

## **RESPONSES TO ONTARIO ENERGY BOARD STAFF INTERROGATORIES**

**INTERROGATORY 60:**

**Reference(s): Exhibit 3, Tab 1, Schedule 1, pp. 1-2**

Table 1 at page 1 of the above reference shows total load, revenues and customers for the period 2009 to 2019.

Board staff notes that in the period from the 2014 Bridge year to the 2019 Test year Total Normalized Gwh decreases by roughly 2%, while Total Customers increases by roughly 8%.

On page 2 of the second reference, it is stated that:

Since 2007, there has been a significant decrease in total energy consumption. Essentially flat growth over the 2004-2006 period has been replaced by declining loads over the 2007-2013 period. While it is difficult to precisely attribute this decline to any particular event, Toronto Hydro believes that the effect of conservation activities – both program driven and naturally occurring - continue to have a significant impact on the overall load change. Furthermore, in late 2008 and 2009, economic conditions also contributed to the load decline.

Please state whether the forecast decline in load in the 2014 to 2019 period, in spite of an anticipated increase in the number of customers, is entirely the effect of conservation activities, or whether other factors are also involved and, if so, what they are and how significant they are relative to the conservation effects.

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1    **RESPONSE:**

2    The forecast reduction in total kWh between 2014 and 2019 is largely attributed to  
3    conservation activities. Excluding the forecast CDM loads, the forecast for total kWh  
4    shows a small annual increase of approximately 0.4%. This forecast reflects the expected  
5    continued trend to lower use per customer than in prior periods, even before accounting  
6    for the effects of CDM activities.

7

8    The table below shows the total kWh load forecast exclusive (“Gross”) and inclusive  
9    (“Net”) of CDM loads.

Year	Forecast GWh (Gross of CDM)	% Change	Forecast GWh (Net of CDM)	% Change
2014	26,581.9		25,018.5	
2015	26,717.3	0.5%	24,993.3	-0.1%
2016	26,905.6	0.7%	25,027.4	0.1%
2017	26,942.0	0.1%	24,841.6	-0.7%
2018	27,049.3	0.4%	24,696.9	-0.6%
2019	27,154.9	0.4%	24,611.4	-0.3%

## **RESPONSES TO ONTARIO ENERGY BOARD STAFF INTERROGATORIES**

1 **INTERROGATORY 61:**

2 **Reference(s):** **Exhibit 3, Tab 1, Schedule 1, pp. 9-10**

3

4

5 Table 3 at page 9 of the above reference shows regression variables by rate class. While  
6 other classes with the exception of those for Street lighting and Unmetered Load show  
7 multiple regression variables, the Competitive Sector Multi-unit Residential class shows  
8 only one which is normalized average use per customer.

9

10 Page 10 of the above reference explains the use of normalized average use per customer  
11 as follows:

12 The load forecast for Competitive Sector Multi-unit Residential (“CSMUR”) was  
13 determined using the NAC as the most suitable model for this relatively new rate  
14 class. Historically, CSMUR customers were part of Residential rate class,  
15 however, as directed by the Ontario Energy Board in EB-2010-0142, Toronto  
16 Hydro established a separate rate class with rates implemented as of June 1, 2013.

17

18 a) Please state why NAC was determined as the most suitable model for the CSMUR  
19 class;

20 b) Please state whether there have been any changes to the regression variables for the  
21 other rate classes relative to those presented in the EB-2010-0142 application and, if  
22 so, why such changes were made.

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**RESPONSE:**

a) The CSMUR class is a new class with consumption data being collected as of its implementation date – June 1, 2013. With the limited historical load data available, Toronto Hydro determined that using the normalized average use per customer would be the most suitable forecast approach for this class. As more historical data for the CSMUR class becomes available, Toronto Hydro anticipates also developing multivariate models for this class.

b) Toronto Hydro confirms that there have been changes to the regression variables used for the other rate classes relative to the last rebasing application (EB-2010-0142), specifically for the GS < 50 kW, GS 50-999 kW, GS 1,000-4,999 kW and Large Use rate classes. The table below lists the regression models used in this application (EB-2014-0116) and the 2011 rebasing application (EB-2010-0142).

Toronto Hydro assesses the appropriateness of all model variables each time it goes through its forecasting exercises. The regression variables are tested for their statistical significance, along with other explanatory variables in the regression models for each customer class independently. Based on the results of the statistical estimation (variables significance in the models and (adjusted) R Squared) “the best-fitted” variables are chosen for those customer classes. As a result, some of the variables become more statistically significant, while the others less.

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1 **Regression Variables by Rate Class (2015 CIR and 2011 COS)**

GS<50 kW		GS 50-999 kW		GS 1,000-4,999 kW		Large Use	
<u>2015 CIR</u> <u>EB2014-</u> <u>0116</u>	<u>2011 COS</u> <u>EB-2010-</u> <u>0142</u>	<u>2015 CIR</u> <u>EB2014-</u> <u>0116</u>	<u>2011 COS</u> <u>EB-2010-</u> <u>0142</u>	<u>2015 CIR</u> <u>EB2014-</u> <u>0116</u>	<u>2011 COS</u> <u>EB-2010-</u> <u>0142</u>	<u>2015 CIR</u> <u>EB2014-</u> <u>0116</u>	<u>2011 COS</u> <u>EB-2010-</u> <u>0142</u>
Toronto Unemploy ment Rate	Toronto City Population	Toronto Unemploy ment Rate	HDD10 per day	Toronto Unemploy ment Rate	Linear Trend (January 2007)	Number of LU customers	Linear Trend (January 2007)
Dew Point Temp.	Business Days Percent.	HDD10 per day	CDD per day	HDD10 per day	HDD10 per day	Time Trend	HDD10 per day
Time Trend	Linear Trend (July 2002)	CDD per day	Dew Point Temp.	CDD per day	CDD per day	HDD10 per day	CDD per day
HDD10 per day	HDD10 per day	Dew Point Temp.	Business Days Percent.	Dew Point Temp.	Dew Point Temp.	CDD per day	Dew Point Temp.
CDD per day	CDD per day	Business Days Percentage	Number of GS 50-1000 kW customers	Business Days Percent.	Business Days Percent.	Dew Point Temp	Business Days Percent.
Number of GS<50 kW customers	Number of GS<50 kW customers	Number of GS 50-1000 kW customers	Blackout dummy	Number of GS 1,000-4,999 kW customers	Number of GS 1,000-4,999 kW customers	Business Days Percent.	Blackout dummy
Blackout dummy	Blackout dummy	Blackout dummy	Intercept term	Blackout dummy	Blackout dummy	Blackout dummy	Intercept term
Intercept term	Intercept term	Intercept term		Intercept term	Intercept term	Intercept term	

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**INTERROGATORY 62:**

**Reference(s):**        **Exhibit 3, Tab 2, Schedule 1, p. 6**

The above reference discusses gains from sale of utility properties in the context of revenue offsets. In its discussion, THESL notes that gains on the sales of such properties were recorded as revenue offsets in the 2011 to 2014 period.

THESL, however, states that in 2015 it expects to sell idle properties at 5800 Yonge and 28 Underwriters and given the relatively large value of these properties, these gains are not recorded as part of revenue offsets, but are proposed to be treated as regulatory liabilities to be refunded to customers over a multi-year period.

a) Please state whether THESL would have any reasons other than the potential size of these gains for its proposed treatment and, if so, what they would be. If not, please explain why THESL believes the size of the gain should be a criteria in determining its treatment and what criteria the Board should use in determining whether a gain should be treated as a revenue offset, or a regulatory liability;

b) In the event the Board was to determine that the 2015 gains were to be treated as revenue offsets, please describe any concerns THESL would have with such treatment.

**RESPONSE:**

a) As noted in Exhibit 8, Tab 1, Schedule 1, page 17, Toronto Hydro has proposed clearance of the 2015 Gains on Sale (as well as the proposed Tax Refund) through a

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1 rate rider in place for 36 months, to assist in smoothing bill impacts for customers.  
2 Providing for full clearance through a single 2015 Revenue Offset for this sizable  
3 amount is problematic under THESL's proposed 2015-19 framework since it would  
4 effectively set into base rates an equivalent full amount in each year (which would be  
5 inappropriate since the offset only occurs once). It would also eliminate the desired  
6 bill impact smoothing.

7  
8 b) As noted above, if the Board were to determine that the gains were to be treated as a  
9 revenue offset, Toronto Hydro would be concerned that a custom clearance term  
10 could not be accommodated under its proposed custom PCI formula, and as a result,  
11 the gains could only be cleared over the full five-year rate term (by including one-  
12 fifth of the total amount as a revenue offset in 2015). This would nullify the positive  
13 impacts a three-year clearance would have on rate smoothing.

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### **INTERROGATORY 15:**

**Reference(s):**           **Exhibit 3, Tab 1, Schedule 1, Appendix C-1, page 1;**  
                                  **Exhibit 3, Tab 1, Schedule 1 (corrected)**

- a) Please describe how Toronto Hydro counts customers in condominiums and in both small (4-plex, 6-plex) and large multi-family residential (apartment buildings). Is it on the basis of meters or meters and sub-meters (suite-meters in condominiums and apartment buildings)? What has been the impact of the creation of the Competitive Sector Multi-Unit Residential Class effective January 1, 2013.
- b) Assuming that suite-metered customers in apartment units or condominium units constitute a customer, how many suite-meter customers does Toronto Hydro now have? How are they divided between condominiums and multi-unit residential buildings? Does the balance of the 736,974 customers include structures or are some of them additional meters within a structure, for example, tenant meters in a shopping centre? Please explain fully.
- c) Table 1 for 2014 (bridge year) shows 736,974 customers (total for all classes) but only 175,545 connections, devices. Please account for the discrepancy. Explain fully. Please describe the distinction between a connection and a “device”.

### **RESPONSE:**

- a) In the referenced exhibit, customer numbers for the Residential class (which includes 4-plex and 6-plexes) and the Competitive Sector Multi-Unit Residential (CSMUR) class almost exclusively represent a Toronto Hydro-owned meter.



## **RESPONSES TO BUILDING OWNERS AND MANAGERS ASSOCIATION, GREATER TORONTO INTERROGATORIES**

1 With the required creation of the CSMUR, customers that were previously included  
2 in the Residential class, who meet the criteria for the new class, are now included in  
3 that class and are charged distribution rates according to the Competitive Sector  
4 Multi-Unit Residential tariffs.

5

6 b) As of September 2014, Toronto Hydro has 44,785 customers in the CSMUR class.  
7 These customers are all in multi-unit residential condominium or apartment buildings  
8 and are individually metered.

9

10 In the Residential class, Toronto Hydro has approximately 120,000 individually  
11 metered customers in apartment buildings or condominiums that are not part of the  
12 CSMUR class. These customers have standard smart meters installed for their  
13 residences.

14

15 For the remaining rate classes, customer numbers include both a structure with a  
16 single meter and structures with multiple meters.

17

18 For Toronto Hydro's General Service > 50 kW to Large Use classes, there are  
19 premises or structures with single meters and with multiple meters. For example, the  
20 GS<50 kW customers numbers may include individual businesses within a mall that  
21 each have their own meter and that are each counted as a customer. In the Large User  
22 class, a customer may have more than one meter, but the meters are totalized for  
23 billing purposes and counted as a single customer.

24

25 c) The value of 736,974 is the total number of customers that Toronto Hydro distributes  
26 electricity to within its service area, excluding the Streetlighting and Unmetered

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1 Scattered Load classes. The 175,545 is the combined total number of connections  
2 from the Unmetered Scattered Load class and the number of devices from the Street  
3 Lighting class. These two numbers – 736,974 and 175,545 – are mutually exclusive.  
4 The distinction between a connection and a device in the context of this schedule is  
5 related to the billing units used for rate design/billing purposes. For the Streetlighting  
6 class, distribution rates are designed and billed based on the number of individual  
7 streetlighting devices. For the Unmetered Scattered Load class, distribution rates are  
8 designed and billed based on the number of physical connections to the distribution  
9 system.

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**INTERROGATORY 17:**

**Reference(s):**        **Exhibit 3, Tab 1, Schedule 1, page 27 (original evidence;  
Accrual)**

In the blue page Ex-Summary, you have removed section 4.5, Budgeting and Accounting Assumptions of the Original Filing. Why was this done, and is the data submitted still applicable? Please explain fully.

**RESPONSE:**

Toronto Hydro did not remove section 4.5 (page 27) from the Executive Summary in its original filing; the original page remains. In its evidence update filed on September 23, 2014, Toronto Hydro provided the OEB and intervenors blue pages for the updated pages *only*. In other words, page 27 of the Executive Summary was not provided as a blue-page within the update package because Toronto Hydro did not make any changes to page 27 from the original pre-filed evidence submitted on July 31, 2014.

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1 **INTERROGATORY 18:**

2 **Reference(s):** **Exhibit 3, Tab 1, Schedule 1, page 30**

3

4

5 Why has DVA increased from \$55.2 million to \$60.4 million?

6

7

8 **RESPONSE:**

9 As part of Toronto Hydro's September 23, 2014 update, revisions were made to balances  
10 in the LRAMVA account (an increase of \$0.6M to reflect updated CDM results – see  
11 updated Exhibit 9, Tab 2, Schedule 5) and the IFRS-CGAAP Transitional PP&E account  
12 (an increase of \$4.7M to reflect a correction for the recovery of return on ratebase  
13 associated with deferred PP&E balance – see updated Exhibit 9, Tab 2, Schedule 4).

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1 **INTERROGATORY 19:**

2 **Reference(s):** **Exhibit 3, Tab 1, Schedule 1, page 7**

3

4

5 Please describe the manner in which the data set used by PSE is expanded relative to the  
6 data set used by PEG. Please explain fully.

7

8

9 **RESPONSE (PREPARED BY PSE):**

10 The data set was expanded by adding 85 U.S. investor-owned utilities to the sample used  
11 by PEG, which included Ontario utilities only. For a listing of the U.S. utilities used in  
12 the data set, please see Table 1 found on page 13 of the PSE Report (Exhibit 4A, Tab 2,  
13 Schedule 5, Appendix B).

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1 **INTERROGATORY 20:**

2 **Reference(s):**

3 **Exhibit 3, Tab 1, Schedule 1, page 9**

4

5

6 a) Why are Revenue Offsets assumed to increase by I-X? What are the prospects for the  
7 revenue offsets being higher than forecast?

8 b) Please confirm that the values for interest and ROE will be changed to correspond to  
9 the Board's approved cost of capital parameters for each year.

10

11

12 **RESPONSE:**

13 a) Toronto Hydro is proposing a custom Price Cap Index ("PCI") for 2016 to 2019 that,  
14 like the PCI used in the OEB's 4GIRM framework, essentially entrenches in rates an  
15 expectation that Revenue Offsets increase by "I - X". To the extent that Revenue  
16 Offsets deviate is to the risk of the company. To be clear, Toronto Hydro has not  
17 provided a forecast of Revenue Offsets for 2016 to 2019 nor does Toronto Hydro  
18 assume that Revenue Offsets will actually increase by "I - X" for 2016 to 2019.

19

20 b) For the purpose of the calculation of the Custom Capital ("C") Factor, Toronto Hydro  
21 has applied 2015 interest rates and ROE.

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1 **INTERROGATORY 21:**

2 **Reference(s):** **Exhibit 3, Tab 1, Schedule 1, page 10, Table 2**

3

4

5 How much of (i) the interest, and (ii) ROE in each year from 2015 to 2019 is due to:

6 a) changes in forecast interest rates/ROE prices changes;

7 b) growth in rate base.

8

9

10 **RESPONSE:**

11 None of the increase in the Interest and ROE Revenue Requirement Components are a  
12 result of changing interest rates or ROE price changes. Annual increases are due solely  
13 to the growth in rate base.

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1 **INTERROGATORY 22:**

2 **Reference(s):** **Exhibit 3, Earnings Sharing**

3

4

5 Why has Toronto Hydro not included earnings sharing in the proposal in light of the  
6 Board's decision in EGD, EB-2012-0459? Please discuss fully.

7

8

9 **RESPONSE:**

10 Toronto Hydro is proposing an incentive-based rate framework that encourages the utility  
11 to continuously seek efficiencies. This incentive is created by including the OEB's  
12 productivity factor and a custom stretch factor in the custom Price Cap Index ("PCI"). In  
13 doing so, Toronto Hydro is committing to share with its customers the benefits of these  
14 efficiencies before they are realized, by directly reducing base rate increases. This  
15 approach provides customers with a guaranteed, up-front share in productivity generated  
16 by the utility. Toronto Hydro believes that the proposed approach using a productivity  
17 and stretch factor within a PCI framework is consistent with the OEB's Renewed  
18 Regulatory Framework.



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**INTERROGATORY 23:**

**Reference(s):**        **Exhibit 3, Tab 1, Schedule 1 page 18**

Does Toronto Hydro accept that the criteria the Board:

- a) should apply to determine whether a particular event should qualify for Z-factor treatment are the criteria the Board adopted in EB-2012-0459.
- b) given the criteria the Board adopted, why has Toronto Hydro proposed a list of “events with a one-time impact”, and “events with an ongoing impact”?
- c) on what basis does Toronto Hydro request that the OEB identify its “concerns with respect to the availability of Z-factor treatment in relation to any of the items set out below”, given that the criteria to be applied to any event for which Z-factor treatment is requested is set out in EB-2012-0459. In what form and forum, does Toronto Hydro wish the Board to express its concerns?
- d) Is Toronto Hydro saying that it would amend its application in the event that the Board “expressed concerns” about one or more of the events listed at pages 17-18?

**RESPONSE:**

- a) Yes. As detailed in Exhibit 1B, Tab 2, Schedule 3, page 17 Toronto Hydro agrees that the standard Z-factor criteria would apply, as most recently articulated by the OEB in EB-2012-0459 (Enbridge Gas Distribution 2014-2018 rate application).
- b) As detailed in Exhibit 1B, Tab 2, Schedule 3, pages 17-18, Toronto Hydro has set out the two categories of potential events as examples of what it believes may necessitate Z-factor treatment during the term of its plan. Toronto Hydro’s interpretation is that

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1 the listed potential events would qualify for Z-factor treatment under the articulated  
2 Z-factor criteria. Toronto Hydro has requested that, to the extent to the OEB has  
3 concerns about the possible availability of Z-factor treatment for any of the listed  
4 items, the OEB identify those concerns as part of its decision.

5

6 c) Please see response to part (b).

7

8 d) Toronto Hydro is not saying this. Toronto Hydro's response would depend on the  
9 specific concerns articulated by the OEB. Toronto Hydro cannot speculate as to what  
10 actions it might take in the hypothetical circumstance presented.

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1 **INTERROGATORY 24:**

2 **Reference(s):** **Exhibit 3**

3 **Exhibit 3, Tab 1, Schedule 1, General**

4  
5 Please explain why it is necessary to have both a I-X increase and a customer capital  
6 index applied to the capital component and then back out the part of the I-X attributable  
7 to capital. Would it not be simpler to apply the I-X only to OM&A? If the two  
8 approaches do not produce equivalent results, please explain.

9  
10 Please provide a calculation showing the impacts on revenue requirement, capital index,  
11 and rate impacts if this were done.

12  
13  
14 **RESPONSE:**

15 A full discussion of the rationale for Toronto Hydro's custom Price Cap Index ("PCI")  
16 and the justification for each of its constituent components is included in Exhibit 1B, Tab  
17 2, Schedule 3. For ease of reference:

18  
19 With the inclusion of  $C_n$  in the custom PCI, Toronto Hydro would  
20 receive sufficient funding for its capital needs as presented in the DSP.  
21 However, the "I – X" increase retained in the custom PCI from the  
22 standard 4th Generation IR framework does provide some degree of  
23 incremental funding. Absent additional constraints, the custom PCI  
24 formula would risk over-funding relative to Toronto Hydro's capital  
25 need because a portion of the "I – X" increase could be committed to  
26 capital expenditures. Toronto Hydro proposes to remove this risk

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1 through an automatic distribution rate reduction captured in the C-  
2 factor to constrain the impact of  $C_n$ .

3  
4 An efficient and principled approach is to reduce the C-factor by a  
5 capital-related proportion of “ $I - X$ ”. Toronto Hydro proposes that this  
6 “scaling” factor be determined by the proportion of the total revenue  
7 requirement that is capital-related. Termed  $S_{cap}$ , this scaling factor is  
8 calculated in the following fashion:

9  
10  $S_{cap} = (\text{capital-related revenue requirement}) / (\text{total revenue}$   
11  $\text{requirement})$

12  
13 Scaling “ $I - X$ ” to only  $S_{OMA}$  would not lead to the same Price Cap Index as the one  
14 proposed in this application. To reach the same outcome, “ $I - X$ ” must be scaled by the  
15 sum of  $S_{OMA}$  and  $S_{RO}$  as defined in Exhibit 1B, Tab 2, Schedule 3. Because Revenue  
16 Offsets reduce Service Revenue Requirement,  $S_{RO}$  is a negative number. Consequently,  
17 to scale “ $I - X$ ” by only  $S_{OMA}$  would actually result in greater price increases than  
18 Toronto Hydro’s proposed framework and would be in less alignment with the standard  
19 4GIRM framework. For more information, please see Section 4.2 of Exhibit 1B, Tab 2,  
20 Schedule 3.

21  
22 The net difference between Toronto Hydro’s custom PCI and a custom PCI described in  
23 the question is therefore:

$$PCI_{TH} - PCI_{BOMA} = S_{RO} * (I - X)$$

## RESPONSES TO BUILDING OWNERS AND MANAGERS ASSOCIATION, GREATER TORONTO INTERROGATORIES

- 1 Using the same illustrative parameters as in Table 5 of Exhibit 1B, Tab 2, Schedule 3, the
- 2 following table provides an example of the difference between the two methodologies.
- 3 The results indicate that Toronto Hydro's proposed model would result in slightly lower
- 4 rate increases than the model contemplated in this Interrogatory.

Item	2016	2017	2018	2019	
Revenue Offsets	-\$45.7	-\$46.4	-\$47.0	-\$47.6	(1)
Total RR	\$692.5	\$748.1	\$801.2	\$844.5	(2)
SRO	-6.6%	-6.2%	-5.9%	-5.6%	(3) = (1)/(2)
I	1.7%	1.7%	1.7%	1.7%	(4)
X	-0.3%	-0.3%	-0.3%	-0.3%	(5)
$PCI_{TH} - PCI_{BOMA}$	-0.09%	-0.09%	-0.08%	-0.08%	(6) = (3)*(4 + 5)

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**INTERROGATORY 25:**

**Reference(s):**            **Exhibit 3, Tab 1, Schedule 1, page 13**

Please provide a full quantitative explanation for reduction in 2016 Custom PCI from 5.62 (original) to 4.56 (blue). Please provide a similar explanation for the changes to the PCI for each of 2017, 2018, and 2019.

**RESPONSE:**

The table below summarizes the changes in Table 5 of Exhibit 1B, Tab 2, Section 3. Again, Toronto Hydro emphasizes that these values assume an inflation factor of 1.7% for 2016 to 2019 and are provided for illustrative purposes only. The actual values of the custom Price Cap Index will not be known until the OEB determines its inflation factor for a given year.

Custom PCI Component	Application				Update				Variance			
	2016	2017	2018	2019	2016	2017	2018	2019	2016	2017	2018	2019
I	1.70%	1.70%	1.70%	1.70%	1.70%	1.70%	1.70%	1.70%	0.00%	0.00%	0.00%	0.00%
X - productivity	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
X - custom stretch	-0.30%	-0.30%	-0.30%	-0.30%	-0.30%	-0.30%	-0.30%	-0.30%	0.00%	0.00%	0.00%	0.00%
C <sub>n</sub>	5.15%	7.77%	6.75%	4.98%	4.10%	7.56%	6.67%	5.01%	-1.05%	-0.21%	-0.09%	0.03%
S <sub>cap</sub>	66.4%	68.5%	70.2%	71.3%	67.1%	69.2%	70.8%	71.9%	0.7%	0.6%	0.6%	0.6%
<b>Custom PCI</b>	<b>5.62%</b>	<b>8.21%</b>	<b>7.17%</b>	<b>5.38%</b>	<b>4.56%</b>	<b>7.99%</b>	<b>7.08%</b>	<b>5.40%</b>	<b>-1.06%</b>	<b>-0.22%</b>	<b>-0.09%</b>	<b>0.02%</b>

The primary reason for the change in the illustrative custom PCI values above is the change in C<sub>n</sub>. The changes in C<sub>n</sub> are caused by changes in forecast depreciation for 2016 to 2019 (see Table 3 of Exhibit 1B, Tab 2, Schedule 3) that are consequential to the

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- 1 updates made to the DSP and corrections to reflect derecognition amounts as filed in
- 2 Exhibit 4B, Tab 1, Schedule 2.

## **RESPONSES TO CONSUMERS COUNCIL OF CANADA INTERROGATORIES**

1 **INTERROGATORY 26:**

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

3

4

5 With respect to revenue offsets please explain how these will be dealt in the context of  
6 Toronto Hydro's plan. If revenue offsets significantly exceed the forecast amounts in  
7 2015, how will these revenues be treated? If new categories of revenue offsets are  
8 established during the IR term, how will these revenues be treated?

9

10

11 **RESPONSE:**

12 As with all forecasts underpinning the test year period, Toronto Hydro accepts the risk of  
13 any forecast variances. Following the normal treatment for revenue offsets, Toronto  
14 Hydro expects to absorb any negative variances and retain any positive variances.

15

16 If Toronto Hydro were permitted to undertake activities that it currently is not authorized  
17 to undertake and which generate revenue offsets, it expects that such an authorization  
18 would be accompanied by OEB direction as to the treatment of any additional revenue  
19 generated.



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### INTERROGATORY 27:

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

Please provide the following information regarding revenue offsets:

- a) For each year 2011 to 2015 please provide actual and projected revenue related to both wireline pole attachments and wireless pole attachments;
- b) For each year 2016-2019 please provide a forecast of the projected revenue from both wireline and wireless attachments.
- c) Please explain, why pole rental revenue has increased from \$10.7 million in 2014 to \$19.5 million in 2015.

### RESPONSE:

- a) The actual and projected revenue related to both wireline pole attachments and wireless pole attachments is as follows:

(\$M)	2011	2012	2013	2014	2015
<b>Wireline</b>	\$2.0	\$2.2	\$2.0	\$2.2	\$8.8
<b>Wireless</b>	\$0.0	\$0.1	\$0.1	\$0.1	\$0.2
<b>Total</b>	\$2.0	\$2.3	\$2.1	\$2.3	\$9.0

- b) Toronto Hydro does not have specific forecasts of revenue offsets for the 2016-2019 period (please refer to the response to interrogatory 3-BOMA-20). Toronto Hydro expects wireline pole attachment revenue to remain relatively flat relative to the 2015 forecast. Wireless revenue will depend on market conditions, but is subject to a

## **RESPONSES TO CONSUMERS COUNCIL OF CANADA INTERROGATORIES**

- 1        deferral and variance account, as approved by the OEB in EB-2013-0234.
- 2
- 3        c) The increase in pole rental revenue is primarily a result of Toronto Hydro's proposal
- 4        to increase the wireline pole attachment rate, as detailed in the pre-filed evidence at
- 5        Exhibit 8, Tab 2, Schedule 1.

## **RESPONSES TO CONSUMERS COUNCIL OF CANADA INTERROGATORIES**

### **INTERROGATORY 28:**

**Reference(s):**            **Exhibit 3, Tab 2, Schedule 1, page 4**

Table 2 sets out the Revenue Offsets related to “Merchandise and Jobbing”. For each of the categories listed please provide a detailed explanation as to how the expenses and revenues were calculated. Please include all assumptions. With respect to Pole and Duct Rental please provide a separate explanation for each item.

### **RESPONSE:**

The underlying assumptions for the Merchandising and Jobbing net revenues can be categorized into the following:

- **Market Rates** – for 2011–2014 Scrap Sales Revenues are based on market rates and actual volumes of scrap processed for sale, while the associated expenses are based on contractor and processing facility charges related to the consolidation and movement of the scrap to the vendors. For 2015, as discussed in Exhibit 3, Tab 2, Schedule 1, Toronto Hydro expects to outsource the processing and selling of scrap metal materials to a third party. Therefore, only net revenues are forecasted.
- **Actual Cost Recovery** – multiple lines of the Merchandising and Jobbing categories (accident claims, isolations and customer services) are based on the recovery of actual costs, based on the time and materials associated with customer initiated services rendered.
- **Predetermined Rates** – Toronto Hydro charges predetermined rates for certain services that are based on either contractual agreement or typical time and materials.

## **RESPONSES TO CONSUMERS COUNCIL OF CANADA INTERROGATORIES**

1       A portion of the customer services revenues are based on these predetermined rates.

2       The associated expenses are the time and materials related to provide such services.

3

4       Duct rentals revenues are based on meters of rented duct at varying rates contractually  
5       agreed upon with each customer. Pole attachment revenues for the period 2011-2014 are  
6       based on the OEB Specific Service Charge rate (\$22.35) per attachment. For 2015,  
7       Toronto Hydro proposes to update the regulated rate to reflect actual, current costs  
8       (please refer to Exhibit 8A, Tab2, Schedule1). Revenues from both duct and poles are  
9       driven by customer demands and overall limitation of available rentable space. The  
10      expenses associated with the Pole & Duct Rentals relate to both internal and external  
11      labour and associated support costs.

## **RESPONSES TO SUSTAINABLE INFRASTRUCTURE ALLIANCE OF ONTARIO INTERROGATORIES**

1 **INTERROGATORY 30:**

2 **Reference(s):** **Exhibit 3, Tab 2, Schedule 2**

3

4

5 Regarding Specific Service Charge Revenue:

6 a) Please explain why the revenue forecast for the “Connection-Reconnection Charge”  
7 remains unchanged at \$440K for 2015 over 2014, despite the specific service charge  
8 for disconnections/reconnections increasing from \$65 to \$120 as noted in Exhibit 8,  
9 Tab 2.

10 b) Please explain why \$0 revenue has been recorded for Duplicate Invoices, Income Tax  
11 Letters, and Special Meter Reads. Is this a materiality/rounding issue?

12 c) Please explain why \$0 revenue is expected from Temporary Service Construction and  
13 Easement Letters in 2014 and 2015.

14 d) For additional clarity, please prepare a table showing all revenue received and  
15 forecast from the charges listed in Exhibit 8, Tab 2, Schedule 1, Table 1. Please show  
16 2012-2014 actuals, and 2015 forecast revenue based on the new proposed service  
17 charges.

18

19

20 **RESPONSE:**

21 a) The 2015 revenue forecast for the “Connection-Reconnection Charge” was  
22 incorrectly stated. The correct amount is \$859,312. As a result, the variance between  
23 2014 and 2015 shows an increase to reflect the higher proposed rate, at slightly lower  
24 forecast volumes.

25

## **RESPONSES TO SUSTAINABLE INFRASTRUCTURE ALLIANCE OF ONTARIO INTERROGATORIES**

- 1    b) A total of \$0 revenue has been recorded for Income Tax Letters and Special Meter  
2       Reads primarily due to materiality. Furthermore, due to electronic reading and smart  
3       meter technology, the Special Meter Reads service charge is now very rarely used.  
4  
5       The revenue from the Duplicate Invoices service charge was incorrectly included  
6       together with the Retailer Service Transaction Request revenue in OEB Appendix 2H  
7       (Exhibit 2, Tab 2, Schedule 2). Please refer to the response to (d) below for the  
8       corrected amounts.  
10  
11   c) The Temporary Service Construction revenue was incorrectly included in the  
12       Miscellaneous Revenue category in OEB Appendix 2H (Exhibit 2, Tab 2, Schedule  
13       2), but the correct amounts had been correctly shown in Table 2 of Exhibit 3, Tab 2,  
14       Schedule 1. The expected revenues from Easement Letters are considered  
15       immaterial.  
16  
17   d) Please see the table below:

## RESPONSES TO SUSTAINABLE INFRASTRUCTURE ALLIANCE OF ONTARIO INTERROGATORIES

Specific Service Charge	Current Toronto Hydro Charge Amount	Proposed Toronto Hydro Charge Amount	2012 Actual	2013 Actual	2014 Bridge	2015 Test	2015 Incremental Revenue (8-OEB-83)
Duplicate invoices for previous billing	\$15	\$25	\$ 7,680	\$ 4,967	\$ 5,730	\$ 2,860	-\$ 2,870
Request for other billing or system information	\$0	\$25	\$ -	\$ -	\$ -	\$ 31,000	\$ 31,000
Easement letter	\$15	\$25	\$ 18,800	\$ 21,400	\$ 16,800	\$ 23,101	\$ 6,301
Income tax letter	\$15	\$25	\$ -	\$ -	\$ -	\$ -	\$ -
Account history	\$0	\$25	\$ -	\$ -	\$ -	\$ 6,000	\$ 6,000
Returned cheque charge (plus bank charges)	\$15	\$25	\$ 81,853	\$ 68,785	\$ 75,000	\$ 113,925	\$ 38,925
Account set up charge/change of occupancy charge	\$30	\$35	\$ 2,816,087	\$ 2,740,590	\$ 2,550,000	\$ 3,811,920	\$ 1,261,920
Special meter reads	\$30	\$55	\$ -	\$ -	\$ -	\$ -	\$ -
Collection of account charge - no disconnection	\$30	\$55	\$ 3,026,321	\$ 3,075,543	\$ 3,299,978	\$ 4,969,096	\$ 1,669,118
Disconnect/Reconnect at meter -during regular hours	\$65	\$120	\$ 260,555	\$ 306,540	\$ 280,247	\$ 498,048	\$ 217,801
Install/Remove load control device - during regular hours	\$65	\$120	\$ 14,170	\$ 585	\$ 15,080	\$ 18,912	\$ 3,832
Disconnect/Reconnect at meter -after regular hours	\$185	\$400	\$ 41,810	\$ 160,105	\$ 139,120	\$ 319,360	\$ 180,240
Install/Remove load control device - after regular hours	\$185	\$400	\$ 3,330	\$ 370	\$ 6,660	\$ 9,920	\$ 3,260
Disconnect/Reconnect at pole - during regular hours	\$185	\$300	\$ 9,250	\$ 5,365	\$ 1,233	\$ 11,152	\$ 9,919
Disconnect/Reconnect at pole - after regular hours	\$415	\$820	\$ 7,055	\$ 3,735	\$ 1,660	\$ 1,920	\$ 260
Meter dispute charge plus Measurement Canada fees	\$30	\$55	\$ -	\$ -	\$ -	\$ -	\$ -
Service call - customer owned equipment or customer missed appointment	Actual Cost/ \$0	\$55	\$ -	\$ -	\$ -	\$ 2,000	\$ 2,000
Temporary service install & remove – overhead - no transformer	Actual Cost	\$2,040	Note 1	Note 1	Note 1	\$ 1,011,840	Note 1
Specific Charge for Access to Power Poles (Wireline)	\$22.35	\$92.53	\$ 2,188,788	\$ 2,034,382	\$ 2,174,650	\$ 8,812,835	\$ 6,638,185

Note 1: In 2012-2014, Toronto Hydro provided this service on an actual cost basis. As such, the projected 2015 revenue is not considered incremental to total 2014 service charge revenues.

## **RESPONSES TO VULNERABLE ENERGY CONSUMERS COALITION INTERROGATORIES**

### **INTERROGATORY 20:**

**Reference(s):**           **Exhibit 3, Tab 1, Schedule 1, pages 3-4**  
                                  **OEB Exh3\_T01\_S01\_Modelling Input Data**

#### **Preamble:**

The text on page 3 (lines 7-8) indicates that historical cumulative CDM impacts are added back to system purchased energy. The text on page 4 (lines 14-16) goes on to explain the load forecast models are developed on a class basis.

- a) Please confirm that the dependent kWh/day variable was based on the purchased energy for each customer class?
- b) If purchased energy was the basis, please explain why it was used as opposed to using delivered energy by class.
- c) If based on purchased energy, how were the monthly purchased energy values determined for each class (i.e., what loss factor was applied to the delivered energy for year/class)?
- d) For those customer classes where calendar month based meter readings and, therefore, actual energy use were not available for all of the historical period (2002-2013), please explain how the kWh for each calendar month were established in order to derive the kWh/day dependent variable.
- e) Please provide the data file (with formulae intact) that calculates the purchased kWh/day as set out in the file referenced above based on the monthly usage by class, where this monthly usage by class reconciles (for the years 2009-2013) with the actual annual usage by class set out in Table 3 (Exhibit 3/Tab 1/Schedule 1, Attachment B-1, page 1).



## **RESPONSES TO VULNERABLE ENERGY CONSUMERS COALITION INTERROGATORIES**

1   **RESPONSE:**

- 2   a) Toronto Hydro confirms that the dependent kWh/day variable was based on the  
3       purchased energy for each customer class.  
4
- 5   b) As filed and approved by the OEB in previous rate applications, Toronto Hydro  
6       continues to use purchased energy as the basis for the dependent kWh/day because it  
7       represents the most reliable calendarized data available.  
8
- 9   c) Purchased energy is allocated by customer class by month based on historical billed  
10       kWh percentages. The process of purchased energy allocation consists of the  
11       following steps. First, historic billed consumption is collected for each customer  
12       class. Second, billed kWh for each customer class are prorated to the months of  
13       actual consumption. Third, the percentages of the prorated consumption by class to  
14       the total prorated consumption for each month are calculated. Fourth, the derived  
15       percentages are applied to historic total purchased energy to get purchased energy by  
16       customer class.  
17
- 18   d) Please see response to part (c).  
19
- 20   e) The requested data file is provided in 3\_VECC\_20E.xlsx.

## **RESPONSES TO VULNERABLE ENERGY CONSUMERS COALITION INTERROGATORIES**

### **INTERROGATORY 21:**

**Reference(s):**           **Exhibit 3, September 23, 2014 Update Letter**

- a) With respect to page 13, please explain what the sources and effect of the “updated” CDM estimates are (i.e., what was the source of the update and what years’ values were impacted?).
- b) Please explain how/why this update affected the estimation of the forecast models set out in Appendix A-2.

### **RESPONSE:**

- a) The development of the LRAMVA and load forecasts was dependent on Toronto Hydro CDM results from the OPA. The report provided by the OPA was an unverified version, which was subsequently updated in August 2014.

At the same time, Toronto Hydro’s CDM project tracking system was updated to allow for improved rate class and monthly allocations. The CDM team recognized an opportunity to further enhance the accuracy of the LRAMVA claim by making additional changes to the original application to incorporate this improved information. With this new information, Toronto Hydro felt it was also appropriate to apply the new assumptions to each historical year. So while the update to the 2013 CDM results did not impact total CDM results prior to 2013, the more accurate class allocation assumptions were applied to historical results for the September update, where appropriate.

## **RESPONSES TO VULNERABLE ENERGY CONSUMERS COALITION INTERROGATORIES**

- 1    b) The update of the CDM historical allocation by class by month had an effect on the
- 2       kWh per day used as the dependent variable in the regression model and hence, on the
- 3       outcome of the forecast models set out in Appendix A-2.

## RESPONSES TO VULNERABLE ENERGY CONSUMERS COALITION INTERROGATORIES

1    **INTERROGATORY 22:**

2    **Reference(s):            Exhibit 3**

3                                **E3/T1/S1, page 3 and page 12**

4                                **OEB Exh3\_T01\_S01\_Modelling Input Data**

5

6

7    **Preamble:**

8    The referenced data file contains historical CDM kWh/day for each customer class.

9

10   a) Please confirm that the cumulative CDM impacts used in the data file are “purchased  
11       energy impacts” and provide the relevant loss factors used for each class (by year).

12   b) Please provide a schedule that sets out the total gross CDM savings impact of each  
13       historic year’s CDM programs on that year’s and subsequent years’ purchased energy  
14       in the following format:

15

Program Year	CDM Impact (Gross) by Calendar Year (MWh)							
	2006	2007	2008	2009	2010	2011	2012	2013
2006								
2007	X							
2008	X	X						
2009	X	X	X					
2010	X	X	X	X				
2011	X	X	X	X	X			
2012	X	X	X	X	X	X		
2013	X	X	X	X	X	X	X	
Total								

## **RESPONSES TO VULNERABLE ENERGY CONSUMERS COALITION INTERROGATORIES**

- 1 c) Please provide either copies of the reports (or links to the OEB/OPA/THESL web-  
2 sites where they can be found) that support/validate the values set out in response to  
3 part (b) along with specific references to where in each document the relevant data is  
4 sourced from.
- 5 d) Please explain how the cumulative annual savings for each year were translated into  
6 monthly savings and illustrate the process using 2013 data.
- 7 e) Please explain more fully why, as indicated on page 12, THESL believes that gross  
8 CDM savings numbers are the correct values to apply in its load forecast modelling.
- 9 f) Has THESL undertaken any load forecast analyses using net CDM values? If so,  
10 please provide the models and the associated forecasts for 2015-2019.
- 11 g) If THESL has not undertaken load forecast analysis using net CDM values, please  
12 undertake the following:
- 13 i) provide a revised data file with net CDM kWh/day by class (as opposed to gross  
14 CDM kWh/day by class);
- 15 ii) provide revised load forecast equations for each class using this data;
- 16 iii) provide forecasts for 2015-2019 by customer class using these models.

17

18

### **RESPONSE:**

- 19
- 20 a) Toronto Hydro confirms that the cumulative CDM impacts in the data file are  
21 “purchased energy impacts“. The table below shows the Loss Factors by customer  
22 class used for all years.

Residential	GS<50kW	GS 50-999kW	GS 1000-4999 kW	Large Use	Street Lighting	USL
1.0376	1.0376	1.0376	1.0376	1.0187	1.0376	1.0376

## RESPONSES TO VULNERABLE ENERGY CONSUMERS COALITION INTERROGATORIES

- 1
- 2 b) The table below includes the total gross CDM savings impact of each historic year's
- 3 CDM programs on that year's and subsequent years' purchased energy.

Year	CDM impact (gross) by calendar year (MWh)*							
	2006	2007	2008	2009	2010	2011	2012	2013
<b>2006</b>	22,643	56,010	56,010	56,010	37,395	9,964	9,630	9,138
<b>2007</b>		105,464	297,429	234,304	226,833	226,830	166,548	40,551
<b>2008</b>			120,179	197,018	195,627	195,318	191,709	185,485
<b>2009</b>				102,547	193,516	183,543	183,516	182,780
<b>2010</b>					269,774	390,962	376,500	376,474
<b>2011</b>						120,256	325,476	325,235
<b>2012</b>							62,073	148,720
<b>2013</b>								73,090
<b>Total</b>	22,643	161,474	473,617	589,879	923,145	1,126,872	1,315,452	1,341,473

\*CDM loads are excluding losses

- 4 c) The historical annual gross savings are taken from two different sources:
- 5
- 6 1) 2006 – 2010 Annual Gross Savings: *2006-2010 Final OPA CDM Results –*
- 7 *Toronto Hydro-Electric System Limited* (a copy of the data file has been attached
- 8 as 3\_VECC\_22C.xlsx).
- 9
- 10 2) 2011 – 2013 Annual Gross Savings: *Draft Verified Annual 2013 CDM Report –*
- 11 *Toronto Hydro-Electric System Limited* (a copy has been filed as Exhibit 9, Tab 2,
- 12 Appendix B). Please refer to the net savings in the table on page 4, and the net-
- 13 to-gross conversion factors in the table on page 6.
- 14

## **RESPONSES TO VULNERABLE ENERGY CONSUMERS COALITION INTERROGATORIES**

1 d) To translate the annual gross savings into monthly savings, the following steps were  
2 taken:

3  
4 1) Each month was assigned a percentage of the annual savings that would be  
5 considered initiated in that month, and thus, projects beginning in that month  
6 would continue to produce savings for the next 12 consecutive months in order to  
7 achieve their percentage of the annual total. For example, for the portion of  
8 projects that initiated in January of a given year, annual savings would be realized  
9 by December of the same year. However, for the portion of total projects which  
10 were considered initiated in June of a given year, annual savings would be  
11 realized by May of the following year. As a result of this application, the savings  
12 reported by the OPA for any given calendar year would actually span that given  
13 year as well as the next, in a similar but more comprehensive manner to the “half-  
14 year” rule. The percentages assigned to each month were developed from the  
15 project completion records in Toronto Hydro’s Customer Resource Management  
16 (CRM) system.

17  
18 2) Typical program measures were assessed for their pattern of annual savings, so as  
19 not to allocate the same level of peak demand or consumption savings each  
20 month, without discretion. For example, peak demand and consumption savings  
21 related to programs involving cooling loads were considered 100% realized in the  
22 hottest months (July and August). However, the savings resulting from these  
23 projects were reduced accordingly in the shoulder and heating months. The  
24 primary resource for determining the seasonal allocation of savings was the  
25 OPA’s Conservation Program Resource Planning Tool V3.3.

26

## **RESPONSES TO VULNERABLE ENERGY CONSUMERS COALITION INTERROGATORIES**

- 1 e) Toronto Hydro believes that “gross“ historical and estimated CDM savings are the  
2 correct values to apply in to the load forecast, because it represents the real impact on  
3 the load used to develop the rates used to collect the Revenue Requirement.  
4
- 5 f) Toronto Hydro has not undertaken load forecast analysis using Net CDM values.  
6
- 7 g) Please refer to the attached data file: 3\_VECC\_22G.xlsx.



## **RESPONSES TO VULNERABLE ENERGY CONSUMERS COALITION INTERROGATORIES**

**INTERROGATORY 23:**

**Reference(s):**            **Exhibit 3, Tab 1, Schedule 1, page 5 (lines 6-10)**

- a) Did THESL undertake any similar analysis to determine whether 18 degrees Celsius was the appropriate balance point for the CDD measure?
- b) If not, why not?
- c) If yes, please provide the results.

**RESPONSE:**

- a) Yes, a similar analysis was performed to make sure that 18 degrees Celsius was the appropriate temperature balance point for CDD measure.
- b) Not applicable.
- c) Figure 2, page 5 of Exhibit 3, Tab 1, Schedule 1 graphically displays the relationship between Toronto Hydro's historic purchased energy and average temperature. While the left hand side of the plotted relationship indicates the appropriate balance point for the HDD calculation, the right hand side illustrates the fact that the "cooling" load "builds up", displaying a clear linear relationship with average temperature at the point of 18 degrees and higher.

When Toronto Hydro originally developed the HDD10 measure, statistical analysis was performed on the appropriate base temperatures for both HDD and CDD. CDD18 was determined to be appropriate.

## RESPONSES TO VULNERABLE ENERGY CONSUMERS COALITION INTERROGATORIES

1  
2 As an example of such analysis, the table below illustrates the “goodness of fit” of the  
3 regression models for all classes when CDD18 is replaced by CDD20 (CDD  
4 calculated based on the 20 degrees Celsius base temperature). In all cases, the models  
5 exhibit a poorer statistical fit.

Customer class	Adjusted R <sup>2</sup> with CDD18 (models as filed)	Adjusted R <sup>2</sup> with CDD20 (CDD base temperature of 20 degrees Celsius)
Residential	93.7%	85.8%
GS<50 kW	93.0%	89.7%
GS 50-1000 kW	95.2%	91.6%
GS 1-5 MW	87.0%	83.9%
Large Users	74.2%	71.4%

## RESPONSES TO VULNERABLE ENERGY CONSUMERS COALITION INTERROGATORIES

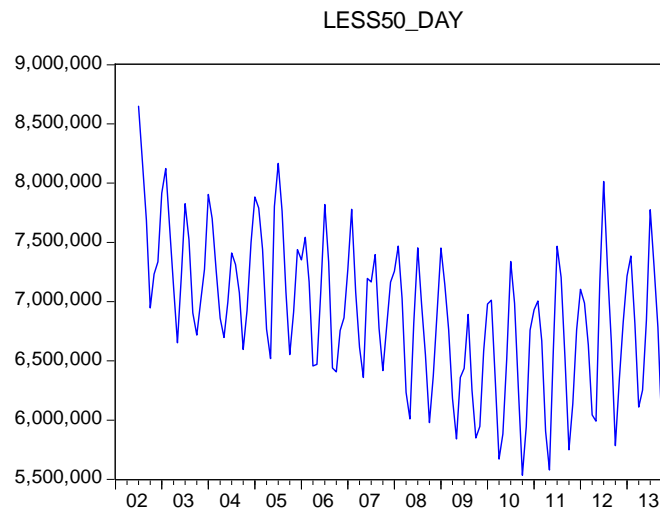
### INTERROGATORY 24:

**Reference(s):** Exhibit 3, Tab 1, Schedule 1, page 6

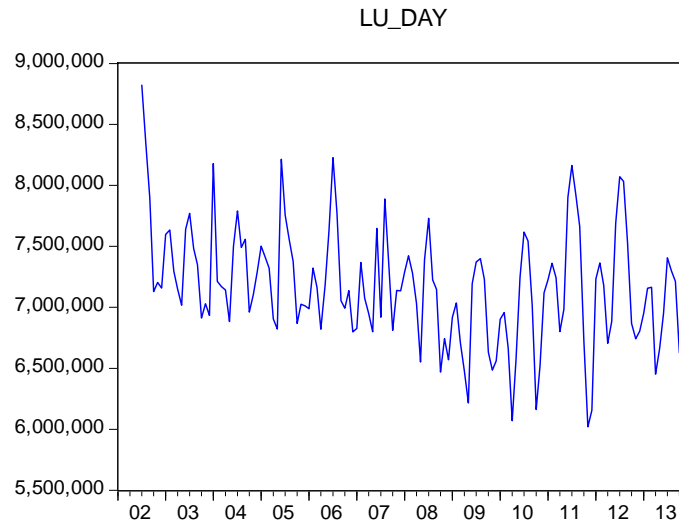
- a) Please document and/or illustrate the change in trend for the GS<50 and Large Use classes as between the 2002-2009 period and the 2010-2013 period.
- b) Please demonstrate that such a change in “trend” does not exist for the Residential and GS>50 classes.

### RESPONSE:

- a) The graphs below clearly illustrate the change in load trends for GS<50 kW and Large Users classes between 2009 and 2010 years.



## RESPONSES TO VULNERABLE ENERGY CONSUMERS COALITION INTERROGATORIES



- 1 The tables below contain an alternative forecast made based on a “standard” Linear
- 2 Trend variable for the GS<50 kW and Large User classes. The comparison of the
- 3 outcomes with the filed forecasts clearly demonstrates that linear trends are unreasonably
- 4 lowering the forecasts values and not properly reflecting the latest tendencies in the
- 5 explanatory variables.

**Table 1: GS<50 kW Annual Delivered kWh**

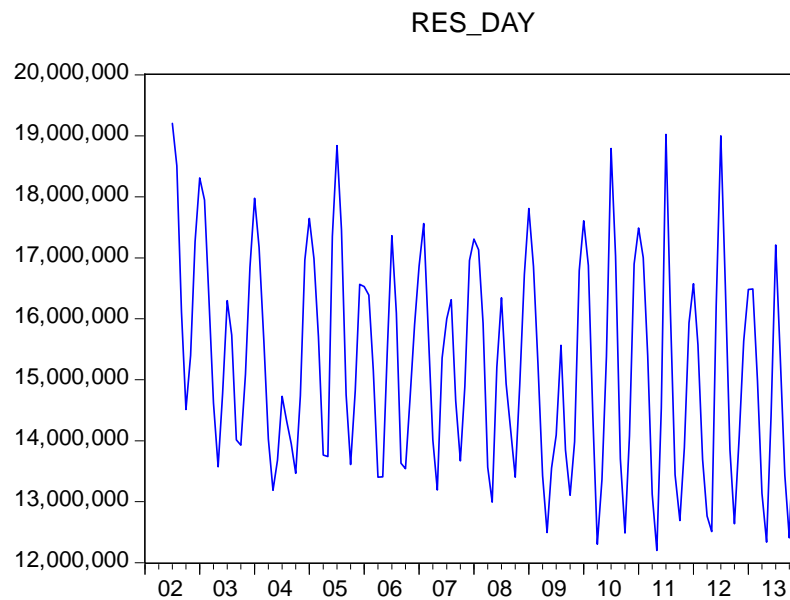
Year	Model as filed with Spline Trend	Model with Basic Linear Trend	Variance, %
2014	2,134,640,222	2,115,142,100	-0.9%
2015	2,118,402,162	2,075,471,386	-2.0%
2016	2,101,996,032	2,033,423,521	-3.3%
2017	2,058,843,341	1,964,927,570	-4.6%
2018	2,016,610,061	1,897,875,782	-5.9%
2019	1,986,965,125	1,843,277,270	-7.2%

## RESPONSES TO VULNERABLE ENERGY CONSUMERS COALITION INTERROGATORIES

**Table 2: Large Users Annual Delivered kWh**

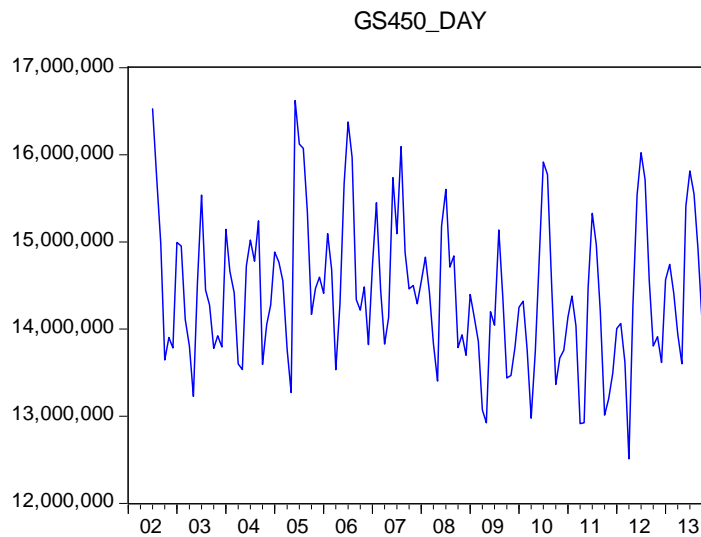
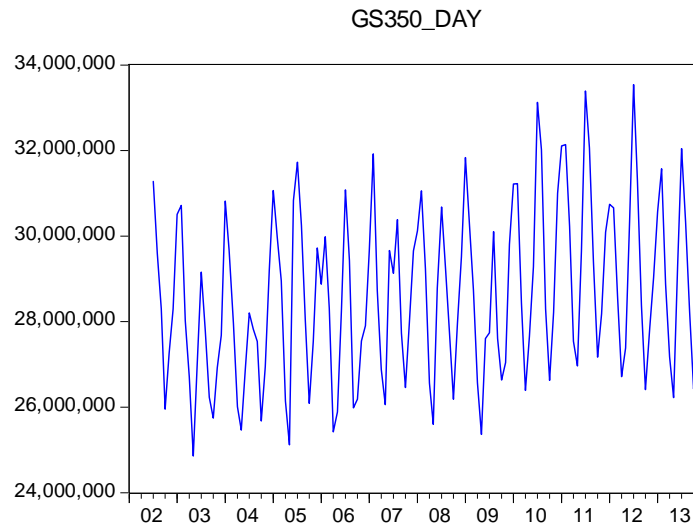
Year	Model as filed with Spline Trend	Model with Basic Linear Trend	Variance, %
2014	2,246,880,155	2,190,829,571	-2.5%
2015	2,228,386,374	2,155,421,973	-3.3%
2016	2,234,712,907	2,138,125,601	-4.3%
2017	2,229,642,449	2,114,551,592	-5.2%
2018	2,225,220,101	2,087,670,503	-6.2%
2019	2,229,610,682	2,072,396,458	-7.1%

- 1 b) The graphs below illustrate the persistence of a declining trend in Residential load
- 2 since July 2002.



## RESPONSES TO VULNERABLE ENERGY CONSUMERS COALITION INTERROGATORIES

- 1 No trends were used in the GS 50-1000 kW and GS 1-5 MW class models.



## **RESPONSES TO VULNERABLE ENERGY CONSUMERS COALITION INTERROGATORIES**

**INTERROGATORY 25:**

**Reference(s):**        **Exhibit 3, Tab 1, Schedule 1, page 7**

a) Given there is demonstrable trend in HDD and CDD why didn't THESL use the 20-year trend for each for purposes of its load forecast?

**RESPONSE:**

a) Toronto Hydro has used the 10-year average as its basis for the weather forecast in its previous filings. This approach was approved by the OEB in Toronto Hydro's prior rate applications. Additionally, based on its research as well as discussions with meteorological services, Toronto Hydro continues to believe that the usage of the 10-year average is relevant for the purposes of load forecasting.

However, as required by the OEB Filing Requirements, Toronto Hydro has also filed the alternative load forecast based on the 20-year HDD and CDD trend (refer to Table 1. Exhibit 3, Tab 1, Schedule 1, Appendix F-2). The variances presented in column 4 of the table clearly demonstrate that the difference in load forecasts based on the 10-year weather averages vs. 20-year trend is immaterial.

## **RESPONSES TO VULNERABLE ENERGY CONSUMERS COALITION INTERROGATORIES**

### **INTERROGATORY 26:**

**Reference(s): Exhibit 3, Tab 1, Schedule 1, page 8**

- a) What is the source for the historic population and unemployment values used in developing the load forecast models?
- b) Does this historic data differ (in terms of definition) from the forecast values produced by the Conference Board of Canada? If so, how was this accounted for in the load forecast?
- c) Please provide the Conference Board forecast used and indicate the date it was published.
- d) Is there a more recent Conference Board forecast now available? If so, please provide.
- e) Why was it necessary to “derive” the unemployment and population forecasts used in load forecast analysis as opposed to directly using the forecasts from the Conference Board of Canada?
- f) Please explain in more detail how the unemployment and population forecasts were “derived”.
- g) What “loss factors” were used for each customer class to translate the 2015-2019 forecasts by customer class from “purchased” to “delivered energy”?
- h) Please provide a data file that shows for 2015-2019:
  - i) The calculation of the “purchased kWh/day by class (before CDM adjustments) using the load forecast model proposed for each.
  - ii) The derivation of the annual kWh by class, as set out in Table 3 (Exhibit 3/Tab 1/Schedule 1, Attachment B-1, page 1).



## **RESPONSES TO VULNERABLE ENERGY CONSUMERS COALITION INTERROGATORIES**

1   **RESPONSE:**

2   a) Toronto Hydro used two sources of data for Unemployment Rate and Population: the  
3       Conference Board of Canada (quarterly historic and forecast data) and the Labour  
4       Force Study data from the City of Toronto (monthly historic data). City of Toronto  
5       data was used as independent social and economic variables in the class models  
6       because the data frequency match the load data, and more closely matches Toronto  
7       Hydro's operating area. The Conference Board of Canada data was used to derive the  
8       forecast for the City of Toronto Population and Unemployment data.

9

10   b) The historic population data provided by the City of Toronto includes only City of  
11       Toronto residents. The Conference Board of Canada data includes the population for  
12       the entire Toronto Census Metropolitan Area, which expands beyond the City of  
13       Toronto. A linear correlation between the two data sets was used to produce the  
14       forecast of the City of Toronto population variable for class load models.

15

16   c) The Conference Board of Canada data used for the forecast was obtained on February  
17       3, 2014. Please refer to the attached electronic data file: 3\_VECC\_26CandD.xlsx.

18

19   d) The most recent Metropolitan Data by the Conference Board of Canada are dated  
20       August 26, 2014. Please refer to the attached electronic data file:  
21       3\_VECC\_26CandD.xlsx.

22

23   e) The Conference Board of Canada data is quarterly annualized and includes  
24       population outside of Toronto, whereas Toronto Hydro's modelling is done on a  
25       monthly basis. Therefore, Toronto Hydro believes that using monthly historic data  
26       for the City of Toronto results in better explanatory properties of the models.

## RESPONSES TO VULNERABLE ENERGY CONSUMERS COALITION INTERROGATORIES

- 1
- 2 f) The population and unemployment rate forecasts were built using regression
- 3 modelling. Simple pair regression models were built to estimate the relationship
- 4 between the City of Toronto data and the Conference Board of Canada data. The
- 5 significance of the regressions/coefficients and high  $R^2$  values provide a high level of
- 6 confidence to produce the forecasts of the City of Toronto population and
- 7 unemployment rate based on the corresponding forecasts provided by the Conference
- 8 Board of Canada.
- 9
- 10 g) The total loss factors used to convert class purchased energy kWh into “delivered
- 11 kWh” are presented in the table below.

Customer class	Loss factor value
Residential	1.0376
GS<50 kW	1.0376
GS 50-999 kW	1.0376
GS 1000-4999 kW	1.0376
Large Use	1.0187
Street Lighting	1.0376
USL	1.0376

- 12 h) The requested data file is provided as 3\_VECC\_26H.xlsx.

## **RESPONSES TO VULNERABLE ENERGY CONSUMERS COALITION INTERROGATORIES**

### **INTERROGATORY 27:**

**Reference(s):**        **Exhibit 3, Tab 1, Schedule 1, page 10**  
                             **OEB Exh3\_T01\_S01\_Modelling Input Data**

#### **Preamble:**

Although the CSMUR class was not created until 2013 it is noted that historical values are reported starting in December 2007.

- a) Since there has been no analysis presented relating CSMUR usage with weather, please explain how the CSMUR usage for 2012 was “weather corrected”.
- b) Do the historical Residential kWh/day values for the period prior to December 2007 include any usage by customers that would now be classified as CSMUR?
- c) If so, doesn’t this distort the data used to develop the Residential load forecast model?

#### **RESPONSE:**

- a) The basis for the CSMUR average usage data was the analysis presented in Toronto Hydro’s EB-2010-0142 case (the basis for establishing this new class). In order to put this average use on the same CDD/HDD forecast basis as the other classes, this usage was normalized to the current ten-year historical average of HDD 10 and CDD 18.
- b) Toronto Hydro believes there are no customers and corresponding usage that would fall under the definition of the CSMUR class prior to December 2007.

**RESPONSES TO VULNERABLE ENERGY CONSUMERS  
COALITION INTERROGATORIES**

- 1 c) Not applicable.

## **RESPONSES TO VULNERABLE ENERGY CONSUMERS COALITION INTERROGATORIES**

### **INTERROGATORY 28:**

**Reference(s): Exhibit 3, Tab 1, Schedule 1, page 10**

- a) Please confirm that the forecast monthly peak demand referred to at lines 18-19 is the forecast billing peak demand for the class as opposed to the class' Non-Coincident or Coincident peak demand.
- b) Please provide the "historic relationship between energy and demand" used for each class (per lines 19-20) and indicate how it was determined.
- c) Please clarify which of the following approaches is used to calculate the billing demand for the relevant customer classes (net of CDM):
- Approach 1: First, forecast billed energy by class (prior to removing CDM); then second, apply historic relationship between energy and billed demand to determine billed demand (prior to removing CDM) and, finally, remove cumulative CDM impacts on billing demand (per Table 5), OR
  - Approach 2: First forecast billed energy by class (prior to removing CDM); then second, remove the cumulative energy CDM impacts and, finally, apply historic relationship between energy and billed demand to determine billed demand (with CDM removed).
- d) If Approach 1 was used please set out how the cumulative demand impacts (per Table 5) were calculated. In particular, where they determined by applying the historic energy-demand relationship for the class to the cumulative energy impacts in Table 4? If not, please provide a schedule that sets out the determination of the values in Table 5.

## RESPONSES TO VULNERABLE ENERGY CONSUMERS COALITION INTERROGATORIES

1     **RESPONSE:**

2     a) Confirmed.

3

4     b) The historic relationships between energy and demand are quantified using “billing  
5       factors”. Billing factors are coefficients calculated based on historic billing  
6       determinants (the data from the billing system):

- 7             • Hours used is defined as billed kWh divided by billed kW
- 8             • Power Factor is defined as billed kW divided by billed kVA

9

10       A three-year average is used for each billing factor as an approximation of the  
11       expected relationship between billed energy and demand. The table below contains  
12       the estimated billing factor values for the forecasting horizon for each customer class.

	GS 50-999 kW		GS 1000-4999 kW		Large Use	
	Hours Used	Power Factors	Hours Used	Power Factors	Hours Used	Power Factors
Jan	449	94%	516	93%	481	93%
Feb	458	94%	524	93%	487	93%
Mar	431	93%	513	92%	485	93%
Apr	422	92%	491	92%	471	93%
May	418	90%	488	91%	462	92%
Jun	413	90%	485	91%	451	92%
Jul	443	90%	500	91%	463	92%
Aug	432	90%	499	91%	474	92%
Sep	409	90%	480	91%	455	92%
Oct	415	91%	493	91%	467	92%
Nov	441	93%	517	92%	476	93%
Dec	437	93%	496	92%	461	93%

## **RESPONSES TO VULNERABLE ENERGY CONSUMERS COALITION INTERROGATORIES**

- 1 c) Toronto Hydro confirms that Approach 1 was used to calculate the billing demand for  
2 the relevant customer classes (net of CDM).  
3
- 4 d) The CDM demand reduction forecast was determined by applying the 2013 historic  
5 energy-demand savings relationships taken from current CDM programs, rather than  
6 the rate class billing factors. As the current CDM forecasting efforts are focused on  
7 energy savings, ratios were developed to produce the forecasted demand savings.  
8 Since the historical verified CDM results include both energy and demand savings  
9 attributed to each program, the relationship between these two values was used to  
10 determine the forecast demand savings associated with future energy savings from  
11 each historical programs.  
12
- 13 However, the forecast also includes savings allocated to potential new programs for  
14 2015-2020, which at the time were not fully developed. In these cases, the average of  
15 the energy-demand ratios taken from the historical verified results for the appropriate  
16 sector (Residential or General Service) were applied.

## **RESPONSES TO VULNERABLE ENERGY CONSUMERS COALITION INTERROGATORIES**

1 **INTERROGATORY 29:**

2 **Reference(s):** **Exhibit 3, Tab 1, Schedule 1, page 11**

3

4

5 a) Are the 7 TWh provincial total and THESL's share of 1.5 TWh Gross CDM or Net  
6 CDM values? If net, what is the "gross" equivalent and how was it calculated?

7

8

9 **RESPONSE:**

10 a) Both the provincial CDM total and Toronto Hydro's share are net CDM values. To  
11 determine the gross equivalent, best estimates of overall residential and non-  
12 residential net-to-gross ratios were derived from the 2013 historical verified results  
13 and these conversion factors were applied to all 2014 to 2019 future savings.



## RESPONSES TO VULNERABLE ENERGY CONSUMERS COALITION INTERROGATORIES

1 **INTERROGATORY 30:**

2 **Reference(s):**           **Exhibit 3, Tab 1, Schedule 1, pages 12-14**

3

4

5 a) Please complete the following schedule:

CDM Program Year	Forecast Gross CDM Impact by Calendar Year (MWh)					
	2014	2015	2016	2017	2018	2019
2006						
2007						
2008						
2009						
2010						
2011						
2012						
2013						
2014						
2015	x					
2016	x	x				
2017	x	x	x			
2018	x	x	x	x		
2019	x	x	x	x	x	
Total						

6 In doing so please ensure:

- 7 • The annual totals for 2014 to 2019 match those set out in Table 4 (Exhibit
- 8 3/Tab 1/Schedule) or explain why they do not.

## **RESPONSES TO VULNERABLE ENERGY CONSUMERS COALITION INTERROGATORIES**

- 1           • The table entries for the 2014-2019 program years match those set out in  
2           Table 6 or explain why they do not.
- 3   b) Please explain more fully how the values in Tables 5 and 7 were derived.
- 4   c) Please provide a schedule that sets out for each customer class and for the THESL  
5       overall for the individual years 2006-2013:
- 6       i) The annual delivered energy (net of CDM) – consistent with Appendix B-1, Table  
7           1
- 8       ii) The annual purchased energy (net of CDM) (i.e., (i) adjusted for losses)
- 9       iii) The historic cumulative CDM savings for each year (at the purchase level)  
10           consistent with the modelling data input.
- 11       iv) The annual purchases (grossed up by CDM) consistent with the modelling input  
12           data (i.e. (ii) + (iii)).
- 13   d) Please provide a schedule that sets out for each customer class and for THESL overall  
14       for the years 2014-2019:
- 15       i) The forecast of annual purchased energy (grossed up for CDM) based on the  
16           forecasting models.
- 17       ii) The assumed cumulative CDM savings for each year (at the purchase level)  
18           consistent with the modeling data input (i.e. Table 4).
- 19       iii) The assumed annual purchases net of CDM (i.e., (i) – (ii))
- 20       iv) The forecast total delivered energy – consistent with Appendix B-1, Table 1.
- 21

## RESPONSES TO VULNERABLE ENERGY CONSUMERS COALITION INTERROGATORIES

1     **RESPONSE:**

2     a)   Please see the table below:

Year	Forecast Gross CDM Impact by Calendar Year, MWh					
	2014	2015	2016	2017	2018	2019
<b>2006</b>	8,922	8,604	8,418	8,145	8,145	8,145
<b>2007</b>	40,551	33,385	17,469	14,397	12,062	12,062
<b>2008</b>	169,730	143,832	123,978	100,935	88,060	87,072
<b>2009</b>	179,820	173,975	163,892	132,442	91,029	66,835
<b>2010</b>	375,417	338,368	275,829	242,065	218,757	137,182
<b>2011</b>	324,863	323,128	320,221	316,837	311,448	307,827
<b>2012</b>	148,038	147,848	146,996	144,351	139,794	141,633
<b>2013</b>	171,597	169,593	165,585	159,644	151,130	140,527
<b>2014</b>	92,021	227,454	224,889	219,698	211,783	200,718
<b>2015</b>		99,619	246,300	243,546	237,924	229,353
<b>2016</b>			120,946	298,801	295,377	288,559
<b>2017</b>				147,823	365,202	359,874
<b>2018</b>					141,104	348,601
<b>2019</b>						127,665
<b>Total</b>	1,510,960	1,665,807	1,814,523	2,028,684	2,271,814	2,456,053

3     b) The cumulative forecast CDM demand impacts in Table 5 (Exhibit 3, Tab 1,  
4     Schedule 1) consist of incremental CDM savings for the current years plus the  
5     conservation and efficiency measure persistence from the prior years. The total gross  
6     forecast CDM demand impacts in Table 7 (Exhibit 3, Tab 1, Schedule 1) include  
7     incremental and persistence CDM savings starting from 2014 only. Please refer to  
8     Toronto Hydro's response to 3-VECC-28 part (d) for more details.

## RESPONSES TO VULNERABLE ENERGY CONSUMERS COALITION INTERROGATORIES

1 c)

2 i) Annual Delivered energy (net of CDM), MWh

Year	Total	Residential	CSMUR	GS <50 kW	GS 50-999 kW	GS 1000- 4999 kW	Large Use	Street Lighting	Unmetered Scattered Load
2006	25,518,717	5,298,514	13	2,453,136	9,814,888	5,184,936	2,600,460	110,621	56,150
2007	25,754,686	5,328,009	2,759	2,446,284	10,068,862	5,191,114	2,549,634	111,053	56,971
2008	25,141,414	5,167,623	9,068	2,315,274	10,000,241	5,009,791	2,471,249	111,324	56,846
2009	24,349,729	5,002,032	23,823	2,180,476	9,844,681	4,786,396	2,343,906	112,001	56,414
2010	24,751,657	5,156,666	50,171	2,095,766	10,191,135	4,829,372	2,263,690	112,750	52,107
2011	24,701,254	5,091,639	81,040	2,085,498	10,275,861	4,670,666	2,340,746	113,045	42,759
2012	24,564,922	5,033,529	112,183	2,124,568	9,978,193	4,794,684	2,367,028	113,595	41,142
2013	24,424,304	4,951,919	140,700	2,157,353	9,842,128	4,905,371	2,272,056	113,644	41,132

3 ii) Annual Purchased Energy (net of CDM), MWh

Year	Total	Residential	CSMUR	GS <50 kW	GS 50-999 kW	GS 1000- 4999 kW	Large Use	Street Lighting	Unmetered Scattered Load
2006	26,429,072	5,497,738	13	2,545,374	10,183,928	5,379,890	2,649,089	114,780	58,262
2007	26,674,874	5,528,342	2,862	2,538,265	10,447,451	5,386,300	2,597,313	115,229	59,113
2008	26,040,025	5,361,926	9,408	2,402,328	10,376,250	5,198,159	2,517,461	115,510	58,983
2009	25,220,979	5,190,109	24,719	2,262,462	10,214,841	4,966,364	2,387,737	116,212	58,535
2010	25,639,535	5,350,556	52,057	2,174,567	10,574,322	5,010,957	2,306,021	116,989	54,067
2011	25,585,782	5,283,085	84,088	2,163,913	10,662,233	4,846,283	2,384,518	117,295	44,367
2012	25,443,826	5,222,790	116,401	2,204,452	10,353,373	4,974,964	2,411,291	117,866	42,689
2013	25,299,716	5,138,111	145,991	2,238,470	10,212,192	5,089,813	2,314,544	117,917	42,679

## RESPONSES TO VULNERABLE ENERGY CONSUMERS COALITION INTERROGATORIES

1           iii) Historic cumulative CDM savings (adjusted for losses), MWh

Year	Total	Residential	CSMUR	GS <50 kW	GS 50-999 kW	GS 1000- 4999 kW	Large Use
2006	23,495	23,495	-	-	-	-	-
2007	167,263	104,575	-	15,462	16,547	15,481	15,199
2008	490,133	207,361	-	69,389	72,762	70,957	69,664
2009	609,966	184,883	83	100,173	104,202	107,827	112,798
2010	954,133	214,509	333	173,242	178,181	187,255	200,613
2011	1,164,865	216,524	680	223,917	252,944	234,869	235,932
2012	1,360,360	240,781	1,270	261,313	350,447	261,136	245,412
2013	1,387,802	250,110	1,582	265,269	404,035	245,249	221,557

2           iv) Annual Purchased Energy (gross of CDM), MWh

Year	Total	Residential	CSMUR	GS <50 kW	GS 50-999 kW	GS 1000- 4999 kW	Large Use	Street Lighting	Unmetered Scattered Load
2006	26,452,567	5,521,232	13	2,545,374	10,183,928	5,379,890	2,649,089	114,780	58,262
2007	26,842,137	5,632,917	2,862	2,553,727	10,463,998	5,401,781	2,612,511	115,229	59,113
2008	26,530,158	5,569,287	9,408	2,471,717	10,449,012	5,269,115	2,587,125	115,510	58,983
2009	25,830,945	5,374,992	24,802	2,362,635	10,319,043	5,074,191	2,500,535	116,212	58,535
2010	26,593,668	5,565,065	52,390	2,347,809	10,752,502	5,198,211	2,506,634	116,989	54,067
2011	26,750,647	5,499,608	84,767	2,387,829	10,915,177	5,081,152	2,620,450	117,295	44,367
2012	26,804,186	5,463,571	117,671	2,465,765	10,703,820	5,236,100	2,656,703	117,866	42,689
2013	26,687,518	5,388,221	147,573	2,503,739	10,616,227	5,335,062	2,536,100	117,917	42,679

## RESPONSES TO VULNERABLE ENERGY CONSUMERS COALITION INTERROGATORIES

1 d)

2 i) Purchased Energy Forecast (Gross of CDM), MWh

Year	Total	Residential	CSMUR	GS <50 kW	GS 50-999 kW	GS 1000- 4999 kW	Large Use	Street Lighting	Unmetered Scattered Load
2014	26,581,918	5,378,058	180,243	2,518,809	10,695,430	5,127,551	2,520,962	118,186	42,679
2015	26,717,287	5,351,790	223,444	2,537,647	10,821,824	5,112,373	2,509,148	118,383	42,679
2016	26,905,646	5,341,944	267,914	2,554,735	10,919,365	5,141,575	2,518,347	118,970	42,796
2017	26,941,980	5,299,322	303,788	2,557,026	10,955,323	5,144,351	2,520,715	118,776	42,679
2018	27,049,338	5,273,101	341,067	2,564,451	11,022,230	5,159,298	2,527,540	118,973	42,679
2019	27,154,864	5,246,882	380,388	2,572,330	11,086,803	5,170,422	2,536,190	119,170	42,679

3 ii) Cumulative CDM forecast (adjusted for losses), MWh

Year	Total	Residential	CSMUR	GS <50 kW	GS 50-999 kW	GS 1000- 4999 kW	Large Use
2014	1,563,466	259,277	1,919	303,907	500,871	265,428	232,066
2015	1,724,005	257,279	2,314	339,593	602,901	282,827	239,091
2016	1,878,262	251,873	2,780	373,704	711,116	296,944	241,845
2017	2,100,335	265,213	3,312	420,770	843,607	318,055	249,378
2018	2,352,397	285,173	3,888	472,016	986,638	343,974	260,708
2019	2,543,486	293,070	4,471	510,655	1,109,236	361,168	264,886

## RESPONSES TO VULNERABLE ENERGY CONSUMERS COALITION INTERROGATORIES

1                   iii) Purchased Energy Forecast (Net of CDM), MWh

Year	Total	Residential	CSMUR	GS <50 kW	GS 50-999 kW	GS 1000-4999 kW	Large Use	Street Lighting	USL
2014	25,018,451	5,118,781	178,325	2,214,903	10,194,559	4,862,123	2,288,897	118,186	42,679
2015	24,993,282	5,094,510	221,130	2,198,054	10,218,923	4,829,546	2,270,057	118,383	42,679
2016	25,027,385	5,090,072	265,134	2,181,031	10,208,249	4,844,631	2,276,502	118,970	42,796
2017	24,841,644	5,034,108	300,476	2,136,256	10,111,716	4,826,296	2,271,337	118,776	42,679
2018	24,696,941	4,987,928	337,179	2,092,435	10,035,592	4,815,323	2,266,832	118,973	42,679
2019	24,611,378	4,953,811	375,917	2,061,675	9,977,567	4,809,255	2,271,304	119,170	42,679

2                   iv) Delivered Energy Forecast (Net of CDM), MWh

Year	Total	Residential	CSMUR	GS <50 kW	GS 50-999 kW	GS 1000-4999 kW	Large Use	Street Lighting	USL
2014	24,152,773	4,933,289	171,862	2,134,640	9,825,134	4,685,931	2,246,880	113,903	41,132
2015	24,128,179	4,909,898	213,117	2,118,402	9,848,615	4,654,536	2,228,386	114,093	41,132
2015	24,161,161	4,905,620	255,526	2,101,996	9,838,327	4,669,074	2,234,713	114,659	41,245
2015	23,982,059	4,851,685	289,588	2,058,843	9,745,293	4,651,403	2,229,642	114,472	41,132
2015	23,842,519	4,807,178	324,961	2,016,610	9,671,928	4,640,828	2,225,220	114,662	41,132
2015	23,760,137	4,774,298	362,294	1,986,965	9,616,006	4,634,979	2,229,611	114,851	41,132

## RESPONSES TO VULNERABLE ENERGY CONSUMERS COALITION INTERROGATORIES

### INTERROGATORY 31:

**Reference(s):** Tab 1, Schedule 1, page 14 and Appendix C1

- a) Please explain more fully how the customer count for each class was “extrapolated” from historic levels.
- b) Please explain how the separate customer count forecasts for the Residential and CSMUR classes were developed.
- c) Please explain the basis for the 2014 Large Use class customer count.
- d) Please provide the customer count for each class as of June 30, 2014.

### RESPONSE:

- a) Customer forecasts are based on linear and non-linear trend models, as well as information on customer reclassification, where available. Different trend models were tested and the models producing the best fit and forecast were used. For the CSMUR class, projections for new customers were based on internal estimates of new and retrofit activities. The following table summarizes the models used for each class.

Customer Class	Model Used
Residential	Linear Trend
CSMUR	Internal Estimates
GS< 50 kW	Linear Trends, plus reclass information
GS 50-999 kW	Combination of Linear and Non-linear trends, plus reclass information
GS 1000-4999 kW	Linear Trend plus reclass information



## RESPONSES TO VULNERABLE ENERGY CONSUMERS COALITION INTERROGATORIES

Customer Class	Model Used
Large Use	Linear Trend plus reclass information
Street-lighting	Linear Trend
Unmetered Scattered Load	Flat forecast

- 1    b) For the purposes of Residential class forecasting, the historic monthly CSMUR  
2       customers were subtracted from the Residential customer counts (which originally  
3       included CSMUR customers). A linear trend was then applied to the historical  
4       residential customers only. The CSMUR class, as noted in part (a) above, was  
5       forecasted based on internal estimates of new and retrofit activities.  
6
- 7    c) The expected number of large user customers in 2014 is lower than 2013 due to  
8       customer reclassification.  
9
- 10   d) Please see the table below:

Customer class	Number of customers as of June 30, 2014
Residential	609,928
Competitive Sector Multi-Unit Residential	43,022
GS<50 kW	69,078
GS 50-1000 kW	11,852
GS 1-5 kW	447
Large Users	47
Street Lighting (Devices)	163,810
USL (customers)	888
USL (connections)	11,754

## **RESPONSES TO VULNERABLE ENERGY CONSUMERS COALITION INTERROGATORIES**

**INTERROGATORY 32:**

**Reference(s):**        **Exhibit 3, Tab 1, Schedule 1, page 12**

- a) Is THESL aware of any other Ontario electricity distributor that has based its load forecast CDM adjustments on estimates of “gross” CDM savings?
- b) Please explain why, if the CDM adjustments made by THESL are based on “gross” CDM savings the LRAMVA should only be based on “net” CDM savings.
- c) For each of the years 2015-2019 please set out THESL’s proposal, by customer class, for the CDM savings (kWh or kW as applicable) that it views should be used as the basis for calculating the LRAMVA.

**RESPONSE:**

- a) Toronto Hydro does not know whether other electricity distributors use net or gross savings for the purposes of their distribution load forecasts. Toronto Hydro maintains that the load forecast that is used to determine distribution rates most appropriately includes gross CDM savings, since these will contribute to the loads that the distributor ultimately charges rates on.
- b) Toronto Hydro believes that LRAMVA savings should properly be based on gross CDM savings, and in a previous LRAM application provided its LRAM amounts on that basis. However, Toronto Hydro also understands that the LRAMVA guidelines clearly indicate that LRAMVA is to be based on net CDM savings, and accepts that for the purposes of LRAMVA claims. However, Toronto Hydro maintains that for

## RESPONSES TO VULNERABLE ENERGY CONSUMERS COALITION INTERROGATORIES

- 1 the purposes of load forecasts used to develop distribution rates, gross CDM savings  
2 are most appropriately reflected in the forecast.
- 3 c) The table below shows the “net” incremental CDM estimates, which correspond with  
4 the gross CDM amounts used in the load forecast.

Customer Class	2015		2016		2017		2018		2019	
	MWh	MW	MWh	MW	MWh	MW	MWh	MW	MWh	MW
Residential	7,114		25,586		48,299		74,624		98,349	
CSMUR	144		522		987		1,528		2,016	
GS <50 kW	15,220		55,011		104,079		161,060		212,478	
GS 50-999 kW		73.1		238.2		417.2		588.4		736.2
GS 1000-4999 kW		19.8		64.4		112.8		159.1		199.1
Large Use		19.1		62.1		108.9		153.5		192.1
Total	22,479	112.0	81,119	364.7	153,366	638.9	237,213	901.0	312,843	1,127.4

## **RESPONSES TO VULNERABLE ENERGY CONSUMERS COALITION INTERROGATORIES**

1 **INTERROGATORY 33:**

2 **Reference(s):** **Exhibit 3, Tab1, Schedule 1, Appendix A-1**

3

4

5 a) Please provide an electronic version of Appendix A-1 where the forecast monthly  
6 2014-2019 values for columns 2-9 are included and the calculation of the annual  
7 delivered energy by customer class (per Appendix B-1, Table 1) is performed.

8

9

10 **RESPONSE:**

11 Please refer to the electronic file 3\_VECC\_26H.xlsx provided as part of Toronto Hydro's  
12 response to interrogatory 3-VECC-26.

## **RESPONSES TO VULNERABLE ENERGY CONSUMERS COALITION INTERROGATORIES**

**INTERROGATORY 34:**

**Reference(s):**        **Exhibit 3, Tab 2, Schedule 1, pages 1-7**

- a) Please confirm that the values shown in Tables 1 & 2 are in millions of dollars and the Appendix 2-H values are in thousands of dollars.
- b) With respect to page 2 (lines 18-23) does the \$8.1 M cover all of the OM&A costs incurred by THESL for the maintenance street-lighting assets? If not, what is the difference?
- c) Please confirm that the interest income shown excludes any interest income/expense associated with deferral or variance accounts.

**RESPONSE:**

- a) The values shown in Table 1 are in millions of dollars. The values shown in Table 2 and Appendix 2-H are in thousands of dollars.
- b) Yes. The \$8.1 million covers all of the OM&A costs incurred by Toronto Hydro for the maintenance street-lighting assets. Please refer to Exhibit 2A, Tab 5, Schedule 1, page 23 for details.
- c) Confirmed. The interest income shown excludes any interest income/expense associated with deferral or variance accounts.

## **RESPONSES TO VULNERABLE ENERGY CONSUMERS COALITION INTERROGATORIES**

**INTERROGATORY 35:**

**Reference(s):           Exhibit 3**

**Exhibit 8, Tab 1, Schedule 1, p. 7**

- a) Where are the customers, loads and revenues from THESL's Standby Power Service Classification reflected in Exhibit 3? Please address separately the revenues from the Service Charge and the revenues from the Distribution Volumetric Rate.
- b) Please provide a schedule that sets out for each of the years 2010-2013 the following:
- i) The number of Standby Power customers,
  - ii) The billed kW (by customer class)
  - iii) The annual revenues from Standby Power charges.
- c) What are the forecast billing quantities and associated revenues for 2014 and 2015?

**RESPONSE:**

- a) The historic and forecast customers, loads and revenues in Exhibit 3 do not include any loads or revenue from the Standby Volumetric rate. The standby volumetric rate is only applicable if a co-generation unit has been operational for an entire billing cycle and the customer has not utilized standby facilities. Historically, Toronto Hydro's Standby customers have utilized the standby facilities each month of each billing cycle, and have not incurred any volumetric standby charges. Their historical and forecast loads and revenues are included in the rate classes the customer resides in. Based on historical information, Toronto Hydro does not forecast any standby revenue.

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- 1     b)
- 2         i) There are four customers with load displacement co-generations.
- 3
- 4         ii) For the billed kW/kVA (by customer class) please see table below. As noted in
- 5             part (a) above, the billed kVA amounts were billed under the standard distribution
- 6             rates, not under the Standby rates.

Year	Annual Billed kVA GS - 1000 to 4999 kW	Annual Billed kVA LU
2010	48,152	658,768
2011	47,464	589,676
2012	46,331	544,921
2013	34,546	527,095

- 7         iii) Please see the table below for the Standby customers annual distribution revenue.
- 8             The only revenue from the Standby service is the monthly Standby Service
- 9             Charge.

Year	Customer Charge	Standby Service Charge	Distribution Charge	Standby Volumetric Charge	Total
2010	\$ 84,474	\$ 9,632	\$2,420,051	\$ -	\$2,514,157
2011	\$ 87,639	\$ 9,632	\$2,511,806	\$ -	\$2,609,077
2012	\$ 106,640	\$ 9,651	\$2,762,775	\$ -	\$2,879,066
2013	\$ 118,851	\$ 9,672	\$2,668,590	\$ -	\$2,797,113

- 10     c) Please see part (a).