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March 2, 2015

via RESS – signed original to follow by courier

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

Dear Ms. Walli:

**Re: Toronto Hydro-Electric System Limited (“Toronto Hydro”)
Custom Incentive Rate-setting Application for 2015-2019 Electricity Distribution Rates
and Charges – Undertaking Responses
OEB File No. EB-2014-0116**

Toronto Hydro writes to the Ontario Energy Board (“OEB”) in respect of the above-noted matter.

Further to my letter dated February 27, 2015, enclosed are the following responses from Days 6, 7 and 8 of the Oral Hearings:

- J6.4;
- J7.1, J7.2, J7.3, J7.9, J7.10, J7.11; and
- J8.1 to J8.10.

Also enclosed is an updated response to J1.1 and an excel file (labelled Appendix B) which is part of the response to J6.4. The response to J8.11 will be filed together with the Undertaking Responses for Day 9 on March 4, 2015.

Please contact me if you have any questions.

Yours truly,

[original signed by]

Daliana Coban

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encl.:DC\acc

cc: Charles Keizer, Torys LLP
Crawford Smith, Torys LLP
Amanda Klein, Toronto Hydro
Intervenor of Record for EB-2014-0116

ORAL HEARING UNDERTAKING RESPONSE TO CANADIAN UNION OF PUBLIC EMPLOYEES, LOCAL ONE

UNDERTAKING NO. J1.1:

Reference(s):

Please look into whether THESL tracks critical accidents, injuries, and workplace health and safety issues for externally contracted services with respect to the contractors identified in the evidence.

RESPONSE:

Toronto Hydro has various systems and processes in place that verify the design and construction contractors' compliance with internal and external safety standards, and track critical accidents, injuries, and workplace health and safety issues as they arise. These include Initial and Ongoing Third-Party Qualification Reviews, Internal Quarterly Contractor Reviews, Comprehensive Third-Party Inspections and Contractor Incident Notification framework. All of which are described below.

Toronto Hydro notes that the costs associated with contractor non-compliance with legislative and/or contractual safety requirements, as well as the costs of safety-related incidents (if any) caused by contractor staff are borne by the outside contractors themselves and have no bearing on the utility's actual costs.

1. Initial and On-Going Third Party Qualification Reviews.

Independent third party assessments of contractors' past safety performance, confirmation of contractors' insurance / workplace compensation coverage meeting all internal and external requirement, and legislative compliance verification of the

ORAL HEARING UNDERTAKING RESPONSE TO CANADIAN UNION OF PUBLIC EMPLOYEES, LOCAL ONE

1 contractors' safety policies and procedures. Following initial verification, these
2 assessments are performed on a regular basis.

2. Internal Quarterly Contractor Reviews

3
4
5 Quarterly internal reviews of contractor safety performance based on the following seven
6 criteria:

- 7 1) Registration with OHSAS 18001
- 8 2) WSIB Performance Index (CAD7 and NEER statements)
- 9 3) Safety professional staffing ratio (one safety professional/70 workers)
- 10 4) Supervisor and management inspections
- 11 5) Safety incident investigations completion timing
- 12 6) Continuous improvement in safety incident rates
- 13 7) Notices of violation, orders, or other written infractions from regulatory agencies

3. Third Party Inspections

14
15
16 Comprehensive daily inspections by a third-party construction verification and audit firm
17 (SNC Lavalin) that review the quality of contractors' work, verify adherence to
18 contractual terms and include review of safety compliance among other assessment
19 categories.

4. Contractor Incident Notification and Reporting

20
21
22 Mandatory notification to Toronto Hydro of any safety incidents reportable to an outside
23 agency (e.g., Ministry of Labour), including reporting of critical injuries and results of
24 investigations/corrective actions conducted following an incident.

**ORAL HEARING UNDERTAKING RESPONSE TO CANADIAN
UNION OF PUBLIC EMPLOYEES, LOCAL ONE**

1 Several contractor firms employed by Toronto Hydro are certified to OHSAS 18001 – an
2 internationally recognized safety management system traceable to the Standards Council
3 of Canada. More generally, the average Total Recordable Injury Frequency (TRIF) value
4 for all external design and construction firms in 2014 was 1.22, which is better than
5 Toronto Hydro’s own average TRIF performance over the 2012-2014 timeframe.

} /C

**ORAL HEARING UNDERTAKING RESPONSE TO ENERGY
PROBE RESEARCH FOUNDATION**

1 **UNDERTAKING NO. J6.4:**

2 **Reference(s):**

3

4 To provide consultant's report on pole dates.

5

6 **RESPONSE:**

7 A copy of the Streetlighting Inventory Study is attached as Appendix A to this Schedule.

8 This study was filed with the OEB in the Streetlighting proceedings (EB-2009-0180 et

9 al.). The data underlying the study was contained in an Excel spreadsheet. Attached as

10 Appendix B to this Schedule is an excerpt of the spreadsheet relating to the vintages of

11 the streetlighting poles.

**Toronto Hydro-Electric System Ltd.
Streetlighting Division**

**Quality Assurance and Quality
Control Plan for Streetlight
Inventory**

Toronto, Ontario

June 2010

Toronto Hydro-Electric System Ltd.
Streetlighting Division

**Quality Assurance and Quality
Control Plan for Streetlight
Inventory**

Toronto, Ontario

June 2010

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Project # 5041

Client Project Team

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Project Team	Richard Cook Glenn Winn Gary Soper Greg Russell John Farancato Robert McNabney Tony Huynh Andrew Herczeg

HDR | iTRANS Project Team

Principal	Chris Philp
Project Manager	Maurice Masliah
Technical Team	Kevin Shen Andrew O'Connor Barry McLaughlin
Quality Assurance	Scott Prugh
Data Collection	Horizon Data Services Ltd.

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Map Inspection Form - Quality Control for Streetlight Inventory

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1. PURPOSE

The HDR | iTRANS Quality Assurance and Quality Control plan defines the attributes and values for the Toronto Hydro Streetlight Inventory project. In addition, this plan provides the specifications, minimum standards, and procedures for the data to be delivered to Toronto Hydro.

The quality control and quality assurance procedure is for HDR | iTRANS, and does not specify the procedures used by Horizon Data Services Limited or Toronto Hydro-Electric System Ltd.

2. ATTRIBUTES AND VALUES

An *attribute* is a category that is assessed for a streetlight, such as for example “Pole Ownership”. A *value* is the option or answer that the corresponding attribute can take, such as “Streetlighting”, “Distribution”, “Bell”, or “TTC”. The source for the data is derived either from the Toronto Hydro GEAR System which is then validated during the field data collection, or is collected directly from the field site visit. Mandatory values are values which must be collected as part of the minimum data requirements.

The selection of attributes and values was determined through a series of working meetings between HDR | iTRANS and Toronto Hydro.

The attributes and values are broken up into five categories and provided in the following tables:

- Table 1: Pole
- Table 2: Bracket
- Table 3: Luminaire
- Table 4: Street Area Type
- Table 5: Photos

Table 1: Pole

POLE			
ATTRIBUTE	VALUE	SOURCE	MANDATORY
GEAR FID #		Toronto Hydro Gear System	Y
Pole Ownership		Field Collection	Y
	Streetlighting	Field Collection	
	Distribution	Field Collection	
	Bell- Wood/Alley	Field Collection	
	TTC - Steel+Supports TTC Wires	Field Collection	
Address/Location		Field Collection	
Location Type	Street/Laneway/Other	Field Collection	Y
Address No		Field Collection	
Street 1		Toronto Hydro Gear System	Y
Street1 Suffix		Toronto Hydro Gear System	
Street1 Direction		Toronto Hydro Gear System	
Street 2		Field Collection	Y - intersection
Street2 Suffix		Field Collection	
Street2 Direction		Field Collection	
Survey Date/Time		System Generated	Y
Mounted Luminaire	Pole / On a structure, wall mount / Underpass	Field Collection	Y
Pole Number		Toronto Hydro Gear System	
Foundation	Base mounted / Direct buried	Field Collection	Y
Pole Class	A/B/C/D/E/F/G/1/2/3/4/5/6/78/9/0	Toronto Hydro Gear System	
Pole Height (ft)	25 or less/30/32.5/35/40	Toronto Hydro Gear System	Y
Installation Year	YY	Field Collection	
Distance to closest pole	25 or less/35/45/55	Field Collection	Y Default is 25

(m)			
Pole Material	Concrete/Aluminum/Wood/Steel/Iron/Fiberglass	Toronto Hydro Gear System	Y
Pole Style	Standard/Decorative	Field Collection	
Pole Condition	1/2/3 (1 - Good/2 - Monitor/3 - Replace)	Field Collection	Y
Condition Comments		Field Collection	Y -If Condition is 3
Handhole Cover Condition	1/2/3 (1 - Good/2 - Monitor/3 - Replace)	Field Collection	
Electrical Supply	Overhead/Underground	Field Collection	Y
Is there a handwell?	Y/N	Field Collection	Y
Handwell Condition	1/2/3 (1 - Good/2 - Monitor/3 - Replace)	Field Collection	
Attachments		Field Collection	
Distribution Wires	Y/N	Field Collection	
3rd Party Electrical	Y/N	Field Collection	
Service Wires	Y/N	Field Collection	
Traffic Light	Y/N	Field Collection	
Temporary Feed	Y/N	Field Collection	
Support Wire	Y/N	Field Collection	
3rd Party Box	Y/N	Field Collection	
Control Relay	Y/N	Field Collection	
TTC Wire	Y/N	Field Collection	
Others	Y/N	Field Collection	
Other Comments		Field Collection	Y - Others is Y
EXCEPTION	Y/N (Default: N)	Field Collection	
EXCEPTION Comments		Field Collection	Y - If Exception is Y

Table 2: Bracket

BRACKET

ATTRIBUTE	VALUE	SOURCE	MANDATORY
Brackets installed?	Y/N	Field Collection	Y
Number of Brackets	1/2 (Default is 1)	Field Collection	Y
#1 Bracket Type	Top mount/Decorative/Tapered Elliptical/AR9/Lane bracket/Pedestrian Bracket	Toronto Hydro Gear System	Y - If Bracket Installed is Y
#1 Arm Length (ft)	2 and less/6/8 or more	Toronto Hydro Gear System	
#2 Bracket Type	Top mount/Decorative/Tapered Elliptical/AR9/Lane bracket/Pedestrian Bracket	Toronto Hydro Gear System	Y - If Bracket Installed is Y & Number of Brackets is 2
#2 Arm Length (ft)	2 and less/6/8 or more	Toronto Hydro Gear System	

Table 3: Luminaire

LUMINAIRE			
ATTRIBUTE	VALUE	SOURCE	MANDATORY
Number of Luminaires	0/1/2/3/4/5	Field Collection	Y
Cluster?	Y/N (Default: N)	Field Collection	Y
#1 Luminaire Type	Acorn/Cobra Head/Decorative/Oriental hat/Wall Pack/Pedestrian Light	Field Collection	Y
#1 Wattage Color	Red/Gold	Field Collection	
#1 Wattage Value	5/7/10/15/20/25/40	Toronto Hydro Gear System	
#1 On Top	(Gray / Blue) Photocell / (Brown / Black) Shorting cap	Toronto Hydro Gear System	
#2 Luminaire Type	Acorn/Cobra Head/Decorative/Oriental hat/Wall Pack/Pedestrian Light	Field Collection	Y - If Number of Luminaire is greater than 1
#2 Wattage Color	Red/Gold	Field Collection	
#2 Wattage Value	5/7/10/15/20/25/40	Toronto Hydro Gear System	
#2 On Top	(Gray / Blue) Photocell / (Brown / Black) Shorting cap	Toronto Hydro Gear System	

Table 4: Street Area Type

Street Area Type			
ATTRIBUTE	VALUE	SOURCE	MANDATORY
Street - Area Type	Overhead supply/Residential Underground Supply/Mixed Use Underground	Field Collection	Y
Surveyor's Comments		Field Collection	

Table 5: Photos

PHOTOS			
Photo	Digital Photo	Field Collection	Y - if Condition is 3

3. QUALITY CONTROL METHODS

There are several types of errors which may occur during the data collection process, including:

1. Missed poles that are in GEAR. A publicly accessible pole in GEAR was not visited by the surveyor.
2. Missed streetlights that are not in GEAR. A streetlight not in GEAR was not visited by the surveyor, such as a laneway light.
3. Systematic misclassification of data entry. Examples include coding Bell poles as distribution, or using the wrong label for the address information. The survey is purposely entering information, but is consistently wrong. This type of problem should be addressed through additional training.
4. Data entry errors. The surveyor miss keyed while entering data. This includes missing or skipped attributes.

Given the large number of attributes and streetlights, the quality control methods are based upon a sampling approach. There are four types of quality control methods

- Logical checks
- GIS map inspection
- Online street view validation
- Field visit validation

3.1 Logical Checks

The design of the software used for data collection has most of the logical checks built in, however, there are some additional checks than can be conducted through automated checks.

The logic checks include:

- Installation year greater than 2010 or smaller than 1950.
- Number of brackets = 1, but no information on the first bracket provided.
- Number of brackets = 2, but no information on the second bracket provided.
- Number of luminaires = 1, but no information on the first luminaires provided.
- Number of luminaires = 2, but no information on the second luminaires provided.
- If the number brackets = 1 or 2 then the number of luminaires should be the same.
- If ownership is Bell then Wattage should equal 7.
- If bracket type equals AR9 then the bracket length should be 8 feet or more.
- If there is a temporary feed attachment then the area type should be underground.
- If the electrical supply equals underground then the area type may be either residential underground supply or mixed use underground.
- If the electrical supply equals overhead then the area type should be overhead supply.

In addition, the logical checks include checks for missing values:

- General
 - Missing Ownership

- Missing Location
 - Missing Mounted Luminaries
 - Missing Street Area Type
- Exception is "Yes"
 - Missing Exception Comments
- Ownership is "Street lighting Side"
 - Missing Distance to Closest Pole
 - Missing Pole Height
 - Missing Pole Material
 - Missing Style
 - Missing Foundation
 - Missing Electrical Supply
 - Missing Pole Condition
- Pole Condition is "3-Replace"
 - Missing Pole Condition Comments
 - Missing Photo
- Handwell Installed is "Yes"
 - Missing Handwell Condition
- Other Attachment is "Yes"
 - Missing Other Attachment Comments
- Bracket is Installed
 - Missing Number of Brackets
 - Missing Bracket Type
- Bracket is Installed and Number of Bracket is 2
 - Missing Bracket Type 2
- No of Luminaries > 0
 - Missing Luminaries Type 1
- No of Luminaries > 1 and Cluster is No
 - Missing Luminaries Type 2

Use the Logical Checks Form, found in the Appendix, to record results.

Responsibility: Kevin Shen

3.2 GIS Map Inspection

By displaying the collected data on a GIS map, a visual inspection may be conducted to look for GEAR poles that may have been skipped. Since surveyed poles are color coded red, green pole stand out and can be investigated further. GEAR poles which are not publically accessible will remain green.

GIS maps can also be used to look for patterns, such as showing all distribution poles and seeing if there are any strange or unexpected patterns. By querying subsets of the data, it should be possible to conduct a visual inspection of the pattern of streetlights to look for

outliers in the data, such as for example a TTC pole not on an arterial. The following GIS visualization can be conducted under this quality control check:

- Show all green poles (all poles not surveyed). Look for publically accessible poles that were not surveyed.
- Show all TTC poles. Compare against known streetcar routes.
- Show all Distribution poles. Look for outliers and patterns.
- Show all Bell poles. Look for outliers and patterns.
- Show all poles by Street Area Type. Look for outliers and patterns.

Use the Map Inspection Form, found in the Appendix, to record results.

Responsibility: Barry McLaughlin

3.3 Street View Validation

Online street view allows for a cost-effective validation of the key attributes listed in **Table 6**.

Table 6: Street View Validation Attributes

Attribute
Pole Ownership
Address/Location
Foundation
Pole Material
Pole Style
Brackets installed?
Number of Brackets
Bracket Type
Number of Luminaires
Cluster?
Street Area Type

The limitations of this method for quality control are

- Online street views are several years old, so there is the potential that things may have changed since the image was captured. Therefore caution should be used when validating.
- Several attributes can not be distinguished from the online images.

Use the Map Inspection Form, found in the Appendix, to record results.

Responsibility: Barry McLaughlin

3.4 Field Visit Validation

This quality control method involves going to a subzone which has been completed and validating the data which has been collected. This method is a duplication of the task of the surveyor and consists of validating all of the data collected in Table 1 to Table 5. The HDR | iTRANS Streetlight Inventory and Condition Review Training Material detail the criteria and method for conducting field visits.

All attributes can be checked using this method.

Use the Field Inspection Form, found in the Appendix, to record results.

Responsibility: Andrew O'Connor and Horizon Data Services Ltd.

4. QUALITY ASSURANCE PROCEDURE

The field collection process followed by Horizon Data Services Ltd.

1. Supervisors received infield training (in pairs) and the Hydro rep (John Farancato) for 4 hrs following the in class training. The supervisor is then required to do a 8 hrs shift (typical full time shift) in collecting data individually. This is monitored by Hydro rep who answers or classify streetlights.
2. The counter goes through a 4 hrs one and one infield training with the supervisor. If the counter passes this test then he is required to do an 8hr peer training under the supervision of another supervisor. If successful the counter starts collecting data on his own. The supervisor is there for support.
3. Both the supervisor and the counter are required to carry a log book which will be returned to Horizon upon completion of project. These log books will be available for inspection by HDR | iTRANS. The log book will include any abnormalities or problems encountered in the field. The log books will record the start, end time and date and the daily number of poles collected (all poles that are inserted and or deleted will be recorded in the log book)
4. The Supervisors will do random checks along with the counter after completion of each subzone. They will check against any abnormality along any street such as temporary overhead wires, exceptions, change in pattern of ownership and laneways. After approval is given the counter will start his next assigned subzone.
5. The supervisors may record any condition in his her log book and check against the PDA info at any time to ensure the data collection is accurate.
6. Supervisors will do daily checks and will spend a minimum of 30 minutes with each counter
7. Supervisors will meet regularly to review progress and to make adjustments accordingly. This may include recommending additional training for counters and or replacement

The field collection process followed by HDR | iTRANS.

8. Conduct site visits to observe the processes used by the surveyors in the field and use the Field Inspection Form, found in the Appendix to record the following:
 - a. Based on field observations, was the process being performed properly?
 - b. Did the supervisors have any questions, comments, or concerns?
 - c. Do the supervisors, surveyors and other staff seem to understand the procedure and process?
9. Every two weeks completed subzones will be received from the surveyors. If the aggressive schedule can be maintained, it is estimated that between 60 and 100 subzones per two week period will be completed. There are 537 subzones in total.
10. Individual subzones are assembled into a single data set.
11. Run automated logical checks
12. Inspect the data using GIS map inspection
13. Conduct stratified randomized sampling using online street view validation
14. Conduct field visit validation

Responsibility: Scott Prugh

5. ESTIMATE OF DATA RELIABILITY

Use Equation 8.13 page 285 from David J. Sheskin Handbook of Parametric and Nonparametric Statistical Procedures. Fourth Edition. Chapman & Hall/CRC Publishers. 2007 in order to estimate the reliability of the collected data:

$$\sqrt{n} = \frac{z_{\alpha/2} \sqrt{p_1 p_2}}{w}$$

Where

n = the sample population

$z_{\alpha/2}$ = the standard score, or how many standard deviations an observation is above or below the mean. For a 95% confidence level, $z_{\alpha/2} = 1.96$.

p = sample proportions. In this case it is the proportion of data that is in error, let's say 5%.

Given that the sample size is fixed, we want to solve for the confidence interval as follows:

$$w = \frac{z_{\alpha/2} \sqrt{p_1 p_2}}{\sqrt{n}}$$

Next, we plug in the values. **The following values are for illustration purposes only. The following values are shown in order to illustrate the methodology:**

n = 40 (number of poles sampled in the subzone. The average subzone has 400 poles.)

p = 0.05 (proportion of poles with errors)

$z_{\alpha/2} = 1.96$ (5% confidence interval)

$$0.068 = \frac{1.96\sqrt{0.05 \times 0.95}}{\sqrt{40}}$$

Which gives us a confidence interval of 0.068, or 7% for a subzone where the sample we inspected had a 5% error rate. This means we can be 95% confident that the true error rate is between 5% and 12% (5 + 7%).

Note that this methodology is appropriate for large populations (it is appropriate for evaluating the reliability of the entire study with over 100,000 poles). For subzones, which are small, the estimate is too conservative and in this example the confidence interval is even smaller than 7%.

Responsibility: Maurice Masliah

Appendix A

Quality Control Forms

Map Inspection Form - Quality Control for Streetlight Inventory

SubZone			Date			Reviewer		
Check of Surveyed Poles (Green/Red) Completed _____								
Use Google Street View to confirm poles are publically accessible.								
List GEAR FID # of un- surveyed poles.								
Check of TTC Poles Completed _____								
Use Google Street View to confirm poles are on street car routes.								
List GEAR FID # of error poles.								
Check of Distribution Poles Completed _____								
Use Google Street View to confirm poles ownership.								
List GEAR FID # of error poles.								
Check of Bell Poles Completed _____								
Use Google Street View to confirm poles ownership.								
List GEAR FID # of error poles.								
Check of Street Area Type Completed _____								
Use Google Street View to confirm street area type.								
List GEAR FID # of error poles.								

Field Inspection Form - Quality Assurance for Streetlight Inventory

[illegible]

ORAL HEARING UNDERTAKING RESPONSE TO VULNERABLE ENERGY CONSUMERS COALITION

UNDERTAKING NO. J7.1:

To confirm whether the criteria for general industry peer group in the Towers Watson Study are disjunctive, as opposed to conjunctive.

RESPONSE (PREPARED BY TOWERS WATSON):

The peer group selection criteria for the named general industry peer group are disjunctive. Some of the companies listed will have employees located in the GTA and reported revenues within the defined range but an employee headcount that sits outside of the defined range. Likewise, some organizations have reported revenues and an employee headcount that sit within the defined range, but no employees within the GTA.

The criteria aimed to deliver a peer group that is (a) broadly reflective of the types of organization that Toronto Hydro would compete with from a talent management perspective, (b) likely to have similar roles at a similar level to those selected for the benchmarking study, and (c) are large enough to provide robust market data for comparison. The latter of these three points is a significant one. Having initially restricted our view to organizations that met the revenue and headcount criteria and that were headquartered (e.g., as a parent organization) in the GTA, only seven companies satisfied the criteria. It was important, therefore, to take a broader view in order to ensure that the resulting data offered a genuine reflection of the market rather than one that was perhaps at risk of being skewed (upwards or downwards) by a small number of organizations.

The general industry named peer group is intended to provide a supplementary data point for comparison to the named energy peer group to ensure that any industry bias is understood and balanced in the context of general industry norms.

ORAL HEARING UNDERTAKING RESPONSE TO SOCIETY OF ENERGY PROFESSIONALS

1 **UNDERTAKING NO. J7.2:**

2 **Reference(s):**

3

4 To provide the 2014 Toronto Hydro safety metric and the 2012 and 2013 results for both
5 Toronto Hydro and the external contractors.

6

7 **RESPONSE:**

8 Please see the following table.

YEAR	Toronto Hydro TRIF	Contractor Average TRIF
2012	2.15	1.89
2013	2.26	1.96
2014	1.18	1.22*
Three-Year Average	1.86	1.61

9 **Toronto Hydro notes that the 2014 contractor average TRIF value presented in the
10 original response to OH Undertaking J1.1 was incorrect. An updated response to that
11 undertaking has been filed to correct the record.

ORAL HEARING UNDERTAKING RESPONSE TO ONTARIO ENERGY BOARD STAFF

1 **UNDERTAKING NO. J7.3:**

2

3 **To reconcile previous information on engineering and design costs.**

4

5 **RESPONSE:**

	Engineering	Design
Type of Work	• Conducting the Asset Management Planning Process illustrated in Ex. 2B, Section D1 including developing the scopes of work and high-level planning estimates for particular projects¹; and • Developing the design and construction standards that will be applied to arrive at the specific designs for projects/jobs.	• Developing the specific designs (e.g. equipment layouts, selection of specific types of material and equipment) for particular scopes of work (i.e. projects), including developing the detailed design estimate for particular projects.
Resources	• Conducted internally by Professional Engineers represented by the Society of Energy Professionals. • <i>Note:</i> In some instances, Toronto Hydro uses third party engineering firms to perform specific studies (e.g. Asset Condition Assessments)	• Conducted internally by engineering technologists represented by CUPE. • Conducted externally by design and construction contractors. <i>Note:</i> In some instances, Toronto Hydro uses specialized design firms to perform complex design work.
Costs	• Engineering costs are typically allocated to capital projects using a percentage-based methodology. • Over the plan, the costs will be tracked through the Planning, Engineering and Support Costs metric (Exhibit 2B, Sec. C3.2), and are expected to range between 6.2% and 6.8% of the annual distribution capital costs (2B-SEC-19).	• Internal design costs are typically charged directly to the project through project work orders. In a given year, internal design costs typically range between 6% to 8% of the planned (i.e. non-reactive) distribution capital work executed by internal resources. • External design and construction costs are charged directly to the project through project work orders. Typically, the design component ranges between 5% to 10% of the external design and construction cost.

¹ Under the ICM framework, projects were commonly referred to as jobs.

ORAL HEARING UNDERTAKING RESPONSE TO SCHOOL ENERGY COALITION

UNDERTAKING NO. J7.9:

Reference(s):

To explain the four-year 30 percent increase in average Executive compensation costs.

RESPONSE:

	2011	2012	2013	2014	2015	2011 v. 2015
Executive FTEs	9.2	7.4	8	6.9 6.3 ¹	6	-35%
Total Salary and Wages	\$ 2,840,668	\$ 2,554,144	\$ 2,661,984	\$ 2,469,509	\$ 2,424,089	-15%
Average Total Salary and Wages per FTE	\$308,768	\$345,155	\$332,748	\$391,986	\$404,015	31%

As demonstrated by the table above, total salary and wages for the executive workforce have decreased by 15% between 2011 and 2015. Toronto Hydro respectfully submits that average compensation per FTE is not a useful or reliable indicator to assess the reasonableness of the utility's compensation levels, and that the analysis should focus on total compensation levels (including benefits), which have decreased by 19% from 2011 to 2015 with respect to the executive workforce.

In addition, Toronto Hydro notes that the latest executive compensation benchmarking study commissioned by the Human Resources Committee of Toronto Hydro Corporation's Board of Directors in October 2012 (1B-SEC-8, Appendix N) indicates that compensation levels for Named Executive Officers at Toronto Hydro are generally at or below the market competitive levels.

¹ In preparing this response, Toronto Hydro determined that the 2014 FTE number had been rounded in Appendix A to Undertaking TC J2.4. The actual number of FTEs for 2014 was 6.3.

ORAL HEARING UNDERTAKING RESPONSE TO SCHOOL ENERGY COALITION

Variance explanations for average total salary and wages per executive FTE:

- **2011 vs. 2012:** Although total salary and wages decreased by 10.1% from 2011 to 2012, average salary and wages per FTE increased by 11.8% over the period due to the timing of the variable performance payout² relative to the reduction of FTEs from 2011 to 2012. For greater clarity, the variable performance payout in 2012 was driven by the number of FTEs in 2011 (9.2), but the average compensation per FTE in 2012 was calculated based on the number of FTEs in that year (7.4).
- **2012 vs. 2013:** Although total salary and wages increased by 4.2% from 2012 to 2013, average salary and wage per FTE decreased by 3.6% over the period due to the timing of the variable performance payout relative to the reduction of FTEs from 2012 to 2013. For greater clarity, the variable performance payout in 2013 was driven by the number of FTEs in 2012 (7.4), but the average compensation per FTE in 2013 was calculated based on the number of FTEs in that year (8.0).
- **2013 vs. 2014:** Although total salary and wages decreased by 7.2% from 2013 to 2014, average compensation per FTE increased by 17.8% over the period due to base salary and variable performance pay increases for the executives that acquired expanded portfolios in 2013 to accommodate the permanent reduction of the executive workforce by approximately two FTEs. Consistent with the explanations above, the increase is also affected the timing of the variable performance payout relative to the reduction of FTEs from 2013 to 2014.
- **2014 vs. 2015:** Although Toronto Hydro forecasts total salary and wages to decrease by 1.8% from 2014 to 2015, average salary and wages per FTE are expected to increase by 3.1% over the period due to the timing of the variable performance payout relative to the reduction of FTEs from 2014 to 2015.

² Variable performance pay for a given year is incurred in the first quarter of the following year, after the company's annual results are finalized and approved by the Board of Directors.

ORAL HEARING UNDERTAKING RESPONSE TO ONTARIO ENERGY BOARD STAFF

1 **UNDERTAKING NO. J7.10:**

2 **Reference(s):**

3

4 To explain why it is reasonable for Toronto Hydro to pay Toronto Hydro Corporation a
5 6.16 percent coupon rate on the \$45 million promissory note.

6

7 **RESPONSE:**

8 The \$45 million promissory note was part of an earlier instrument – 2003 Series 1 Note –
9 held by the parent company at the time that the note was issued. As a result, the \$45
10 million promissory note was issued at the same rate as the original instrument.

ORAL HEARING UNDERTAKING RESPONSE TO ONTARIO ENERGY BOARD STAFF

UNDERTAKING NO. J7.11:

Reference(s):

To explain what sort of capital can be put in-service in the 2015-2019 period so that the AFFO-to-debt metric does not go below the 13 percent threshold, assuming no increase in OM&A and rates.

RESPONSE:

The AFFO-to-debt metric is forecasted to be 12.3% at the end of 2015. However, due to rate and calendar year synchronization in 2016, Toronto Hydro anticipates a sustained increase in the metric such that the capital expenditures (Exhibit 2A, Tab 6, Schedule 3) and related in-service additions (response to OH J4.3) in evidence for the 2016-2019 period are expected to result in an AFFO-to-debt metric above 13%.

This determination was made based on assumptions consistent with information included in Toronto Hydro's application, including:

- OM&A increases in 2016-2019 as per the proposed rate framework in Exhibit 1B, Tab 2, Schedule 3;
- Deemed ROE rates not changing over the CIR term; and
- Debt service rates over the CIR term that are based on projected market rates.

Synchronization of the rate and fiscal years in 2016 results in better alignment of cash inflows and outflows, causing a sustained improvement in the AFFO-to-debt metric which, as indicated in the rating agency report, is credit positive.

ORAL HEARING UNDERTAKING RESPONSE TO ONTARIO ENERGY BOARD STAFF

UNDERTAKING NO. J8.1:

Reference(s):

To explain why there would be no difference to the impact of 2015 PILs using IFRS instead of USGAAP.

RESPONSE:

The calculation of PILs for 2015 is the same under both IFRS and USGAAP accounting standards. The calculation of PILs is based on the computation of taxable income derived from accounting income. Net income for accounting purposes, whether calculated using IFRS or USGAAP, is adjusted for accounting/tax differences to arrive at taxable income.

Key differences between IFRS and USGAAP are outlined in Exhibit 1C, Tab 4, Schedule 4, pages 33 and 34. With reference to this table, the remainder of this response focusses on the differences that affect net income for accounting purposes (rather than balance sheet differences – a balance sheet reclass difference does not impact the calculation of PILs).

One key difference outlined is the derecognition of PP&E under IAS16. In arriving at taxable income using IFRS net income, the derecognition of PP&E is reversed. Taxable income would therefore be the same if calculated using USGAAP.

A second key difference is with regards to Employee Benefits under IAS19. In order to arrive at taxable income using both USGAAP and IFRS, only actual payments made are deducted. Any gains or losses recognized for accounting purposes under both standards

ORAL HEARING UNDERTAKING RESPONSE TO ONTARIO ENERGY BOARD STAFF

1 are reversed in arriving at taxable income. Using either accounting standard results in the
2 same calculated PILs.

3

4 A third key difference is with regards to borrowing costs under IAS23. For accounting
5 purposes under both standards, borrowing costs that are directly attributable to a capital
6 asset are capitalized. There is a difference in the quantum that can be capitalized under
7 both standards. In arriving at taxable income, borrowing costs capitalized are reversed
8 and only the actual interest expense is deducted. Taxable income would therefore be the
9 same under IFRS and USGAAP.

10

11 A fourth key difference is with regards to provisions, contingent assets and liabilities
12 under IAS37. For accounting purposes, amounts in respect of asset retirement
13 obligations are capitalized and then deducted either as depreciation, accretion or interest
14 expense. In arriving at taxable income, these expenses are reversed. For tax purposes, a
15 deduction is only made for actual expenses incurred. PILs is therefore the same under
16 both standards.

ORAL HEARING UNDERTAKING RESPONSE TO ONTARIO ENERGY BOARD STAFF

1 **UNDERTAKING NO. J8.2:**

2 **Reference(s):**

3

4 To explain why the land lease was classified as pre-paid under US GAAP, and to confirm
5 whether THESL has paid the land lease full amount upfront.

6

7 **RESPONSE:**

8 The cost related to the land lease was paid upfront in 1995 and, for accounting purposes,
9 was appropriately recorded as a prepaid expense under Generally Accepted Accounting
10 Principles (“GAAP”). This lease also qualified as an operating lease under GAAP.

11

12 Please see the response to Undertaking J2.16 in which the accounting treatments under
13 US GAAP, IFRS and the APH have been described.

14

15 Under IFRS IAS 17, land leases are considered finance leases since it is deemed that
16 significant risks and rewards of ownership of the land are transferred to the lessee – in
17 this case, Toronto Hydro.

18

19 This accounting treatment under IFRS is consistent with the treatment under APH as
20 directed in Article 425 – Leases on pages 6 and 8 and, as a consequence, results in its
21 eligibility to be included in Rate Base.

ORAL HEARING UNDERTAKING RESPONSE TO ONTARIO ENERGY BOARD STAFF

1 **UNDERTAKING NO. J8.3:**

2 **Reference(s):**

3

4 To explain why the corresponding liability is not being recorded (for the entry in
5 Technical Conference J2.16).

6

7 **RESPONSE:**

8 There is no corresponding liability for the entry in TC J2.16 as the land lease was paid
9 upfront in 1995.

**ORAL HEARING UNDERTAKING RESPONSE TO ENERGY
PROBE RESEARCH FOUNDATION**

1 **UNDERTAKING NO. J8.4:**

2 **Reference(s):**

3

4 To comment on whether a revenue offset would be used for energy stored at off-peak
5 rates and injected into the system at peak rates.

6

7 **RESPONSE:**

8 Toronto Hydro expects that variances in commodity rates between energy stored at off-
9 peak and energy injected back into the system when needed would be captured within the
10 distributor's Cost of Power account. All energy costs from Toronto Hydro's sources of
11 supply accrue to the Cost of Power, and variances between these costs and the
12 commodity rates paid by customers are accounted for through the normal wholesale
13 settlement process with the IESO and the RSVA Power account.

ORAL HEARING UNDERTAKING RESPONSE TO SOCIETY OF ENERGY PROFESSIONALS

1 **UNDERTAKING NO. J8.5:**

2 **Reference(s):**

3

4 To advise whether additional debt will be issued, beyond the two issues of \$245 million.

5

6 **RESPONSE:**

7 Toronto Hydro forecasts that it will issue approximately \$200 million per year of new
8 and incremental debt over the CIR period.

ORAL HEARING UNDERTAKING RESPONSE TO VULNERABLE ENERGY CONSUMERS COALITION

1 **UNDERTAKING NO. J8.6:**

2 **Reference(s):**

3

4 To provide a revised response to Tables 1 and 2 in J2.28-VECC-74, where values are
5 shown by class for 2015 to 2019 and include impact of CDM programs implemented in
6 2014.

7

8 **RESPONSE:**

9 a) The revised version of the Table 1 includes the proposed “net” CDM impacts of
10 programs implemented in 2014 and onwards.

11

12 b) The revised version of the Table 2 shows the “gross” CDM impacts by class,
13 equivalent to Table 1 (net CDM impacts).

ORAL HEARING UNDERTAKING RESPONSE TO VULNERABLE ENERGY CONSUMERS COALITION

1 **Table 1 – Net CDM impacts:**

Customer Class	2014		2015		2016		2017		2018		2019	
	MWh	MW	MWh	MW	MWh	MW	MWh	MW	MWh	MW	MWh	MW
Residential	6,332		22,673		40,936		63,295		89,079		112,049	
CSMUR	128		463		837		1,295		1,825		2,297	
GS <50 kW	13,527		48,790		88,251		136,552		192,363		242,146	
GS 50-999 kW	30,961	54.9	111,576	189.2	201,775	352.6	312,183	528.1	439,730	694.9	553,481	835.8
GS 1000-4999 kW	8,494	14.9	30,543	51.2	55,203	95.4	85,390	142.8	120,242	187.9	151,312	226.0
Large Use	6,003	14.3	21,034	49.4	37,762	92.0	58,257	137.8	81,747	181.3	102,589	218.1
Total	65,445	84.1	235,078	289.7	424,764	540.0	656,973	808.7	924,987	1,064.1	1,163,874	1,279.8

2 **Table 2 – Gross CDM Impacts:**

Customer Class	2014		2015		2016		2017		2018		2019	
	MWh	MW	MWh	MW	MWh	MW	MWh	MW	MWh	MW	MWh	MW
Residential	8,888		31,522		57,035		87,620		120,475		149,649	
CSMUR	181		645		1,168		1,795		2,470		3,070	
GS <50 kW	19,063		67,952		123,113		189,229		260,352		323,567	
GS 50-999 kW	43,611	78.4	155,365	265.2	281,442	481.2	432,560	724.2	595,096	980.0	739,545	1,204.3
GS 1000-4999 kW	11,950	21.2	42,507	71.7	76,969	130.1	118,278	195.9	162,690	265.0	202,147	325.7
Large Use	8,329	20.5	29,083	69.2	52,407	125.6	80,386	189.0	110,307	255.7	136,793	314.2
Total	92,021	120.1	327,073	406.2	592,135	736.9	909,868	1,109.1	1,251,389	1,500.7	1,554,770	1,844.2

ORAL HEARING UNDERTAKING RESPONSE TO VULNERABLE ENERGY CONSUMERS COALITION

1 **UNDERTAKING NO. J8.7:**

2 **Reference(s):**

3

4 To quantify the resulting revenue-to-cost ratio and total bill impact for the street lighting
5 class of applying the same methodology as was applied to other classes.

6

7 **RESPONSE:**

8 Below are revised tables to include the overall revenue deficiency from the Streetlight
9 rate class, and the allocation of the amounts from the CSMUR and Streetlighting classes.

	Revenue Shortfall from COS Model	% of Total Shortfall
RESIDENTIAL	-\$19,250,934	58%
GS < 50 kW	-9,870,438	30%
LARGE USER	-1,590,628	5%
SMALL SCATTER LOAD	-579,223	2%
STREETLIGHT	-2,080,556	6%
Total	-33,371,778	100%

10 The revenue recovery amounts are different from the \$4.1 million shown in the response
11 to VECC-55 reflecting updates to the filing that have occurred since.

ORAL HEARING UNDERTAKING RESPONSE TO VULNERABLE ENERGY CONSUMERS COALITION

	Rev Recovery
RESIDENTIAL	\$2,611,079
GS < 50 kW	\$1,338,766
LARGE USER	\$215,743
SMALL SCATTER LOAD	\$78,562
STREETLIGHT	\$282,194
	\$4,526,344

- 1 The resulting revenue-to-cost ratio and bill impact for the Streetlighting class are shown
2 below.

	As Proposed	Undertaking Response
Revenue-to-cost ratio	82.1	83.2
Total Bill Impact (\$)	-\$0.56	-\$0.42
Total Bill Impact (%)	-4.1%	-3.1%

ORAL HEARING UNDERTAKING RESPONSE TO VULNERABLE ENERGY CONSUMERS COALITION

UNDERTAKING NO. J8.8:

Reference(s):

To cite any OEB Decisions supporting the understanding that revenue-to-cost ratios within updated Board guidelines are within an acceptable range.

RESPONSE:

Section 2.1 of the Board's EB-2007-0667 Report is as follows (emphasis added):

This section sets out an overview of the Board's policy as it relates to revenue-to-cost ratios.

The Board has concluded that an incremental approach is appropriate in light of the influencing factors identified below, and that a range approach is preferable to implementation of a specific revenue-to-cost ratio. Influencing factors aside, a revenue-to-cost ratio of one may not be achievable or desirable for other reasons (for example, to accommodate different rate design objectives). In addition, as a practical matter there may be little difference between a revenue-to-cost ratio of near one and the theoretical ideal of one.

The Board has therefore adopted, with some modification, the proposal set out in the Discussion Paper of creating bands or ranges of tolerance around revenue-to-cost ratios of one. As the influencing factors are addressed over time, the Board expects that these bands will narrow and move closer to one.

ORAL HEARING UNDERTAKING RESPONSE TO VULNERABLE ENERGY CONSUMERS COALITION

1
2 The ranges established by the Board are set out in section 3, and are
3 intended to be minimum requirements. To the extent that distributors can
4 address influencing factors that are within their control (such as data
5 quality), they should attempt to do so and to move revenue-to-cost ratios
6 nearer to one. As indicated in the Report other issues such as addressing
7 the fact that the Uniform System of Accounts is less detailed than required
8 to accommodate the methodology and certain rate design matters are
9 beyond the control of individual distributors. **These exogenous issues**
10 **also need to be addressed before moving to an appropriate specific**
11 **revenue-to-cost ratio.**

12
13 Section 3.4.4.1 of the Board's EB-2012-0383 Report is as follows (emphasis added):
14

15 The Board will not change the CA Model; however, given the possible
16 misuse of or misunderstanding of the CA Model, the Board will augment
17 the instructions or worksheets contained in the CA Model to deal with some
18 of the issues raised in the course of this consultation.
19

20 **The Board remains concerned with the allocation of costs to daisy-chain**
21 **configured systems. The disparity in the cost allocation result between**
22 **a street lighting customer configuration with multiple devices per**
23 **connection and a street lighting customer with a device to connection**
24 **ratio close to 1:1 appears to be disproportionate when compared to**
25 **actual costs to serve the street lighting rate class. The Board believes**
26 **that further investigation is necessary before making a determination.**

ORAL HEARING UNDERTAKING RESPONSE TO VULNERABLE ENERGY CONSUMERS COALITION

1 The Board will issue a letter shortly to begin a consultation process for this
2 single issue.

3
4 Toronto Hydro has also located the following OEB Decisions (relevant pages attached)
5 which support the utility's proposal to maintain the revenue to cost ratios within the
6 guideline ranges set by the OEB:

- 7
8 1. **EB-2011-0319 – Espanola Regional Hydro Distribution Corporation (see**
9 **Appendix A).** The OEB accepted the proposed revenue-to-cost ratios, which
10 were in the guideline ranges, even though the ratios for the GS<50kW and USL
11 classes moved further from unity compared with the ratios determined by the Cost
12 Allocation Model.
- 13 2. **EB-2013-0160 – Orangeville Hydro Limited (see Appendix B).** The OEB
14 accepted a Settlement Proposal with the revenue-to-cost ratios, which were in the
15 guideline ranges, even though the ratios for GS less than 50kW, Sentinel Lights,
16 Street Lighting and USL classes moved further from unity compared with the
17 ratios determined by the Cost Allocation Model.
- 18 3. **EB-2013-0159 – Oakville Hydro Electricity Distribution (see Appendix C).**
19 The OEB accepted a Settlement Proposal with the revenue-to-cost ratios, which
20 were in the guideline ranges, even though the ratios for GS 50 to 999kW class
21 moved further from unity compared with the ratios determined by the Cost
22 Allocation Model.
- 23 4. **EB-2012-0146/EB-2012-0380 – London Hydro Inc. (see Appendix D).** The
24 OEB accepted a Settlement Proposal with the revenue-to-cost ratios, which were
25 in the guideline ranges, even though the ratios for Residential class moved further
26 from unity compared with the ratios determined by the Cost Allocation Model.

ORAL HEARING UNDERTAKING RESPONSE TO VULNERABLE ENERGY CONSUMERS COALITION

1
2 Toronto Hydro's proposal for revenue-to-cost ratios for all classes maintains the model
3 derived revenue-to-cost ratio or moves it closer to unity, with the exception of the Street
4 Lighting class. The ratio of the Street Lighting class is reduced from the model-derived
5 value and moves further from unity solely due to maintaining the current 2014 rates for
6 this class, to mitigate for the potential impact of the investigation noted in the Board's
7 EB-2012-0383 Report noted above. Toronto Hydro notes that the proposed Street
8 Lighting ratio is above the ratio last approved, and closer to unity.

Revenue-to-Cost Ratios

Customer Class	Updated Current Ratios	Proposed Ratios for Test Year	Board's Target Range - Floor	Board's Target Range - Ceiling
Residential	93.4%	95.2%	85%	115%
GS < 50 kW	113.9%	115.9%	80%	120%
GS > 50 kW	135.7%	120.0%	80%	120%
Street Lighting	68.7%	70.0%	70%	120%
Sentinel Lighting	68.3%	80.0%	80%	120%
Unmetered Scattered Load	114.3%	114.9%	80%	120%

Before any adjustments, the GS > 50 kW class exceeded the ceiling of the Board's target ranges and the Street Lighting and Sentinel Lighting classes fell below the floor of the Board's target ranges. ERHDC proposed to move the Street Lighting and Sentinel Lighting classes to the floor of the respective target ranges and move the GS > 50 kW class to the ceiling of the target range on one year.

VECC submitted that this approach is appropriate and consistent with what had been approved by the Board for other distributors. Given that all the classes are within the Board's target ranges, Board staff had no concerns with the revenue-to-cost ratio proposal.

BOARD FINDINGS

The Board finds that the proposed revenue-to-cost ratios are reasonable and consistent with the Board's revenue-to-cost ratio policy.

Monthly Service Charges ("MSC")

ERHDC is proposing to maintain the same fixed/variable proportions for all the customer classes. The proposed MSC are all within the Board's policy ranges, except for the GS > 50 kW class. ERHDC's current and proposed MSCs are presented in the following table:

Evidence: Ex 3, Tab 1, Sch 2; Ex 3, Tab 2, Sch 2, 3, 4, 5; Load Forecast Model; 8.1-Energy Probe-39; 8.1-VECC-30; 8.1-Staff-35; 8.1-Staff-36; 8.1-Staff-37; 8.1-Energy Probe-40; 8.1-Energy Probe-41; 8.1-Energy Probe-42; 8.1-Energy Probe-43; 8.1-Energy Probe-44; 8.1-Energy Probe-45; 8.1-VECC-29 & OHL Clarification on IR Responses; 8.1-VECC-30; 8.1-VECC-31; 8.1-VECC-32; 8.1-VECC-33; 8.1-VECC-34; 8.1-VECC-35; 8.1-VECC-36; and Responses to VECC Clarification Questions 2, 3, 4 and 5.

Supporting parties: Orangeville Hydro, EP, SEC and VECC.

- 8.2 Is the proposed cost allocation methodology including the revenue-to-cost ratios appropriate?

Complete Settlement: For the purposes of settlement of the issues in this proceeding, the Parties agree that the cost allocation methodology is appropriate and results in revenue-to-cost ratios that are within the Board's permitted ranges. Orangeville Hydro is not proposing any adjustments to the revenue-to-cost ratios resulting from the cost allocation methodology, and the Parties agree that this is consistent with Board policy.

Table 9: Changes to Revenue to Cost Ratios

Rate Classification	Test Year Service Revenue Requirement	Revenue Offset	Test Year Base Revenue Requirement	OHL Proposed 2014 Revenue to Cost Ratios Original	OHL Proposed 2014 Revenue to Cost Ratios Settlement	Difference	Board Target Low	Board Target High
Residential	3,388,798	313,142	3,075,657	103.0%	101.7%	-1.35%	85%	115%
GS < 50 kW	844,056	59,773	784,283	110.8%	116.0%	5.16%	80%	120%
GS >50 to 4999 kW	867,604	78,871	788,733	84.2%	84.9%	0.69%	80%	120%
Sentinel Lights	11,534	1,585	9,948	80.3%	80.0%	-0.27%	80%	120%
Street Lighting	101,243	11,463	89,780	87.3%	86.6%	-0.71%	70%	120%
Unmetered and Scattered Load	11,668	1,254	10,414	109.4%	116.8%	7.47%	80%	120%
Total	5,224,903	466,089	4,758,814					

Evidence: Ex 7, Tab 1, Sch 1, 2, 3; Cost Allocation Model, Appendix 2-P; 2-W; Ex 3, Tab 2, Sch 1; 8.2-Staff-38; 8.2-Staff-39 & OHL Clarification on IR Responses; 8.2-Energy Probe-47; 8.2-Energy Probe-48; 8.2-VECC-37; 8.2-VECC-38; and 8.2-VECC-39.

Supporting parties: Orangeville Hydro, EP, SEC and VECC.

- 8.3 Is the proposed rate design including the class-specific fixed and variable splits and any applicant-specific rate classes appropriate?

Complete Settlement: For the purposes of settlement of the issues in this proceeding, Orangeville Hydro agrees to reduce the proposed GS>50 fixed charge to \$160, to move it closer to the ceiling in the Board's cost allocation model, and to adjust the variable charge accordingly. For the purposes of settlement of the issues in this proceeding, and subject to the adjustment noted herein, the Parties agree that the proposed rate design including class-specific fixed and variable splits and any applicant-specific rate classes are appropriate.

Revenue-to-Cost Ratios

- In its Application, Oakville Hydro had proposed to adjust the revenue to cost ratios for any rate class that was above the upper boundary of the Board's Policy range to the upper boundary and to adjust the revenue to cost ratios of the remaining class proportionately.

In response to Board staff interrogatory number 8.2-Staff-44, Oakville Hydro corrected Board Appendix 2-P and proposed that it change the revenue-to-cost ratio for the Embedded Distributor rate class to 100% and change the revenue-to-cost ratio for all classes below 100% to 97.54% to provide a more equitable balance of revenue-to-cost ratios.

The Parties have agreed to the approach proposed in response to Board staff interrogatory number 8.2-Staff-44 with the exception that the Residential rate class would not change from the original proposal of 98.53%. The agreed to revenue-to-cost ratios are summarized in the Settlement Table 24.

Settlement Table 24 - Proposed Revenue-to-Cost Ratios

Rate Class	8.2-Staff-44		Settlement Agreement
	Corrected	Proposed	
Residential	98.53%	97.54%	98.53%
General Service<50 kW	120.00%	120.00%	120.00%
General Service>50 kW	96.99%	97.54%	95.86%
General Service>1,000 kW	94.72%	97.54%	95.86%
Street Lighting	95.01%	97.54%	95.86%
Sentinel Lighting	120.00%	120.00%	120.00%
Unmetered	120.00%	120.00%	120.00%
Embedded Distributor	120.00%	120.00%	100.00%

8.3 Is the proposed rate design including the class-specific fixed and variable splits and any Applicant-specific rate class appropriate?

7. COST ALLOCATION

7.1 Is London Hydro's cost allocation appropriate?

Status: Complete Settlement

Supporting Parties: London Hydro, Energy Probe, LPMA, SEC, VECC

Evidence: Application: Exhibit 7

OEB IR # 40

LPMA IR # 41

VECC IR # 39

The Parties have agreed for the purposes of settlement that the revenue-to-cost ratios for the 2013 Test Year, reflecting the agreed-upon 2013 Test Year Revenue Requirement, will be as set out in Settlement Table #12: 2013 Test Year Revenue to Cost Ratios, below.

Settlement Table #12a: 2013 Test Year Revenue to Cost Ratios

Customer Class	Revenue Requirement 2013 Cost Allocation Model - Line 40 from O1 of CA.	CA Adjusted 2013 Test Year NET Distribution Revenue at Existing 2012 Rates	Revenue Allocated from 2013 Cost Allocation Model Line 19 from O1 in CA	Total Revenue	Revenue Cost Ratio	Proposed Revenue to Cost Ratio
Residential	\$ 37,252,650	\$ 38,071,995	\$ 2,239,705	\$ 40,311,700	108.21%	108.28%
GS <50 kW	9,516,761	8,305,148	504,264	8,809,412	92.57%	92.57%
GS 50 to 4,999 kW	15,604,675	12,708,730	748,115	13,456,845	86.24%	86.24%
GS 1,000 to 4,999 kW (Co-Generation)	229,772	268,447	6,622	275,069	119.71%	119.71%
Large Use >5MW	1,343,950	1,698,767	41,781	1,740,548	129.51%	115.00%
Street Light	1,576,108	1,100,695	80,793	1,181,488	74.96%	80.00%
Sentinel	65,751	48,707	3,379	52,086	79.22%	80.00%
Unmetered Scattered Load	156,180	87,516	7,973	95,489	61.14%	80.00%
Standby Power	580,185	385,460	17,935	403,395	69.53%	80.00%
TOTAL	\$ 66,326,032	\$ 62,675,465	\$ 3,650,567	\$ 66,326,032		

Settlement Table #12b: 2013 Test Year Revenue to Cost Ratios

Customer Class	2013 Proposed Service Revenue Requirement	2013 Proposed Miscellaneous Revenue per Cost Allocation Model	2013 Proposed Base Revenue Requirement	Proposed Revenue to Cost Ratio	Policy Range
Residential	\$ 40,858,761	\$ 2,239,705	\$ 38,619,056	108.28%	85 - 115
GS <50 kW	8,922,967	504,264	8,418,703	92.57%	80 - 120
GS 50 to 4,999 kW	12,900,821	748,115	12,152,706	86.24%	80 - 120
GS 1,000 to 4,999 kW (Co-Generation)	250,692	6,622	244,070	119.71%	80 - 120
Large Use >5MW	1,555,669	41,781	1,513,888	115.00%	85 - 115
Street Light	1,281,325	80,793	1,200,532	80.00%	70 - 120
Sentinel	53,301	3,379	49,922	80.00%	80 - 120
Unmetered Scattered Load	128,119	7,973	120,146	80.00%	80 - 120
Standby Power	374,377	17,935	356,442	80.00%	80 - 120
TOTAL	\$ 66,326,032	\$ 3,650,567	\$ 62,675,465		

The Parties agreed to conform to the requirements as specified in the interrogatory LPMA Question # 39 b). The interrogatory proposed that the GS 50 to 4,999 kW (Co-Generation) class be decreased in order to achieve a revenue-to-cost ratio of 120%. Further, the revenue-to-cost ratio for the Large User class would be at 115%, the USL class at 80%, and Standby Power class at 80%. The interrogatory also proposed that the Applicant "...increase the classes with the lowest revenue to cost ratio until it reaches the next lowest class and then increase these ratios until the next lowest class and so on, until the revenue shortfall is eliminated."

The shortfalls as to revenue-to-cost ratios were realized with the Streetlight class and the Sentinel class, by raising the proposed revenue-to-cost ratio of each to 80%. A small remaining balance was applied to the Residential class to clear the variance.

7.2 Are the proposed revenue-to-cost ratios for each class appropriate?

Status:	Complete Settlement
Supporting Parties:	London Hydro, Energy Probe, LPMA, SEC, VECC
Evidence:	Application: Exhibit 7 VECC IR # 40 SEC IR # 39/ 40

For the purposes of settlement, the Parties have accepted the revenue-to-cost ratios for the 2013 Test Year, as set out under issue 6.1, above, and that no further adjustments will be required from 2014-2016 as part of this Agreement. The Parties acknowledge that London Hydro's revenue-to- cost ratios remain subject to further Board policy changes of general application over this period.

**ORAL HEARING UNDERTAKING RESPONSE TO CONSUMERS
COUNCIL OF CANADA**

1 **UNDERTAKING NO. J8.9:**

2 **Reference(s):**

3

4 To provide the 2015-2019 projections for SAIDI and SAIFI without MEDs and Loss of
5 Supply, or to explain why they cannot be provided.

6

7 **RESPONSE:**

8 Please refer to interrogatory response 2A-EP-8, part c.

ORAL HEARING UNDERTAKING RESPONSE TO CONSUMERS COUNCIL OF CANADA

1 **UNDERTAKING NO. J8.10:**

2 **Reference(s):**

3

4 To explain why productivity fleet and productivity facilities are not included in the 2015
5 KPIs.

6

7 **RESPONSE:**

8 The Fleet and Facilities Key Performance Indicators were removed from the utility's
9 corporate scorecard in 2015 due to the substantial completion in 2014 of the major
10 activities that drove the inclusion of these metrics onto the Scorecard. The completed
11 activities included vacation of the 28 Underwriters and 5800 Yonge facilities and targeted
12 reduction of Toronto Hydro's fleet count. There are no major activities associated with
13 either fleet size or facilities footprint reduction planned for 2015.