

Ontario Energy Board

IN THE MATTER OF the *Ontario Energy Board Act, 1998*,
S.O. 1998, c. 15, Sched. B, as amended:

AND IN THE MATTER OF an application by Kitchener-
Wilmot Hydro Inc. for an Order or Orders approving or fixing
just and reasonable rates and other service charges for the
distribution of electricity, effective January 1, 2014.

**ENERGY PROBE RESEARCH FOUNDATION
("ENERGY PROBE")
CROSS-EXAMINATION COMPENDIUM**

EB-2009-0267

ONTARIO ENERGY BOARD

IN THE MATTER OF the *Ontario Energy Board Act, 1998*,
S.O. 1998, c.15 (Schedule B);

AND IN THE MATTER OF an Application by Kitchener-Wilmot
Hydro Inc. to the Ontario Energy Board for an Order approving just
and reasonable rates and other charges, effective May 1, 2010.

**REPLY SUBMISSION
TO
FINAL ARGUMENTS
OF KITCHENER-WILMOT HYDRO INC.**

A. INTRODUCTION

1. Kitchener-Wilmot Hydro Inc. (“KW Hydro” or the “Applicant”) owns and operates the electricity distribution system located in the City of Kitchener and the Township of Wilmot.
2. On August 31, 2009, KW Hydro filed an application with the Ontario Energy Board (“the Board”) under section 78 of the Ontario Energy Board Act, 1998, S.O. 1998, c. 15, (Schedule B), seeking approval for changes to the rates that KW Hydro charges for electricity distribution to be effective May 1, 2010. The Board has assigned the File Number EB-2009-0267 to this Application (the “Application”).
3. Further, on September 18, 2009, KW Hydro submitted its Asset Management Strategy as Appendix E to Exhibit 2.
4. The Board issued a Notice of Application and Hearing on September 14, 2009. The School Energy Coalition (“SEC”), Energy Probe Research Foundation (“Energy Probe”) and the Vulnerable Energy Consumers Coalition (“VECC”) applied for Intervenor status and cost eligibility. No objections were received and the Board allowed all Intervenors.
5. The Board issued Procedural Order No. 1 on October 15, 2009 declaring its intent to continue with the Application by way of a written hearing. Procedural Order No. 1 further allowed for a set of written interrogatories. In accordance with the Board’s Order, Board staff interrogatories were submitted to KW Hydro on October 23, 2009 and Intervenor interrogatories were submitted on October 26, 2009.

- h. KW Hydro will provide, if requested by the Board, comparisons of Capital Forecasts to Actual in its next Cost of Service application. KW Hydro does not believe this is necessary; however, as its capital expenditures are reasonable, well documented and justified in this application.
- i. KW Hydro has concerns regarding the HST issue raised by all Intervenors. KW Hydro believes that this is a global issue that the Board needs to address from an industry-wide perspective and that a Board approved variance account is required. KW Hydro submits its argument on this issue in detail at paragraphs 135 ~142 below.

Working Capital and Working Capital Allowance (“WCA”)

- 27. Through the interrogatory process, the Applicant has adjusted its eligible distribution expenses from \$155,315,589 to \$155,151,613, resulting in a revised WCA of \$23,272,742 based on the “15% of specific OM&A accounts formula approach: referred to at page 15 of the Board’s Filing Requirements.
- 28. Board staff made the following submissions on the WCA calculation:
 - a. KW Hydro should update the WCA in determining the revenue requirement and associated distribution rates when preparing its draft Rate Order, to reflect any changes in controllable expenses and load forecasts as determined by the Board in its Decision, as well as to reflect the most current estimate to the RPP commodity price of \$0.06215/kWh, reflected in the Board’s RPP Report of October 15, 2009, as well as updates to reflect current uniform and retail transmission prices. In doing so, Board staff requested that sufficient detail and discussion should be provided by KW Hydro to aid other parties in understanding the numbers provided and their derivation.
 - b. Board staff accepts the Applicant’s use of 15% as appropriate at this time and takes no issue with KW Hydro’s methodology for calculating its WCA. In fact, Board staff suggested that the alternate method of calculating the WCA suggested by Energy Probe in interrogatory #40 should not be adopted by the Board at this time. While it is a more sophisticated method than has been traditionally used by distributors, Board staff noted that the determination of the WCA is a rough proxy at this time, particularly in light of the implementation of smart metering and TOU pricing affecting the estimation of working capital requirements.

- c. KW Hydro did not complete a lead/lag study as part of this Application; however, as a result of the interrogatory process, it has agreed to conduct a lead-lag study as part of its next cost of service rebasing application. This is supported by Board staff. This initiative was also supported by VECC and Energy Probe.

29. SEC, Energy Probe and VECC agreed with Board staff that the WCA should be adjusted to reflect the new energy prices, both RPP and non-RPP.

30. Energy Probe did not support the methodology used by KW Hydro to calculate the commodity component of the cost of power and suggested an alternate methodology in interrogatory #40. KW Hydro applied the RPP Price to non-RPP customers and volumes. Energy Probe submitted that the use of separate prices for RPP and non-RPP volumes provides a more accurate estimate of the commodity cost of power.

31. KW Hydro submits the following on working capital and the WCA:
 - a. KW Hydro agrees that the calculation of the WCA should be updated to reflect Board Decisions in this application, as well as to reflect the most current estimate of the RPP commodity price of \$0.06215/kWh and updated to reflect current uniform and retail transmission rates.
 - b. KW Hydro will supply back up detail for the calculation of the components of the WCA.
 - c. KW Hydro notes that the Board issued a Decision on January 21, 2010 in EB-2008-0272, issuing new UTRs to be effective January 1, 2010. KW Hydro believes that the Application for Retail Transmission rates from Exhibit 8 pages 6~9 will need to be updated to reflect the new UTR values issued through that Decision.
 - d. KW Hydro agrees to conduct a lead lag study prior to its next rebasing application if the Board determines this to be appropriate. Due to the significant costs associated with completing such a study and because KW Hydro has not included these costs in its forecast costs for 2010, the Applicant requests approval to record the incremental costs of conducting a lead lag study in an approved deferral account. KW Hydro will seek to dispose of this account at its next rebasing application when filing its lead lag study.

Ontario Energy
Board

Commission de l'énergie
de l'Ontario



EB-2009-0267

IN THE MATTER OF the *Ontario Energy Board Act*,
1998, S.O. 1998, c. 15, (Schedule B);

AND IN THE MATTER OF an application by Kitchener-
Wilmot Hydro Inc. for an order approving or fixing just
and reasonable rates and other charges for the
distribution of electricity to be effective May 1, 2010.

BEFORE: Pamela Nowina
Presiding Member

Ken Quesnelle
Member

DECISION AND ORDER

April 7, 2010

Board Findings

Working Capital

KW Hydro has followed the Board's *Filing Requirements for Transmission and Distribution Applications* dated November 14, 2006, which allows the Company to apply a 15% factor to derive the allowance for working capital, and this is accepted by all parties for the purposes of this application. The Board concludes that the most accurate data should be used in the calculation of working capital, and notes that all parties agree with this approach.

The Board acknowledges that the RPP price has previously been used as the common proxy for the commodity price estimate in the WCA calculation in past applications, and has been accepted as such by the Board in decisions. However, and notwithstanding the Board's agreement that a more general review of the WCA methodology may be warranted, the Board agrees with Energy Probe and finds that the WCA should be determined in a way that recognizes the split between RPP and non-RPP customers. The precise split will vary from time to time, but the magnitude of the variation is unlikely to be significant while the current approach of assuming 100% RPP volumes is clearly inaccurate. However, the Board does not accept Energy Probe's proposal to update the RPP/non-RPP split to reflect the November 1, 2009 RPP eligibility criteria changes. The Board prefers that the split between RPP and non-RPP be based on actual data, such as was provided in the response to Energy Probe IR # 40.

In accordance with the Board's findings elsewhere in the Decision with respect to Retail Transmission Rates, the Board finds that KW Hydro should reflect the Uniform Transmission Rates approved by the Board in its January 21, 2010 Decision under Board File No. EB-2008-0272.

The Board expects KW Hydro to provide sufficient detail in its draft Rate Order filing to demonstrate that the WCA incorporates each finding in this Decision.

Lead-lag Study

KW Hydro has proposed to conduct a lead-lag study in the preparation of its next cost of service rebasing application. The Board finds this proposal timely and appropriate; the Board notes that KW Hydro will have implemented smart meters and Time-of-Use ("TOU") rates by that time. The standard 15% formula is dated and has not been reviewed for a while, and there have been many changes in utility operations, and

changes in technology and productivity.

The Board notes that the appropriateness of the level of working capital is also being raised in other applications, and that the Board may initiate a generic proceeding/consultation on determining a new working capital methodology in advance of KW Hydro's next cost of service filing. In such case, the Board expects that KW Hydro will participate in such a process and will take into account the outcomes of such a process. The Board expects that KW Hydro will support its cash working capital allowance in its next rebasing application based on the outcomes of this Board-led process or based on the lead/lag study that KW Hydro stated it would individually undertake.

COST OF CAPITAL and CAPITAL STRUCTURE

On December 20, 2006, the Board issued the *Report of the Board on Cost of Capital and 2nd Generation Incentive Regulation for Ontario's Electricity Distributors* (the "2006 Report"). The 2006 Report provided the Board's policy guidelines for determining the capitalization and cost of capital to be used for electricity rate-setting.

In Exhibit 5 of its Application, KW Hydro documented its requested Cost of Capital. This is summarized in the following table:

Cost of Capital Parameter	KW Hydro's Proposal
Capital Structure	60.0% debt (composed of 56.0% long-term debt and 4.0% short-term debt) and 40.0% equity
Short-Term Debt	1.33%, but to be updated in accordance with section 2.2.2 of the 2006 Report.
Long-Term Debt	7.62% as the then current deemed long-term rate applicable to existing promissory notes due to the City of Kitchener and the rural Township of Wilmot, but to be updated in accordance with the methodology in the 2006 Report.
Return on Equity	8.01%, but to be updated in accordance with Appendix B of the 2006 Report.
Return on Preference Shares	Not applicable
Weighted Average Cost of Capital	7.52% as proposed, but to be updated to reflect updated Cost of Capital parameters per the methodologies in the 2006 Report.

In 2009, the Board conducted a consultative process to review the Cost of Capital for all rate regulated entities in the Ontario energy sector under its jurisdiction. Based on its findings arising from that consultative process, on December 11, 2010, the Board

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BY E-MAIL

April 12, 2012

**To: All Licensed Electricity Distributors
All Licensed Electricity Transmitters
All Other Interested Parties**

Re: Update to Chapter 2 of the Filing Requirements for Transmission and Distribution Applications – Allowance for Working Capital

This letter provides an update to the options established in the June 22, 2011 cost of service Filing Requirements for the calculation of the allowance for working capital for the 2013 rate year.

Background

Chapter 2 of the Filing Requirements for Transmission and Distribution Applications issued on June 22, 2011 (for the 2012 rate year), provides for two approaches that an applicant may take for the calculation of its allowance for working capital: (1) the 15% allowance approach; or (2) the filing of a lead/lag study.

Section 2.5.1.4 of the Filing Requirements notes the following:

Cost of Service Applications for the 2013 Rate Year

The Board informs distributors that 2012 will be the final year for which the 15% Allowance Approach will be allowed as a default value. The Board is reviewing the possibility of requiring distributors to file lead/lag studies for the purpose of establishing the working capital allowance for the 2013 rate year.

Working Capital Allowance (“WCA”) for the 2013 Rate Year

The Board has reviewed the approaches to the calculation of WCA and will not require distributors to file lead/lag studies for 2013 rates, unless they are required to do so as a result of a previous Board decision. However, the Board has reviewed the results of lead/lag studies filed by distributors in cost of service applications and in each of those cases both the applied-for WCA and the final Board-approved WCA have been lower

than 15%. The Board has determined that it is not appropriate for a default value for WCA to be set at a higher level than those resulting from lead/lag studies. Based on the results of WCA studies filed with the Board in the past few years, the Board has determined that the default value going forward will be 13% of the sum of cost of power and controllable expenses. This default value will be applicable to 2013 rate applications and beyond. Distributors still have the option of completing and filing a lead/lag study as part of a cost of service rate application for determination by the Board.

The Board therefore revises section 2.5.1.4 of the Filing Requirements, specifically the 15% Allowance Approach to establish a 13% Allowance Approach as the new default value. The following revised excerpt of section 2.5.1.4 is effective immediately for 2013 cost of service applications:

The Applicant may take one of two approaches for the calculation of its allowance for working capital: (1) the 13% allowance approach; or (2) the filing of a lead/lag study.

The only exception to the above requirement is if the applicant has been previously directed by the Board to undertake a lead/lag study on which its current working capital allowance is based. Under such circumstances, the applicant must either continue to use the results of that study, or in the event it wishes to propose a revision to its allowance, the applicant must file an updated study in support of its proposal. In the absence of such circumstances the two approaches are:

13% Allowance Approach

The 13% Allowance Approach is calculated to be 13% of the sum of Cost of Power and controllable expenses (i.e., Operations, Maintenance, Billing and Collecting, Community Relations, Administration and General).

The commodity price estimate used to calculate the Cost of Power should be determined in a way that bases the split between RPP and non-RPP customers on actual data. The calculation should also reflect the most recent Uniform Transmission Rates approved by the Board (EB-2011-0268), issued on December 20, 2011 and effective January 1, 2012. In the event that new Uniform Transmission Rates are approved during the course of a proceeding, the Cost of Power should be updated to reflect the new rates. The RPP Price that should be used should be the most current RPP Price issued by the Board and should apply to the entire test period forecast.

Lead/Lag Study

A lead/lag study analysis for two time periods; namely:

- The time between the date customers receive service and the date that the customers' payments are available to the distributor (the lag); and
- The time between the date when the distributor receives goods and services from its suppliers and vendors and the date that it pays for them (the lead).

Leads and lags are measured in days and are generally dollar-weighted. The dollar-weighted net lag (i.e. lag minus lead) days is then divided by 365 (366 in a leap year) and then multiplied by the annual test year cash expenses to determine the amount of working capital required for operations. This amount is included in the distributor's rate base determination.

For questions related to this amendment please contact the Board's market operations hotline at 416-440-7604, or by e-mail at Market.Operations@ontarioenergyboard.ca
The Board's toll-free number is 1-888-632-6273.

Sincerely,

Original Signed By

Kirsten Walli
Board Secretary

4-Energy Probe-37

Ref: Exhibit 4, Tab 2, Schedule 2

- a) Please explain the incremental costs for smart meters shown in Table 4-5 for 2013 and 2014 of \$345,000 and \$351,900, respectively. What are the amounts included in 2012 associated with the noted cost drivers: meter reading fees, data systems and software maintenance costs.

Answer: See below:

	2012	2013	2014
Meter Reading Fees	101,286	184,000	187,680
Data Sysems	144,129	130,000	132,600
Software Maintenance	21,590	31,000	31,620
	267,005	345,000	351,900

- b) The figures imply that in 2014, smart meter related OM&A costs will be \$1,781,363 (\$1,084,463 + \$345,000 + \$351,900). Please confirm that this is accurate, and explain how this is possible given that the \$1,084,563 figure includes expenses incurred prior to 2012. If not, please provide the total smart meter related OM&A costs for the 2014 test year.

Answer: The incremental costs for 2013 and 2014 are \$345K and \$352K respectively. The incremental increase for 2014 vs 2013 is \$7K.

KWHI made an error in its original Table 4-5 in E4T1S2. Table 4-5 is being resubmitted as part of the interrogatory process (See 4-Energy Probe-34).

4-Energy Probe-38

Ref: Exhibit 4, Tab 2, Schedule 2

The evidence indicates that KWHI is moving to monthly billing in 2013 in order to assist customers with cash flow concerns due to rising electricity bills.

- a) Has KWHI moved to monthly billing? If not, why does KWHI expect to move to monthly billing?

Answer: KWHI has commenced the analysis and planning to enable the changes to its Customer Information System to accommodate monthly billing.

- b) Does the move to monthly billing assist KWHI with its cash flow? If not, please explain fully.

Answer: KWHI did not complete a lead/lag study so it is unable to quantify the effects on cash flow.

- c) KWHI is forecasting an increase in collection expense. Please explain why this expense continues to rise despite the efforts to assist customers with their cash flow concerns.

Answer: There are a number of reasons for this including:

- **Customer growth**
- **Continued difficult economic conditions in Waterloo Region**
- **Inability to collect and retain security deposits**
- **Initiatives to assist low income customers prolong the collections process**
- **Although monthly billing will provide a more frequent and smaller bill, there will still be segments of our customer base that do not pay on time and attempt not to pay at all. Associated with late payments, we produce and issue reminder letters, and we expect that more of these will be issued with monthly billing. Although we expect the percentage to fall because of smaller bill amounts, they will be issued 12 times per year rather than 6 and so we expect the number will increase and have budgeted for a partial year of increased paper, envelopes and postage in 2013, and a full year in 2014. For those payments that remain uncollected we issue termination orders and hand-deliver them to customer premises, and for some portion of those accounts, we perform service disconnections. Once again, we expect fewer to be issued with each cycle, but each cycle will occur twice as often, so our overall numbers have increased.**
- **There is a staff member returning from maternity leave and so labour costs have increased over the temporary labour costs in 2013.**

- d) KWHI is not forecasting a decrease in bad debt expense. Please explain why there is no decrease despite the efforts to assist customers with their cash flow concerns.

Answer: KWHI has hired more staff for Collections (See Ex4, T4, S1). As well the cost of IT continues to rise (See Staff 4-Staff-24). With monthly billing, it is anticipated that the frequency of KWHI's collection activities will also increase.

4-Energy Probe-39

Ref: Exhibit 4, Tab 2, Schedule 2

In the paragraph related to the Service Centre on page 5, the last sentence ends with "and are not 100% charged to OM&A". Should "not" be "now"?

Answer: Yes

Answer: The response in 4-Energy Probe-37 is incorrect. It should state the TOTAL costs for 2013 and 2014 are \$345K and \$352K. The incremental cost for 2013 is \$78K and for 2014 is \$7K.

b) Please provide the total smart meter related costs for each of 2012, 2013 and 2014.

Answer: See table below:

	2012	2013	2014
Meter Reading Fees	101,286	184,000	187,680
Data Systems	144,129	130,000	132,600
Software Maintenance	21,590	31,000	31,620
	267,005	345,000	351,900

4-Energy Probe-71

Ref: 4-Energy Probe-38

The response to part (b) is not complete. Despite not completing a lead/lag study, does KWHI agree that monthly billing, in place of bi-monthly billing will more closely match the inflows of revenue with the monthly billing of electricity costs from the IESO? If not, why not?

Answer: KWHI does agree that the move to monthly billing will more closely match the inflows of revenue with the monthly billing of electricity costs from the IESO. The amount of time from when the electricity was consumed and when payment is received from the customer should be reduced.

As stated in the interrogatory process, KWHI is unable to estimate the total impact that monthly billing will have on its cash flow and, in the absence of a lead lag study, has opted to use the deemed amount for working capital allowance (WCS) of 13%. The Board deemed this amount following a review; therefore, any change to KWHI's WCA due to monthly billing would therefore be unfair to KWHI as this is consistent with Board policy.

4-Energy Probe-72

Ref: 4-Energy Probe-44 & 2-Energy Probe-10 & RRWF

a) Please update this response to reflect the new total depreciation of \$705,600 shown in 2-Energy Probe-10 for transportation equipment based on the updated capital expenditures. In particular, based on this new depreciation expense, how much is capitalized and how much is expensed?

2-Energy Probe-15

Ref: Exhibit 2, Tab 5, Schedule 1

Please provide a Board file number with respect to the "*generic proceeding/consultation*" referred to in the Board's decision on page 2. Did KWHI participate in the process?

Answer: KWHI cannot find the reference to the Board file number but pasted the link to the letter below. KWHI did not participate in the development of the WCA.

[http://www.ontarioenergyboard.ca/OEB/Documents/2013EDR/Letter WCA for 2013 Filing Requirements 20120412.pdf](http://www.ontarioenergyboard.ca/OEB/Documents/2013EDR/Letter_WCA_for_2013_Filing_Requirements_20120412.pdf)

2-Energy Probe-16

Ref: Exhibit 2, Tab 5, Schedule 1

The evidence indicates that KWHI plans to change its residential billing cycles from bi-monthly to monthly in the near future.

a) What other rate classes does KWHI currently bill on a bi-monthly basis?

Answer: It is KWHI's intent to move all bi-monthly billing to monthly billing which includes, residential, general service <50 and micro-fit accounts.

b) Is the movement of the residential billing cycles from bi-monthly to monthly taking place in 2013 or 2014?

Answer: KWHI has commenced the analysis and planning to move all bi-monthly billings to monthly. It is anticipated implementation will not occur until 2014.

c) What are the additional costs included in the 2014 revenue requirement associated with the movement of the residential billing cycle from bi-monthly to monthly billing?

Answer: The total cost included to move to monthly billing for 2014 is \$200,000 for additional postage and office supplies. See 4-STAFF-20 c) for details.

d) Has KWHI made any changes associated with bad debt and/or collection expense as a result of the proposed move from bi-monthly to monthly billing? If yes, please provide details. If not, please explain why not.

Answer: KWHI has decreased the budget amount for bad debt by 21%. Other than costs such as paper and postage, KWHI does not foresee substantial decreases in collection expenses.

- c) What is the impact on OM&A costs for materials based on a 0.1% change (for example from 2.0% to 1.9%) in the assumed inflation rate for 2014?

Answer: OM&A costs for material for a 0.1% change in the assumed inflation rate would change costs by approximately \$700. OM&A is budgeted on programs so material costs can fluctuate year over year based on the programs being performed.

- d) What is the impact on OM&A costs for labour based on a 0.1% change (for example from 2.0% to 1.9%) in the assumed inflation rate for 2014?

Answer: A 0.1% change to inflation for labour would change OM&A costs by approximately \$8,700. It should be noted; however, that inflation costs for labour will not change due to the negotiated collective agreements.

4-Energy Probe-67

**Ref: 2-Energy Probe-16 &
4-Staff-20**

The response to part (c) of 2-Energy Probe-16 indicates that the cost of moving to monthly billing in 2014 is \$200,000. However, the response to 4-Staff-20 indicates that the cost of monthly billing in 2014 is an increase of \$401,500. Please confirm that the total incremental cost of monthly billing in 2014 is this latter figure.

Answer: The forecasted incremental cost for monthly billing was estimated to be \$201,500 in 2013 and an additional incremental cost in 2014 of \$200,000 for a total of \$401,500.

4-Energy Probe-68

**Ref: 4-Energy Probe-29 &
Appendix 2-JB**

- a) Please reconcile the cost driver impact of the conversion to IFRS in 2012 of \$1,227,168 shown in Appendix 2-JB with the figure of \$1,692,337 shown in the response to 4-Energy Probe-29, which was taken from Table 10-7.

Answer: The two calculations are different. Note that the \$1,692,337 is the impact of using two different accounting methods within the same year. The \$1,227,168 is the impact of cost drivers from one year versus the other. Cost drivers are not isolated in the \$1,692,337 and other cost drivers are embedded in that figure.

In order to determine the amount of the cost driver of the impact of conversion to MCGAAP, only the increase on OM&A of the costs that can no longer be burdened or capitalized is

included. This is the \$1,227,168. It consists of the comparison of the different burden rates and the movement of selected labour to OM&A between 2011 and 2012.

The figure of \$1,692,337 is the difference in OM&A in MCGAAP versus CGAAP within the year 2012. It must be noted that these comparators are within the same time period.

The differences between the two numbers would include the reallocation of engineering costs and other previously burdened salaries that were capitalized in CGAAP, but not in MCGAAP. These amounts (\$392,247) are not quantified in the cost driver table because they are not a 100% incremental increase to OM&A costs.

- b) Is the \$1,692,337 difference between CGAAP and MCGAAP calculated for 2012 a good proxy for the difference in accounting for 2013 and 2014? If not, please provide an estimate of the difference for each of 2013 and 2014.

Answer: KWHI considers the \$1.692 million to be a reasonable proxy for the difference in accounting between CGAAP and MCGAAP, albeit a little bit low. KWHI has converted its financial transactions to August 2013 and the increase to distribution expenses is \$1.2 million year-to-date. If this is extrapolated over 12 months (assuming expenses are incurred evenly), the increase to distribution expenses to December 31, 2013 would be \$1.85 million (net of inflation).

See the answer to 4-Energy Probe – 29 b) answered during the Interrogatory phase.

4-Energy Probe-69

Ref: 4-Energy Probe-24

Please explain what the third column represents in the table provided in the response to part (e). In particular, does it reflect the change in the year over year level of the price index or the percent change in the year over year figures?

Answer: KWHI based its answer using a reference to 4-Energy Probe-34, rather than 4-Energy Probe-24. It is the change in the year over year level of the price index.

4-Energy Probe-70

Ref: 4-Energy Probe-37 &
Appendix 2-JB

- a) Please explain the response to 4-Energy Probe-37 part (b) that indicates the incremental costs for 2013 and 2014 are \$345K and \$352K, respectively with the figures provided in Appendix 2-JB of \$162,986 in 2013 and \$6,900 in 2014.

Appendix 2:

Util-Assist Report - Billing Frequency: Moving to Monthly Billing

This report has been identified as being Confidential or Proprietary by the author(s). However, Oakville Hydro has received the express permission of the author(s) to submit the report to the Ontario Energy Board in support of its 2014 Cost of Service Application (EB-2013-0159). The author(s) have been advised that the report, in its entirety, will form part of the public record in this proceeding.



March, 2013

Billing Frequency: Moving to Monthly Billing

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Section 1: Introduction

1.1 Purpose of Document

Oakville Hydro have embarked upon a comprehensive Meter-to-Cash analysis. Cost centres that have been identified include:

- Truck rolls
- Write-offs and collections
- Problems associated with the M2C cycle (delays)

Monthly billing (rather than bi-monthly billing) has been discussed as a possible solution to some of the issues which contribute to these high cost centres. Oakville Hydro has begun to explore opportunities for enhancements, and the benefits that other Ontario LDCs have found that can result from Monthly billing will be discussed within this document.

1.2 Content of Document

Util-Assist has provided the following “Industry Findings” as information to consider, to determine if a proper business case should be constructed for this initiative. **It is important to understand that this document is NOT a business case**, but rather a “listing” of the benefits which other Ontario LDCs have reported in recent years.

If there is deemed to be interest in pursuing this concept, a proper financial analysis will be required.

With regards to financial analysis, there are costs associated with a move to Monthly billing which are easy to quantify (i.e. paper stock, postage, etc), and other costs and/or benefits which are harder to quantify. However, from the perspective of the end consumer, these benefits need to be considered alongside the costs, as the most significant feedback from LDCs which have made this change is the “Customer Satisfaction” which has resulted from the change.

Section 2: Value Proposition

2.1 Benefits of Monthly Billing

Bi-Monthly billing was common practice amongst Ontario LDCs when meter read data collection was manual in nature. In addition to the reduced quantities of postage and paper stock, less frequent readings meant significant savings in the overall Meter-to-Cash cycle by reducing the labour costs associated with data collection. With the introduction of AMI, a trend that has emerged amongst mid to small size Ontario LDCs is the move to Monthly billing. In some cases, LDCs have created a business case analysis to better understand the cost impacts associated with a change of this magnitude, while others have moved forward based on anecdotal evidence and the assertion that customer satisfaction is dramatically improved making the move worth the cost impacts associated with paper stock and postage.

Within this document we will list the commonly associated benefits of Monthly billing (i.e. increased billing frequency), allowing Oakville Hydro the opportunity to consider this effort in conjunction with the other projects currently underway, to determine if a more comprehensive financial evaluation is required.

We will also list the primary cost centers which will need to be considered in a financial analysis. Should Oakville Hydro decide that a more comprehensive study is required, perhaps including a business case, this document could serve as the outline around which that analysis is managed.

2.1.1 Improved Cash Flow

LDCs which have created business cases to justify increasing the billing frequency have found the largest **quantifiable** benefit to be improved cash flow. LDCs settle with IESO independently of their own billing frequency, and reducing the time between payment to IESO and invoicing the customer, can improve the utilities financial situation. With more frequent invoice processing, the LDC has a more consistent incoming flow of funds to work with.

2.1.2 Improved Customer Satisfaction

LDCs may use Improved Cash Flow to justify the move to Monthly Billing, however, almost unanimously LDCs will report that once implemented the most significant impact was Improved Customer Satisfaction. There are many reasons which may contribute to an overall increased level of satisfaction, which will be listed below.

2.1.3 Opportunities for Enhanced Services

This section has been included to demonstrate that Oakville Hydro believes there are some billing options which might lead to further cost savings, and that the anticipated transition period for a move to monthly billing would provide an opportune time to market these service options.

Section 3: Improved Cash Flow

3.1 Improved Cash Flow

In addition to the benefits associated with improved cash flow which can be easily quantified through analysis of the impact of changing the frequency of invoicing, there are some “anecdotal” improvements to the cash flow which are well understood but perhaps difficult to quantify.

- Lower dollar amounts; by billing more frequently, the total cost of each invoice is reduced making payment management for the end consumer easier. This concept can have a cascading effect as seen by the following concepts, which are interrelated.
- Reduced collections; through lowered dollar amounts consumers are more able to make payments and therefore less frequently move into the collection process.
 - **Reduced Truck Rolls: Oakville Hydro has begun to manage a Meter-to-Cash initiative entitled “Reduced Truck Rolls” which would be directly impacted by any positive impacts to the collections process.**
- Reduction in the quantity of bad debt write-offs; it stands to reason that through a reduction in collection activity, the number of write-offs will also be reduced. In addition to this, more frequent billing means that the dollar quantity of final bills will be reduced, perhaps improving the chances of collecting on final invoices more frequently than currently. Eg. If a customer moves out Aug 15, and the bi-monthly bill period is from July 1 – Sept 1, this customer would not have been billed since July 1; in a monthly billing scenario they would have been billed for their July consumption at the beginning of Aug, leaving the utility to collect a reduced amount on the final bill.
- Reduction in quantity of payment arrangements; a reduction in “bad debt” customers would be directly related to a reduction in the requirement for payment arrangements which not only reduce cash flow to the utility but require staff time to manage the customer interaction.
- Reduction in customer calls; the combination of lowered dollar amounts per bill, and reduced collection activity will contribute to an overall reduction in the call centre “traffic” improving utility call centre statistics and allowing better use of staff time (i.e. further improving meter to cash cycle by using staff to handle exceptions sooner).
- LDC experience is that the VEE process is made easier through increased frequency in billing, thereby reducing the overall time required for the meter-to-cash cycle. Meter data exceptions can compound, and billing more frequently means that exceptions are addressed closer to real time ensuring that the compound effect of exceptions resulting from longer bill periods is more controlled. In a similar vein, smaller dollar amounts serves to improve the “dollar variance” reporting process and similarly results in an improved exception management process reducing the meter-to-cash cycle.
- Reduction in unbilled revenue
- Improved proration process
- More certainty around application of service charges. Oakville Hydro charges a monthly service fee per account which in a bi-monthly billing format is doubled up for each bill. In theory then, there should be no impact to revenues by changing the billing frequency. However, Oakville Hydro has experienced in the past, scenarios where billing delays have resulted in bills being generated late enough that revenues have been impacted due to lost service charges. When considering the LDC experience that the VEE process is improved, and the meter-to-cash time cycle reduced, the application of service charges can be seen to be more consistent.

Section 4: Improved Customer Satisfaction

4.1 Improved Customer Satisfaction

The benefits of Section 3: Improved Cash Flow directly impact Oakville Hydro through reduced costs – both directly and indirectly (i.e. reduced losses, staff efficiencies, etc), but some of those same concepts can be seen to benefit the customer, and contribute an improved overall Customer Satisfaction. Utilities are required to demonstrate improvements to the customer’s experience dealing with the LDC – either through cost savings or improved service, and Monthly Billing has been shown to be well received by customers of LDCs which have made this change.

- Lower dollar amounts; in addition to making payments easier to manage, lower bills tend to produce fewer customer calls to the LDC to question billing accuracy, quantities and/or other charges.
- Producing bills more frequently enhances Customer Education efforts; customers are more easily able to understand consumption patterns closer to real time, and increased frequency of billing means that customers better understand their consumption patterns. Eg. If Sept is a hot month, meaning high consumption with air conditioners, but the bill period is Sept 1 – Nov 1, the bill which includes air conditioning is not going to be received until mid to late Nov, creating questions about the high consumption.
- For utilities billing water, billing more often reduces the impact of leaks. Customers with a leak that are billed more frequently have an earlier opportunity to catch the problem before the magnitude of the problem escalates making bill payment that much harder.
- The above scenario – catching problematic consumption – does apply to electric billing as well, but is seen less often. With the introduction of WEB Presentment for TOU billing however, LDCs do report that they’ve been able to use hourly interval data to demonstrate to a customer that high bills are the result of actual consumption (i.e. not reading errors), which can lead the consumer to finding problems with appliances. Eg. LDCs have received complaints for high consumption and assisted the customer in determining that their electrically heated driveway has been left on for many days unnecessarily. As with the water leak scenario, more frequent billing will assist the customer in reducing any costs attributed to “unwanted” consumption.

As stated previously, many Ontario LDCs have made the change to Monthly billing over the previous 5 – 7 years, coincident with the introduction of Smart Meters which has eased the data collection process that was an important consideration prior to the Smart Meter Initiative. All LDCs that have implemented this change have been very happy with the decision. When describing their business case analysis which led to the decision, there is some variation in what was considered the major contributing factors. And while the list of “benefits” leading to improved “customer satisfaction” may be shorter than any list that is created based on utility costs centers; when asked, the only common - and most avidly expressed sentiment – is that the end consumers have been happy with the change.

Section 5: Opportunities for Enhanced Services

5.1 Opportunities for Enhanced Services

During the Oakville Hydro M2C analysis, the team has had opportunity to discuss many billing business process enhancements which are only possible once Monthly Billing has been introduced. Additionally, the team has identified the need to create improved marketing for existing services, and have identified the possibility that through Monthly billing, some of these services may become more attractive to the end consumer.

- Calendar Month Billing; LDCs which have implemented Calendar month billing since beginning billing from Smart Meter data, have expressed not only (further) improved customer satisfaction, but also a further reduction in utility billing costs through implementation of business process changes which have optimized the overall process. Following are some of these considerations.
 - Customer satisfaction, billing for the month of July, results in a bill which is easy to understand for the customer – it may be higher because July is generally a hot month. In addition to making the bill easier to understand, it allows the customer to more easily make comparisons to other “like” users, given that everyone’s bill period is the same across the service territory.
 - Improved VEE process; billing at the beginning of each month means that all VEE processes are handled at the same time. LDCs which have implemented this process report that it has become easier to manage staff vacations, due to the utility wide understanding of when internal processes are busiest. As well this model allows better planning and allocation of other tasks given that the billing function through the remainder of the month is much simplified.
 - Improved Re-Verification process; blackout windows for meter change orders and other field service requirements which can be scheduled become much easier to manage given that the bill period for the entire service territory is the same.
 - Elimination of pro-ration; when the bill period ends at the end of the month, the need for proration of consumption at different rates is eliminated given that rates change at the same time as the bill period begins/ends.
 - Elimination of unbilled revenue; unbilled revenue calculations are based on consumption that occurred in a month, but is not billed until the following month. This scenario does not exist with calendar month billing.
 - Standardization of business processes; alignment of bill periods for all rate classes allows standardization of such important business processes as exception handling, stale meter processing, performance reporting, etc.
- Transition to Monthly/Calendar Month billing; when the LDC changes billing frequency or billing periods, there is an expected “spike” in call centre traffic which must be managed. If anticipated, and properly planned for, this can provide an opportunity to market existing services:
 - PAP billing
 - eBilling
 - WEB Presentment
 - CDM / Green Button Initiatives

Ontario Energy Board Commission de l'énergie
de l'Ontario



EB-2009-0096

**IN THE MATTER OF AN APPLICATION BY
HYDRO ONE NETWORKS INC.**

2010 and 2011 DISTRIBUTION RATES

DECISION WITH REASONS

April 9, 2010

4.3 ALLOWANCE FOR FUNDS USED DURING CONSTRUCTION

The Allowance for Funds Used During Construction (“AFUDC”, also referred to Construction Work in Progress or CWIP) is \$22.3 million in 2010 and \$27.1 million in 2011. The AFUDC rate is 6.4% in 2010 and 7.7% in 2011.

No party was opposed to Hydro One’s overall approach to establishing the AFUDC rates. Energy Probe however submitted that consistent with the approach used to update the cost of capital components, Hydro One should update its test year AFUDC rates based on September 2009 information. The AFUDC rates based on September 2009 forecasts are considerably lower than the rates included in the application. The updated AFUDC rate for 2010 would be 5.23% and for 2011 would be 5.73%.

Hydro One maintained that the original amounts were appropriate and noted that it did not intend to or support revising the AFUDC rates.

BOARD FINDINGS

The Board finds that it would not be appropriate to update the AFUDC rate for more current information. All test year forecasts are underpinned by assumptions for economic factors which may vary as time passes as the test year approaches or as the test year begins. The Board has traditionally resisted selective updates because in order to be consistent the entire application would need to be updated. When the Board updates the return on equity and the deemed debt rates, it does so for purposes of the overall cost of capital in accordance with the deemed capital structure, and for only that purpose. No adjustment will be made to the AFUDC.

4.4 WORKING CAPITAL ALLOWANCE

The working capital allowance for 2010 is \$300.7 million (or 11.7% of 2010 OM&A and cost of power expenses) and \$305.4 million in 2011 (or 11.9% of 2011 OM&A and cost of power expenses).

The determination of working capital relies on a lead-lag study and is based on the forecast of OM&A expenses, cost of power, capital and income taxes, the net lead-lag days and materials and inventory. Hydro One proposed to continue the methodology originally approved by the Board in 2005 and reviewed in subsequent proceedings. In

2009, Hydro One retained Navigant Consulting Inc. to conduct a lead-lag study. The results of that update were used to estimate the test year working capital requirements.

No party objected to the results of the lead-lag study or the methodology used to determine the working capital requirements. VECC and Energy Probe however raised concerns with certain assumptions used to determine the cost of power and the impact on the revenue lag of the planned migration of 140,000 customers from bi-monthly billing to monthly billing.

To determine the cost of power Hydro One has used a weighted average commodity price of \$61.70 per MWh, based on prices in the Board's April 2009 Regulated Price Plan (RPP) Report. Hydro One also calculated the cost of power based on prices in the Board's October RPP Report which is a weighted average price of \$61.12 per MWh. This change would reduce the cost of power by \$15 million and the cash working capital by \$1.5 million per year. Hydro One has relied on the historical RPP/non-RPP customer split of 69%/31% to estimate the weighted average commodity price. However, Hydro One recalculated the commodity price based on a forecast split of 65%/35% and the Board's October 2009 RPP Report, and this would further reduce the weighted average commodity price to \$60.99 per MWh.

Energy Probe and VECC argued that the allowance should be based on the cost of power in the Board's October 2009 RPP Report. They argued the Board's standard practice was to require the working capital allowance to be updated for the most recent RPP Report (typically October or April depending on the timing of the Decision) and that there is no reason why Hydro One should be treated differently. Energy Probe further argued that Hydro One should use the forecast split between RPP and non-RPP customers to calculate the weighted average price and noted that this further reduces the working capital requirement by approximately \$400,000 in 2010 and \$1.9 million in 2011.

Starting in 2010 Hydro One will begin the migration of 140,000 customers from bi-monthly billing to monthly billing. This migration is expected to be completed by mid 2011 and will reduce the revenue lag by 1.96 days from 69.99 days for those customers. Hydro One estimated this change will reduce the working capital requirement by approximately \$13 million per year when the full year impact of the migration occurs in 2012.

Energy Probe and VECC argued that a portion of the full year reduction in working capital should be reflected in the test year estimates given that the migration begins in 2010. VECC submitted that based on the timing of the migration approximately 85%-90% of the full year impact will be realized by 2011 and therefore the 2011 working capital should be reduced by \$11 million. Energy Probe submitted that the working capital should be reduced by \$4.3 million in 2010 and by \$11.9 million in 2011.

Hydro One submitted that the working capital inputs are appropriate and argued that the impact of the updates is relatively small and is offset by other impacts. With respect to the movement of customers, Hydro One submitted that it will be considered after 2011.

BOARD FINDINGS

The Board has consistently incorporated the most current available Board approved commodity price for purposes of determining the working capital allowance in cost of service decisions. The Board concludes that a similar approach is appropriate here and therefore directs Hydro One to use the cost of power in the October 2009 RPP report and to use its forecast split between RPP and non-RPP customers (65%/35%). The Board will also make an adjustment to recognize the impact of the shift from bi-monthly to monthly billing. As this will largely be completed within 2011, the Board will reduce the allowance for that year by \$11 million, as estimated by VECC, but no reduction will be made for 2010.

1 A. WORKING CAPITAL DECISIONS

2

3	<u>FILE NO.</u>	<u>DISTRIBUTOR</u>	<u>WC %</u>
4	EB-2011-0054	HYDRO OTTAWA	14.20%
5	EB-2010-0131	HORIZON	13.50%
6	EB-2007-0680 (1)	TORONTO HYDRO	12.90%
7	EB-2009-0096 (2)	HYDRO ONE DIST.	<u>11.50%</u>
8	Average		13.03%
9	EB-2012-0146	LONDON HYDRO	11.42%

10

11 (1) 12.90% RESULTED FROM EB-2010-0142

12 (2) SEE EB-2009-0096 DECISION

13

14 B. REVENUE LAG

15

16	<u>FILE NO.</u>	<u>DISTRIBUTOR</u>	<u>SERVICE LAG</u>	<u>BILLING LAG</u>	<u>COLLECTION LAG</u>	<u>PROCESSING LAG</u>	<u>TOTAL REVENUE LAG</u>
17	EB-2011-0054	HYDRO OTTAWA	30.24	18.11	25.47	1.15	74.97
18	EB-2010-0131	HORIZON	30.27	17.35	24.00	1.21	72.83
19	EB-2007-0680	TORONTO HYDRO	27.10	16.17	27.06	1.43	71.76
20	EB-2009-0096	HYDRO ONE DIST.	21.00	19.12	32.07	-	72.19
21	EB-2012-0146	LONDON HYDRO	15.21	18.00	30.29	1.40	64.90

22

23

24 C. COST OF POWER LEAD

25

26	<u>FILE NO.</u>	<u>DISTRIBUTOR</u>	<u>COP LEAD</u>
27	EB-2011-0054	HYDRO OTTAWA	33.96
28	EB-2010-0131	HORIZON	32.77
29	EB-2007-0680	TORONTO HYDRO	32.61
30	EB-2009-0096	HYDRO ONE DIST.	32.67
31	EB-2012-0146	LONDON HYDRO	32.12

32

33

34 D. WORKING CAPITAL ALLOWANCE PERCENTAGE

35

36 REVENUE LAG - EXPENSE LEADS = NET LAG DAYS = 13.0%

37

365 365 365

38

APPENDIX 2-3

Horizon Utilities Lead/Lag Study



A Determination of the Working Capital Requirements of Horizon Utilities' Regulated Electric Distribution Business

Prepared for:



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August 9, 2010

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Section I: Introduction and Overview

Summary

In 2008, the Ontario Energy Board (“OEB”) in Horizon Utilities (“Horizon” or the “Company”) 2008 Electricity Distribution Rates (“EDR”) Cost of Service Application Decision issued a directive requesting that the Company conduct a study of its lead/lag methodology to support its future working capital submissions before the OEB. In response to the directive, the Company retained Navigant Consulting, Inc. (“NCI”) to perform a lead/lag study using the most recent data available and to derive the Company’s working capital requirements for a the 2009 historical year, the 2010 bridge year, and for the 2011 test year. The purpose of this report is to provide the results of the lead-lag study and to present the working capital requirements of the Company’s distribution business.

Results from the lead-lag study applied to the Company’s historical, bridge, and test year expenses identify that working capital amounts of \$55.1M, \$61.4M, and \$62.6M will be required by the Company in 2009, 2010, and 2011, respectively. These amounts represent approximately 13.6%, 13.8%, and, 14.2% of the Company’s Operations, Maintenance, and Administration (“OM&A”) expenses including cost of power for the years 2009, 2010, and 2011.

Working Capital

Working capital is the amount of funds required to finance the day-to-day operations of a regulated utility and are included as part of a rate base for ratemaking purposes. A lead-lag study is the most accurate basis for determination of working capital and was used by NCI for this purpose.

A lead-lag study analyzes two time periods:

1. The time between the date customers receive service and the date that customers’ payments are available to the Company (or “lag”) and,
2. The time between the date when the Company receives goods and services from its vendors and the date that the Company pays for them (or “lead”)¹.

“Leads” and “Lags” are both measured in days and are generally dollar-weighted. The dollar-weighted net lag (i.e., lag minus lead) days is then divided by 365 (or 366 if a leap year is selected) and then multiplied by the annual test year cash expenses to determine the amount of working capital required for operations. The resulting amount of working capital is then included as part of the Company’s rate base for the purpose of determining revenue requirements.

Key Concepts

Several key concepts need to be defined up-front as they surface throughout the lead-lag study described in this report.

¹ A positive lag (or lead) indicates that payments are received (or paid for) after the provision of a good or service.

Mid-Point Method: When a service is provided to (or by) the Company over a period of time, the service is deemed to have been provided (or received) evenly over the midpoint of period, unless specific information regarding the provision (or receipt) of that service is available indicating otherwise. If both the service end date (“Y”) and the service start date (“X”) are known, the mid-point of a service period can be calculated using the formula:

$$\text{Mid-Point} = \frac{([Y-X]+1)}{2}$$

When specific start and end dates are unknown but it is known that a service is evenly distributed over the mid-point of a period, an alternative formula that is typically used is shown below. The formula uses the number of days in a year (A) and the number of periods in a year (B):

$$\text{Mid-Point} = \frac{A/B}{2}$$

Statutory Approach: In conjunction with the use of the mid-point method, it is important to note that not all areas of this study may utilize dates on which actual payments were made by the Company. In some instances, particularly the Goods and Services Tax (“or GST”) and its successor, the Harmonized Sales Tax (“HST”), the due date for payments are established by statute or by regulation with significant penalties in place for missing the due date. In these instances, the due date established by statute has been used in lieu of when payments were actually made.

Expense Lead Components: As used in this study, Expense Leads are defined to consist of two components: a) a Service Lead component, i.e., services are assumed to be provided to the Company evenly around the mid-point of the service period, and b) a Payment Lead component, i.e., the time period from the end of the service period to the time payment was made and the funds left the Company’s possession.

Dollar Weighting: Both Lags and leads should be dollar-weighted to more accurately reflect the flow of dollars. To use an example, let's suppose that a particular transaction has a Cash Outflow Lead time of 100 days and its dollar value was \$100. Let's suppose further that another transaction has a Cash Outflow Lead time of 30 days with a dollar value of \$1 Million. A simple un-weighted average of the two transactions would give us a Cash Outflow Lead time of 65 days (100+30 divided by 2). On the other hand, dollar weighting the two transactions gives us a Cash Outflow Lead time that would be closer to 30 days, an answer which is more representative of how the dollars actually flowed in this example.

Method

Performing a lead-lag study requires two key undertakings:

1. Developing an understanding of how the regulated business works, i.e., in terms of products and services sold to customers or purchased from vendors and the collections and payment policies and procedures that govern such transactions; and

2. Modeling such operations using data from a relevant period of time and a representative data set. It is important to ascertain and factor into the study whether (or not) there are known changes to existing business policies and procedures going forward. Where such changes are known and material, they should be factored into the study.

To develop an understanding of the Company's operations, interviews with personnel within the regulated utility's Treasury and Risk Operations, Human Resources, and Payroll were conducted. Some key questions that were addressed during the course of the interviews included:

- a. What is being sold (or bought)? If a service is being provided (purchased), over what time period was the service provided (or purchased)?
- b. Who are the buyers (sellers)?
- c. What are the terms for payment? Are the terms for payment driven by industry norms or by company policy? Is there flexibility in the terms for payment?
- d. Are any changes expected to the terms for payment either driven by industry or internally by the Company? What is the basis for such changes (if any)?
- e. How is payment made (e.g., cash, check, electronic funds transfer)?

Except where otherwise noted, a calendar year 2009 data set was used in the analysis. Development of the data set entailed gathering raw data from the utility's General Ledger, Accounts Payable, Payroll, and Tax Systems. Once the raw data had been gathered from the multiple in-house systems, sampling and data validation was performed to the extent necessary and appropriate. Standard statistical sampling techniques were used, and validation generally took the form of comparing actual invoices with data from the utility's systems to ensure accuracy.

Organization of the Report

Section II of this report discusses the lags associated with the Company's collections of revenues. Included in Section II is a description of the sources of such revenues and how they were treated for the purposes of deriving an overall revenue lag.

Section III presents a description of the various expenses and their attendant lead times. Included in the discussion on expense leads are the lead times on Cost of Power, OM&A costs, Interest on long-term debt, Payments in Lieu of Taxes, Debt Reduction Charges, and the GST. The methods used to calculate the expense lead times associated with each of the items as well as the results from the application of the methods are described.

Finally, Section IV presents the cash working capital requirements of Horizon Utilities' distribution business including the working capital requirement associated with the GST.

Section II: Revenue Lags

A Revenue Lag is the time difference between when service is provided to a customer and when customer payments for such services are available to the Company. A Revenue Lag consists of four sequential components: a) Service Lag; b) Billing Lag; c) Collections Lag; and d) Payment Processing Lag. The Lag times of each of these four components when added together results in the Revenue Lag for the purpose of calculating the working capital requirements of the Company.

Based on an analysis of its components described in greater detail below, the Revenue Lag consists of Service Lag of 30.27 days, a Billing Lag of 17.35 days, a Collections Lag of 24.00 days, and a Payment Processing Lag of 1.21 days. When the components are added together, the overall Revenue Lag for the Company is 72.84 days as shown in Table 1 below.

Table 1. Calculation of Total Revenue Lag

Component of Overall Revenue Lag	Lag Time
Service Lag	30.27 days
Billing Lag	17.35 days
Collections Lag	24.00 days
Payment Processing Lag	1.21 days
Total	72.84 days

Service Lag

A Service Lag measures the time from the Company’s provision of electricity to a customer to the time the customer’s service period ends and the meter is read. Interviews with Company’s Customer Services staff indicated that the Company’s smaller (residential and small commercial) customers are on a bi-monthly service schedule. Larger customers are on a monthly schedule. Considering this information and using a mid-point methodology, a Service Lag of 30.27 days was determined for the Company’s regulated distribution operations.

Billing Lag

A Billing Lag is the time period between the end of a customer’s service period and meter read to the time that customer’s bill is generated and dispatched. While customer consumption data was readily available subsequent to a meter read, interviews with the Company’s Customer Service Department indicated that the key determinant of the Company’s ability to dispatch a bill to its customer was the receipt of pricing data from the Ontario Independent System Operator (“IESO”) which could take up to 11 or 12 business days. Taking this information into account, an overall Billing Lag of 17.35 calendar days was determined.

Collections Lag

Collections Lag measures the time from when a customer’s bill is dispatched to the customer to the time a payment is received by the Company from that customer and recorded in the Company Billing System as having been received. This period of time is measured by using receivables aging data contained in receivables reports used by the Company for normal business purposes. Using such data provided by the Company for calendar year 2009, a dollar-weighted average Collections Lag of 24.00 days was determined for the Company’s operations.

Payment Processing Lag

A Payment Processing Lag is the time period between the recording of a payment as having been received by the Company from a customer and the payment being deposited into the Company’s bank account. Interviews with the Company indicated that if a customer paid using electronic means (e.g., direct debit), that payment is in the Company’s bank account on the same day. If the customer paid by cheque, the payment is in the Company’s bank account by the next day. The exceptions to both would be if the payment were to be received on a Friday, Saturday, or a public holiday in which case additional time would be involved. When the exceptions are taken into account, an overall Payment Processing Lag of 1.21 days is the result; such was used in the determination of the Company’s overall Revenue Lag time.

Section III: Expense Leads

An Expense Lead is the time period between when a good or service is provided to the Company and when the Company generally pays for that service. The following expense related items were considered in this study:

- Power Supply;
- Payroll, Withholdings, and Employee Benefits;
- Operations, Maintenance, and Administrative (“OM&A”) Expenses;
- Payments in Lieu of Taxes;
- Debt Reduction Charge; and,
- Interest Expense.

The Company’s benefits and costs in terms of the working capital requirement associated with the Goods and Services Tax (“GST”) and its successor, the Harmonized Sales Tax (or “HST”) are discussed separately.

Power Supply

The company purchases its power supply requirements on a monthly basis from the IESO and pays for such supplies on a schedule defined within the IESO’s billing and settlement procedures. Using information on actual payments made by the Company in 2009, a dollar-weighted expense lead time of 32.77 days was determined for the Company’s power supply procurements. This expense lead time consisted of an average service lead time of 15.21 days or the mid-point of a month and an average payment lead time of 17.56 days. The calculation is shown in Table 2 below.

Table 2 Calculation of Power Supply Expense Lead Time

Month	Service Start Date	Service End Date	Payment Date	Service Lead Time	Payment Lead Time	Total Lead Time	Payment Amount	Weighting Factor	Weighted Lead Time
January	12/1/2008	12/31/2008	01/15/2009	15.50	15.00	30.50	33,858,505.71	9.06%	2.76
February	1/1/2009	1/31/2009	02/18/2009	15.50	18.00	33.50	31,914,476.30	8.54%	2.86
March	2/1/2009	2/28/2009	03/17/2009	14.00	17.00	31.00	32,404,335.14	8.67%	2.69
April	3/1/2009	3/31/2009	04/20/2009	15.50	20.00	35.50	31,535,590.90	8.44%	3.00
May	4/1/2009	4/30/2009	05/19/2009	15.00	19.00	34.00	27,160,588.56	7.27%	2.47
June	5/1/2009	5/31/2009	06/16/2009	15.50	16.00	31.50	26,150,550.31	7.00%	2.20
July	6/1/2009	6/30/2009	07/17/2009	15.00	17.00	32.00	29,627,831.13	7.93%	2.54
August	7/1/2009	7/31/2009	08/19/2009	15.50	19.00	34.50	31,148,262.05	8.33%	2.88
September	8/1/2009	8/31/2009	09/17/2009	15.50	17.00	32.50	37,842,048.04	10.12%	3.29
October	9/1/2009	9/30/2009	10/19/2009	15.00	19.00	34.00	29,463,281.52	7.88%	2.68
November	10/1/2009	10/31/2009	11/18/2009	15.50	18.00	33.50	30,704,520.41	8.21%	2.75
December	11/1/2009	11/30/2009	12/16/2009	15.00	16.00	31.00	31,953,816.95	8.55%	2.65
Total							373,763,807.02	100.00%	32.77 days

Payroll, Withholdings, and Employee Benefits

The following items were considered under the umbrella of payroll, withholdings, and employee benefits:

- Regular Payroll
- Board of Directors Payroll
- Contribution to the Ontario Municipal Employee Retirement System (“OMERS”)
- Group Life and Long Term Disability Insurance Coverage
- Group Health, Medical, Dental, and Vision Coverage, and,
- Company contributions on account of Employee Health Care Spending Accounts

When considered together and on a dollar-weighted basis, these items have an expense lead time of 10.49 days.

A summary of the calculation of the dollar-weighted expense lead time is provided in Table 3 below.

Table 3: Payroll, Withholdings, and Employee Benefits Expense Lead Time

Item	Lead Time Days	2009 Amounts	Weighting Factor	Weighted Lead Time Days
Payroll and Withholdings	6.00	20,391,727	78.71%	4.72
Board of Directors Payroll	38.86	130,434	0.50%	0.20
Pensions - OMERS	39.03	3,767,880	14.54%	5.68
Group Life and Long Term Disability	(1.80)	131,118	0.51%	(0.01)
Group Health Medical, Dental, and Vision	(2.12)	1,471,885	5.68%	(0.12)
Group Health Care Spending Account	39.65	14,620	0.06%	0.02
Total		25,907,665	100.00%	10.49 days

Payroll and Withholdings

Interviews with Company staff responsible for administering payroll and benefits indicated that all employees excluding the Company’s Board of Directors are paid weekly. While pay-day is the Friday following a Monday pay period end, payroll and withholding related funds including the Employer Health Tax, the Canada Pension Plan, and Employment Insurance are transferred electronically to the Company’s payroll administrator (ADP) on the Wednesday preceding the Friday pay-day. Taking this information into account and using the Company’s payroll and withholding data for 2009, a dollar-weighted average lead time of 6.0 days was determined for Payroll and Withholdings. This included a service lead time of 4 days (the mid-point of a week) and a 2-day payment lead time since the funds are electronically transferred to ADP on the Wednesday following a Monday pay-period end.

Board of Directors Payroll

The Company’s Board of Directors are paid quarterly using a process similar to that of the Company’s employees except that they are paid on the fourth Friday of every third month. The funds to make these payments are transferred by the Company to its payroll administrator on the Wednesday preceding the Friday. Taking this information into account and using the Company’s Payroll and Withholding data



for 2009, a dollar weighted average lead time of 38.86 days was determined. This lead time includes a service lead time component of 45.63 days and a payment lag time of about (6.77) days.

Contributions to the Ontario Municipal Employee Retirement System (“OMERS”)

The Company makes its contributions to the OMERS around the last week of the month following a calendar month for which contributions need to be made. Using data on actual payment dates and payment amounts during 2009, a dollar-weighted expense lead time of 39.03 days was determined. This lead time includes an average service lead component of about 15.21 days and a payment lead component of about 23.82 days.

Group Life and Long Term Disability Insurance

As is typical with payments for insurance in general, the Company generally pays its vendor of Group Life and Long Term Disability Insurance either in advance or in the current month for the current month. Using data on actual payment dates and payment amounts during 2009, a dollar-weighted expense lag time of (1.80) days was determined. This lead time includes an average service lead component of about 15.21 days and a payment lag time of about (17.01) days.

Group Health, Medical, Dental, and Vision

As with Group Life and Long Term Disability Insurance, the Company pays for Group Health coverage either in advance or in the current month for the current month. Using data on actual payment dates and payment amounts during 2009, a dollar-weighted expense lag time of (2.12) days was determined. This lead time includes an average service lead component of about 15.21 days and a payment lag time of about (17.33) days.

Group Health Care Spending Account

The Company makes contributions to Employee Health Care Spending accounts on a schedule similar to its remittances of funds on account of OMERS, i.e., around the last week of the month following a service delivery month. Using data on actual payment dates and payment amounts during 2009, a dollar-weighted expense lead time of 39.65 days was determined. This lead time includes an average service lead component of about 15.21 days and a payment lead time of about 24.44 days.

OM&A Expenses

The following items were considered under the umbrella of OM&A expenses in this study.

- Consulting and Contract Staff;
- Freight Postage and Delivery;
- Tree Trimming;
- Telecommunications;
- Software Licenses and Maintenance;
- Payments to the Workers Safety Improvement Board (“WSIB”);
- Property Tax Payments;
- Corporate Procurement Card Payments; and,
- Miscellaneous OM&A expenses.

These items were selected to be included within the umbrella of OM&A expenses because they represent activities typical to that undertaken by a regulated distribution company. Further, the items when considered together represent a major share of the Company’s non power supply, payroll, and benefits related expenses. Finally, consideration of these items assists in making the Company’s study consistent with that of other studies that have been accepted by the Ontario Energy Board.

When considered together and on a dollar-weighted basis, this basket of items has an expense lead time of 17.80 days in 2009, 18.13 days in 2010, and 18.55 days in 2011 respectively. A summary of the calculation of the dollar-weighted expense lead time is provided in Table 4 below.

Table 4. Expense Lead Time Associated With OM&A Expenses

Description	Lead Time Days	2009 Amount \$M	2009 Weighting Factor	2010 Amount \$M	2010 Weighting Factor	2011 Amount \$M	2011 Weighting Factor	2009 Weighted Lead Time Days	2010 Weighted Lead Time Days	2011 Weighted Lead Time Days
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
Consulting & Contract Staff	32.67	2.33	13.42%	2.09	11.96%	3.46	15.66%	4.38	3.91	5.11
Freight, Postage and Delivery	31.46	0.07	0.39%	0.17	0.95%	0.12	0.56%	0.12	0.30	0.18
Tree Trimming	31.52	0.98	5.63%	1.32	7.54%	1.16	5.25%	1.77	2.38	1.66
Tele-Communications	31.77	0.17	1.01%	0.20	1.12%	0.24	1.10%	0.32	0.36	0.35
Software	28.10	0.59	3.43%	0.78	4.47%	1.13	5.11%	0.96	1.25	1.44
WSIB	39.58	0.25	1.43%	0.25	1.42%	0.25	1.13%	0.57	0.56	0.45
Property Taxes	(12.30)	0.71	4.11%	0.71	4.09%	0.71	3.23%	(0.51)	(0.50)	(0.40)
Credit Card	27.71	0.21	1.22%	0.22	1.24%	0.22	1.00%	0.34	0.34	0.28
Miscellaneous OM&A	14.18	12.04	69.37%	11.73	67.21%	14.80	66.97%	9.84	9.53	9.50
Total		17.35		17.46		22.09		<u>17.80</u>	<u>18.13</u>	<u>18.55</u>

Payments Made to Consulting and Contract Staff

During 2009, the Company hired a number of consulting and contract firms to provide it with services ranging from financial, legal, engineering, customer service and billing, and network operations. Using data on actual payment dates and payment amounts during 2009, a dollar weighted expense lead time of 32.67 days was determined. This lead time includes a half-month or 15.21 days of service lead time.

Freight Postage and Delivery

During 2009, the Company hired courier firms, the most common of which are UPS Canada and Federal Express, to provide support to the Company’s delivery services operations. Using data on actual payment dates and payment amounts during 2009, a dollar weighted expense lead time of 31.46 days



was determined for the provision of such services. This lead time includes a half-month or 15.21 days of service lead time.

Tree Trimming

The Company hired outside firms during 2009 to provide it with tree-trimming and vegetation management services. The Company indicated that such outside firms are generally hired on the basis of a monthly contract and work (including billing for services) generally occurs after the month during which services were provided to the Company. Using data on actual payment dates and payment amounts during 2009 therefore, a dollar weighted expense lag time of 31.52 days was determined for the provision of such services. This lead time includes a half-month or 15.21 days of service lead time.

Telecommunications

The Company purchases a variety of telecommunications related services including telephone, wireless, cellular, and paging from its vendors. Using data on payment dates and payment amounts during 2009, a dollar-weighted average expense lead time of 31.77 days associated with the purchase of telecommunications related services was determined. This expense lead time includes 15.21 days of service lead time.

Software License and Maintenance

The Company has contracts with outside firms for the provision of software and maintenance related services. Some of these contracts cover multiple years and may be pre-paid. Using data from 2009, a dollar-weighted average expense lead time of 28.10 days associated with payments for software licenses and maintenance was determined. Taking into account that some of these contracts may cover multiple years, an average service lead time of 89.00 days was included in the determination of the expense lead time associated with the Company's purchase of software license and computer maintenance related services.

Workers Safety Improvement Board ("WSIB")

The Company makes its contributions to the WSIB around the last week of the month following a calendar month for which contributions need to be made. Using data on actual payment dates and payment amounts during 2009, a dollar-weighted expense lead time of 39.58 days was determined. This lead time includes an average service lead component of about 15.21 days and a payment lead component of about 24.37 days.

Property Taxes

The Company pays property taxes to the Cities of St. Catharine and Hamilton. Payments are made in the current year for the current year and are generally made in four installments to each city. Using data on actual payment dates and payment amounts during 2009, a dollar-weighted expense lag time of (12.30) days was determined. This lag time includes an average service lead component of about 182.50 days (or the mid-point of a year) and an average payment lag time of about (194.80) days.

Corporate Procurement Card

The Company pays its corporate credit card bill following the calendar month of card usage on a schedule specified by its credit card vendor. Using data on actual payment dates and payment amounts during 2009, a dollar-weighted expense lead time of 27.71 days was determined. This lead time includes an average service lead component of about 15.21 days and a payment lead component of about 12.50 days.

Other (Miscellaneous) Operations and Maintenance Expenses

Finally, payments for additional computer related maintenance services, vehicle maintenance, and other general services were considered under the category of Miscellaneous OM&A. Using data on actual payment dates and amounts within calendar year 2009, a dollar-weighted expense lead time of 14.18 days was determined. This expense lead time includes an average 17.00 days of service lead time.

Interest on Long Term Debt

The Company makes interest payments on its outstanding long term debt semi-annually. Payments are due on January 30 and July 30 of any given year. Taking this information into account, a dollar-weighted expense lag time of (62.74) days associated with interest expense was determined. This lag time includes a service lead time of 182.50 days (i.e., the mid-point of a year).

Debt Reduction Charge

The Company makes a debt reduction charge monthly to the Ontario Electricity Finance Corporation (OEFCC). This payment is generally made around the 15th of the month following the current month. Using actual payment dates and amounts from calendar year 2009, a dollar-weighted expense lead time of 28.27 days associated with the debt reduction charge was determined. This expense lead time includes an average of 15.21 days of service lead time.

Payments in Lieu of Taxes ("PILS")

The Company makes payments in lieu of taxes to the Federal Government in monthly installments on or around the last business day of every month. Taking this information into account and using actual payments made in 2009, a dollar weighted expense lead time of 34.44 days was determined. This expense lead time includes an average 182.5 days of service lead time, i.e., the mid-point of a year.

Goods and Services Tax (GST) and Harmonized Sales Tax (HST)

The expense lead times associated with the following items that attract GST and HST were considered in the NCI study:

- a. Customer Revenues including Cost of Power;
- b. Cost of Power;
- c. Consulting and Contract Services;
- d. Freight Postage and Delivery;
- e. Tree Trimming;
- f. Telecommunications;

- g. Software;
- h. Corporate Credit Card; and
- i. Miscellaneous OM&A.

A summary of the expense lead times associated with each of the above items is provided in Table 5. Note that the statutory approach described earlier in this report was used to determine the expense lead times associated with the Company’s remittances and collections of GST and HST, i.e., both remittances and collections are generally on the last day of the month following the date of the applicable invoice.

Table 5. Expense Lead Times Associated With GST/HST payments (receipts)

GST Related Item	GST/HST Lead (Lag) Days	Working Capital Factor
Revenues [incl COP]	(17.41)	-4.77%
Cost of Power	43.25	11.85%
Consulting & Contract Services	44.24	12.12%
Freight Postage and Delivery	45.10	12.36%
Tree Trimming	43.41	11.89%
Telecommunications	44.32	12.14%
Software	44.85	12.29%
Corporate Credit Card	18.83	5.16%
Miscellaneous OM&A	45.87	12.57%

The Ontario government has harmonized the Ontario Provincial Sales Tax with the federal GST into a harmonized single sales tax effective July 1, 2010. Based on current information, there appears to be no change to the current schedule of both remittances and receipts of the HST compared with what existed under the GST regime. Thus, no changes to the schedule of either remittances or receipts of the HST relative to the schedule that governed the GST have been considered in this study.

Section IV: Horizon Utilities – Working Capital Requirements

Having calculated the revenue lag, expense lead, and the net lag times, the next step in the process was to calculate the Company’s working capital requirement. Using the results described under the discussion of revenue lags and expense leads, and applying them to the Company’s expenses for 2009-2011, the Company’s working capital requirements are \$55.1M in 2009, \$61.4M in 2010, and \$62.6M in 2011. These amounts represent 13.6%, 13.8%, and 14.2% of the Company’s OM&A expense including cost of power for 2009, 2010, and 2011 respectively.

A summary of the Company’s working capital requirements is provided in Tables 6-8 for each year 2009-2011. Included within the working capital amounts shown in Table 5 are GST/HST net benefits of \$1.1M, \$2.4M, and \$3.3M for 2009, 2010, and 2011 respectively. The derivation of these amounts is shown in Table 9. Finally, the calculation of the weighted average expense lead time associated with OM&A expenses, Col (C) Line 2 of Tables 6-8, is presented on Table 10.

Table 6. Working Capital Requirements Associated With Distribution Operations - 2009

Line	Description	Revenue Lag Days	Expense Lead Days	Net Lag Days	Working Capital Factor	Expenses \$M	Working Capital Requirement \$M
	(A)	(B)	(C)	(D)	(E)	(F)	(G)
1	Cost of Power	72.84	32.77	40.07	10.98%	365.3	40.1
2	OM&A Expenses	72.84	13.58	59.26	16.24%	38.8	6.3
3	PILS	72.84	34.44	38.40	10.52%	6.4	0.7
4	Interest Expense	72.84	(62.74)	135.57	37.14%	8.1	3.0
5	Debt Reduction Charge Amount	72.84	28.27	44.57	12.21%	31.9	3.9
6	Total					450.5	\$54.0
7	GST						1.1
8	Total - Including GST						\$55.1
9	As a Percent of OM&A incl. Cost of Power						<u>13.6%</u>

Table 7. Working Capital Requirements Associated With Distribution Operations - 2010

Line	Description	Revenue Lag Days	Expense Lead Days	Net Lag Days	Working Capital Factor	Expenses \$M	Working Capital Requirement \$M
	(A)	(B)	(C)	(D)	(E)	(F)	(G)
1	Cost of Power	72.84	32.77	40.07	10.98%	405.1	44.5
2	OM&A Expenses	72.84	13.50	59.34	16.26%	40.1	6.5
3	PILS	72.84	34.44	38.40	10.52%	5.7	0.6
4	Interest Expense	72.84	(62.74)	135.57	37.14%	9.0	3.3
5	Debt Reduction Charge Amount	72.84	28.27	44.57	12.21%	33.2	4.1
6	Total					493.1	\$59.0
7	GST/HST						2.4
8	Total - Including GST/HST						\$61.4
9	As a Percent of OM&A incl. Cost of Power						<u>13.8%</u>

Table 8. Working Capital Requirements Associated With Distribution Operations - 2011

Line	Description	Revenue Lag Days	Expense Lead Days	Net Lag Days	Working Capital Factor	Expenses \$M	Working Capital Requirement \$M
	(A)	(B)	(C)	(D)	(E)	(F)	(G)
1	Cost of Power	72.84	32.77	40.07	10.98%	394.0	43.3
2	OM&A Expenses	72.84	13.74	59.10	16.19%	47.5	7.7
3	PILS	72.84	34.44	38.40	10.52%	6.1	0.6
4	Interest Expense	72.84	(62.74)	135.57	37.14%	10.1	3.7
5	Debt Reduction Charge Amount	72.84	28.27	44.57	12.21%	32.4	4.0
6	Total					490.1	\$59.3
7	GST/HST						3.3
8	Total - Including GST/HST						\$62.6
9	As a Percent of OM&A incl. Cost of Power						<u>14.2%</u>

Shown in Table 9 Cols (G)-(I) below are the derivation of the GST/HST Benefits and Costs included within line 7 of Tables 6-8.

Table 9. GST/HST Related Working Capital Requirements

	GST/HST Lead (Lag) Days	Working Capital Factor	Amount 2009 \$M	Amount 2010 \$M	Amount 2011 \$M	Working Capital 2009 \$M	Working Capital 2010 \$M	Working Capital 2011 \$M
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)
GST/HST Rate			5.00%	9.00%	13.00%			
Revenues [incl. COP]	(17.41)	-4.77%	485.8	495.2	502.7	(1.2)	(2.1)	(3.1)
Cost of Power	43.25	11.85%	365.3	405.1	394.0	2.2	4.3	6.1
C&C Services	44.24	12.12%	2.3	2.1	3.5	0.0	0.0	0.1
Freight Postage and Delivery	45.10	12.36%	0.1	0.2	0.1	0.0	0.0	0.0
Tree Trimming	43.41	11.89%	1.0	1.3	1.2	0.0	0.0	0.0
Telecommunications	44.32	12.14%	0.2	0.2	0.2	0.0	0.0	0.0
Software	44.85	12.29%	0.6	0.8	1.1	0.0	0.0	0.0
Corporate Credit Card	18.83	5.16%	0.2	0.2	0.2	0.0	0.0	0.0
Miscellaneous OM&A	45.87	12.57%	12.0	11.7	14.8	0.1	0.1	0.2
Total						<u>\$1.1</u>	<u>\$2.4</u>	<u>\$3.3</u>

Finally, Table 10 below shows the calculation of the weighted expense lead time associated with OM&A expenses for each year 2009-2011. The result shown on Cols (K)-(M) of Table 10 is included within Col (C), Line 2 of Tables 6-8 respectively.

Table 10 - Calculation of OM&A Expense Lead Time

Item	Expenses 2009 \$M	Expenses 2010 \$M	Expenses 2011 \$M	Expense Lead Days 2009	Expense Lead Days 2010	Expense Lead Days 2011	Factor 2009	Factor 2010	Factor 2011	OM&A Lead Time Days 2009	OM&A Lead Time Days 2010	OM&A Lead Time Days 2011
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)
Payroll and Benefits	22.41	23.57	26.41	10.49	10.49	10.49	57.76%	58.82%	55.55%	6.06	6.17	5.83
Other OM&A	16.39	16.50	21.13	17.80	18.13	18.55	42.24%	41.18%	44.45%	7.52	7.33	7.91
Total	<u>\$38.80</u>	<u>\$40.07</u>	<u>\$47.54</u>							<u>13.58</u>	<u>13.50</u>	<u>13.74</u>



1 **Table 2 - Revenue Lag from Residential and General Service Customers**

Revenue Lag Component	Days	
	2009	2010
Service Lag	30.24	30.24
Billing Lag	18.11	18.24
Collections Lag	25.47	25.36
Payment Processing and Bank Float Lag	1.15	1.13
TOTAL	74.97	74.97

2

3 2.1.1 Service Lag

4

5 Service lag is the number of days between when service is provided to a customer and
 6 when the customer's meter is read. Residential and general service < 50kW customers'
 7 meters are read on a bi-monthly basis, and other classes of customers' meters are read
 8 monthly. Based on this information and using the number of customers in each class, a
 9 weighted average service lag of 30.24 is determined for 2009 and 2010. Table 3 and
 10 Table 4 show the details.

11

12 **Table 3 - 2009 Service Lag – Residential and General Service Customers**

Customer Type	Average # of Customers	Frequency of Meter Read	Mid Point of Service Period	Customer Weight	Service Lag
Residential	267,225	Bi-monthly	30.42	90.88%	27.65
General Service < 50 kW	23,312	Bi-monthly	30.42	7.93%	2.41
GS 50 – 1,499 kW	3,279	Monthly	15.21	1.12%	0.17
GS 1,500 – 4,999 kW	67	Monthly	15.21	0.02%	-
Large Users	11	Monthly	15.21	0.00%	-
Street Lighting	8	Monthly	15.21	0.00%	-
Unmetered Scattered Load	143	Monthly	15.21	0.05%	0.01
TOTAL	294,045			100.00%	30.24

13



1 **Table 25 – 2010 Working Capital Requirement Adjusted for HST**

Expense Item Description	Revenue Lag (Days)	Expense Lead (Days)	Net Lag (Lead) Days	Working Capital Factor	Expenses from Financial Statements	Working Capital Requirement
	A	B	C = A-B	D = F/E	E	F = E*C/365
Cost of Power	75.25	33.67	41.57	11.39%	\$621,842,000	\$70,829,601
OM&A Expenses	75.25	11.18	64.07	17.55%	54,948,488	9,644,966
Interest on Long Term Debts	75.25	45.63	29.62	8.12%	15,542,000	1,261,309
PILs	75.25	(3.31)	78.56	21.52%	13,773,000	2,964,271
Debt Retirement Charges	75.25	32.69	42.55	11.66%	52,701,411	6,143,941
Sub-Total					758,806,899	90,844,088
HST					17,106,564	5,089,924
Capital Expense				(21.05) ¹	50,050,932	375,325
TOTAL (Including HST)					\$825,964,395	\$96,309,337
Working Capital as a % of OM&A plus Cost of Power						14.2%

2

3

4 **6.0 OTHER CONSIDERATIONS**

5

6 **6.1 Time of Use (“TOU”) Rates**

7

8 No impacts have been considered for the implementation of TOU rates.

9

10 **6.2 Monthly Billing**

11

12 Hydro Ottawa will be changing to monthly billing. This would provide a common billing
 13 frequency for all customers. The shorter timeframe between bills would reduce the size
 14 of bills to help customers better manage payments. This would also provide a more
 15 direct line of sight between consumption and billing to help customers understand and
 16 manage their usage. No adjustment has been made to the WCA in this regard as the
 17 impact of changing to monthly billing will not be seen until 2013.

18

¹ OM&A GST net lead (lag) days.



REPORT ON LEAD LAG STUDY AND WORKING CAPITAL RESULTS USING 2005 EXPENSE LEVELS

Presented to:

**Toronto Hydro Electric System
Limited**



December 4, 2006

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II-A. Revenues from Bundled Service Ratepayers

As shown in Table II-1, revenues from bundled service ratepayers represented 99.17% of total revenues realized by the Company during 2005. The lag time associated with the realization of such revenues was 71.76 days.

The lag associated with the Company's provision of service to its bundled service ratepayers typically consists of four components: a) Service lag; b) Billing lag; c) Collections lag; and, d) the lag associated with the Company's payment processing lag (including bank float). The contribution of each component to the overall revenue lag is shown in Table II-2, below.

Table II-2

Revenue Lag from Bundled Service Ratepayers (Days)

Revenue Lag Component	Days
Service Lag:	27.10
Billing Lag:	16.17
Collections Lag:	27.06
Payment Processing & Bank Float Lag:	1.43
Total	71.76

A discussion of each of the four components follows.

II.A.1 Service Lag

The Service Lag covers the period between the time the Company provides service and the time customers' meters are read. Interviews with the Company's customer service personnel revealed that the Company's customers have their meters read on a monthly or bi-monthly basis. Based on this information and using data from the Company's Customer Information System ("CIS") regarding the number of customers that receive monthly and bi-monthly service respectively, NCI determined that the average service lag was 27.10 days.

Table IV-1

Calculation of THESL Working Capital Requirement

(All data in Millions \$s except where otherwise noted)⁷

	Expense Item Description	Revenue Lag (Days)	Expense lead (Days)	Net Lag (Lead) Days	Working Capital Factor	Expenses at Present Rates	Working Capital Requirement	
		(A)	(B)	(C)	(D)	(E)	(F)	
1	Cost of Power	71.53	32.61	38.92	10.63%	2,224	236	
2	OM&A Expenses	71.53	19.86	51.67	14.12%	167	24	
3	Interest on Long term debt	71.53	43.23	28.30	7.73%	81	6	
4	Payments in Lieu of Taxes	71.53	37.95	33.58	9.18%	61	6	
5	Debt Retirement Charge	71.53	33.20	38.33	10.47%	159	17	
6	Sub-Total					2,692	289	
7	GST ⁸					19	9	
8	TOTAL (including GST)					2,711	298	
9	Working Capital as a % of OM&A including Cost of Power							12.45%

⁷ Strictly speaking, the Debt Retirement Charge and GST are not “expenses”, but rather are “flow through expenditures”.

⁸ See Footnote 1 for calculation.



A Determination of the Working Capital Requirements of Hydro One Networks' Distribution Business

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July 6, 2009

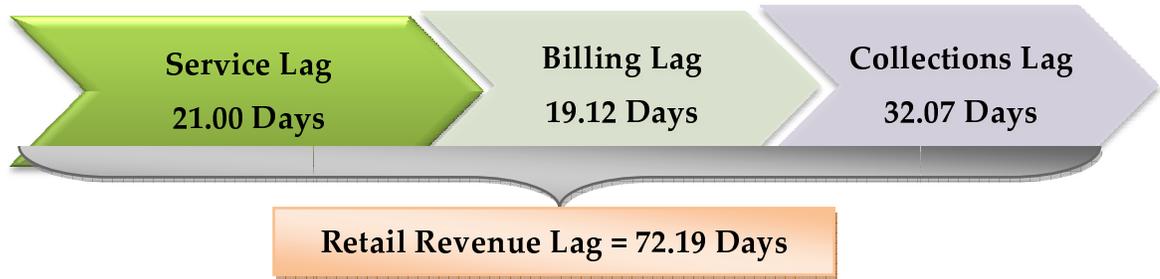


Table 1. Calculation of Total Revenue Lag

Description	Un-weighted Lag Days	Weighting Factor % of Revenues	Weighted Lag Days
(A)	(B)	(C)	(D)
Retail Revenues	72.19	94.20%	68.01
IESO RRRP Remittances (discussion provided under "Cost of Power")	32.67	4.24%	1.39
Other Revenue	38.35	1.55%	0.60
TOTAL - Revenue Lag		100.00%	69.99

Each of the components of the Company’s retail revenue lag shown in Figure 2 is discussed separately below. The revenue lag associated with the IESO’s RRRP Program is discussed in the section entitled “Cost of Power”.

Figure 2². Components of Retail Revenue Lag



Retail Revenue Lag - Service

The Service Lag covers the period between the time the Company provides service and the time customers’ meters are read. The Company’s customers, who can be categorized into those that are demand billed, acquired (from other distribution companies), seasonal, and all others, may have their meters read on a monthly, bi-monthly, quarterly, or annual basis. Based on this information and using data on number of customer accounts from the Company’s Customer Service System (“CSS”) for 2008, a weighted average service lag time of 21.00 days was determined.

Retail Revenue Lag - Billing

Billing lag refers to the average number of days from the date a customer’s meter is read until the customer’s bill is mailed. The amount of time that it takes the Company to bill a customer depends on the:

² Note that service, billing, and collections only are shown in Figure 2. Payment Processing and Bank Float has been excluded from Figure 2 since there is no lag associated with such activities. A brief discussion is provided later in this section.

Section IV: Hydro One Distribution – Working Capital Requirements

Having calculated the revenue lag, expense lead, and the net lag times, the next step in the process was to calculate the Company’s working capital requirement. Using the results described under the discussion of revenue lags and expense leads, and applying them to the Company’s proposed distribution expenses for the test years 2010 and 2011, the Company’s working capital requirements are \$305 million in 2010 and \$309 million in 2011. These amounts represent 11.7 percent, and 11.9 percent of the distribution business’ OM&A expenses respectively. A summary of the Company’s distribution business working capital requirements is provided in Table 5. Included within the working capital amounts shown in Table 5 are GST amounts of \$8.6 million, and \$8.2 million for the period 2010-2011. The derivation of these amounts is shown in Table 6.

Table 5. Working Capital Requirements Associated With Distribution Operations

Line No.	Description	Revenue Lag Days	Expense Lead Days	Net Lag (Lead) Days	2010 Budget \$000s	2011 Budget \$000s
	(A)	(B)	(C)	(D)	(E)	(F)
1	<u>EXPENSES</u>					
2	Cost of Power	69.99	32.67	37.32	2,008,400	1,994,600
3	OM&A Expenses	69.99	22.92	47.07	591,000	606,200
4	Removal costs	69.99	30.02	39.97	33,000	35,700
5	Environmental Remediation	69.99	34.84	35.15	12,800	16,900
6	Interest on Long term debt	69.99	52.87	17.12	154,900	164,600
7	Income and Capital Taxes	69.99	16.51	53.48	16,500	39,600
8	Total				2,816,600	2,857,600
9	GST (see Table 6)				25,489	32,248
10	Total amounts paid/accrued				2,842,089	2,889,848
11	<u>WORKING CAPITAL REQUIRED</u>					
12	Cost of Power				205,331	203,920
13	OM&A Expenses				76,212	78,172
14	Removal costs				3,614	3,909
15	Environmental Remediation				1,233	1,627
16	Interest on Long term debt				7,265	7,720
17	Income and Capital Taxes				2,418	5,803
18	Total				296,073	301,152
19	GST (see Table 6)				8,644	8,170
20	Net working cash required				304,717	309,323
21	Working Capital as a % of OM&A including Cost of Power				11.7%	11.9%

Table 6. GST Related Working Capital Requirements – Distribution Operations

All Data in \$000s unless otherwise noted

APPENDIX 2J – LEAD-LAG STUDY



Section II: Revenue Lags

A Revenue Lag is the time difference between when service is provided to a customer and when customer payments for such services are available to the Company. Interviews with the Company indicate that London Hydro's distribution business receives funds from retail customers and the Ontario Ministry of Finance via the Independent Electricity System Operator ("IESO") as part of the Ontario Clean Energy Benefit ("OCEB") Program. The OCEB is assumed to be 10% of the otherwise applicable cost of power bill. Retail customer Revenue Lag consists of four sequential components: a) Service Lag; b) Billing Lag; c) Collections Lag; and d) Payment Processing Lag. The lag times of each of these four components, when added together, results in the Revenue Lag for the purpose of calculating the working capital requirements of the Company.

A table summarizing the components of the total revenue lag of 64.64 days which London Hydro incurs are summarized Table 1 below. Table 2 summarizes the components of London Hydro's retail revenue lag.

Total Revenue Lag	Lag Days	Weighting Factor	Weighted Lag Days
Retail Revenue	64.90	90%	58.41
OCEB Revenue	62.29	10%	6.23
Total		100%	64.64

Table 1: Components of Total Revenue Lag

Component of Retail Revenue Lag	Lag Days
Service Lag	15.21
Billing Lag	18.00
Collections Lag	30.29
Payment Processing Lag	1.40
Total	64.90

Table 2: Components of Retail Revenue Lag

The estimation of each component of the retail revenue lag is described below.

Service Lag

The Service Lag is the time from the Company's provision of electricity to a customer, to the time the customer's service period ends, which is typically defined as when the meter is read. Interviews with Customer Service Staff at the Company indicated that all customers are on a monthly service schedule. Taking this information into account and using a mid-point methodology, the Service Lag was estimated to be 15.21 days.

Billing Lag

A Billing Lag is the time period between the end of a customer's service period and the time that the customer's bill is generated and provided to the customer. While customer consumption data was readily available subsequent to a meter read, interviews with the Company's Customer Service Department indicated that the key determinant of the Company's ability to provide a bill to its customer



Section IV: London Hydro, Inc.'s Working Capital Requirements

Having calculated the revenue lag, expense lead, and the net lag times, the next step in the process was to calculate the Company's working capital requirement. Using the results described under the discussion of revenue lags and expense leads, and applying them to the Company's expenses for 2010, the Company's working capital requirements are \$35.65M. This amount represents 11.42% of the Company's OM&A expense including Cost of Power.

A summary of the Company's working capital requirements is provided in Table 8 below. Included within the working capital amount shown in Table 8 is the GST/HST benefit of \$1.31M for 2010. The derivation of this amount is shown in Table 7 above.

Description	Revenue Lag Days	Expense Lead Days	Net Lag Days	Working Capital Factor	Expenses (\$M)	Working Capital Requirement (\$M)
Cost of Power	64.64	32.12	32.52	8.91%	278.62	24.82
Retailer Expenses	64.64	29.21	35.44	9.71%	20.69	2.01
OM&A Expenses	64.64	15.08	49.57	13.58%	33.41	4.54
PILS	64.64	(28.76)	93.41	25.59%	2.35	0.60
Interest Expense	64.64	47.29	17.36	4.75%	4.90	0.23
Debt Retirement Charge	64.64	31.33	33.32	9.13%	23.38	2.13
Total					363.34	34.34
GST/HST						1.31
Total – including GST/HST						35.65
Working Capital as a Percentage of OM&A including Cost of Power						11.42%

Table 8: 2010 Working Capital Requirement associated with Distribution Operations



1 **2. RATE BASE**

2

3 **Issue 2.2 - Is the working capital allowance for the test year appropriate?**

4

5 Board Staff Question #10 - Ref: Exh B4-2-1, p20

6 The evidence states that Hydro Ottawa will be changing to monthly billing for all
7 customer classes in 2013. No adjustment has been made to the WCA in this regard as
8 the impact of changing to monthly billing will not be seen until 2013. What is the
9 expected impact on WCA when monthly billing is fully implemented?

10

11 **Response**

12

13 When monthly billing is fully implemented, Hydro Ottawa Limited's residential and
14 general service customers' service lag will change from 30.24 days to 15.21 days. Using
15 Hydro Ottawa's current lead-lag study as a base, this would result in a WCA of 9.6%, a
16 decrease of 4.6%.

17

18 Hydro Ottawa plans to revisit its WCA once monthly billing has been fully implemented.

19

20 Please refer to Exhibit K2-2-19 (VECC # 17) for additional information on Hydro Ottawa's
21 monthly billing plans.

Appendix 2-J
OM&A Cost Driver Table

OM&A	Last Rebasing Year (2010 Actuals)	2011 Actuals	2012 Actuals	2013 Bridge Year	2014 Test Year
<i>Reporting Basis</i>	CGAAP	CGAAP	CGAAP	CGAAP	CGAAP
Opening Balance	\$ 13,881,503	\$ 12,270,957	\$ 13,724,480	\$ 16,443,729	\$ 17,431,075
Pension and Payroll Benefits		\$ 29,260	\$ 108,143	\$ 108,013	\$ 72,373
General Salary Increases		\$ 212,237	\$ 202,021	\$ 206,745	\$ 223,623
Human Resources - New Resource			\$ 67,759	\$ 51,040	\$ 4,300
Retirements and Resignations - Finance	-\$ 102,056				
Reduction in AR Credit insurance - End of program	-\$ 106,950	-\$ 58,049			
LEAP	-\$ 47,476	\$ 47,475			
Diversion of resources to OPA Programs	-\$ 38,898	-\$ 25,020	-\$ 46,393		
Diversion and reallocation of resources to complete TS9	-\$ 779,303	\$ 881,930			
HST Impact	-\$ 11,504	-\$ 39,810	-\$ 69,902	-\$ 40,000	
Increase in Non recoverable Pole accidents		\$ 99,677	-\$ 32,428		
Effect of the Smart Meter Decision			\$ 1,084,463	\$ 345,000	\$ 351,900
Monthly Billing				\$ 178,000	\$ 164,000
Additional Admin Credit	-\$ 257,997				
Collection of a bad debt previously deemed uncollectible	-\$ 266,362	\$ 146,300			
Changes to accounting estimates			\$ 1,227,168		
Inflation		\$ 159,522	\$ 178,418	\$ 138,548	\$ 275,929
Closing Balance	\$ 12,270,957	\$ 13,724,480	\$ 16,443,729	\$ 17,431,075	\$ 18,523,200

Notes:

- 1 For each year, a detailed explanation for each cost driver and associated amount is required.
- 2 The closing balance for each year becomes the opening balance for the next year.
- 3 If it has been more than three years since the applicant last filed a cost of service application, additional years of historical actuals should be incorporated into the table, as necessary, to go back to the last cost of service application. If the applicant last filed a cost of service application less than three years ago, a minimum of
- 4 Opening Balance for "Last Rebasing Year" (cell B15) should be equal to the Board-Approved amount.

Appendix 2-JB Recoverable OM&A Cost Driver Table

OM&A	Last Rebasing Year (2010 Actuals)	2011 Actuals	2012 Actuals	2013 Bridge Year	2014 Test Year
<i>Reporting Basis</i>	CGAAP	CGAAP	CGAAP	CGAAP	CGAAP
Opening Balance	\$ 13,881,503	\$ 12,270,957	\$ 13,724,479	\$ 16,443,729	\$ 17,431,075
Pension and Payroll Benefits		\$ 29,260	\$ 108,143	\$ 108,013	\$ 72,373
General Salary Increases		\$ 212,237	\$ 202,021	\$ 206,745	\$ 223,623
Human Resources - new Resource			\$ 67,759	\$ 51,040	\$ 4,300
LEAP	-\$ 47,476	\$ 47,475			
Diversion of Resources to OPA Programs	-\$ 38,898	-\$ 25,020	-\$ 46,393	-\$ 91,816	-\$ 9,875
HST Impact	-\$ 11,504	-\$ 39,810	-\$ 69,902	-\$ 40,000	
Diversion and reallocation of resources to complete TS9	-\$ 779,303	\$ 753,893			
Increase in Non recoverable Pole accidents		\$ 99,677	-\$ 32,428		
Network Protector and Transformer Maintenance		\$ 128,037			
Additional Admin Credit	-\$ 257,997			\$ 101,425	-\$ 15,000
Collection of a bad debt previously deemed uncollectible	-\$ 266,362	\$ 146,300			
Reduction in AR Credit insurance - End of program	-\$ 106,950	-\$ 58,049			
Retirements and Resignations - Finance	-\$ 102,056				
Wood Pole Survey				\$ 50,000	
Overhead Line Maintenance				\$ 109,434	
Remove Dead Ash Trees				\$ 50,000	\$ 50,000
Liability Insurance Rebate Received in 2012, not in 2013				\$ 95,978	\$ 6,900
IT programs				\$ 266,724	\$ 267,700
Increased Staffing Resources and Overtime				\$ 168,000	\$ 120,400
IFRS Changes			\$ 1,227,168	\$ 210,320	\$ 4,206
Monthly Billing - Customer Service - Billing				\$ 168,000	\$ 164,000
Monthly Billing - Customer Service - Collecting				\$ 33,500	\$ 36,000
Effect of the Smart Meter Decision			\$ 1,084,463	-\$ 739,463	
Increased Labour due to Smart Meters				\$ 162,986	
Increased OMA as a result of Smart Meters					\$ 6,900
Other Programs		\$ 122,579	\$ 128,281	\$ 33,393	\$ 104,590
Inflation		\$ 36,943	\$ 50,138	\$ 43,067	\$ 56,009
Closing Balance	\$ 12,270,957	\$ 13,724,479	\$ 16,443,729	\$ 17,431,075	\$ 18,523,201

Notes:

- 1 For each year, a detailed explanation for each cost driver and associated amount is required in Exhibit 4.
- 2 For purposes of assessing incremental cost drivers, the closing balance for each year becomes the opening balance for the next year.
- 3 If it has been more than three years since the applicant last filed a cost of service application, additional years of historical actuals should be incorporated into the table, as necessary, to go back to the last cost of service application. If the applicant last filed a cost of service application less than three years ago, a minimum of three years of actual information is required.
- 4 Opening Balance for "Last Rebasing Year" (cell B15) should be equal to the Board-Approved amount.

Description

Page No.

**UNDERTAKING JT1.15: TO REVIEW TABLE IN APPENDIX
2JB AND CORRECT IF NECESSARY**

44

See revised table below:

Recoverable OM&A Cost Driver Table

OM&A	Last Rebasing Year (2010 Actuals)	2011 Actuals	2012 Actuals	2013 Bridge Year	2014 Test Year
<i>Reporting Basis</i>	CGAAP	CGAAP	CGAAP	CGAAP	CGAAP
Opening Balance	\$ 13,881,503	\$ 12,270,957	\$ 13,677,015	\$ 16,390,832	\$ 17,431,075
Pension and Payroll Benefits		\$ 29,260	\$ 108,143	\$ 108,013	\$ 72,373
General Salary Increases (includes inflation)		\$ 212,237	\$ 202,021	\$ 206,745	\$ 223,623
Human Resources - new Resource			\$ 67,759	\$ 51,040	\$ 4,300
LEAP	-\$ 47,476	\$ 47,475			
Diversion of Resources to OPA Programs	-\$ 38,898	-\$ 25,020	-\$ 46,393	-\$ 91,816	-\$ 9,875
HST Impact	-\$ 11,504	-\$ 39,810	-\$ 69,902	-\$ 40,000	
Diversion and reallocation of resources to complete TS9	-\$ 779,303	\$ 753,893			
Increase in Non recoverable Pole accidents		\$ 99,677	-\$ 32,428		
Additional Admin Credit	-\$ 257,997			\$ 101,425	-\$ 15,000
Collection of a bad debt previously deemed uncollectible	-\$ 266,362	\$ 146,300			
Reduction in AR Credit insurance - End of program	-\$ 106,950	-\$ 58,049			
Retirements and Resignations - Finance	-\$ 102,056				
Infrastructure Surveys				\$ 30,000	\$ 20,000
Remove Dead Ash Trees				\$ 50,000	\$ 50,000
Property and Liability Insurance		\$ 102,329	-\$ 42,500	\$ 120,357	\$ 15,300
IT programs				\$ 266,724	\$ 267,700
Increased Staffing Resources and Overtime				\$ 168,000	\$ 120,400
IFRS Changes			\$ 1,227,168	\$ 210,320	\$ 4,206
Monthly Billing - Customer Service - Billing & Collecting				\$ -	\$ 401,500
Regulatory Expenses				\$ 83,800	
Effect of the Smart Meter Decision			\$ 1,084,463	-\$ 739,463	
Increased Labour due to Smart Meters				\$ 162,986	
Increased OMA as a result of Smart Meters					\$ 6,900
Other programs (includes one time programs)		\$ 51,934	\$ 18,143	\$ 12,503	-\$ 57,799
Inflation (non-labour)		\$ 85,832	\$ 197,343	\$ 161,609	\$ 173,157
Increased labour due to maternity leave				\$ 40,000	-\$ 40,000
Ontario ON1Call				\$ 20,000	-\$ 20,000
Decreased O/H line maintenance					-\$ 49,100
TS & DS maintenance				\$ 118,000	-\$ 118,000
Closing Balance	\$ 12,270,957	\$ 13,677,015	\$ 16,390,832	\$ 17,431,075	\$ 18,480,760

4-Energy Probe-30

Ref: Exhibit 4, Tab 1, Schedule 1

Table 4-5 reflects an increase in the 2012 OM&A costs for the smart meter decision of \$1,084,463.

Please break this amount down by the year the costs were actually incurred.

Answer: See table below:

	2009	2010	2011	Apr-12		Dec-12	
Operations	55,514	50,985	245,228	301,363	653,091	(143,353)	509,737
Billing & Collecting	93,784	102,333	158,959	24,647	379,723	143,353	523,076
Admin	13,333	9,106	2,731	26,479	51,649	-	51,649
	<u>162,631</u>	<u>162,424</u>	<u>406,919</u>	<u>352,490</u>	<u>1,084,463</u>	<u>-</u>	<u>1,084,463</u>

4-Energy Probe-31

Ref: Exhibit 4, Tab 1, Schedule 1

At the bottom of page 1, KWHI indicates that the total allowable operating costs will increase by 1.1% between the Board approved level for 2012 and the forecast for 2014.

- a) Please confirm that this increase includes the impact of depreciation expenses.

Answer: Confirmed – this includes the impact of depreciation

- b) What is the increase between the Board approved 2010 level and the forecast for 2014 excluding depreciation costs (i.e. controllable OM&A costs plus property taxes)?

Answer: The increase is \$4,515,879 or 23.9%

4-Energy Probe-32

Ref: Exhibit 4, Tab 1, Schedule 1 & RRWF

Please reconcile the OM&A figure for 2014 of \$18,523,200 shown in Table 4-1 with the figure of \$18,523,800 used in the RRWF.

Answer: The most recent version of the RRWF (filed August 9, 2013) uses the figure \$18,523,200 which coincides with Table 4-1.

4-Energy Probe-33

Ref: Exhibit 4, Tab 1, Schedule 2 &
Exhibit 4, Tab 1, Schedule 1

- a) Please confirm the following differences between Table 4-3 and Table 4-1:
i) Administrative and General lower by \$61,322 in Table 4-3 for 2009;

Answer: Table 4-1 inadvertently included \$61,322 for charitable donations in 2009.

- ii) Community Relations lower by \$47,465 in Table 4-3 for 2011;

Answer: Table 4-1 inadvertently had the LEAP donation in two places.

- iii) Community Relations lower by \$46,465 in Table 4-3 for 2012: and

Answer: Table 4-1 inadvertently had the LEAP donation in two places.

- iv) Administrative and General lower \$5,422 in Table 4-1 for 2012.

Answer: Table 4-3 is correct, Admin and General should be \$2,663,711.

- b) Please explain each of the differences noted above in part (a) or as corrected in part (a).

Summary of Operating Costs

OM&A Expenses	2009 Actual	2010 Board Approved	2010 Actual	2011 Actual	2012 Actual	2013 Bridge	2014 Test
	CGAAP	CGAAP	CGAAP	CGAAP	CGAAP	CGAAP	CGAAP
Operation	2,815,696	3,051,200	2,824,720	3,258,635	4,821,308	5,365,500	5,642,000
Maintenance	3,953,941	4,761,500	4,069,611	4,856,219	5,226,753	5,260,500	5,619,400
Billing and Collections	2,883,410	3,003,200	2,700,114	2,919,903	3,514,152	3,617,200	3,933,800
Community Relations	227,140	209,400	212,185	198,222	164,909	236,675	237,300
Administrative and General Expenses	2,323,216	2,856,203	2,464,329	2,444,036	2,663,711	2,951,200	3,090,700
Total Controllables	12,203,402	13,881,503	12,270,958	13,677,015	16,390,833	17,431,075	18,523,200
Property Tax	258,390	520,618	390,054	371,636	352,736	376,000	394,800
Amortization Expenses	9,386,316	10,317,027	9,798,634	10,114,321	9,661,969	7,169,353	6,077,499
Total OM&A Expenses	21,848,109	24,719,148	22,459,645	24,162,971	26,405,539	24,976,428	24,995,499

Answer: Table 4-1 has been updated as above for the changes. Table 4-3 was correct as filed

- c) Are some or all of the differences related to expenses that are not recoverable for regulatory purposes? If this is the case, please provide a revised Table 4-1 that only included recoverable expenses for regulatory purposes. Please **also provide** a revised Table 4-5 that only includes recoverable OM&A costs for regulatory purposes.

Answer: Table 4-1 inadvertently included donations that were not recoverable for regulatory purposes. The revised Table 4-1 is attached above.

- d) Please provide the most recent year-to-date figures available for OM&A expenses in the same level of detail as found in Table 4-1 (excluding property tax and amortization). Please provide the figures for the corresponding period in 2012. In doing so, please do not include any cost incurred prior to 2012, but included in the 2012 OM&A expense, as a result of the smart meter decision.

Answer:

Summary of Operating Costs

OM&A Expenses	2012	2013
	YT August CGAAP	YT August CGAAP
Operation	2,786,683	3,497,474
Maintenance	3,665,794	3,547,140
Billing and Collections	2,033,335	2,052,684
Community Relations	497,387	215,538
Administrative and General Expenses	2,021,906	1,963,862
Total Controllables	11,005,104	11,276,698

4-Energy Probe-34

Ref: Exhibit 4, Tab 1, Schedule 2

- a) Please provide the source for the historical inflation rates shown on page 6.

Answer: See 4-Staff-18 b)

<http://www.ontarioenergyboard.ca/OEB/Industry/Regulatory%20Proceedings/Applications%20Before%20the%20Board/Electricity%20Distribution%20Rates/3rd%20Gen%20Stretch%20Factors>

For 2014 it was the direction provided to managers when setting their budgets.

- b) Please provide the source for the forecasted inflation rates for 2013 and 2014 shown on page 6.

Answer: See the link below on the Ontario Energy Board Website

<http://www.ontarioenergyboard.ca/OEB/Industry/Regulatory%20Proceedings/Applications%20Before%20the%20Board/Electricity%20Distribution%20Rates/3rd%20Gen%20Stretch%20Factors>

For 2014 it was the direction provided to managers when setting their budgets.

included. This is the \$1,227,168. It consists of the comparison of the different burden rates and the movement of selected labour to OM&A between 2011 and 2012.

The figure of \$1,692,337 is the difference in OM&A in MCGAAP versus CGAAP within the year 2012. It must be noted that these comparators are within the same time period.

The differences between the two numbers would include the reallocation of engineering costs and other previously burdened salaries that were capitalized in CGAAP, but not in MCGAAP. These amounts (\$392,247) are not quantified in the cost driver table because they are not a 100% incremental increase to OM&A costs.

- b) Is the \$1,692,337 difference between CGAAP and MCGAAP calculated for 2012 a good proxy for the difference in accounting for 2013 and 2014? If not, please provide an estimate of the difference for each of 2013 and 2014.

Answer: KWHI considers the \$1.692 million to be a reasonable proxy for the difference in accounting between CGAAP and MCGAAP, albeit a little bit low. KWHI has converted its financial transactions to August 2013 and the increase to distribution expenses is \$1.2 million year-to-date. If this is extrapolated over 12 months (assuming expenses are incurred evenly), the increase to distribution expenses to December 31, 2013 would be \$1.85 million (net of inflation).

See the answer to 4-Energy Probe – 29 b) answered during the Interrogatory phase.

4-Energy Probe-69

Ref: 4-Energy Probe-24

Please explain what the third column represents in the table provided in the response to part (e). In particular, does it reflect the change in the year over year level of the price index or the percent change in the year over year figures?

Answer: KWHI based its answer using a reference to 4-Energy Probe-34, rather than 4-Energy Probe-24. It is the change in the year over year level of the price index.

4-Energy Probe-70

Ref: 4-Energy Probe-37 &
Appendix 2-JB

- a) Please explain the response to 4-Energy Probe-37 part (b) that indicates the incremental costs for 2013 and 2014 are \$345K and \$352K, respectively with the figures provided in Appendix 2-JB of \$162,986 in 2013 and \$6,900 in 2014.

Answer: The response in 4-Energy Probe-37 is incorrect. It should state the TOTAL costs for 2013 and 2014 are \$345K and \$352K. The incremental cost for 2013 is \$78K and for 2014 is \$7K.

b) Please provide the total smart meter related costs for each of 2012, 2013 and 2014.

Answer: See table below:

	2012	2013	2014
Meter Reading Fees	101,286	184,000	187,680
Data Systems	144,129	130,000	132,600
Software Maintenance	21,590	31,000	31,620
	267,005	345,000	351,900

4-Energy Probe-71

Ref: 4-Energy Probe-38

The response to part (b) is not complete. Despite not completing a lead/lag study, does KWHI agree that monthly billing, in place of bi-monthly billing will more closely match the inflows of revenue with the monthly billing of electricity costs from the IESO? If not, why not?

Answer: KWHI does agree that the move to monthly billing will more closely match the inflows of revenue with the monthly billing of electricity costs from the IESO. The amount of time from when the electricity was consumed and when payment is received from the customer should be reduced.

As stated in the interrogatory process, KWHI is unable to estimate the total impact that monthly billing will have on its cash flow and, in the absence of a lead lag study, has opted to use the deemed amount for working capital allowance (WCS) of 13%. The Board deemed this amount following a review; therefore, any change to KWHI's WCA due to monthly billing would therefore be unfair to KWHI as this is consistent with Board policy.

4-Energy Probe-72

Ref: 4-Energy Probe-44 & 2-Energy Probe-10 & RRWF

a) Please update this response to reflect the new total depreciation of \$705,600 shown in 2-Energy Probe-10 for transportation equipment based on the updated capital expenditures. In particular, based on this new depreciation expense, how much is capitalized and how much is expensed?



1

Table 10-7

	CGAAP (modified)	CGAAP (pre-2012)	Variance
Net Income	9,172,686	9,259,451	(86,765)

Changes to Net Income

	CGAAP (modified)	CGAAP (pre-2012)	Variance
Changes to Net Income			
Labour Overhead	(1,361,482)	1,608,783	247,301
Vehicle Overhead	(806,514)	1,231,715	425,201
Supervisory Overhead	(123,732)	247,342	123,611
Material Overhead	(29,610)	86,267	56,657
6400 - Employee Benefits	(966,645)	855,570	(111,075)
5350 - Information Technology	(998,291)	995,051	(3,240)
6475 - Service Centre Building Maintenance	-	126,094	126,094
5617 - Human Resources	7,975	(67,918)	(59,943)
6492 - Safety	(421,819)	-	(421,819)
6498 - Allocation of Garage Expenses	(871,167)	-	(871,167)
8030 - Purchasing/Warehouse	(378,435)	-	(378,435)
Allocation of BU 6499	72,830	(38,430)	34,400
Total Effect of Overhead/Burden Change	(5,876,889)	5,044,474	(832,416)
Reallocation of Engineering	(626,084)		(626,084)
Reallocation of Wages to Expense	-	(233,837)	(233,837)
Total Effect on Distribution Expense	(6,502,973)	4,810,637	(1,692,337)

Amortization		3,870,787	3,870,787
	(6,502,973)	8,681,424	2,178,450

2 Variance is account 1576 (2,265,215)

3

4 Although the effect on net income is negligible due to the addition of account 1576 (\$2,265,213),
 5 the effect on distribution expenses is significant at \$1,692,339. Note there is a \$2 rounding
 6 difference. The effect of this is to increase the revenue requirement by the same amount. The
 7 addition of \$1,692,339 equates to an increase to distribution expenses in 2012 from pre-2012
 8 GAAP of 11.5% and a 19.8% increase over 2011 (\$2,713,817).

9

KW Hydro could also have better documented its methodology, including the truncation of the regression range and the forecasting from 2006 to the 2010 test year. That being said, the Board accepts KW Hydro's load forecast for the 2010 test year. Customer growth and consumption pattern forecasts are comparable to historical actuals, and the Board accepts KW Hydro's explanations for its trending approaches. The variations proposed by various intervenors are relatively small adjustments to forecast assumptions that would not produce material impacts.

The Board encourages KW Hydro to undertake further work in the area of load forecasting, for purposes of its next rebasing, in order to better capture the impacts of CDM and local economic factors, and to take advantage of new data, such as interval data that Smart Meters and TOU pricing will make available. As one example, the Board expects that KW Hydro will have improved data on class-specific weather sensitivity as interval data and CDM impacts are gathered in future years.

OPERATING, MAINTENANCE and ADMINISTRATIVE EXPENSES ("OM&A")

General OM&A

For the 2010 Test year, KW Hydro is requesting approval of \$14,190,476 in OM&A expenses, excluding income and capital taxes, donations and amortization expenses. Total operating expenses for the 2010 test year are forecasted at \$25,476,819. This is an increase of 13.79% over KW Hydro's 2008 actuals and 35.94% over 2006 actuals. KW Hydro's 2010 Test Year OM&A also represents an 8.02% increase over the 2009 Bridge year. KW Hydro's OM&A and operating expenses by year is summarized below:

Operating Expenses
Exhibit 4/page 2/Table 1

	2006 Board Approved	2006 Actual	2007 Actual	2008 Actual	2009 Bridge	2010 Test	Average annual variance 2006 to 2010
Operations	\$ 2,315,938	\$ 2,585,870	\$ 2,733,252	\$ 3,016,284	\$ 2,799,800	\$ 3,051,200	4.22%
Maintenance	\$ 2,736,940	\$ 3,602,257	\$ 3,605,546	\$ 3,968,318	\$ 4,342,200	\$ 4,761,500	7.22%
Billing and Collecting	\$ 2,434,491	\$ 2,676,674	\$ 2,772,666	\$ 2,864,738	\$ 3,006,500	\$ 3,003,200	2.92%
Community Relations	\$ 150,090	\$ 702,223	\$ 791,303	\$ 207,677	\$ 208,800	\$ 256,376	-22.27%
Administrative and General	\$ 2,487,622	\$ 2,585,071	\$ 2,634,695	\$ 2,572,119	\$ 2,974,400	\$ 3,118,200	4.80%
Total OM&A	\$ 10,125,081	\$ 12,152,095	\$ 12,537,462	\$ 12,629,136	\$ 13,331,700	\$ 14,190,476	3.95%
Property Tax	\$ 518,048	\$ 510,416	\$ 527,008	\$ 506,522	\$ 529,300	\$ 550,500	1.91%
Amortization Expense	\$ 8,098,266	\$ 8,510,357	\$ 8,901,061	\$ 9,253,850	\$ 9,723,672	\$ 10,735,844	5.98%
Total Operating Expenses	\$ 18,741,395	\$ 21,172,868	\$ 21,965,531	\$ 22,389,508	\$ 23,584,672	\$ 25,476,820	4.73%

1 **SECTION 1**

					2010-2014	2012-2014
	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>Compounded</u>	<u>Compounded</u>
3 Escaltors						
4 Inflation (1)	2.30%	1.90%	1.60%	1.70%	1.87%	1.65%
5 Base Productivity	-0.72%	-0.72%	-0.72%	0.00%	-0.54%	-0.36%
6 Stretch Factor	-0.20%	-0.20%	-0.20%	-0.15%	-0.19%	-0.18%
7 Customer Growth (2)	<u>1.54%</u>	<u>1.51%</u>	<u>1.51%</u>	<u>1.54%</u>	<u>1.52%</u>	<u>1.52%</u>
8 Total Escalator	2.92%	2.49%	2.19%	3.09%	2.67%	2.64%

9
10 (1) 2011-2012 actual, 2013-2014 Board Forecast

11 (2) Exhibit 4, Tab 1, Schedue 2, Table 4-6

12

13

14 **SECTION 2**

15

16 **Pre-Tax Cost of Capital (1)**

	<u>Capital</u>	<u>After-Tax</u>	<u>Pre-Tax</u>
	<u>Structure</u>	<u>Return</u>	<u>Return</u>
19 Long Term Debt	56.00%	4.83%	4.83%
20 Short Term Debt	4.00%	2.11%	2.11%
21 ROE	40.00%	<u>9.36%</u>	<u>12.39%</u>
22 Total		6.53%	7.74%
23			
24 Total Tax Rate	24.45%		

25

26

27 **Working Capital Allowance Percentage**

28

29 Controllable Expenses & Cost of Power 208,434,136

30 One Percentage Point Change in Working Capital Rate 1.00%

31 Impact on Working Capital Allowance 2,084,341

32

33 Impact on Ratepayers 161,429

34

35 (1) Settlement Agreement RRWF

36

37

38 **SECTION 3**

39

40 **OM&A - Excludes Property Taxes**

	Old CGAAP	Old CGAAP	Old CGAAP	Old CGAAP	New CGAAP	New CGAAP	New CGAAP
	<u>2009</u>	<u>2010 BA</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>
43 Final as Filed (1)	12,203,402	13,881,503	12,270,957	13,677,015	16,390,832	17,431,075	18,480,760
44 Adj. for Smart Meter Decision (2)	<u>162,631</u>	<u>162,424</u>	<u>162,424</u>	<u>406,919</u>	<u>-731,974</u>	<u>0</u>	<u>0</u>
45 Final as Filed after Smart Meter Adj.	12,366,033	14,043,927	12,433,381	14,083,934	15,658,858	17,431,075	18,480,760
46							
47 Adj. For Accounting Change (3)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>-1,692,337</u>	<u>-1,692,337</u>	<u>-1,692,337</u>
48 Final as Filed Adjusted to Old CGAAP	12,366,033	14,043,927	12,433,381	14,083,934	13,966,521	15,738,738	16,788,423
49							
50							
51 Customers (4)		89,034	88,330	89,686	91,030	92,412	93,835
52							
53 Adj. Old CGAAP OM&A per Customer		157.74	140.76	157.04	153.43	170.31	178.91
54 percentage change			-10.76%	11.56%	-2.30%	11.00%	5.05%
55							
56 New CGAAP OM&A per Customer					172.02	188.62	196.95
57 percentage change						9.65%	4.41%

58

59

60 (1) Undertaking JT1.15 & 4-Energy Probe-33

61 (2) 2-Energy Probe-30

62 (3) 4-Energy Probe-68 & Tech. Conf. Tr. Page 46

63 (4) Exhibit 4, Tab 1, Schedule 2, Table 4-6