**EB-2014-0073**

# 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 Festival Hydro Inc. for an order approving just and reasonable rates and other charges for electricity distribution to be effective January 1, 2015.

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

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# INDEX OF MATERIALS

## Pre-Tax Cost of Capital (1)

| | Capital Structure | After-Tax Return | Pre-Tax Return |
|---|---|---|---|
| Long Term Debt | 56.00% | 4.23% | 4.23% |
| Short Term Debt | 4.00% | 2.11% | 2.11% |
| ROE | 40.00% | 9.36% | 12.73% |
| Total | | 6.20% | 7.55% |
| | | | |
| Tax Rate | 26.50% | | |

## Working Capital Allowance Percentage

| | |
|---|---|
| Controllable Expenses & Cost of Power (1) | 73,885,634 |
| One Percentage Point Change in Working Capital Rate | 1.00% |
| Impact on Working Capital Allowance Rate Base | 738,856 |
| | |
| Impact on Ratepayers | 55,762 |

(1) Settlement Agreement RRWF

# WORKING CAPITAL FILINGS SUMMARY

**ORIGINAL LEAD LAG STUDIES**

| FILE NO. (a) | DISTRIBUTOR (b) | BOARD APPROVED (c) | SERVICE LAG (d) |
|---|---|---|---|
| EB-2007-0680 (1) | TORONTO HYDRO | 12.90% | 27.10 |
| EB-2009-0096 (2) | HYDRO ONE DIST. | 11.50% | 21.00 |
| EB-2010-0131 | HORIZON UTILITIES | 13.50% | 30.27 |
| EB-2011-0054 | HYDRO OTTAWA | 14.20% | 30.24 |
| AVERAGE | | 13.03% | 27.15 |

(1) 12.90% RESULTED FROM EB-2010-0142 - NO CHANGE IN LEAD/LAG STUDY, ONLY CHANGE IN MIX OF COSTS

(2) SEE EB-2009-0096 DECISION & WORKING PAPERS

**MOST RECENT LEAD LAG STUDIES**

| FILE NO. (a) | DISTRIBUTOR (b) | APPLIED OR APPROVED (c) | SERVICE LAG (d) |
|---|---|---|---|
| EB-2011-0054 | HYDRO OTTAWA | 14.20% | 30.24 |
| EB-2012-0033 | ENERSOURCE | 13.50% | 28.75 |
| EB-2012-0146 | LONDON HYDRO | 11.42% | 15.21 |
| EB-2013-0174 | VERIDIAN | 13.40% | 22.30 |
| EB-2013-0416 | HYDRO ONE DIST | 7.40% | 16.40 |
| EB-2014-0002 | HORIZON UTILITIES | 12.00% | 25.02 |
| EB-2014-0116 | TORONTO HYDRO | 7.99% | 18.72 |
| | | 11.42% | 22.38 |

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Ontario

**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**

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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

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

**Presented to:**

## Toronto Hydro Electric System Limited

**December 4, 2006**

**Prepared by:**

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# I. INTRODUCTION

In 2006, the Ontario Energy Board ("OEB") issued a directive to Toronto Hydro Electric System Limited ("THESL" or the "Company") requesting that the Company conduct a study of its lead/lag methodology to support its future working capital submissions before the OEB[1]. 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 THESL's working capital requirements for the historical 2005 "test" year. The purpose of this report is to provide the results of the lead-lag study and to determine the working capital requirements of the Company's distribution business.

## I.A. Working Capital and Lead/Lag Studies

Working capital is the amount of funds required to finance the day-to-day operations of a regulated utility. The determination of working capital generally relies on a lead/lag study.

A lead/lag study analyzes the time elapsed between the date customers receive service and the date that such customers' payments are available to the Company (or "lag") together with the time during which the Company receives goods and services but pays for them at a later date (or "lead"). "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 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.

[1] EB-2005-0421, Decision With Reasons, Issued April 12, 2006

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Performing a lead/lag study requires two key undertakings: a) developing an understanding of how the regulated business works in terms of collections and payment policies and procedures; and b) development of a representative data set that reflects the implementation of such policies and procedures in terms of the timing of payments received (sent) at any given point in time.

To develop an understanding of THESL's operations, interviews with personnel within the regulated utility's Accounts Payable, Customer Service, Human Resources, Payroll, and Tax Departments were conducted. As in prior instances where NCI has conducted lead/lag studies, some key issues that were addressed during the course of the interviews included:

- The nature of buyers (sellers) within the business;
- The nature of the product or service, i.e., what is being sold (or bought), or, if a service was being provided;
- The time period over which the service was provided;
- Payment Terms, i.e., whether driven by government mandate, industry norms, or by company policy and the degree of flexibility within the terms for payment;
- Actual payment dates and amounts;
- Method of payment for such products (or services), e.g., cash, check, electronic;
- Expectation of changes (if any) to the Company's collections and payment policies or procedures going-forward.[2]

Operational data was obtained from THESL's Accounts Payable, Customer Service, Human Resource, Payroll, and Tax Systems. Once the data had been gathered, sampling and data validation was performed to the extent necessary and appropriate. Data validation generally took the form of comparing an actual invoice or a bill with data from the Company's systems to ensure accuracy. Except where otherwise noted,

[2] Activity over a given twelve month period is used to analyze the timing of payments and receipts unless interviews with Company personnel reveal that there are known changes to existing policies or procedures going forward. Where such changes are known, they have been incorporated into the derivation of the appropriate leads, lags, and net lags.

the lead-lag study focused on activities within THESL for the twelve months ended August 31, 2006.

## I.B 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 revenues and how they were treated for the purposes of deriving an overall revenue lag for the Company's distribution operations.

Section III presents a description of the various expenses and their attendant lead times. Included in the discussion on expense leads is the lead-time on OM&A costs, interest on long-term debt, Payments in Lieu of Taxes (such as Capital, Income, and Large Corporation Taxes), and the Goods and Services Tax (or "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.

Section IV sets forth a summary of THESL's working capital requirements for its distribution operations using operating expense data for the historical 2005 year.

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## II. REVENUE LAGS

A utility providing service to its customers generally derives its revenue from the services provided to its customers. Revenue lags represent the number of days from the date services are rendered by the Company until the date payments are received from the customers and such funds are available to the Company. Based on a review of the Company's accounting records, NCI has determined that the majority of THESL's revenues originate from two sources:

1. Residential Class, various General Service Classes, and Large User Class customers, hereafter referred to as "Bundled service ratepayers";
2. Other (miscellaneous) sources including (but not limited to) retailers, connection charges, transformer rentals and customer related jobs.

When both sources of revenues are considered together, the weighted average revenue lag time is 71.53 days. Table II-1 shows the amount of these revenues in 2005, the revenue lags associated with each revenue source, and the weighted average of all revenue sources.

**Table II-1**

**THESL Revenue Lag**

| Source of Revenues | Revenue Lag (Days) | 2005 Amounts (Mil $s) | Weighting Factor | Weighted Revenue Lag |
|---|---|---|---|---|
| Revenues from Bundled Service Ratepayers | 71.76 | 2,687 | 99.17% | 71.16 |
| Revenues from Other Sources | 44.66 | 22 | 0.83% | 0.37 |
| Total | | 2,709 | 100.00% | 71.53 |

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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.

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### II.A.2 Billing Lag

The billing lag refers to the average number of days from the date the meter is read until the customer is billed. Based on the Company's monthly scheduled meter read and bill dates, NCI determined an average billing lag of 16.17 days for the twelve months ended August 31, 2006.[3]

### II.A.3 Collections Lag

The collections lag refers to the average amount of time from the date the Company mails a bill to the date that THESL receives the customer's payment. For the purpose of this lead/lag study, this information was derived from an aging of accounts receivables report that showed the amount outstanding by aging day interval. Using data for the twelve-month period ended August 31, 2006, an average collections lag time of 27.06 days was derived.

### II.A.4 Payment Processing and Bank Float

Based on interviews with the Company's Customer Service Department and the Company's Treasury operations, NCI determined that customer payments to the Company were typically in the form of pre-authorized payments, checks (lockbox), payments via the telephone, payments directly to financial institutions for credit to the Company's bank account, electronic payments (internet payments or direct debit payments), or payments via credit card. Using data on actual payments made and processed for the twelve-month period ended August 31, 2006, NCI determined that the weighted average lead-time associated with payment processing and bank float was 1.43 days.

[3] This average billing lag includes the time period associated with the Company's receipt of billing data from the Ontario Independent Electric System Operator ("IESO") in order to bill its customers.

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## II.C. Revenues from Other Sources

Revenues from other sources represent 0.83% of the Company's total collections during 2005. The timing of receipts of such other revenues from customers depends on the Company's billing, collections, and payment processing and bank float operations. Thus, a lag time of 44.66 days was used in the derivation of the Company's overall revenue lag time as shown on Table II-1.

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## III. EXPENSE LEADS (LAGS)

As mentioned at the outset, a lead/lag study considers both the lag time associated with the collection of revenues from customers as well as the lead (or lag) time associated with the payment for goods and services provided to the Company by its vendors. For the purpose of this lead/lag study, the following four broad categories of expenses were considered in order to estimate the overall cash working capital requirement of the Company:

1. Cost of power;
2. Operations, Maintenance, and Administrative ("OM&A") expenses[4];
3. Interest on Long Term debt; and
4. Taxes.

Each of these categories and the associated expense lead (or lag) times are discussed below.

### III.A Cost of Power

The Company purchases all of its power supply requirements from Ontario's Independent Electric System Operator (the "IESO"). Based on actual billings and the Company's payments to (or receipts from) the IESO during the twelve month period ended August 31, 2006, a weighted expense lead time of 32.61 days was derived for the cost of power.

This weighted expense lead-time includes an average service lead-time of 15.21 days since the IESO provides service to the Company on a monthly basis. The

[4] The categories included within OM&A expenses are generally consistent with those defined within the Ontario Energy Board's Distribution rates Handbook.

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derivation of the expense lead-time associated with the cost of power is shown in Table III-1[5].

**Table III-1**

**Derivation of the Expense Lead Time for Cost of Power**

| Service Begin | Service End | Service Lead Time | Monthly Payment Amounts | Payment Date | Payment Lead Time | Total Lead Time | Weighting Factor | Weighted Lead Time |
|---|---|---|---|---|---|---|---|---|
| 9/1/2005 | 09/30/2005 | 15.00 | 200,974,640 | 10/19/2005 | 19.00 | 34.00 | 10.02% | 3.41 |
| 10/1/2005 | 10/31/2005 | 15.50 | 184,360,107 | 11/17/2005 | 17.00 | 32.50 | 9.19% | 2.99 |
| 11/1/2005 | 11/30/2005 | 15.00 | 161,372,179 | 12/16/2005 | 16.00 | 31.00 | 8.05% | 2.49 |
| 12/1/2005 | 12/31/2005 | 15.50 | 202,696,412 | 1/18/2006 | 18.00 | 33.50 | 10.11% | 3.39 |
| 1/1/2006 | 01/31/2006 | 15.50 | 162,630,421 | 2/16/2006 | 16.00 | 31.50 | 8.11% | 2.55 |
| 2/1/2006 | 02/28/2006 | 14.00 | 156,059,276 | 3/16/2006 | 16.00 | 30.00 | 7.78% | 2.33 |
| 3/1/2006 | 03/31/2006 | 15.50 | 86,324,877 | 4/20/2006 | 20.00 | 35.50 | 4.30% | 1.53 |
| 4/1/2006 | 04/30/2006 | 15.00 | 138,929,508 | 5/16/2006 | 16.00 | 31.00 | 6.93% | 2.15 |
| 5/1/2006 | 05/31/2006 | 15.50 | 169,178,427 | 6/16/2006 | 16.00 | 31.50 | 8.43% | 2.66 |
| 6/1/2006 | 06/30/2006 | 15.00 | 165,500,488 | 7/19/2006 | 19.00 | 34.00 | 8.25% | 2.81 |
| 7/1/2006 | 07/31/2006 | 15.50 | 184,853,295 | 8/17/2006 | 17.00 | 32.50 | 9.22% | 3.00 |
| 8/1/2006 | 08/31/2006 | 15.50 | 192,839,849 | 9/19/2006 | 19.00 | 34.50 | 9.61% | 3.32 |
| | | | 2,005,719,479 | | | | 100.00% | 32.61 |

[5] By ignoring the IESO creditworthiness requirements when computing the expense lead time associated with the cost of power, the Company has been conservative in estimating the working capital requirement associated with the cost of power. As it stands today, should the Company be downgraded to a BBB rating category, an additional $80 million in letters of credit may need to be posted with the IESO. More importantly, and from a working capital perspective, THESL is subject to margin calls from the IESO. If THESL's "actual exposure" (i.e., the total amount owed to the IESO) crosses a pre-determined threshold, the IESO can and does issue actual margin calls; all margin calls must be paid in cash within 2 business days of the margin call, and must be enough to reduce THESL's actual exposure down to 35% of its "maximum exposure". Margin calls posted are used as offsets against the next IESO invoice. THESL is currently in discussions with the IESO to try and change this with a view to making this less onerous. Should these discussions prove unsuccessful, THESL may have to reflect the IESO practices and recompute the expense lead time (and accompanying working capital requirements) associated with the cost of power.

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## III.B OM&A Expenses

The next category of expenses considered in the lead/lag study was OM&A expenses. Included within this category were the following types of expenses:

1. Payroll and Benefits;
2. Expenses associated with Consulting and Contract Staff;
3. Lease Expenses;
4. Provincial and Local property taxes; and
5. Miscellaneous Operations and Maintenance expenses.

The expense lead times associated with each type of OM&A expense are discussed below.

### III.B.1 Payroll and Benefits

The category "Payroll and Benefits" consists of a number of expense-related items. A summary of the items considered, their individual expense lead times, their corresponding weighting factors, and the overall weighted expense lead time is shown in Table III-2 below.

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**Table III-2**

**Payroll and Benefits**

| | Amounts Twelve Months ended August 31, 2006 | Lead (Lag) Days | Weighting Factor | Weighted Lead |
|---|---|---|---|---|
| Net Payroll - Actives | $76,577,494 | 11.50 | 52.30% | 6.01 |
| Withholdings - Actives | 33,829,038 | 20.82 | 23.10% | 4.81 |
| Pensions | 18,156,050 | 45.28 | 12.40% | 5.61 |
| Employer Health Tax | 2,139,600 | 30.21 | 1.46% | 0.44 |
| Workers Safety Improvement Board Payments (WSIB ) | 955,096 | 45.24 | 0.65% | 0.30 |
| Group Medical and Dental | 11,334,337 | 0.50 | 7.74% | 0.04 |
| Group Life | 2,155,568 | 35.20 | 1.47% | 0.52 |
| Long Term Disability (LTD) | 1,176,620 | 35.19 | 0.80% | 0.28 |
| Accidental Death and Dismemberment (ADD) | 24,544 | 35.21 | 0.02% | 0.01 |
| Employee Assistance Program (EAP) | 72,447 | 35.22 | 0.05% | 0.02 |
| Total | $146,420,793 | | 100.00% | 18.04 |

Each item in Table III-2 is discussed below.

### III.B.1.1 Payroll and Payroll Related Withholdings

Based on interviews with the Company's payroll department, NCI determined that:

- All active THESL employees are paid bi-weekly on the same cycle. Payroll administration is outsourced and ADP is the payroll administrator. ADP has access to net payroll funds a day in advance of payday.
- Payroll related taxes and withholdings, on the other hand, are remitted to the respective authorities by THESL.
- All payments are via electronic funds transfer.

Based on this information and taking into account actual pay dates and amounts as well as withholding remittance dates and amounts, an expense lead time of 11.5 days

was estimated for active employee payroll and 20.82 days for withholdings associated with active payroll.

#### III.B.1.2 Pensions

In accordance with the requirements of its pension fund administrator (The Ontario Municipal Employee Retirement System or "OMERS"), the Company is required to make contributions to OMERS on the last day of the month following the month of service. Using actual payment dates and amounts remitted and using a 15.21 day service lead time (the mid-point of the month for which a contribution is due), an overall expense lead time of 45.28 days was derived.

#### III.B.1.3 Employer Health Tax ("EHT")

Pursuant to the Income Tax Act, the Company is required to make monthly installment payments associated with the EHT around the middle of the month following the month of service. Taking into account actual remittances made by the Company, the remittance dates, as well as the service periods covered by those remittances, the weighted expense lead-time was calculated to be 30.21 days.

#### III.B.1.4 WSIB Payments

The Workplace Safety Insurance Board ("WSIB") oversees Ontario's workplace safety education and training system, provides disability benefits, monitors the quality of health care, and assists in early and safe return to work. The WSIB premium covers workers on a Corporation's payroll, either working full or part time under a contract of service or as an apprentice. Based upon WSIB coverage periods, and actual payment amounts and dates during the twelve-month period ended August 31, 2006, an expense lead-time of 45.24 days was derived.

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### III.B.1.5 Group Medical and Dental

During 2005-06, the Company's Health and Dental program was administered by Manulife which charges an administrative fee for services rendered and is reimbursed for claims. The Company paid the administrator daily for both the administration and claims related costs incurred by Manulife. Taking into account actual payments made by the Company, an expense lead-time of 0.5 days was estimated.

### III.B.1.6 Group Life, Accidental Death and Dismemberment ("ADD"), Long Term Disability ("LTD"), and Employee Assistance Programs ("EAP")

During 2005-06, the Company's programs were administered by MEARIE, RBC Insurance, SunLife, and Warren Sheppell, which charges premiums or administrative fee for services rendered. Life Insurance premiums and administrative fees for the Company's LTD, ADD, and EAP programs are paid monthly by check typically around the 15th of the month following the month of service. Taking into account actual payments made by the Company during 2005, expense lead time estimates for: a) Group Life is 35.20 days, b) LTD is 35.19 days, c) ADD is 35.21 days, and d) EAP is 35.22 days.

### III.B.2 Consulting and Contract Staff

The second type of expense which falls under OM&A expenses are those associated with Consulting and Contract Staff. Using data on invoices from vendors of services provided to the Company, NCI determined that the average expense lead-time associated with payments for consulting and contract staff was 54.78 days. The invoices included a broad spectrum of services ranging from communications and training, contract employee services, building maintenance, and architectural and other consulting related services.

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### III.B.3 Leases

The third type of expense included under the OM&A umbrella are payments made by the Company for operating leases. The Company leases office space as well as space for its communication antennas. Based on actual payments made for the leases for the twelve months ended August 31, 2006, a weighted expense lead-time of negative 14.71 days was determined.

### III.B.4 Property Taxes

The Company makes two forms of property tax payments: a) Payments to the City of Toronto, b) PILS property taxes to the Province of Ontario. Property Taxes were paid to the City of Toronto in six installments during the current year for the current year. The first three payments were estimated and trued up in the second set of three payments. Payments were made by wire transfer. Based on actual payments made during 2005, a weighted expense lead-time of negative 28.09 days was determined.

PILS property taxes were paid to the Province of Ontario in two installments. The first was an estimate and the second consisted of a true up as well as the second payment amount. PILS Property Taxes were paid in the current year for the current year and were paid by wire transfer. Based on actual payments made during 2005, a weighted expense lead-time of 12.67 days was determined.

### III.B.5 Miscellaneous Operations and Maintenance Expenses

Using invoices for routine goods and services provided to the Company, NCI determined a weighted average expense lead-time of 40.08 days for miscellaneous operations and maintenance related expenses. NCI's analysis took into account transactions that occurred during 2005 and, where services were provided to the Company, used the actual service periods shown on vendor invoices.

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### III.C. Interest on Long Term Debt

The Company has two outstanding long-term debt instruments; both of which were payable to THESL's holding company (Toronto Hydro Corporation or "THC"):

- $980 million at 5 percent. Interest was payable quarterly by THESL to THC on the last day of March, June, September, and December. Payments were made by wire transfer.
- $180 million at 6.16 percent. Interest was due semi-annually on May 7th and November 7th. Payments were made by wire transfer.

Taking this information into account, an expense lead-time of 43.23 days was estimated.

### III.D. Taxes

Both income and non-income taxes, as well as pass-through taxes, must be considered in a lead/lag study when deriving working capital requirements. The categories of taxes that were considered in this study were: 1) Payments in Lieu (PIL) of Taxes including the Ontario Capital Tax and the Corporate Income and Large Corporation Tax, 2) the Debt Retirement Charge, and 3) the Goods and Services Tax ("GST").

#### III.D.1 Payments in Lieu of Taxes (PILs)

The Company paid its current year PILS obligations (Capital, Corporate Income, and Large Corporation Tax) to the province of Ontario in monthly installments and made a true up payment in or around February of the following year. Thus, the Company was pre-paying a portion of its annual tax obligation and post-paying the balance. Taking this information into account and using actual payment dates and amounts, an expense lead-time of 37.95 days (dollar-weighted by amount paid by month) was derived.

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### III.D.2 Debt Retirement Charge ("DRC")

DRC collections by the Company were used to retire the former Ontario Hydro stranded debt. Annual DRC amounts were paid in monthly installments to the Ontario Electric Finance Corporation (OEFC). Such payments are generally made on the 18th of every month for the month prior and are calculated based on prior month billings. Payments were made by wire transfer. Based on actual DRC payments made in 2005, a weighted expense lead-time of 33.2 days was determined.

### III.D.3 Goods and Services Tax

The GST is imposed by the Federal Government and is levied at a flat rate of 6 percent. The following categories of GST were considered in this study:

1. Retail Revenues
2. Cost of Power
3. Consulting and Contract Staff
4. Lease Payments
5. Miscellaneous Operations and Maintenance Expenses

### III.D.3.1 GST - Retail Revenues

The Company is obligated to collect GST from its customers and remit such collections to the Federal Government. Remittances were generally due on the last day of the month following the month in which a customer is billed for GST. Based on this information, a GST lead-time of negative 18.49 days was determined. The lead-time is shown as negative as such GST amounts which the Company was required to remit represent a source of working capital to the Company.

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### III.D.3.2 GST – Cost of Power

The Company is owed GST on amounts that it pays on power supplies from the IESO. Similar to retail revenues, a reimbursement generally occurs at the end of the month following the date of payment (or receipt) of funds from the IESO. Using actual dates of payments/receipts, an average expense lead-time of 43.58 days was determined and used in the derivation of the Company's cash working capital requirement.

### III.D.3.3 GST – Consulting and Contract Staff

Reimbursements were made on the last day of the month following the dates on which the Company made payments on account of its retaining consulting and contract staff. Taking this information into account and using actual payment dates, an expense lead-time of 44.64 days was derived and used in the determination of the Company's cash working capital requirements.

### III.D.3.4 GST – Lease Payments

Reimbursements were made on the last day of the month following the dates on which the Company made lease payments. Taking this information into account and using actual payment dates, an expense lead-time of 46.68 days was derived and used in the determination of the Company's cash working capital requirements.

### III.D.3.5 GST – Miscellaneous Operations and Maintenance Expenses

As with other categories of GST, using actual payment dates on miscellaneous operations and maintenance expenses, an expense lead-time of 47.16 days was determined.

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## IV. THESL'S WORKING CAPITAL REQUIREMENTS

This section presents the derivation of the Company's working capital requirements using the revenue lags and expense leads discussed in Sections II and III, respectively. Table IV-1 shows the overall derivation of the Company's cash working capital requirement.[6] Footnotes 1, 2, and 3 to Table IV-1 are provided in support of the information shown in Table IV-1. As shown in Table IV-1, the net cash working capital requirement using 2005 expense levels is $298 million or approximately 12.45 percent of OM&A expenses and the cost of power. As would be expected, the cost of power is the most significant contributor to the Company's net cash working capital requirement followed by OM&A expenses. What drives the magnitude of the requirements is the significance of the net lag (i.e., revenue lag minus the expense lead time) for both these items.

[6] The dollars provided in Column E of Table IV-1, were provided by (and will be addressed by) the Company. NCI has not reviewed, nor have we expressed an opinion as to the accuracy of the figures.

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**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.

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## Footnotes 1, 2, and 3 to Table IV-1

| FOOTNOTE 1: GST CALCULATION | | | | | |
|---|---|---|---|---|---|
| | GST CATEGORY | 2005 Expenses (Mil $s) | 6% GST | Net Lead (lag) Days | GST Benefit (Cost) |
| | | (A) | (B) | (C) | (D) |
| 1 | Revenue | 2,709 | 163 | (18.49) | (8) |
| 2 | Cost of power | 2,224 | (133) | 43.58 | 16 |
| 3 | OM&A Expenses | 167 | (10) | 46.93 | 1 |
| 4 | TOTAL | | 22 | | 9 |

| FOOTNOTE 2: OM&A CALCULATION | | | | | |
|---|---|---|---|---|---|
| OM&A CATEGORY | | Amounts for the 12 months ended 8/31/06 ($000s) | Weighting Factor | Expense Lag Time | Weighted Expense Lead Time |
| | | (A) | (B) | (C) | (D) |
| 1 | Payroll and benefit costs | 146,421 | 79.93% | 18.04 | 14.42 |
| 2 | Consulting and contract staff | 2,586 | 1.41% | 54.78 | 0.77 |
| 3 | Lease Payments | 357 | 0.20% | (14.71) | (0.03) |
| 4 | Property taxes - Province | 539 | 0.29% | 12.67 | 0.04 |
| 5 | Property taxes - City | 7,052 | 3.85% | (28.09) | (1.08) |
| 6 | Miscellaneous O&M | 26,234 | 14.32% | 40.08 | 5.74 |
| 7 | TOTAL | 183,188 | 100.00% | | 19.86 |

| FOOTNOTE 3: CALCULATION OF GST LEAD TIME ON OM&A | | | | | |
|---|---|---|---|---|---|
| GST CATEGORY | | Amounts for the 12 months ended 8/31/06 ($000s) | Weighting Factor | GST Expense Lead Time | Weighted Expense Lead Time |
| | | (A) | (B) | (C) | (D) |
| 1 | Consulting and contract staff | 2,586 | 8.9% | 44.64 | 3.96 |
| 2 | Lease Payments | 357 | 1.2% | 46.68 | 0.57 |
| 3 | Miscellaneous O&M | 26,234 | 89.9% | 47.16 | 42.40 |
| | TOTAL | **29,177** | **100.0%** | | **46.93** |

Filed: July 13, 2009
EB-2009-0096
Exhibit D1-1-4
Attachment 1
Page 1 of 23

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

**Prepared for:**

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July 6, 2009

Navigant Consulting has prepared this report at the request of Hydro One Networks Inc. (the "Company"). In preparing this report Navigant Consulting has relied upon the Company's budgets for 2010 and 2011. Navigant Consulting has not independently confirmed the accuracy of the budget information supplied by the Company.

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**FIGURES:**

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# Section I: Introduction and Overview

## *Summary*

In the EB-2005-0378 and EB-2006-0501 Decisions With Reasons, the Ontario Energy Board (the "Board") accepted Hydro One's (the "Company") 2006 distribution and 2007-08 transmission related requests for working cash allowances consistent with the amount recommended in lead-lag study reports prepared by Navigant Consulting, Inc. ("NCI"). In preparation for a 2010-11 distribution rate filing before the Board, the Company retained NCI to prepare an update to its prior studies. This report provides the results of the update and the working capital requirements of the Company's distribution business.

Listed below are key findings and conclusions from this study:

1. In terms of lead lag days, the results from this study are generally consistent with results from the Company's 2006 and 2007-08 distribution and transmission studies respectively. Where there are differences, they have been identified, explained, and their impact on working capital requirements quantified.
2. The approach and method are generally consistent, in terms of lead and lag items, with other studies relating to the determination of working capital both in Ontario and other Canadian jurisdictions.
3. Results from the lead-lag study applied to the Company's test year distribution expenses identify that working capital amounts of $305 million in 2010 and $309 million in 2011 respectively will be required by the Company. These amounts represent approximately 11.7 percent and 11.9 percent of the Company's Operations, Maintenance, and Administration ("OM&A") expenses including cost of power. These results compare well with the 11.6 percent identified as the working capital requirement for the Company in its 2006 distribution study and accepted by the OEB.
4. If the OEB's guideline of 15% of OM&A including cost of power were to have been used verbatim by the Company, the result would have been a working capital requirement of approximately $390 million for both 2010 and 2011 compared with amounts identified in this study that are in the order of $80-85 million per year less.

## *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 the time between the date customers receive service and the date that customers' payments are available to the Company (or "lag") together with the time between which the Company receives goods and services from its vendors and pays for them at a later date (or "lead")[1]. "Leads" and "Lags" are both measured in days and are generally dollar-weighted. The dollar-weighted

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

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 deriving revenue requirements.

## *Key Concepts*

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

**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"), 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.

## *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 Hydro One's operations, interviews with personnel within the regulated utility's Accounts Payable, Customer Service, Wholesale Market Operations, Human Resources, Payroll, Treasury, and Tax Departments 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 2008 data set was used in the analysis. Development of the data set entailed gathering raw data from the utility's General Accounting, Accounts Payable, Customer Service, 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 or bills 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 as it affects the Company's distribution operations.

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, removal costs, environmental remediation costs, interest on long-term debt, Capital and Income Taxes, 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.

Section IV presents the cash working capital requirements of Hydro One's distribution business including the working capital requirement associated with the GST.

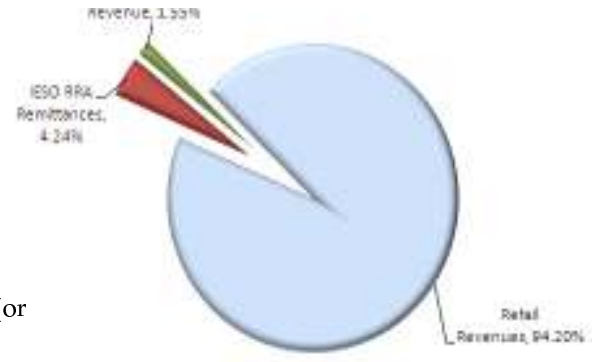
Finally, Section V presents a summary comparison of the results from the 2009 study with results from prior Hydro One studies. Differences between the two have been noted, explained, and their impacts on working capital quantified. Also included within Section V is an update to the high-level benchmarking of Hydro One's lead-lag studies with other studies that have been conducted in Canada. The question addressed in the benchmarking effort is have other studies within Canada considered the various elements of revenues and expenses considered by the Company The intent of presenting the discussion in Section V is:

- To demonstrate that the approach used in this study is reasonable when compared with the Company's 2006 distribution study and captures the current operations of the Company;
- To show that the approach used in this study is consistent with similar studies in Canada; and,
- To emphasize that the overall result is a balance between the expectations of investors and rate-payers in terms of working capital.

## Section II: Revenue Lags

An investor owned utility providing service to its customers generally derives its revenue from bills paid for service by customers. A ***revenue lag*** represents the number of days from the date service is rendered by the Company until the date payments are received from the customers and such funds are available to the Company.

**Figure 1. Sources of Revenue**




Hydro One Distribution receives funds from three sources:

a. Retail customers;
b. The Independent Electric System Operator (or "IESO"), and
c. Other sources including municipalities, electricity retailers, and for miscellaneous services such as jobbing and contracting work performed by the Company.

Based on the Company's records for calendar year 2008, approximately 94.2 percent of the Company's revenues are realized from its retail customers, with about 4.2 percent being provided by the IESO as part of a Rural or Remote Rate Program ("RRRP"). The remainder originates from a variety of sources including customer related jobbing and revenue from other electricity retailers. This is shown in Figure 1.

The revenue lag associated with the provisioning of service to retail customers typically consists of four components:

a. Service Lag;
b. Billing Lag;
c. Collections Lag; and
d. Payment Processing Lag (including Bank Float).

When considered together, this study indicates that these four components of the retail revenue lag total 72.19 lag days. The retail revenue lag time of 72.19 days is applicable to approximately 94.2 percent of the Company's retail revenues (retail revenues and revenue from other electricity distributors within the Province). The IESO's RRRP remittances, which account for about 4.2% of total revenues, have a lag time of 32.67 days consistent with the expense lead time associated with the cost of power. Finally, other revenues, which account for about 1.6% of total revenues, have a lag time of 38.35 days. When all sources of the Company's retail revenues are weighted, the result is an overall revenue lag time of 69.99 days. The information is provided in Table 1.

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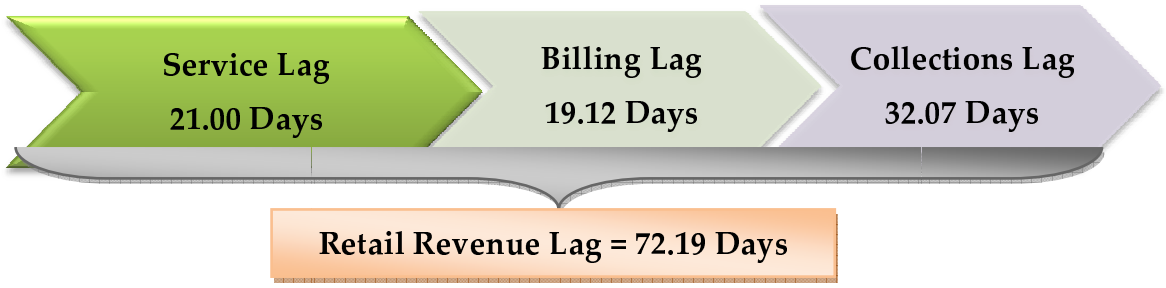
Table 1. Calculation of Total Revenue Lag

| 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 2[2]. 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.

1. Time taken to read a customer's meter and for the resulting download of the meter read data to the Company's billing system. As with most utilities that use the Customer Service System ("CSS") to bill customers, this could take up to 4 business days; and
2. Time taken to receive IESO price information to include on interval metered Hydro One customer bills. Per the IESO's business rules, preliminary statements for a particular trade day are made available to market participants 10 business days after a trade day (or 11 business days).

Taking these two steps into account and using data from calendar year 2008 an overall billing lag of approximately 19.12 calendar days was determined.

### *Retail Revenue Lag - Collections*

The collections lag refers to the average amount of time from the date the Company mails a bill to the date that the Company receives the customer's payment. This information is tracked by the Company using reports that indicate aging of accounts receivables segregated into four intervals: Current (or 0-21 days), 22-59 days, 60-119 days, and finally, greater than or equal to 120 days. Using balances by month within each of these aging intervals for calendar year 2008 and the mid-point approach defined at the outset of this report, a weighted average collections lag time of 32.07 days was determined.

### *Retail Revenue Lag - Payment Processing and Bank Float*

Based on interviews with the Company's Customer Service Department and the Company's Treasury operations, NCI determined that customer payments to the Company are typically in the form of checks, electronic payments, internet payments, direct debit payments, or payments via credit card. Under any of these customer payment options, the Company deposits all payments into its account on the same day. Therefore, there is no payment processing time associated with the Company's receipt of customer payments. Finally, once the deposits are made to the Company's bank account, all deposits are immediately available. Thus, there is no bank float associated with the Company's deposits. Therefore, no additional lag time for payment processing or bank float was considered in this study.

### *Other Revenue Lag*

The lag time associated with other revenues was estimated using a weighted average of energy (see discussion on collections lag above) and non-energy related accounts receivables of the Company. When balances by aging intervals for both categories of accounts receivables were weighted together, a revenue lag time of 38.35 days was determined.[3]

[3] Using data from calendar year 2008, the weighted average lag time relating to energy only accounts receivables was determined to be 32.07 days [discussion under Retail Revenue Lag – Collections]. From records supplied by the Company, the weighted average lag time associated with non-energy related accounts receivable was determined to be 44.63 days. When both the energy and non-energy related accounts receivable are considered together, the result is 38.35 days.

## Section III: Expense Leads

As mentioned at the outset, a determination of working capital requires both a measurement of the lag in the collection of revenues for services provided by Hydro One's distribution business, and the lead times associated with payments for services provided to the Company. Therefore, in conjunction with the calculation of the revenue lag, expense lead times were calculated for the following items:

- Cost of Power;
- OM&A Expenses;
- Removal Costs;
- Environmental Remediation;
- Interest on Long Term Debt;
- Income and Capital Taxes; and
- GST.

### *Cost of Power*

The Company purchases the vast majority of its power supply requirements from the IESO. Based on the IESO's billings to the Company and the Company's payments (or receipts) during 2008, a weighted expense lead time of 32.67 days was derived for the cost of power. This estimate of expense lead time includes both a service lead time component, generally a half month using the mid-point approach described at the outset, as well as a payment lead time. The payment lead time was calculated using the IESO invoicing and payment schedules for 2008, i.e., payments due on or by the 12th business day following the end of a delivery month. The calculation is shown in Table 2 below.

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Table 2. Expense Lead Time Associated With Purchased Power

| Delivery Month | Payment Amounts | Date of Payment (Receipt) Amounts | Service Lead Time | Payment Lead Time | Total Lead Time | Weighting Factor | Weighted Expense Lead Time (Days) |
|---|---|---|---|---|---|---|---|
| (A) | (B) | (C) | (D) | (E) | (F) | (G) | (H) |
| January | 195,453,099 | 2/18/2008 | 15.50 | 18.00 | 33.50 | 10.22% | 3.42 |
| February | 178,177,740 | 3/18/2008 | 14.50 | 18.00 | 32.50 | 9.31% | 3.03 |
| March | 178,757,340 | 4/16/2008 | 15.50 | 16.00 | 31.50 | 9.34% | 2.94 |
| April | 150,759,843 | 5/16/2008 | 15.00 | 16.00 | 31.00 | 7.88% | 2.44 |
| May | 141,311,673 | 6/17/2008 | 15.50 | 17.00 | 32.50 | 7.39% | 2.40 |
| June | 138,052,862 | 7/17/2008 | 15.00 | 17.00 | 32.00 | 7.22% | 2.31 |
| July | 154,229,697 | 8/19/2008 | 15.50 | 19.00 | 34.50 | 8.06% | 2.78 |
| August | 154,959,499 | 9/17/2008 | 15.50 | 17.00 | 32.50 | 8.10% | 2.63 |
| September | 146,073,249 | 10/17/2008 | 15.00 | 17.00 | 32.00 | 7.64% | 2.44 |
| October | 145,204,851 | 11/19/2008 | 15.50 | 19.00 | 34.50 | 7.59% | 2.62 |
| November | 165,065,859 | 12/16/2008 | 15.00 | 16.00 | 31.00 | 8.63% | 2.67 |
| December | 165,065,859 | 1/19/2009 | 15.50 | 19.00 | 34.50 | 8.63% | 2.98 |
| TOTAL | 1,913,111,570 | | | | | **100.00%** | **32.67** |

## *OM&A Expenses*

For the purpose of the distribution lead-lag study, OM&A expenses were considered to consist of payments made by Hydro One to its vendors in the following categories:

a. Payroll and Benefits expenses;
b. Payments made to Consulting and Contract Staff;
c. Payments made to Inergi;
d. Lease Payments made on the Trinity Office Building;
e. Property Taxes;
f. Corporate Procurement Card payments; and
g. Other (Miscellaneous) Operations and Maintenance related payments.

Expense lead times were calculated individually for each of the items (a) – (g) listed above and then dollar-weighted to derive a composite expense lead time of 22.92 days for OM&A expenses.

### Payroll and Benefits Expenses

The following items were considered under the umbrella of Payroll and Benefits.

a. Four types of payroll including basic, trades, management, and board of directors payroll;
b. Three types of payroll withholdings including the Canada Pension Plan, Employment Insurance, and Income Tax withholdings;
c. Contributions made by the Company to the Hydro One Pension Plan;
d. Group Health, Dental, and Life Insurance related administrative fees and claims;

e. Payments made by the Company on account of the Employer Health Tax (or "EHT"); and
f. Payments made by the Company to the Worker Safety Improvement Board (WSIB).

When all payroll, withholdings, and benefits were dollar-weighted using actual payment data for calendar year 2008, the weighted average expense lead time associated with payroll and benefits was determined to be 22.79 days (see Table 3 below).

**Table 3. Expense Lead Time Associated With Payroll and Benefits**

| Line | Category | Total Company Payment Amounts (000s) | Expense Lead Time | Weighting Factor | Weighted Expense Lead Time (Days) |
|---|---|---|---|---|---|
| | (A) | (B) | (C) | (D) | (E) |
| 1 | Pensions | 98,820 | 45.28 | 12.82% | 5.80 |
| 2 | Group Health and Dental - ASO | 5,857 | 43.38 | 0.76% | 0.33 |
| 3 | Group Life Insurance Premiums | 4,499 | 55.50 | 0.58% | 0.32 |
| 4 | Group Health and Dental - Claims | 44,945 | 6.84 | 5.83% | 0.40 |
| 5 | Employer Health Tax: | 12,240 | 30.87 | 1.59% | 0.49 |
| 6 | WSIB Payments: | 4,217 | 44.42 | 0.55% | 0.24 |
| 7 | Basic Payroll | 251,285 | 18.73 | 32.60% | 6.10 |
| 8 | Management Payroll | 46,282 | (0.68) | 6.00% | (0.04) |
| 9 | Trades Payroll | 102,347 | 11.78 | 13.28% | 1.56 |
| 10 | Board of Directors (BOD) Payroll | 359 | 60.76 | 0.05% | 0.03 |
| 11 | Withholding – All Except BOD | 199,849 | 29.05 | 25.93% | 7.53 |
| 12 | Withholding - BOD Payroll | 135 | 64.19 | 0.02% | 0.01 |
| 13 | Total | $770,833 | | | 22.79 |

### Payments Made to Consulting and Contract Staff

Hydro One Networks engages consulting and contract staff to provide assistance in the areas of engineering, environmental services, receivables management, accounting, and general consulting. A dollar-weighted expense lead time of 60.36 days was determined based on a review of a sample of invoices rendered and payments made by the Company for the twelve months ending March 31, 2008. As with other categories of expense, this dollar-weighted expense lead time took into account the relevant service period over which services were provided to the Company.

### Payments to Inergi

Inergi (a division of CapGemini) provides a spectrum of services to Hydro One including (and not limited to) customer service operations, finance, human resources, accounts payable, information technology, IESO settlements, and supply management services. Per its contract, Hydro One is generally

required to make payments in the current month for the current month. Based on a review of a sample of payments made by the Company for the twelve months ending March 31, 2008, and using a ½ month of service lead time (since payments are made monthly), a dollar-weighted expense lead time of 2.59 days was determined.

### Trinity Lease Payments

The Company leases its office space in the Bell Trinity Square Building from an outside party. The Company generally makes its lease payments at the end of the month prior for the current month. Taking this information into account and using a sample of actual invoices and payments for the period ended May 31, 2008, a dollar-weighted expense **lag** time of 18.71 days was determined. Note that since lease payments are generally required to be made before the fact, the result is an expense lag rather than an expense lead. Again, since lease payments are made monthly, the calculated dollar-weighted expense lag time includes ½ month of service lead time.

### Property Taxes

The Company makes property tax payments to a number of municipalities and taxing authorities in the Province of Ontario. These payments are made in the current year for the current year and are typically made in two installments; an estimate and a final. Using actual payment dates and amounts associated with the Company's distribution business for calendar year 2008, a dollar-weighted expense lead time of 10.28 days was determined. Since property tax payments are for the current year, a ½ year was used as indicative of the service lead time associated with property taxes.

### Procurement Card Payments

Procurement (or charge) cards are used by the Company's employees for a variety of Company-related reasons including, and not limited to, purchases of materials in the field, incidental expenses, and to settle charges for travel and accommodation. Based on a sample of actual invoices for the twelve months ending March 31, 2008 from the Company's charge card provider and payments made by the Company, a dollar-weighted expense lead time of 33.52 days was determined. Since the Company receives a monthly bill for service, the dollar-weighted expense lead time includes an additional ½ month of service lead time.

### Other (Miscellaneous) Operations and Maintenance Expenses

This category of expense includes a sample of items from the Company's accounts payable system that were invoiced and paid in 2008.[4] The sample was selected in a manner that reflected a reasonable mix of vendors – both small and large – and products and services. Based on a sample of approximately 568 invoices which included product purchases, equipment rentals, and provision of general services to the Company, a dollar-weighted expense lead time of 34.84 days was derived. A mid-point approach using

[4] Note that this category of expense **excludes** payments to the IESO, payroll and benefits, payments to Inergi, payments to consulting and contract staff, payments relating to the Company's lease of the Trinity Office Building, all categories of taxes, payments relating to the Company's procurement card, and payments related to interest on long term debt.

data for the twelve months ending March 31, 2008 was used in the determination of the expense lead time associated with the delivery of both products and services to the Company.

### Removal Costs

The Company incurs costs when removing or replacing equipment from existing sites or rights of way. While these costs are required to be reported as a depreciation and amortization expense for accounting purposes, there is a cash flow impact associated with the Company's expenditures on such removals. The Company estimates that 40% of total removal costs relate to the Company's labor; the balance relates to materials and services required to implement removals, i.e., other (miscellaneous) operations and maintenance expenses. Taking this information into account, a weighted expense lead time of 30.02 days was determined.[5]

### Environmental Remediation

The Company incurs an expense when it is required to perform environmental remediation of its existing sites. As with removals, such remediation costs are recorded on the Company's books as a depreciation and amortization expense. However, since the process of remediation involves the procurement of general materials and services, there is a cash flow impact associated with it. Thus, an expense lead time identical to that used for other (miscellaneous) operations and maintenance expenses was assigned to environmental remediation, i.e., 34.84 days.

## *Interest on Long Term Debt*

The Company makes interest payments on its long term debt outstanding out of current year revenues. Such payments are generally made twice a year. Taking into account the various bonds and other long term debt instruments outstanding as of December 31, 2008, the dollar-weighted expense lead time associated with the Company's interest payments on its long term debt was calculated to be 52.87 days. The analysis used a calendar year approach to calculate the weighted-expense lead time associated with interest payments relative to the mid-point of the year.

## *Income and Capital Tax*

The Company makes income, and capital tax payments in monthly installments to the Federal Government. Using actual payment data from calendar year 2008, a dollar-weighted expense lead time of 13.58 days was determined for Capital Tax. The corresponding value for Income Tax was 17.17 days. Both estimates include the appropriate service lead times in the calculation, since payments are made for the year in monthly installments.

When capital and income taxes are dollar weighted together using actual payments amounts in 2008, the resulting value for the three was 16.51 days.

[5] The derivation of the expense lead time associated with removals used the following approach:
*(40% * Payroll and Expense Benefit Lead Time) + (60% * Other (Miscellaneous) Operations and Maintenance Expense Lead Time)*

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### *Goods and Services Tax (GST)*

The expense lead times associated with the following items that attract GST were considered in the NCI update to the distribution lead-lag study:

a. Retail Revenues;
b. Payments to the IESO for Power Supply;
c. Payments for the Corporate Credit Card;
d. Payments for the lease of the Trinity Office Building;
e. Payments to Inergi;
f. Payments for Other (Miscellaneous) Operations and Maintenance Expenses;
g. Payments made to Consulting and Contract Staff; and
h. Payments for Environmental Remediation, Removals, and Capital.

A summary of the expense lead times associated with each of the above items is provided in Table 4. Note that the statutory approach described at the outset was used to determine the expense lead times associated with the Company's remittances and disbursements of GST, i.e., both remittances and collections are generally on the last day of the month following the date of the applicable invoice.

**Table 4. Expense Lead Times Associated With GST**

| Line | GST Category | Expense Lead (Lag) Time Days |
|---|---|---|
| | (A) | (B) |
| 1 | GST - Retail Revenues | (18.23) |
| 2 | GST - Cost of Power | 46.50 |
| 3 | GST - Corporate Credit Card | 15.75 |
| 4 | GST - Payments for Lease of the Trinity Building | 39.19 |
| 5 | GST - Inergi Contract | 46.00 |
| 6 | GST - Other Operations and Maintenance | 43.95 |
| 7 | GST - Consulting and Contract Staff | 42.09 |
| 8 | GST - Environmental Remediation | 43.95 |
| 9 | GST – Removals | 43.95 |
| 10 | GST – Capital | 43.95 |

The expense lead times associated with the GST payments on the Corporate Procurement Card, the Trinity Building Lease, Inergi, Consulting and Contract Staff, and Other (Miscellaneous) Operations and Maintenance Expenses were then aggregated on a weighted basis into a single expense lead time using estimated GST payments made in 2008. The aggregation resulted in a weighted lead time of 36.59 days and is used in the calculation of GST costs or benefits as discussed in the next section.

With respect to the GST, it should be noted that the Ontario government has announced its intention to harmonize the Ontario Retail Sales Tax with the federal GST into a harmonized single sales tax effective July 1, 2010. No detailed information on the implementation of the proposed harmonized single sales tax has yet been released by either taxing authority. Accordingly, no changes to the current schedule of both remittances and receipts of the GST have been considered in this study.

## 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 | EXPENSES | | | | | |
| 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 | WORKING CAPITAL REQUIRED | | | | | |
| 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

| Line | Description | TEST YEAR 2010 | | TEST YEAR 2011 | |
|---|---|---|---|---|---|
| | | BUDGET | GST PROJECTION Assuming 5% GST Rate | BUDGET | GST PROJECTION Assuming 5% GST Rate |
| | | (A) | (B) | (C) | (D) |
| 1 | GST CATEGORY | | | | |
| 2 | Revenues | 3,189,300 | 159,465 | 3,288,700 | 164,435 |
| 3 | Cost of Power | 2,008,400 | (100,420) | 1,994,600 | (99,730) |
| 4 | OM&A Expenses | 224,580 | (11,229) | 230,356 | (11,518) |
| 5 | Removal costs | 33,000 | (1,650) | 35,700 | (1,785) |
| 6 | Environmental Remediation | 12,800 | (640) | 16,900 | (845) |
| 7 | Capital | 400,740 | (20,037) | 366,180 | (18,309) |
| | | | $25,489 | | $32,248 |
| | | GST (Lead) Lag Days | GST (Benefit) Cost | GST (Lead) Lag Days | GST (Benefit) Cost |
| | | (E) | (F) = Col (E)/365 X Col (B) | (G) | (H)= Col (G)/365 X Col (D) |
| 8 | GST (BENEFIT) COST | | | | |
| 9 | Revenue | (18.23) | (7,963) | (18.23) | (8,211) |
| 10 | Cost of Power | 46.50 | 12,793 | 46.50 | 12,705 |
| 11 | OM&A Expenses | 36.59 | 1,126 | 36.59 | 1,155 |
| 12 | Removal costs | 43.95 | 199 | 43.95 | 215 |
| 13 | Environmental Remediation | 43.95 | 77 | 43.95 | 102 |
| 14 | Capital | 43.95 | 2,412 | 43.95 | 2,204 |
| 15 | GST (BENEFIT) COST | | $8,644 | | $8,170 |

## Section V: Findings and Conclusions

The purpose of this section is to demonstrate that:

- The results from this study are generally consistent with results from the Company's 2006 and 2007-08 distribution and transmission studies respectively and that the current operations of the Company are fully captured;
- The approach used in this study is consistent with similar studies in Canada; and
- The overall result is a balance between the expectations of investors and rate-payers, i.e., a working capital requirement lower than the OEB's guideline (15% of OM&A including cost of power) in conjunction with compensation to investors for funding activities outside of the areas specified by the OEB's guidelines.

### *Comparison with Hydro One's Prior Transmission and Distribution Studies*

In terms of the overall working capital requirements of the Company, results from this study (11.7% and 11.9% of OM&A expenses including cost of power) are generally consistent with what was identified in the 2006 distribution study (11.6% of OM&A expenses including cost of power).

In terms of specific lead-lag days and, for the most part, results from the current lead-lag study are generally consistent with either the 2006 distribution study performed in 2005 or the 2007-08 transmission study performed in 2006 with a few exceptions. The discussion below highlights each of the exceptions and provides an estimate of its impact on the Company's otherwise applicable working capital requirement.

*Collections lag*: Using data on accounts receivables received from the Company, this study notes that the lag time associated with collections from retail customers has increased from an estimated 30.22 days in the 2006 distribution study to about 32.07 days in the current study. The driver of this change is an increase in amounts within the 60 days and greater aging interval compared with the prior study. The impact of this change is that it **increases** the Company's working capital requirements by approximately $14.2 million and $14.5 million in 2010 and 2011 respectively.

*Other Revenue Lag*: The lag time associated with collections of other revenues has decreased from 70.30 days in the 2006 distribution study to 38.35 days in the current study. The major driver of this decrease is that the lag time associated with non-energy related collections has decreased significantly since the 2006 distribution study. The impact of this change is that it **decreases** the Company's working capital requirements by about $3.8 million and $3.9 million in 2010 and 2011 respectively.

*Operations, Maintenance, and Administrative ("OM&A") Expenses*: The expense lead time associated with OM&A expenses has increased from 16.45 days in the 2006 study to 22.92 days in the current study. Factors driving this increase include payments made to consulting and contract staff, payments to Inergi, and finally, property tax payments. The net effect of this increase is that it **decreases** the otherwise

applicable working capital requirements of the Company by $10.5 million and $10.7 million in 2010 and 2011 respectively.

*Interest on Long Term Debt*: While the expense lead time associated with interest on long term debt has decreased significantly compared with the 2006 distribution study (52.87 days compared with 74.66 days), results from the current study are generally consistent with the expense lead time identified in the Company's 2006 transmission study (52.87 days compared with 53.30 days). The driver of the difference is a change in the mix of bonds outstanding and their attendant interest payment dates – bonds outstanding currently and their respective interest payment due dates are more in line with the state of affairs at the Company when the 2007-08 transmission study was developed. The impact of this change is that it **increases** the Company's working capital requirements by about $9.3 million and $9.8 million in 2010 and 2011 respectively.

*Capital and Corporate Income Tax*: The expense lead time associated with capital and corporate income taxes has increased from 15.61 days in the 2006 distribution study to 16.51 days in the current study. This increase, driven by true-up payments made in the year following the current year, results in a decrease of otherwise applicable working capital requirements by $40,000 and $97,000 for 2010 and 2011 respectively.

Table 7 below compares the results of the current study (in terms of days) with Hydro One's distribution study accepted by the Board in 2006 and the transmission study accepted in 2007 in each of the areas discussed above.

**Table 7. Current Study vs. Hydro One's Accepted 2006 Distribution Study and Accepted 2007 Transmission Study**

Note that the Impacts shown in the Table below are derived using 2010 and 2011 Budgets and **not** the amounts used in the 2006 Distribution Rate Application

| | Number of Days | | | Impact ($M) | |
|---|---|---|---|---|---|
| | From Distribution Study Dated July 2005 | From Transmission Study Dated July 2006 | From Current Distribution Study | 2010 | 2011 |
| | (A) | (B) | (C) | (D) | (E) |
| **Collections Lag** | 30.22 | | 32.07 | +14.2 | +14.5 |
| **Other Revenue Lag** | 70.30 | | 38.35 | -3.8 | -3.9 |
| **OM&A** | 16.45 | 19.21 | 22.92 | -10.5 | -10.7 |
| **Interest on Long Term Debt** | 74.66 | 53.30 | 52.87 | +9.3 | +9.8 |
| **Capital Tax and Corporate Income LCT** | 15.61 | 15.68 | 16.51 | -0.04 | -0.07 |

## *Comparison with Other Canadian Studies – Update from 2006 Transmission Study*

As identified in the Company's 2006 transmission working capital study accepted by the Board, Hydro One's current distribution lead-lag study is generally consistent with studies that have been performed for other utilities both in the Province of Ontario and within other Canadian jurisdictions. Table 8 presents a high-level summary of the various elements of a lead-lag study and whether or not they have been considered in other Canadian jurisdictions involving Great Lakes Power (or "GLP"), Enbridge,

Union Gas, FortisBC, ATCO, Direct Energy, Altalink, FortisAlberta, Terrasen Gas, Newfoundland Power, Ontario Power Generation, Pacific Northern, and EPCOR.. To the extent that certain elements of Hydro One's distribution study do not apply to others (e.g., in the instance of natural gas companies), they have been so noted within Table 8.

From a review of the information in Table 8, it is clear that the items considered in the current Hydro One distribution lead-lag study are consistent with items that have been considered in other lead-lag studies within Canada. To the extent that there are differences, they can be explained as not being relevant to an electric distribution company's operations or to the operations of an electric company for that matter.

In concluding therefore:

1. The results from this study are generally consistent with results from the Company's 2006 and 2007-08 distribution and transmission studies respectively and that the current operations of the Company are fully captured;
2. When compared with other studies relating to the determination of working capital in Ontario and other Canadian jurisdictions, there is similarity; and
3. Finally, and most important, the overall result points to an overall savings to the rate-payer. If the OEB's guideline of 15% of OM&A including cost of power were to have been applied verbatim, the result would have been a working capital requirement of approximately $390 million for both 2010 and 2011 compared with the $305 million and $309 million in working capital requirements identified in this study.

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## Table 8. Comparison of Hydro One 2009 Distribution Study With Other Canadian Studies

| Name of Utility | Jurisdiction | Type of Service | Customer /Retail Revenues | IESO/ISO Revenues | Other Revenues | Payroll and Withholdings | Employee Benefits | Cost of Power | Cost of Other Fuels | Other OM&A | Income and Related Taxes | GST | Interest Expense |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **(A)** | (B) | (C) | (D) | (E) | (F) | (G) | (H) | (I) | (J) | (K) | (L) | (M) | (N) |
| **GLP** | Ontario | Electric Transmission | N/A | Yes | Yes | Yes | Yes | N/A | N/A | Yes | | Yes | |
| ***Hydro One Distribution - 2009*** | ***Ontario*** | ***Electric Distribution*** | ***Yes*** | ***Yes*** | ***Yes*** | ***Yes*** | ***Yes*** | ***Yes*** | ***N/A*** | ***Yes*** | ***Yes*** | ***Yes*** | ***Yes*** |
| **Enbridge** | Ontario | Gas | Yes | N/A | | Yes | Yes | N/A | Yes | Yes | | Yes | |
| **Union** | Ontario | Gas | Yes | N/A | | Yes | Yes | N/A | Yes | Yes | | Yes | |
| **Manitoba Hydro** | Manitoba | Electric (Integrated) | | | | Yes | Yes | | Yes | Yes | | Yes | |
| **BCTC** | BC | Electric TX | | | | Yes | Yes | | Yes | Yes | | Yes | |
| **FortisBC** | BC | Electric | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| **ATCO** | Alberta | Gas | Yes | N/A | Yes | Yes | Yes | N/A | Yes | Yes | Yes | Yes | Yes |
| **Direct Energy** | Alberta | Electric | N/A | N/A | | Yes | Yes | Yes | N/A | Yes | | Yes | |
| **AltaLink** | Alberta | Electric TX | Yes | Yes | Yes | Yes | Yes | Yes | N/A | Yes | Yes | Yes | Yes |
| **Fortis Alberta** | Alberta | Electric TX | Direct Connect Customers and Marketers | Yes | Yes | Yes | Yes | N/A | N/A | Yes | Yes | Yes | Yes |
| **Pacific Northern** | BC | Gas | Yes | N/A | Yes | Yes | Yes | N/A | Yes | Yes | Yes | Yes | |
| **EPCOR** | Alberta | Electric TX | N/A | Yes | | Yes | Yes | N/A | N/A | Yes | | Yes | Yes |
| **Terrasen Gas** | BC | Gas | Yes | N/A | Yes | Yes | Yes | N/A | Yes | Yes | Yes | Yes | |
| **Newfoundland Power** | Newfoundland | Electric | Yes | N/A | Yes | Yes | Yes | Yes | N/A | Yes | Yes | Yes | |
| **Ontario Power Generation** | Ontario | Electric | N/A | Yes | Yes | Yes | Yes | N/A | Yes | Yes | Yes | Yes | |

# WORKING CAPITAL

## 1.0 INTRODUCTION

Working capital is the amount of funds required to finance the day-to-day operations of a regulated utility and is included as part of rate base for ratemaking purposes. The determination of working capital relies on a lead-lag study.

In 2005, Hydro One commissioned Navigant to carry out a lead-lag study. In the OEB's RP-2005-0020/EB-2005-0378 Decision with Reasons, the OEB accepted the results of the Navigant lead-lag study. In 2009, Hydro One commissioned Navigant to conduct an updated lead-lag study which is included in Exhibit D1, Tab 1, Schedule 4, Attachment A (entitled "A Determination of the Working Capital Requirements of Hydro One Networks' Distribution Business – dated June 19, 2009).

## 2.0 SUMMARY

Hydro One Distribution's net cash working capital requirement for the 2010 test year is $304.7 million or 11.7% of OM&A ($591.0M) and Cost of Power expenses ($2,008.4M). Net cash working capital requirement for the 2011 test year is $309.3 million or 11.9% of OM&A ($606.2M) and Cost of Power expenses ($1,994.6M). The net cash working capital requirement was calculated using the Navigant methodology accepted in RP-2005-0020/EB-2005-0378 and updated in 2009 as part of this application. Table 1 summarizes the net cash working capital requirements determined by using the lead/lag days from the Navigant study filed in Exhibit D1, Tab 1, Schedule 4, Attachment 1 to reflect the 2010 and 2011 test year revenues, expenses and GST amounts (Table 2).

The methodology used to determine the net working cash required is based on the Navigant study that was accepted by the OEB, and it takes the following into consideration:

- the three most important elements of revenue lags i.e., service, billing and collections; the most important elements of expense lead such as payroll and benefits, operations, maintenance, administration expenses, cost of power, taxes and interest.

## Table 1

## Distribution Net Cash Working Capital Requirement
## (All Data in $M Except Lead/Lag Days)

| | Revenue Lag (Days) | Expense Lag (Days) | Net Lag (Lead Days) | 2010 Test Year | 2011 Test Year |
|---|---|---|---|---|---|
| | (A) | (B) | (C) | (D) | (E) |
| **Expenses** | | | | | |
| Cost of Power | 69.99 | 32.67 | 37.32 | $2,008.4 | $1,994.6 |
| OM&A | 69.99 | 22.92 | 47.07 | $591.0 | $606.2 |
| Removal Costs | 69.99 | 30.02 | 39.97 | $33.0 | $35.7 |
| Environmental Costs | 69.99 | 34.84 | 35.15 | $12.8 | $16.9 |
| Interest on Long-Term Debt | 69.99 | 52.87 | 17.12 | $154.9 | $164.6 |
| Income & Capital Tax | 69.99 | 16.51 | 53.48 | $16.5 | $39.6 |
| **Total** | | | | **$2,816.6** | **$2,857.6** |
| GST (see Table 2) | | | | $25.5 | $32.2 |
| **Total Amounts Paid/Accrued** | | | | **$2,842.1** | **$2,889.8** |
| **Working Capital Required** (Calculations based on above values, for each expense category, calculated using the following formula: For 2010 and 2011 (Col (D)*Col (C)/365)) | | | | | |
| Cost of Power | | | | $205.3 | $203.9 |
| OM&A | | | | $76.2 | $78.2 |
| Removal Costs | | | | $3.6 | $3.9 |
| Environmental Costs | | | | $1.2 | $1.6 |
| Interest on Long-Term Debt | | | | $7.3 | $7.7 |
| Income & Capital Tax | | | | $2.4 | $5.8 |
| **Total** | | | | **$296.1** | **$301.2** |
| GST (see Table 2) | | | | $8.6 | $8.2 |
| **Net Working Cash Required** | | | | **$304.7** | **$309.3** |

**Table 2**
**Distribution Summary of GST Cash Working Capital Requirement**
**(All Data in $M Except Lead-Lag Days)**

| GST Category | 2010 Test Year | | 2011 Test Year | |
|---|---|---|---|---|
| | | 5% GST Projection | | 5% GST Projection |
| | (A) | (B) | (C) | (D) |
| Revenue | 3,189.3 | 159.5 | 3,288.7 | 164.4 |
| Cost of Power | 2,008.4 | (100.4) | 1,994.6 | (99.7) |
| OM&A Expenses | 224.6 | (11.2) | 230.4 | (11.5) |
| Removal Costs | 33.0 | (1.7) | 35.7 | (1.8) |
| Environmental Costs | 12.8 | (0.6) | 16.9 | (0.8) |
| Capital | 400.7 | (20.0) | 366.2 | (18.3) |
| **TOTAL** | | **$25.5** | | **$32.2** |
| | | | | |
| **GST (Benefit) Cost** | **2010 Test Year** | | **2011 Test Year** | |
| | **Expense Leads (Days)** | **GST Amounts** | **Expense Leads (Days)** | **GST Amounts** |
| | **(C)** | **(D)** | **(C)** | **(D)** |
| The values shown in the Col (D) labeled "GST Amounts" are calculated using the expense leads shown in Col (C) divided by 365 and multiplied by the 5% GST projected amount in Col (B) | | | | |
| Revenue | (18.23) | (8.0) | (18.23) | (8.2) |
| Cost of Power | 46.50 | 12.8 | 46.50 | 12.7 |
| OM&A Expenses | 36.59 | 1.1 | 36.59 | 1.2 |
| Removal Costs | 43.95 | 0.2 | 43.95 | 0.2 |
| Environmental Costs | 43.95 | 0.1 | 43.95 | 0.1 |
| Capital | 43.95 | 2.4 | 43.95 | 2.2 |
| **TOTAL** | | **$8.6** | | **$8.2** |

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.

# APPENDIX 2-3

## Horizon Utilities Lead/Lag Study

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

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August 9, 2010

NAVIGANT CONSULTING

Navigant Consulting has prepared this report at the request of Horizon Utilities Inc. (the "Company"). In preparing this report Navigant Consulting has relied upon the Company's revenue and expense data for 2009, 2010, and 2011. Navigant Consulting has not independently confirmed the accuracy of such data supplied by the Company.

NAVIGANT CONSULTING

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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 and 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** | | **17.80** | **18.13** | **18.55** |

## 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 (OEFC). 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 | | | | | | **13.6%** |

**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 | | | | | | **13.8%** |

NAVIGANT CONSULTING

**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 | | | | | | **14.2%** |

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 | | | | | | **$1.1** | **$2.4** | **$3.3** |

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 | **$38.80** | **$40.07** | **$47.54** | | | | | | | **13.58** | **13.50** | **13.74** |

**EB-2010-0131**

**HORIZON UTILITIES CORPORATION ("HORIZON UTILITIES")**
**RESPONSES TO**
**ENERGY PROBE INTERROGATORIES**

**DELIVERED: January 24th, 2011**

**Question 7**

**Reference:** Exhibit 2, Tab 4, Schedule 1, Appendix 2-3

**a)** Please provide all the data, calculations and assumptions used by rate class to arrive at a service lag of 30.27 days.

**b)** Does Horizon have any plans to move residential and small commercial customers to monthly billing? If yes, please elaborate on the timing of any such move.

**c)** Did the service lags used include 30.42 days for customers billed on a bimonthly basis (i.e. 365 / 6 / 2) and a service lag of 15.21 days for customers billed on a monthly basis (i.e. 365 / 12/ 2)? If not, please show the calculation of the monthly and bimonthly service lags.

**d)** Please indicate which rate classes are billed on a bimonthly basis and which rate classes are billed on a monthly basis.

**e)** Please provide an example of the pricing data from the IESO that results in the delay in processing the bill to a customer by up to 11 or 12 business days.

**f)** With respect to the collection lag, is this accounts receivable analysis done on a rate class by rate class basis? If so, please provide the collection lag for each rate class based on the specific accounts receivable analysis for the rate class. If it is not done on a rate class specific basis, please explain why not.

**g)** Please provide the dates and amounts of property tax payments made that result in the average payment lag time of (194.8) days as shown on page 10.

**h)** Please show the derivation of the GST/HST lag of (17.41) days shown in Table 5 and reconcile it with the total revenue lag shown in Table 1.

**i)** Please recalculate the percentages of 13.6%, 13.8% and 14.2% shown in Tables 6 through 8, respectively under the assumption that all rate classes are billed on a monthly basis.

**j)** With reference to the interest costs shown in Exhibit 5, Tab, Schedule 2, Table 5-1, please explain $10.1 million interest expense shown in Table 8 for 2011.

**Response:**

**a)** The data, calculations and assumptions used in the derivation of the 30.27 days are shown in the Table below. The Table includes data on the number of monthly and bi-monthly customers. The assumptions regarding the mid-points of the service period for both monthly and bi-monthly customers are shown. Items that are calculated in the Table below are a) the weighting factors and b) the resulting service lag in days.

| | Number of Customers/Accounts | | | Weighting Factors | | Mid Points | | Service Lag Days |
|---|---|---|---|---|---|---|---|---|
| **Rate Classification** | Monthly | Bi Monthly | Total | Monthly | Bi Monthly | Monthly | Bi Monthly | |
| Residential | | 212,580 | 212,580 | 0.00% | 90.49% | 15.21 | 30.42 | 27.52 |
| General Service < 50 | | 17,979 | 17,979 | 0.00% | 7.65% | 15.21 | 30.42 | 2.33 |
| General Service > 50 | 2,216 | | 2,216 | 0.94% | 0.00% | 15.21 | 30.42 | 0.14 |
| Large Users | 12 | | 12 | 0.01% | 0.00% | 15.21 | 30.42 | 0.00 |
| Unmetered and Scattered | | 1,879 | 1,879 | 0.00% | 0.80% | 15.21 | 30.42 | 0.24 |
| Sentinel | | 250 | 250 | 0.00% | 0.11% | 15.21 | 30.42 | 0.03 |
| Streetlights | 4 | | 4 | 0.00% | 0.00% | 15.21 | 30.42 | 0.00 |
| Total | 2,232 | 232,688 | 234,920 | | | | | **30.27 days** |

**b)** No, Horizon Utilities does not currently have any plans to move residential and small commercial customers to monthly billing.

**c)** Yes.

**d)** As used in Horizon's lead/lag study, the information requested is provided in the Table below.

| Class | Frequency of Billing |
|---|---|
| Residential | Bi-Monthly |
| General Service < 50 kW | Bi-Monthly |
| General Service > 50 kW | Monthly |
| Large Users | Monthly |
| Unmetered and Scattered | Bi-Monthly |
| Sentinel | Bi-Monthly |
| Streetlights | Monthly |

**e)** Horizon's meters measure volumes of kilowatthours consumed by customers. These volumes need to be applied to prices (cents/KWh) in order to generate a bill.

**f)** No. The analysis has not been performed on a rate class by rate class basis (see response to d) for a list of rate classes). Horizon Utilities prepares its aged accounts receivable and credit analysis using two categories of customers; a) residential, and b) commercial, which closely aligns to its credit policies. **g)** As explained on page 2 of Exhibit 2, Tab 4, Schedule 1, Appendix 2-3, the expense lead time consists of two components: a service component, and a payment component. Adding the two together and dollar weighting them produces a weighted average expense lead time for a particular of expense. In the instance of property taxes (page 10 of Exhibit 2, Tab 4, Schedule 1, Appendix 2-3), the weighted average expense lead time was determined to be (12.30) days and the service lead time was 182.50 days. The average payment lag time of (194.8) days is the "delta" between the service lead time and the weighted average expense lead time.

**h)** The derivation of the (17.41) days of the GST/HST lag is shown on Cols (A) through (F) of the Table below. The discussion following the Table explains how the values in the Table were calculated and, in doing so, reconciles with the total revenue lag calculation shown on Table 1 of Exhibit 2, Tab 4, Schedule 1, Appendix 2-3.

| Line | Start Date | Average End Date assuming Mid Point of Service Period | Customer Invoice Date | GST Remittance Date | GST Collection Date | GST Lead Revenues |
|---|---|---|---|---|---|---|
| | (A) | (B) | (C) | (D) | (E) | (F) |
| 1 | 1/1/2009 | 1/31/2009 | 2/17/2009 | 3/31/2009 | 3/14/2009 | (16.16) |
| 2 | 2/1/2009 | 3/3/2009 | 3/20/2009 | 4/30/2009 | 4/14/2009 | (15.16) |
| 3 | 3/1/2009 | 3/31/2009 | 4/17/2009 | 5/31/2009 | 5/12/2009 | (18.16) |
| 4 | 4/1/2009 | 5/1/2009 | 5/18/2009 | 6/30/2009 | 6/12/2009 | (17.16) |
| 5 | 5/1/2009 | 5/31/2009 | 6/17/2009 | 7/31/2009 | 7/12/2009 | (18.16) |
| 6 | 6/1/2009 | 7/1/2009 | 7/18/2009 | 8/31/2009 | 8/12/2009 | (18.16) |
| 7 | 7/1/2009 | 7/31/2009 | 8/17/2009 | 9/30/2009 | 9/11/2009 | (18.16) |
| 8 | 8/1/2009 | 8/31/2009 | 9/17/2009 | 10/31/2009 | 10/12/2009 | (18.16) |
| 9 | 9/1/2009 | 10/1/2009 | 10/18/2009 | 11/30/2009 | 11/12/2009 | (17.16) |
| 10 | 10/1/2009 | 10/31/2009 | 11/17/2009 | 12/31/2009 | 12/12/2009 | (18.16) |
| 11 | 11/1/2009 | 12/1/2009 | 12/18/2009 | 1/31/2010 | 1/12/2010 | (18.16) |
| 12 | 12/1/2009 | 12/31/2009 | 1/17/2010 | 2/28/2010 | 2/11/2010 | (16.16) |
| 13 | Average | | | | | **(17.41)** |

i. The dates shown on Col (A) are assumed starting dates for a 12 month period in 2009.

ii. The values shown on Col (B) are calculated as the Service Start Date in Col (A) plus an average service lag of 30.27 days as indicated on Table 1 of Exhibit 2, Tab 4, Schedule 1, Appendix 2-3.

iii. The values shown on Col (C) are calculated as the values shown on Col (B) plus a billing lag of 17.35 days that is shown on Table 1 of Exhibit 2, Tab 4, Schedule 1, Appendix 2-3.

iv. For each period, in this example, month, the GST remittance date shown on Col (D) is the last day of the month following the Customer Invoice Date shown on Col (C).

v. The values shown on Col (E) are calculated as the values shown on Col (C) plus 24.00 days of collections lag plus 1.21 days of payment processing lag. Both the collections lag and payment processing lag values are shown on Exhibit 2, Tab 4, Schedule 1, Appendix 2-3.

**i)** Horizon believes that performing such a calculation in isolation is misleading, inappropriate, and its results would be irrelevant in the present context for two reasons. First, one would have to factor in the on-going operating costs of implementing such a change in the estimation of Horizon's working capital requirements.. Also, in generic

terms, such costs may include (and might not be limited to) incremental capital investments in metering and information technology, incremental payroll and benefit expenses, incremental OM&A expenses, increased taxes, and depending on how the shift is accomplished, incremental interest expenses. Second, as explained in response to part b) of this interrogatory, Horizon has no plans to move customers from bi-monthly to monthly billing. With these as caveats and assuming that all customers are billed on a monthly basis, Horizon's working capital requirements would reduce to a theoretical 8.8%, 8.8%, and 9.0% respectively for the period 2009-2011.

**j)** The interest expense of $10.1MM is based on the interest payments in the year of $8.1MM with respect to the $116MM Promissory Note and interest payments of $2.0MM with respect to the $40MM Promissory Note.

Ontario Energy Board

Commission de l'énergie de l'Ontario

Ontario

**EB-2010-0131**

**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 Horizon Utilities Corporation for an order approving just and reasonable rates and other charges for electricity distribution to be effective January 1, 2011.

**BEFORE:** Marika Hare
Presiding Member

Cathy Spoel
Member

Karen Taylor
Member

## DECISION AND ORDER

## BACKGROUND

Horizon Utilities Corporation ("Horizon") filed an application (the "Application") with the Ontario Energy Board (the "Board") on August 27, 2010 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 Horizon charges for electricity distribution, to be effective January 1, 2011. The Board assigned the Application File Number EB-2010-0131.

Enterprise Data Warehouse/Operational Data Store and investment in new equipment in fleet capital additions. With respect to the issue of fleet capital, the Board also notes that the premiums paid by Horizon to purchase electric hybrid vehicles should not be the responsibility of the ratepayer.

Parties have provided various rationales or approaches (averaging of 2 or 3 years of actual capital expenditures, an envelope reduction, etc.) to arrive at an appropriate level of capital expenditures for the test year. Each approach produces a different capital budget. However, the range of results is relatively narrow. On one point, however, there is agreement – that the proposed capital budget is excessive and not adequately supported by Horizon's evidence. The Board agrees.

The Board finds that the capital expenditures for setting 2011 rates should be $39 million (exclusive of smart meters), which is approximately equal to a $5 million reduction in the applied-for capital expenditures budget of about $44 million. The approved capital expenditures budget is within the range suggested by parties and Board staff and is a 3.5% increase to Horizon's previous peak-year capital spending of $37.7 million, reached in 2009.

*Lead-Lag study*

As directed by the Board in its decision on Horizon's previous Cost of Service application for 2008 rates (EB-2007-0697), Horizon filed a lead-lag study to update its working capital requirements. The study was conducted by Navigant Consulting Inc. ("Navigant"). The results of the lead-lag study are the basis for Horizon's proposal that the Working Capital Allowance ("WCA") be calculated as 14% of the sum of the Cost of Power plus controllable expenses; this is lower than the 15% factor that is commonly used in the electricity distribution sector.

An update to the study was filed as part of Horizon's updated evidence on March 14, 2011. The update did not result in material changes to the results of the lead-lag study.

Mr. Subbakrishna of Navigant Consulting testified on behalf of Horizon with respect to the lead-lag study. During cross-examination it was affirmed that, while revenue weights are used for most components of the analysis, customer weighting was used to estimate the service lag.

In its submission, Board staff submitted that customer weighting overestimates the average service lag, and that revenue weighting for the service lag, as for other revenue and expense leads and lags, is appropriate. Board staff noted the response to Undertaking J1.2, reducing the service lag from 30.5 days to 26.7 days would result in a WCA factor of about 13%, and reduce rate base by about $5.5M.[16]

Energy Probe agreed that the WCA was overstated by more than $4.5 million compared to the updated Navigant Report for the reasons noted by Board staff. Energy Probe also submitted that the WCA should be updated and corrected through updating of Tables 8 and 9 of the Lead-Lag study conducted by Navigant Consulting, rather than just through application of the 14% factor or whatever factor determined by the Board.[17] Energy Probe also submitted that the revenue weights should use the 2011 test year forecasts rather than 2009 actual data,[18] that management fee expenses of $784,515 should be excluded from OM&A for the purposes of calculating the WCA[19] and that the Cost of Power was incorrect and proposed corrections for this. Overall, Energy Probe estimated that its proposed adjustments would result in a WCA factor of 13.6%.

Energy Probe also submitted that the WCA should be updated to reflect any adjustments resulting from the Board's decision (i.e. with respect to controllable operating expenses and/or load forecast). [20]

CCC[21], SEC[22] and VECC[23] supported Energy Probe's submission on this issue. AMPCO did not make a submission on this matter.

In reply, Horizon concurred with Energy Probe's submissions for the updated Cost of Power and with the exclusion of management fee expenses of $784,515 from OM&A and hence from controllable expenses for purposes of calculating the WCA. However, Horizon rejected the submissions of Board staff and stated that its 14% WCA factor per the updated Navigant Report is correct. It stated that the alternative would be to apply the generic 15% factor commonly used by electricity distributors. Horizon also opposed

[16] Board staff submission [EB-2010-0131], May 4, 2011, pp. 17-18
[17] *Ibid.*, pp. 12-13
[18] *Ibid.*, pp. 14-16
[19] *Ibid.*, pg. 19
[20] *Ibid.*, pp. 16-18
[21] CCC submission [EB-2010-0131], May 9, 2011, pg. 7
[22] SEC submission [EB-2010-0131], May 6, 2011, pp. 35-36
[23] VECC submission [EB-2010-0131], May 6, 2011, pg. 4

Energy Probe's proposed 13.6% factor for the WCA, submitting that it was too late in the process to suggest changes in the methodology for revenue weighting of service and revenue lags.[24]

**Board Findings**

The Board has considered the many adjustments and corrections suggested by Energy Probe, and supported by other parties, in order to calculate the WCA. The Board is in agreement that these factors would reduce the WCA by approximately $2.6 million, as suggested by Energy Probe.

The Board is also concerned with the adequacy of the WCA calculation given the testimony of the Navigant consultant, who stated that the lead/lag study did not take into consideration a number of elements that would have reduced the billing lag – most notably the introduction of smart meters and AMI, which represent a significant investment in assets in order to improve billing information. Noting that Horizon has nearly completed its deployment of smart meters and will be implementing time-of-use ("TOU") pricing this year, the Board finds it is incongruent to disregard the operational impacts arising from smart meters and TOU pricing that should reduce cash working capital requirements during 2011and the subsequent IRM period.

The Board does accept Horizon's argument that a lead/lag study is undertaken based on the individual characteristics of the distributor, and therefore comparisons to other distributors may not be appropriate. Nevertheless, the Board must take notice of the results of other study results such as those conducted for and filed by Hydro One Networks Inc. and Toronto Hydro Electric Systems Ltd. to ascertain reasonableness.

For the reasons set out above, the Board directs that a 13.5% working capital allowance will be used. This result is also more consistent with the results of the working capital allowance studies undertaken by Hydro One (result being 11.9%) and Toronto Hydro-Electric Systems Limited (result being 12.9%).

[24] Horizon reply submission [EB-2010-0131], May 20, 2011, pp. 41-44



# LEAD LAG STUDY

## 1.0 INTRODUCTION

Hydro Ottawa Limited ("Hydro Ottawa") filed an application with the Ontario Energy Board (the "Board") on September 19, 2007 seeking approval for changes to the rates charged for electricity distribution effective May 1, 2008. In the application, Hydro Ottawa used "the 15% allowance approach" as described in the Board's Filing Requirements for Transmission and Distribution Applications ("Filing Requirements") to calculate the Working Capital Allowance ("WCA") for the Test Year 2008. The 15% rate was then changed to 12.5%[1] as part of a settlement agreement based on the results of a lead-lag study conducted by Toronto Hydro-Electric System Limited for its 2008 Test Year. For this application, Hydro Ottawa has conducted its own lead/lag study to derive the working capital requirements. This study is based on 2009 and 2010 historical data, and adjusted for any anticipated material changes for the 2012 Test Year.

Working capital is the amount of funds required to finance the day-to-day operations of a regulated utility. Determining the company's working capital requirements using a lead/lag study is one of two approaches included in the Filing Requirements.

Lag is the time between one event, process, or period and another. In this lead/lag study, lag is the number of days between the date that a service is rendered and the date that payment is received, and generally refers to revenue; however, prepaid revenue would be a negative lag (or a revenue lead). Lead refers to the number of days between the date Hydro Ottawa receives goods and services and the date that it pays for them, and generally refers to an expense; however, a prepaid expense would be a negative lead (or an expense lag). Both the overall revenue lag and expense lead, in number of days, are developed by weighting the lag or lead from individual sources based on relative dollar magnitude. A net lag is then calculated using the lag minus the

[1] EB-2007-0713, Decision, Issued March 17, 2008



lead. The working capital requirement is then determined by using the net lag divided by 365 and multiplied by the annual budgeted costs[1]. The working capital requirement is then expressed as a percent of the total Operations, Maintenance and Administration ("OM&A") plus the cost of power to determine the WCA for both 2009 and 2010. An adjustment was then made to reflect the only material change known for 2012, the move to a harmonized sales tax ("HST"). These revised results for 2009 and 2010 were averaged to determine the final WCA proposed for 2012. Refer to Exhibit B4-1-1 for the determination of the final working capital requirement to include in rate base by multiplying the proposed WCA by the total of the 2012 forecast OM&A and cost of power.

## 2.0 REVENUE LAG

Revenue lag refers to the number of days between the date that Hydro Ottawa provides a service to its customer and the date that payment is received and funds are available to the company. Hydro Ottawa's revenue can be divided into three categories.

- Revenues from Residential and General Service Customers. This group of customers includes residential, general service < 50 kW, general service 50 – 1,499 kW, general service 1,500 – 4,999 kW, large users, streetlighting and unmetered scattered load.
- Revenues from Services to Retailers. This refers to electricity retailers licensed under the *Ontario Energy Board Act*.
- Revenues from Other Sources. This includes pole and duct rentals, property rentals and work for other services.

When the three sources of revenues are considered together, the weighted average revenue lag time for 2009 is 75.3 days and for 2010 is 75.2 days. Table 1 shows a

[1] Budgeted costs include Cost of Power, OM&A, Interest Expense, Payments in Lieu of Taxes ("PILs"), Debt Retirement Charge and HST on Capital Expenses



summary of the 2009 and 2010 revenue lags. Details for each component are provided in the sections that follow.

**Table 1 - Revenue Lag[1]**

| Source of Revenues | 2009 | | | | 2010 | | | |
|---|---|---|---|---|---|---|---|---|
| | Revenue Lag (Days) | Amount $ | Weighting Factor | Weighted Revenue Lag | Revenue Lag (Days) | Amount $ | Weighting Factor | Weighted Revenue Lag |
| Revenues from Residential and Business Customers | 74.97 | 732,196,506 | 98.42% | 73.78 | 74.97 | 770,833,454 | 98.05% | 73.51 |
| Revenues from Services to Retailers | 32.90 | 347,827 | 0.05% | 0.02 | 30.15 | 321,152 | 0.04% | 0.01 |
| Revenues from Other Sources | 96.16 | 11,420,912 | 1.54% | 1.48 | 90.51 | 15,016,106 | 1.91% | 1.73 |
| TOTAL[2] | | 743,965,246 | 100.00% | 75.3 | | 786,170,711 | 100.00% | 75.2 |

## 2.1 Revenues from Residential and Business Customers

As shown in Table 1, revenues from residential and general service customers represent 98.42% of Hydro Ottawa's 2009 total revenues, and represent 98.05% of Hydro Ottawa's 2010 total revenues. The revenue lag is the same each year at 74.97 days.

The revenue lag associated with this category consists of 4 components. They are summarized in Table 2 and discussed in further detail in the sections that follow.

[1] Note that these revenues are from the same source as revenues reflected on the audited financials but would not be the same numbers as no adjustments have been made for end of period accruals or for accounting entries for items such as retail settlement variance accounts. The revenues from residential and general service customers do not include miscellaneous charges that are not available by customer class from Hydro Ottawa's financial system but these would not be material for the purposes of allocation.
[2] Totals do not equal due to rounding.



**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 |

### 2.1.1 Service Lag

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

**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 |



**Table 4 - 2010 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 | 271,603 | Bi-monthly | 30.42 | 90.98% | 27.68 |
| General Service < 50 kW | 23,434 | Bi-monthly | 30.42 | 7.85% | 2.39 |
| GS 50 – 1,499 kW | 3,279 | Monthly | 15.21 | 1.10% | 0.16 |
| GS 1,500 – 4,999 kW | 66 | Monthly | 15.21 | 0.02% | - |
| Large Users | 12 | Monthly | 15.21 | 0.00% | - |
| Street Lighting | 8 | Monthly | 15.21 | 0.00% | - |
| Unmetered Scattered Load | 129 | Monthly | 15.21 | 0.04% | 0.01 |
| TOTAL | 298,531 | | | 100.00% | 30.24 |

### 2.1.2 Billing Lag

Billing lag is the number of days between when a customer's meter is read and the date the customer is billed. This data is available from Hydro Ottawa's customer information system ("CIS") for each customer class. A query was generated from the CIS database to measure the average number of days between meter reads and billing date for all customers by class in 2009 and 2010.

With Hydro Ottawa's CIS, bills are produced once the spot market price is available (10 business days after the service period end date,) even for those that are on the fixed regulated price plan. The system needs to calculate the difference between what would have been billed at the spot market price and billed at the fixed rate for the purposes of filing claims with the Independent Electricity System Operation ("IESO") each month. The system also needs to calculate the difference between what would have been billed at the spot market price and what is billed based on a retail contract for the purposes of settlement. All of this must happen before the bill is finalized.

The weighted average billing lag for 2009 is 18.11 days, and for 2010 is 18.24 days. Table 5 and Table 6 show the details.



**Table 5 - 2009 Billing Lag**

| Customer Type | Average # of Customers | Sales | Weight | Number of days between Meter Read & Billing (Regular Read) | Weighted Lag |
|---|---|---|---|---|---|
| Residential | 267,225 | $252,919,083 | 34.54% | 20.33 | 7.02 |
| General Service < 50 kW | 23,312 | 77,002,452 | 10.52% | 20.08 | 2.11 |
| GS 50 – 1,499 kW | 3,279 | 272,554,577 | 37.22% | 17.21 | 6.41 |
| GS 1,500 – 4,999 kW | 67 | 72,377,217 | 9.88% | 15.00 | 1.48 |
| Large Users | 11 | 53,233,888 | 7.27% | 13.83 | 1.01 |
| Street Lighting | 8 | 3,613,935 | 0.49% | 16.83 | 0.08 |
| Unmetered Scattered Load | 143 | 495,355 | 0.07% | 0.00 | 0.00 |
| TOTAL | 294,045 | $732,196,507 | 100.00% | 14.76 | 18.11 |

**Table 6 - 2010 Billing Lag**

| Customer Type | Average # of Customers | Sales | Weight | Number of days between Meter Read & Billing (Regular Read) | Weighted Lag |
|---|---|---|---|---|---|
| Residential | 271,603 | $267,560,504 | 34.71% | 20.08 | 6.97 |
| General Service < 50 kW | 23,434 | 82,536,260 | 10.71% | 20.33 | 2.18 |
| GS 50 – 1,499 kW | 3,279 | 283,209,918 | 36.74% | 17.69 | 6.50 |
| GS 1,500 – 4,999 kW | 66 | 73,990,275 | 9.60% | 15.42 | 1.48 |
| Large Users | 12 | 59,628,830 | 7.74% | 13.17 | 1.02 |
| Street Lighting | 8 | 3,935,758 | 0.51% | 17.50 | 0.09 |
| Unmetered Scattered Load | 129 | (28,092) | 0.00% | 0.00 | 0.00 |
| TOTAL | 298,531 | $770,833,453 | 100.00% | 14.88 | 18.24 |

### 2.1.3 Collections Lag

Collections lag is the number of days between when a customer is billed and when that payment is received from the customer. The collection lag for residential and general service customers was derived from an aged accounts receivable report by calculating the Days Sales Outstanding. The average collection lag for 2009 is 25.47 days and for 2010 is 25.36 days. Table 7 and Table 8 show the details.



**Table 7 - 2009 Collection Lag – Residential and General Service Customers ($000)**

| Month | 1-17 Days | 18-30 Days | 31-60 Days | 61-90 Days | 91-120 Days | Over 121 Days | Total | # of Days in Month | Sales[1] | Days Sales Outstanding |
|---|---|---|---|---|---|---|---|---|---|---|
| Jan | 44,143 | 4,980 | 5,024 | 1,502 | 830 | 984 | 57,465 | 31 | 67,524 | 26.38 |
| Feb | 44,637 | 3,628 | 5,480 | 977 | 659 | 1,112 | 56,493 | 28 | 63,933 | 24.74 |
| Mar | 26,991 | 9,793 | 4,024 | 1,983 | 469 | 1,089 | 44,350 | 31 | 73,921 | 18.60 |
| Apr | 38,880 | 2,221 | 4,519 | 1,273 | 728 | 966 | 48,587 | 30 | 51,230 | 28.45 |
| May | 34,920 | 5,264 | 4,306 | 2,050 | 677 | 1,032 | 48,248 | 31 | 52,983 | 28.23 |
| Jun | 24,224 | 6,141 | 4,488 | 1,589 | 1,089 | 1,015 | 38,547 | 30 | 56,823 | 20.35 |
| Jul | 33,422 | 3,299 | 3,786 | 1,785 | 902 | 1,254 | 44,449 | 31 | 51,386 | 26.82 |
| Aug | 34,636 | 3,173 | 3,777 | 1,549 | 973 | 1,345 | 45,453 | 31 | 54,308 | 25.95 |
| Sep | 42,740 | 5,377 | 3,243 | 1,444 | 652 | 1,275 | 54,731 | 30 | 67,025 | 24.50 |
| Oct | 42,037 | 2,387 | 4,161 | 1,341 | 605 | 1,124 | 51,655 | 31 | 54,345 | 29.47 |
| Nov | 37,811 | 4,304 | 4,059 | 1,464 | 557 | 1,026 | 49,220 | 30 | 55,950 | 26.39 |
| Dec | 36,023 | 3,154 | 3,802 | 1,560 | 612 | 918 | 46,068 | 31 | 55,516 | 25.72 |
| TOTAL | 440,464 | 53,720 | 50,668 | 18,517 | 8,753 | 13,143 | 585,266 | 365 | 704,944 | 25.47 |

**Table 8 - 2010 Collection Lag – Residential and General Service Customers ($000)**

| Month | 1-17 Days | 18-30 Days | 31-60 Days | 61-90 Days | 91-120 Days | Over 121 Days | Total | # of Days in Month | Sales[1] | Days Sales Outstanding |
|---|---|---|---|---|---|---|---|---|---|---|
| Jan | 48,796 | 5,729 | 4,009 | 1,449 | 567 | 876 | 61,426 | 31 | 65,733 | 28.97 |
| Feb | 47,108 | 5,065 | 4,727 | 935 | 526 | 856 | 59,217 | 28 | 61,591 | 26.92 |
| Mar | 41,541 | 5,999 | 3,848 | 1,414 | 368 | 739 | 53,910 | 31 | 73,330 | 22.79 |
| Apr | 39,369 | 1,937 | 4,687 | 1,365 | 555 | 656 | 48,570 | 30 | 53,084 | 27.45 |
| May | 35,652 | 5,353 | 4,812 | 1,666 | 522 | 659 | 48,664 | 31 | 60,462 | 24.95 |
| Jun | 37,570 | 2,515 | 3,483 | 1,394 | 621 | 691 | 46,276 | 30 | 59,355 | 23.39 |
| Jul | 38,735 | 3,617 | 3,405 | 1,359 | 524 | 804 | 48,444 | 31 | 58,386 | 25.72 |
| Aug | 50,042 | 3,346 | 3,453 | 1,170 | 568 | 728 | 59,306 | 31 | 76,143 | 24.14 |
| Sep | 40,436 | 4,428 | 3,779 | 1,090 | 394 | 743 | 50,871 | 30 | 67,115 | 22.74 |
| Oct | 41,941 | 3,908 | 4,306 | 1,504 | 397 | 721 | 52,776 | 31 | 56,454 | 28.98 |
| Nov | 38,328 | 4,018 | 3,943 | 1,280 | 422 | 628 | 48,619 | 30 | 63,245 | 23.06 |
| Dec | 46,872 | 3,313 | 4,312 | 1,337 | 473 | 575 | 56,882 | 31 | 69,871 | 25.24 |
| TOTAL | 506,390 | 49,229 | 48,764 | 15,963 | 5,937 | 8,676 | 634,959 | 365 | 764,770 | 25.36 |

[1] This is from a report of all sales from the CIS in the year and does not include any accruals.



### 2.1.4 Payment Processing and Bank Float

Payments from customers are in the following forms: Remittance Processor Machine (Drop Box), Telepay & Internet, Auto Pay Bank Debit, Pre-Authorized Chequing, Bank Teller, and Cash. Based on the information provided from Hydro Ottawa's payment processing, it was determined that on a weighted average basis, it took 1.15 days in 2009 and 1.13 days in 2010 to clear a customer account.

## 2.2 Revenues from Services to Retailers

As a licensed electricity distributor, Hydro Ottawa provides services described under the Retail Settlement Code to electricity retailers. As shown previously in Table 1, revenues from services to retailers represent only 0.04% of Hydro Ottawa's annual revenues in 2009 and 0.04% in 2010. The revenue lag is 32.90 and 30.15 days for 2009 and 2010 respectively, the weighted revenue lag from this category is only 0.02 days in 2009 and 0.01 days in 2010. Table 9 shows the details for the service lag, billing lag, collections lag and payment processing and bank float lag.

**Table 9 - Revenue Lag from Services to Retailers**

| Revenue Lag Component | Days | |
|---|---|---|
| | 2009 | 2010 |
| Service Lag | 15.21 | 15.21 |
| Billing Lag | 0.74 | 0.58 |
| Collections Lag | 16.95 | 14.36 |
| Payment Processing and Bank Float Lag[1] | - | - |
| TOTAL | 32.90 | 30.15 |

[1] Hydro Ottawa recognizes payments from retailers when received by the bank. As a result, the 'Payment Processing and Bank Float Lag' is captured in the Collections Lag.



## 2.3 Revenues from Other Sources

Revenues from other sources include pole and duct rentals, property rentals and miscellaneous work for other activities. As shown in Table 1, revenues from these sources represent 1.54% of Hydro Ottawa's 2009 revenue, and 1.91% of the 2010 revenue. Therefore, while the revenue lag is 96.16 and 90.51 days for 2009 and 2010 respectively, the weighted revenue lag for 2009 and 2010 under this category is only 1.48 days for 2009 and 1.73 days for 2010. A number of services are billed in advance for the year, which results in a negative billing lag. Table 10 shows the details for the service lag, billing lag, collections lag and payment processing and bank float lag.

**Table 10 - Revenue Lag from Other Sources**

| Revenue Lag Component | Days | |
|---|---|---|
| | 2009 | 2010 |
| Service Lag | 31.47 | 23.01 |
| Billing Lag | (24.92) | (14.09) |
| Collections Lag | 88.46 | 80.46 |
| Payment Processing and Bank Float Lag | 1.15 | 1.13 |
| TOTAL | 96.16 | 90.51 |

## 3.0 EXPENSE LEAD (LAG)

Expense lead refers to the number of days between the date that Hydro Ottawa receives goods and services and the date that the company pays for them. Hydro Ottawa's expenses can be divided into five categories:

- Cost of Power,
- Operating, Maintenance, and Administration,
- Interest on Long Term Debts,
- Payments in Lieu of Taxes, and
- Debt Retirement Charges.



Each of the categories above is discussed in detail below.

### 3.1 Cost of Power

Cost of power includes invoices from the IESO, Hydro One, and embedded generators. Based on the data collected from the invoices recorded in Hydro Ottawa's accounts payable system, it is determined that the weighted average expense lead for 2009 is 33.96 days and for 2010 is 33.67 days. Table 11 shows the details.

**Table 11 - Cost of Power Expense Lead[1] ($000)**

| Vendor | 2009 | | | | 2010 | | | |
|---|---|---|---|---|---|---|---|---|
| | Amount | Expense Lead | Weight Factor | Weighted Lead | Amount | Expense Lead | Weight Factor | Weighted Lead |
| IESO | $547,555 | 33.15 | 93.79% | 31.09 | $593,733 | 32.88 | 93.99% | 30.91 |
| Hydro One | 32,239 | 49.28 | 5.52% | 2.72 | 33,461 | 49.00 | 5.30% | 2.60 |
| Generators | 4,029 | 22.10 | 0.69% | 0.15 | 4,498 | 23.58 | 0.71% | 0.17 |
| TOTAL[2] | $583,824 | | 100.00% | 33.96 | $631,692 | | 100.00% | 33.67 |

### 3.2 OM&A Expenses

OM&A expenses included within this study consist of the following categories:

- Payroll and Benefit Costs,
- Consulting and Contracts,
- Property Taxes, and
- Miscellaneous OM&A Expenses.

Each type of expense listed above is discussed in detail below and summarized in Table 12 that follows.

[1] Costs in this table are based on invoices in the year without accruals and adjustments normally part of financial statements.
[2] Totals do not equal due to rounding.

### 3.2.1 Payroll and Benefit Costs[1]

All employees of Hydro Ottawa are paid bi-weekly. Payments are deposited into employees' bank accounts on Thursday for the payroll period ending on Friday of the previous week. Payroll withholdings, as well as the employer's portion of Canadian Pension Plan and Employment Insurance are remitted to Canada Revenue Agency within 3 business days after the payday. Employer Health Tax is remitted on the 15th of each month for the payroll of the previous month. Workers Safety and Insurance Board remittance is made on the last business day of each month for the payroll of the previous month. The group pension plan of Hydro Ottawa is administered by Ontario Municipal Employees Retirement System ("OMERS"). Remittance to OMERS is made on the last business day of each month for the payroll of the previous month. The group insurance plan is administered by Great West Life, and the remittance is made in advance on the last business day of each month for the following month. Hydro Ottawa has an Employee Assistance Program. Payment for this program is made in advance on the last business day of each month for the following month. Based on the above payment patterns, the weighted average expense lead calculated for 2009 is 15.15 days and for 2010 is 15.10 days. Tables 12 and 13 below show the details.

**Table 12 – 2009 Payroll and Benefit Expense Lead**

| Lead (Days) | Payroll and withholdings | Benefits | WSIB | Total |
|---|---|---|---|---|
| Expense | $46,399,619 | $2,989,492 | $377,228 | $49,766,339 |
| Service Lead | 6.28 | 14.04 | 14.04 | 34.36 |
| Payment Lead | 10.66 | (30.42) | 30.42 | 10.66 |
| Total Lead | 16.94 | (16.38) | 44.46 | 45.02 |
| Weighting Factor | 93.23% | 6.01% | 0.76% | 100.00% |
| Weighted Lead | 15.80 | (0.98) | 0.34 | **15.15** |

[1] The payroll and benefit costs here are based on T4 statements, which are cash based. This is different from the total compensation expenses in financial statements, which is accrual based.



**Table 13 – 2010 Payroll and Benefit Expense Lead**

| Lead (Days) | Payroll and withholdings | Benefits | WSIB | Total |
|---|---|---|---|---|
| Expense | $46,496,277 | $3,115,417 | $394,118 | $50,005,813 |
| Service Lead | 6.32 | (30.42) | 14.04 | (10.06) |
| Payment Lead | 10.64 | (16.38) | 30.42 | 24.68 |
| Total Lead | 16.96 | (16.38) | 44.46 | 45.04 |
| Weighting Factor | 92.98% | 6.23% | 0.79% | 100.00% |
| Weighted Lead | 15.77 | (1.02) | 0.35 | **15.10** |

### 3.2.2 Consulting and Contracts

Expenses included in this category are on-going contractual expenses Hydro Ottawa has with outside vendors. It includes consulting and contract staff, outside services, rental and lease payments, professional services (legal, audit and consulting), information technology ("IT") maintenance contracts, telephone lines and airtime, and membership and professional dues, including regulatory assessments. The 2009 and 2010 accounts payable data was retrieved from Hydro Ottawa's financial system JD Edwards ("JDE"). Each vendor has a payment term in JDE, and the vendor is paid based on that term. Based on this information and the analysis on actual accounts payable data, a weighted payment term is derived for each payment. Generally, vendors are paid between 15 to 30 days after the goods and services are invoiced. As a result of prepaid expenses (e.g. OEB cost assessments, IT maintenance contracts, and insurance), the average expense lead for 2009 is 7.96 days and for 2010 is 7.22 days.

### 3.2.3 Property Taxes

Property taxes are prepaid twice a year. Based on the actual payments made in 2009 and 2010, the average expense lead for 2009 is a credit of 61.39 days and for 2010 is a credit of 74.83 days.



### 3.2.4 Miscellaneous OM&A Expenses

All expense not included above are discussed in this category. The method to derive the expense lead for Miscellaneous OM&A expenses is the same as that used for Consulting and Contract Expenses. The weighted average expense lead for 2009 is 23.80 days and for 2010 is 25.13 days.

Based on the above, the overall OM&A expense lead for 2009 is 11.28 days and for 2010 is 11.18 days. Table 14 shows the details.

**Table 14 - OM&A Expense Lead ($000)**

| Vendor | 2009 | | | | 2010 | | | |
|---|---|---|---|---|---|---|---|---|
| | Expense Lead (Days) | Amount | Weighting Factor | Weighted Lead (Days) | Expense Lead (Days) | Amount | Weighting Factor | Weighted Lead (Days) |
| Payroll & Benefits | 15.15 | $49,766 | 61.84% | 9.37 | 15.10 | $50,006 | 59.66% | 9.01 |
| Consulting and Contracts | 7.96 | 26,895 | 33.42% | 2.66 | 7.22 | 28,371 | 33.85% | 2.44 |
| Property Taxes | (61.39) | 1,775 | 2.21% | (1.35) | (74.83) | 1,598 | 1.91% | (1.43) |
| Misc. OM&A | 23.80 | 2,036 | 2.53% | 0.60 | 25.13 | 3,850 | 4.59% | 1.15 |
| **Total**[1] | | **$80,472** | **100.00%** | **11.28** | | **$ 83,825** | **100.00%** | **11.18** |

## 3.3 Interest on Long Term Debt

Hydro Ottawa has promissory notes issued to Hydro Ottawa Holding Inc. Table 15 shows the details of the debt. Interest on this long term debt is calculated and paid on a monthly basis. An intercompany journal entry is posted the week following the month the interest is due. The posting goes into the intercompany account and is settled as part of month-end processes by a physical cash transfer. Based on this information, it is determined that the expense lead on interest on long term debts is 45.63 days (service lag 15.21 days, payment lag 30.42 days).

[1] Totals do not equal due to rounding.



**Table 15**

| Date of Debt Issuance | Principal ($) | Interest Rate |
|---|---|---|
| 1-Jul-05 | 200,000,000 | 5.140% |
| 1-Jul-05 | 32,185,000 | 5.900% |
| 20-Dec-06 | 50,000,000 | 5.318% |
| 21-Dec-09 | 15,000,000 | 5.850% |
| 30-Apr-10 | 15,000,000 | 5.970% |

### 3.4 Payment in Lieu of Taxes (PILs)

Monthly installments on the current year's PILs are made to the Ontario Electricity Financial Corporation ("OEFC"). A true-up payment is typically made in the following year. The 2009 expense lead on PILs is 13.59 days and the 2010 expense lead on PILs is a credit of 3.31 days. The main reason for the difference between the 2009 and 2010 expense lead is that payments are being made earlier in the month in 2010.

### 3.5 Debt Retirement Charges ("DRC")

DRC is collected by Hydro Ottawa from its customers to pay down the debt of the former Ontario Hydro. The money is then remitted to the OEFC on a monthly basis. Based on the actual amounts and payment dates of the DRC payments, it is determined that the 2009 expense lead is 33.82 days and the 2010 expense lead is 32.69 days.

### 3.6 Goods and Services Tax ("GST")

The GST return for Hydro Ottawa is generally remitted on the last day of each month for the previous month. The 2009 and 2010 GST rate is 5%. HST was introduced in 2010, this will be discussed later. The following categories are subject to GST:

- Revenues,
- Cost of Power, and
- OM&A Expenses.



### 3.6.1 Revenues

Hydro Ottawa is obliged to collect GST from its customers, and then remit the GST amount collected to Canada Revenue Agency on the last day of each month. As discussed in Section 2.0, Hydro Ottawa has three types of revenues. Table 16 and Table 17 show the GST expense lead from each type of revenues. This represents the average difference between the collection date and the GST remittance date.

**Table 16 - 2009 GST Expense Lead – Revenues**

| Revenue | 2009 Revenue | 5% GST | Lead (Lag) Days | Weight Factor | Weighted Lead (Lag) Days |
|---|---|---|---|---|---|
| Revenue from residential and general service customers | $732,196,506 | $36,609,825 | 16.53 | 98.42% | 16.27 |
| Revenues from Retailers | 347,827 | 17,391 | 24.38 | 0.05% | 0.01 |
| Revenues from Other Sources | 11,420,912 | 571,046 | (32.23) | 1.54% | (0.49) |
| TOTAL[1] | $743,965,246 | $37,198,262 | | 100.00% | 15.78 |

**Table 17 - 2010 GST Expense Lead – Revenues**

| Revenue | 2010 Revenue | 5% GST | Lead (Lag) Days | Weight Factor | Weighted Lead (Lag) Days |
|---|---|---|---|---|---|
| Revenue from residential and general service customers | $770,833,454 | $38,541,673 | 16.59 | 98.05% | 16.26 |
| Revenues from Retailers | 321,152 | 16,058 | 16.96 | 0.04% | 0.01 |
| Revenues from Other Sources | 15,016,106 | 750,805 | (22.14) | 1.91% | (0.42) |
| TOTAL[2] | $786,170,711 | $39,308,536 | | 100.00% | 15.85 |

### 3.6.2 Cost of Power

Hydro Ottawa pays GST on power purchased from IESO, Hydro One and embedded generators. Hydro Ottawa can then claim and get this GST returned. The GST expense lead is calculated by using the GST return date of Hydro Ottawa, which is the last day of each month, minus the payment date of the power bills. Since the GST is paid upfront

[1] Totals do not equal due to rounding.
[2] Totals do not equal due to rounding.



and then returned, it results in a negative GST lead days. Tables 18 and 19 below show that the GST expense lead on Cost of Power is a negative lead of 41.74 days for 2009, and is a negative lead of 41.91 days for 2010.

**Table 18 – 2009 GST Expense Lead – Cost of Power**

| Vendor | 2009 | | | | |
|---|---|---|---|---|---|
| | Expense | GST Amount | GST Lead (Lag) | Weight Factor | Weighted Lead |
| IESO | $547,555,259 | $27,377,777 | (42.92) | 93.79% | (40.25) |
| Hydro One | 32,239,309 | 1,611,273 | (23.75) | 5.52% | (1.31) |
| Generators | 4,028,998 | 201,450 | (25.58) | 0.69% | (0.18) |
| TOTAL | $583,823,566 | $29,190,500 | | 100.00% | (41.74) |

**Table 19 – 2010 GST Expense Lead – Cost of Power**

| Vendor | 2010 | | | | |
|---|---|---|---|---|---|
| | Expense | GST Amount | Expense Lead | Weight Factor | Weighted Lead |
| IESO | $593,732,971 | $54,440,066 | (43.17) | 94.04% | (40.60) |
| Hydro One | 33,461,357 | 3,052,095 | (23.17) | 5.27% | (1.22) |
| Generators | 4,498,036 | 395,646 | (13.93) | 0.68% | (0.10) |
| TOTAL[1] | $631,692,364 | $57,887,806 | | 100.00% | (41.91) |

### 3.6.3 OM&A Expenses

GST is generally charged on general and administration expenses, as well as miscellaneous OM&A expenses. The weighted average GST expense lead on OM&A expenses for 2009 is negative 21.40 days, and for 2010 is negative 21.05 days.

Combining the three categories of GST expenses, Hydro Ottawa's 2009 and 2010 GST cost is approximately $1.8 million and $2.0 million respectively. Table 20 and Table 21 show the details.

[1] Totals do not equal due to rounding.



**Table 20 - 2009 GST Expense Lead**

| GST Category | 2009 Expenses | 5% GST | Net Lead (Lag) Days | GST Cost (Benefit) |
|---|---|---|---|---|
| | A | B = A*5% | C | D = B*C/365 |
| Revenue | ($745,535,000) | ($37,276,750) | 15.78 | ($1,611,771) |
| Cost of Power | 587,958,000 | 29,397,900 | (41.74) | 3,361,757 |
| OM&A | 28,931,185 | 1,446,559 | (21.40) | 84,810 |
| TOTAL | ($128,645,815) | ($6,432,291) | (47.36) | $1,834,796 |

**Table 21 - 2010 GST Expense Lead**

| GST Category | 2010 Expenses | 5% GST | Net Lead (Lag) Days | GST Cost (Benefit) |
|---|---|---|---|---|
| | A | B = A*5% | C | D = B*C/365 |
| Revenue | ($785,652,000) | ($39,282,600) | 15.85 | ($1,705,524) |
| Cost of Power | 621,842,000 | 31,092,100 | (41.91) | 3,570,256 |
| OM&A | 32,221,042 | 1,611,052 | (21.05) | 92,931 |
| TOTAL[1] | ($131,588,958) | ($6,579,448) | (47.12) | $1,957,663 |

## 4.0 WORKING CAPITAL REQUIREMENTS

Based on the revenue lag and expense lead information above, the 2009 working capital requirement is approximately $87 million, or approximately 13.6% of Hydro Ottawa's total OM&A expenses plus cost of power. The 2010 working capital requirement is approximately $93 million, or 13.7% of the total OM&A expenses plus cost of power. The average working capital requirement between 2009 and 2010 is approximately 13.7% of Hydro Ottawa's total OM&A expenses plus cost of power. Table 22 and Table 23 show the details.

[1] Totals do not equal due to rounding.

**Table 22 – 2009 Working Capital Requirement**

| 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 | 75.23 | 33.96 | 41.27 | 11.31% | 587,958,000 | 66,553,416 |
| OM&A Expenses | 75.23 | 11.28 | 63.95 | 17.52% | 53,828,665 | 9,437,984 |
| Interest on Long Term Debts | 75.23 | 45.63 | 29.61 | 8.11% | 14,642,000 | 1,189,447 |
| PILs | 75.23 | 13.59 | 61.64 | 16.89% | 13,920,000 | 2,352,513 |
| Debt Retirement Charges | 75.23 | 33.82 | 41.41 | 11.35% | 52,464,792 | 5,958,922 |
| Sub-Total[1] | | | | | 722,813,456 | 85,492,282 |
| GST | | | | | 6,432,291 | 1,834,796 |
| TOTAL (Including GST)[2] | | | | | 729,245,747 | 87,327,078 |
| **Working Capital as a % of OM&A plus Cost of Power** | | | | | | **13.6%** |

**Table 23 – 2010 Working Capital Requirement**

| 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 |
| SUBTOTAL | | | | | 758,806,899 | 90,844,088 |
| GST | | | | | 6,579,448 | 1,957,663 |
| TOTAL (Including GST) | | | | | 765,386,347 | 92,801,751 |
| **Working Capital as a % of OM&A plus Cost of Power** | | | | | | **13.7%** |

[1] Totals do not equal due to rounding.
[2] Totals do not equal due to rounding.



## 5.0 MATERIAL CHANGES FOR 2012

### 5.1 Harmonized Sales Tax

HST was implemented in 2010. In order to compare 2009 and 2010 on the same basis, HST was not included in 2010 numbers and a Provincial Sales Tax ("PST") adjustment was made where appropriate[1]. In Table 24 and 25 below, the WCA for 2009 and 2010 is recalculated based on a 13% HST.

**Table 24 – 2009 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 | 75.23 | 33.96 | 41.27 | 11.31% | 587,958,000 | $66,553,416 |
| OM&A Expenses | 75.23 | 11.28 | 63.95 | 17.52% | 53,828,665 | 9,437,984 |
| Interest on Long Term Debts | 75.23 | 45.63 | 29.61 | 8.11% | 14,642,000 | 1,189,447 |
| PILs | 75.23 | 13.59 | 61.64 | 16.89% | 13,920,000 | 2,352,513 |
| Debt Retirement Charges | 75.23 | 33.82 | 41.41 | 11.35% | 52,464,792 | 5,958,922 |
| Sub-Total[2] | | | | | 722,813,456 | 85,492,282 |
| HST | | | | | 16,723,956 | 4,770,470 |
| Capital Expense[3] | | | | (21.40)[4] | 45,932,777 | 350,088 |
| TOTAL (Including HST)[5] | | | | | 785,470,189 | 90,612,840 |
| **Working Capital as a % of OM&A plus Cost of Power** | | | | | | **14.1%** |

[1] The PST adjustment was calculated from July to December 2010 on a transactional level.
[2] Totals do not equal due to rounding.
[3] Capital expense HST impact.
[4] OM&A GST net lead (lag) days.
[5] Totals do not equal due to rounding.



**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%** |

## 6.0 OTHER CONSIDERATIONS

### 6.1 Time of Use ("TOU") Rates

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

### 6.2 Monthly Billing

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

[1] OM&A GST net lead (lag) days.



## 7.0 CONCLUSIONS

For the purposes of this rate application, Hydro Ottawa is proposing to use an average of the WCA from 2009 and 2010, adjusted for the HST. Table 26 shows the details.

**Table 26 – Working Capital Allowance for Test Year**

| | 2009 | 2010 | Average |
|---|---|---|---|
| Working Capital as a percent of Cost of Power and OM&A | 14.1% | 14.2% | 14.2% |

In Exhibit B4-1-1, this WCA of 14.2% is applied to the forecast OM&A and cost of power for 2012 to determine the working capital requirement included in the 2012 rate base.

1 Adelaide Street E
Suite 3000
Toronto, ON. M5C 2V9
610-999-0253 phone
215-832-4401 fax

June 3, 2011

Ms. Jane Scott
Hydro Ottawa Limited
3025 Albion Road North
PO Box 8700
Ottawa, Ontario, K1G3S4

Sent by e:mail: janescott@hydroottawa.com

Dear Ms. Scott:

Navigant was retained by Hydro Ottawa Limited ("HOL" or "the Company") to perform an independent review of its lead lag study supporting its request for a working capital allowance from the Ontario Energy Board ("OEB" or "the Board"). The purpose of this letter is to present the results of our review of HOL's analysis on working capital requirements dated June 2011.

Based on our review, we conclude that the HOL analysis is:

- **Complete**, in terms of revenue and expense items considered.
- Generally **consistent**, in terms of methods used with other studies that have been presented before the OEB by Horizon Utilities ("Horizon"), Hydro One Networks ("HONI") and Toronto Hydro Electric System Limited ("THESL").

Our conclusion therefore, is that the result of HOL's analysis – a request to the Board for 14.2% of Operations, Maintenance, and Administration ("OM&A") expenses including cost of power – is **reasonable** for two reasons: a) it represents a working capital requirement as evidenced by the Company's 2009-10 operations and, b) it is based on a study that is comparable in terms of approach, though not necessarily its result which by definition is HOL specific, with those supporting other such requests that have been historically accepted by the OEB.

***Summary of the HOL Analysis dated June 2011***

In its analysis dated June 2011, the Company has identified a working capital requirement of 14.2% of OM&A expenses including cost of power. The approach taken by the Company was to utilize actual experience from 2009 and 2010 in order to determine an average percent of OM&A expense including cost of power represented by working capital. The result, i.e., 14.2%, has then been applied to the Company's 2012 estimate of OM&A expenses including cost of power to determine the amount of working capital to include in its regulated rate-base. The derivation of the 14.2% working capital percentage is shown in Table 1 below.

**Table 1: Derivation of the Working Capital Percentage[1]**

| Line | Description | 2009 Revenue Lag Days | 2010 Revenue Lag Days | 2009 Expense Lead Days | 2010 Expense Lead Days | 2009 Net Lag (Lead) Days | 2010 Net Lag (Lead) Days | 2009 Working Capital Factor | 2010 Working Capital Factor | 2009 Amounts $M | 2010 Amounts $M | 2009 WCA - $M | 2010 WCA - $M |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (A) | (B) | (C) | (D) | (E) | (F) = (B) - (D) | (G) = (C) - (E) | (H) = (F)/365 | (I) = (G)/365 | (J) | (K) | (L) = (H) X (J) | (M) = (I) X (K) |
| 1 | Cost of Power | 75.3 | 75.2 | 34.0 | 33.7 | 41.3 | 41.6 | 11.32% | 11.39% | 588.0 | 621.8 | 66.6 | 70.8 |
| 2 | OM&A Expenses | 75.3 | 75.2 | 11.3 | 11.2 | 64.0 | 64.1 | 17.53% | 17.55% | 53.8 | 54.9 | 9.4 | 9.6 |
| 3 | Interest on Long Term Debt | 75.3 | 75.2 | 45.6 | 45.6 | 29.7 | 29.6 | 8.12% | 8.12% | 14.6 | 15.5 | 1.2 | 1.3 |
| 4 | PILs | 75.3 | 75.2 | 13.6 | (3.3) | 61.7 | 78.6 | 16.90% | 21.52% | 13.9 | 13.8 | 2.4 | 3.0 |
| 5 | Debt Retirement Charges | 75.3 | 75.2 | 33.8 | 32.7 | 41.5 | 42.6 | 11.36% | 11.66% | 52.5 | 52.7 | 6.0 | 6.1 |
| 6 | HST | | | | | | | | | | | 5.1 | 5.5 |
| 7 | Total | | | | | | | | | | | 90.6 | 96.3 |
| 8 | Average WCA as a % of OM&A Including Cost of Power | | | | | | | | | | | **14.2%** | |

The Company has considered its three major sources of revenues in its study: a) from residential and business customers, b) from retailers, and c) from other sources. Considered together and on a dollar-weighted basis, the Company's analysis indicates that the revenue lag is 75.3 days for 2009 and 75.2 days for 2010 respectively. The information is summarized in Table 2 below.

**Table 2: Derivation of Overall Revenue Lag Days[2]**

| Source of Revenues | 2010 | | | | 2009 | | | | Weighted Average Days |
|---|---|---|---|---|---|---|---|---|---|
| | Revenue Lag (Days) | Amount $s | Weighting Factor | Weighted Revenue Lag Days | Revenue Lag (Days) | Amount $s | Weighting Factor | Weighted Revenue Lag Days | |
| (A) | (B) | (C) | (D) | (E) | (F) | (G) | (H) | (I) | (J) |
| Residential and Business | 74.97 | 770,833,454 | 98.05% | 73.51 | 74.97 | 732,196,506 | 98.42% | 73.78 | |
| Retailers | 30.15 | 321,152 | 0.04% | 0.01 | 32.90 | 347,827 | 0.05% | 0.02 | |
| Other Sources | 90.51 | 15,016,106 | 1.91% | 1.73 | 96.16 | 11,420,912 | 1.54% | 1.48 | |
| Total | | 786,170,711 | 100.00% | 75.2 | | 743,965,246 | 100.00% | 75.3 | |
| Weighted Average 2009-2010 | | 51.4% | | 75.2 | | 48.6% | | 75.3 | 75.3 |

The majority of the Company's revenues in 2009 and 2010 were from residential and business customers (98% or more). The average lag time, i.e., the average of 2009 and 2010, associated with the realization of these revenues was 74.97 days consisting of a service lag time of 30.24 days, a billing lag time of 18.17 days, a collections lag time of 25.41 days, and finally, a payment processing lag time of about 1.14 days.

[1] Note that we have not conducted an independent evaluation of the amounts shown in Cols (J) and (K) of Table 1 and as such cannot render an opinion on such amounts.

[2] Note that we have not conducted an independent evaluation of the amounts shown in Cols (C) and (G) of Table 2 and as such cannot render an opinion on such amounts.

In terms of expenses and as shown on Table 1, the Company has considered the suite of major expense items driving working capital in its study. These include:

- The Cost of Power associated with purchases from the Ontario Independent System Operator ("IESO"), Hydro One Networks, and other embedded generators
- OM&A expenses
- Interest expense
- The Debt Retirement Charge (or "DRC")
- Payments in Lieu of Taxes ("or PILs") and,
- The Harmonized Sales Tax (or "HST")

The expense lead time associated with the two major drivers of working capital requirement, i.e., cost of power and OM&A expenses, have been estimated to be on average, 33.8 days and 11.2 days respectively. These are averages for 2009 and 2010 respectively and are the result of giving full consideration, where applicable, to both the mid-point method and dollar-weighting. Other drivers of working capital that have been considered by the Company and quantified include interest on long term debt (45.6 days), the debt retirement charge (33.3 days), and PIL's (5.1 days). Again, these are averages for 2009 and 2010 respectively and consider, where applicable, the use of both the mid-point method and dollar-weighting. Finally, the Company estimates that the working capital requirement associated with the HST represents approximately 0.80% of the Company's OM&A expenses including the cost of power. This working capital requirement is driven by timing differences between collections from and remittances to Revenue Canada of the HST and is calculated on a statutory basis.

It should be noted that within OM&A expenses, HOL has considered the following major components in its analysis:

- Payroll and Benefits including the Canada Pension Plan, Employment Insurance, Payments on account of the Workers Safety Improvement Board (or "WSIB"), the Ontario Municipal Employment Retirement System (or "OMERS"), the Employer Health Tax (or "EHT") and various categories of health and welfare benefits provided by the Company to its employees.
- Payments made to Consulting and Contract Staff
- Payments on account of Property Taxes, and
- Miscellaneous OM&A.

Considered together and on a dollar-weighted basis, the expense weighted lead time for OM&A expenses is 11.2 days on average for 2009 and 2010.

***Discussion***
Any assessment of the working capital requirements of a regulated electric distributor such as HOL based on a lead-lag study would, at a minimum, require the following two criteria to be addressed:

- Completeness. The completeness of a study on working capital requirements depends on the breadth of payment and receipt items considered. The wider the breadth of items

considered, the clearer the picture of the working capital requirements of a business such as HOL.

- Consistency, in terms of methodology with other such studies that have been accepted by the Board. As defined here, consistency would entail selecting between actual data or statutory approaches when quantifying revenue lag and expense lead times. The use of the mid-point methodology and the application of dollar-weighting where appropriate would also be factors to consider.

The Company's study has considered a broad spectrum of revenue and expense items including the cost of power. Major items relating to the day to day operations of the Company (OM&A) such as payroll and benefits, consulting and contract staff related expenses, WSIB payments, property taxes, and PIL's have been included in the analysis thereby enhancing its completeness. Additionally, the Company has taken into consideration interest expense payments, debt retirement charge payments, and HST pass-through's when calculating its working capital requirements. The expense categories are wide enough in terms of the breadth of the Company's operations to be a snap-shot of how the Company does business on a daily basis. Thus, it would be reasonable to conclude that the working capital study performed by HOL is **complete** in terms of items that have been considered including the two key ones, i.e., OM&A expenses and cost of power.

Is HOL's study **consistent** with other studies that have been accepted by the Board? By and large, yes. The Company has prudently used a combination of actual data and statutory approaches for the determination of revenue lags and/or expense lead times while at the same time giving due consideration, where appropriate, to the use of both the mid-point method and Dollar-Weighting in its calculations. Consider, for instance, the key features of how HOL calculated the revenue lag associated with providing bundled service to its residential and small business customers, i.e., the majority of its revenues:

- The Company has used a customer-weighting approach in its calculation of the service lag component. This is consistent with prior studies that have been either filed with and/or accepted by the OEB.[3]
- The Company's estimate of the Billing lag, while HOL specific, is based on methods and constraints similar to those which have been used by HONI, THESL, and Horizon in their distribution rate applications.
- In terms of calculating its collections lag however, the Company has conservatively elected to use a simple Days of Sales Outstanding ("DSO", or average accounts receivable turnover) method for calculating its collections lag time. Had HOL elected to perform a more rigorous sales-weighted or true DSO analysis, we believe that the result would have been a collections lag time higher than the 25.41 days used by the Company here. Note that the 25.41 days is an average of 2009 and 2010. In the alternative, had the Company elected to use a mid-point method as a proxy for either a sales weighted or true DSO analysis, the result would still have been higher, and more representative of actual

[3] See EB-2005-0378, EB-2007-0680, EB-2009-0096, and EB-2010-0131.

collections, compared with the simple DSO analysis it elected to use. In this respect, the Company's result of 14.2% of OM&A including cost of power is conservative.

- HOL's payment processing lag time of 1.14 days, while HOL specific, has been calculated in a manner generally consistent with that used by Horizon and THESL in their last distribution rate applications.
- HOL's revenue lag result considering all sources of revenues (75.3 days on average for 2009 and 2010) is the result of dollar-weighting as shown on Table 2.

Focusing on the calculation of expense lead days, HOL has aptly calculated the expense lead times associated with cost of power, payroll and benefits, consulting and contract staff, miscellaneous OM&A expenses, interest expense, PILs, and the Debt Reduction Charge giving due consideration to both the mid-point method and dollar-weighting where actual data has been used. The expense lead time associated with HST on the other hand, has been calculated using a statutory approach, i.e., payments or receipts are due on the last day of the month following the date on an invoice. Both these approaches are consistent with that used by Horizon, HONI, and THESL in their last distribution rate applications before the Board.

In conclusion, the methods used for calculating both revenue lags and expense leads in the HOL study are, for practical purposes, identical to and therefore, consistent with those used in the Horizon, HONI, and THESL studies filed with or accepted by the OEB. We conclude therefore that HOL's study is **consistent,** in terms of methodology, with current practice for electricity distributors in the province of Ontario.

For the various reasons discussed above, we conclude that HOL's result in terms of its request for working capital, i.e., 14.2% of OM&A expenses including the cost of power, is **reasonable**. It represents a working capital requirement as evidenced by the Company's 2009-10 operations and is based on a study that is comparable in terms of approach, though not necessarily its result which by definition is HOL specific, with those supporting other such requests that have been historically accepted by the OEB.

Jane, it has been my pleasure to support you on this important project. Please let us know if you require our assistance on similar endeavors in the future.

Sincerely,

Nagendra ("Subba") Subbakrishna
Associate Director, Energy



## 2. RATE BASE

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

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

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

**Response**

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

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

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

## 2. RATE BASE

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

Board Staff Question #11 - Ref: Exh B4-2-1, p4; Ref: Horizon Utilities Corporation EB-2010-0131 (BS #11)

Hydro Ottawa's study uses a service lag of 30.24 days based on a weighting of the average number of customers. The recent Horizon Utilities proceeding determined that it was more appropriate to determine service lag on the basis of distribution revenues.

a) Please provide any concerns Hydro Ottawa has with the determination of service lag on the basis of distribution revenue.

b) Please determine the impact on WCA when service lag is determined on the basis of distribution revenue.

**Response**

a) It is not Hydro Ottawa Limited's belief that the recent Horizon Utility proceeding determined that the service lag was more appropriately based on distribution revenue.

b) When using distribution revenue as the basis for weighting the service lag for residential and general service customers it changes from 30.24 days in 2009 and 2010 to 25.7 days in 2009 and 25.66 days in 2010. This would result in a 0.5% decrease to the WCA, from 14.2% to 13.7%.



## 2. RATE BASE

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

Energy Probe Question #15 - Ref: Exhibit B4, Tab 2, Schedule 1

a) Please provide a revised Table 3 and Table 4 that uses sales dollars as the weighting factor to calculate the service lag in the same way billing lag is calculated in Tables 5 and 6.

b) Please show the calculations used to determine the Days Sales Outstanding in Tables 7 and 8. In particular, please show the calculation of 26.38 days in Table 7 in the month of January and the assumptions used.

c) Please provide a version of Tables 7 and 8 that calculates the collection lag in both years separately for the customers that are billed monthly and for the customers that are billed bi-monthly.

d) Please show the calculation of the number of days for each the forms of payment processing noted on page 8 for 2009 and 2010, along with the weighting assigned to each form in each of 2009 and 2010 that was used to calculate the weighted average of 1.15 days in 2009 and 1.13 days in 2010.

e) Please provide the data, assumptions and calculations used to calculate the each of the lags shown in Table 10.

**Response**

a) Please find Table 3 and 4 of Exhibit B4-2-1 with sales dollars as the weighting factor. Please note that weighting by sales dollars has not been the generally accepted method for service lag.



**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 | 252,919,083 | Bi-monthly | 30.42 | 34.54% | 10.51 |
| General Service < 50 kW | 77,002,452 | Bi-monthly | 30.42 | 10.52% | 3.2 |
| GS 50 – 1,499 kW | 272,554,577 | Monthly | 15.21 | 37.22% | 5.66 |
| GS 1,500 – 4,999 kW | 72,377,217 | Monthly | 15.21 | 9.89% | 1.5 |
| Large Users | 53,233,888 | Monthly | 15.21 | 7.27% | 1.11 |
| Street Lighting | 3,613,935 | Monthly | 15.21 | 0.49% | 0.08 |
| Unmetered Scattered Load | 495,355 | Monthly | 15.21 | 0.07% | 0.01 |
| TOTAL | 732,196,506 | | | 100.00% | 22.07 |

**Table 4 - 2010 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 | 267,560,504 | Bi-monthly | 30.42 | 34.71% | 10.56 |
| General Service < 50 kW | 82,536,260 | Bi-monthly | 30.42 | 10.71% | 3.26 |
| GS 50 – 1,499 kW | 283,209,918 | Monthly | 15.21 | 36.74% | 5.59 |
| GS 1,500 – 4,999 kW | 73,990,275 | Monthly | 15.21 | 9.60% | 1.46 |
| Large Users | 59,628,830 | Monthly | 15.21 | 7.74% | 1.18 |
| Street Lighting | 3,935,758 | Monthly | 15.21 | 0.51% | 0.08 |
| Unmetered Scattered Load | (28,092) | Monthly | 15.21 | 0.00% | 0 |
| TOTAL | 770,833,454 | | | 100.00% | 22.13 |

b) The Days Sales Outstanding ("DSO") in Tables 7 and 8, of Exhibit B4-2-1, is based on data from Hydro Ottawa Limited's ("Hydro Ottawa") customer information system ("CIS"). It gathers all receivables not yet paid and determines how long the receivables have been outstanding. For example, if the customer invoice is billed January 30, 2009 and the report is run January 31 the receivable would go into the 1-17 days DSO bucket. No additional calculations on the bucket data was preformed other than to summarise it in Tables 7 and 8.

The total column adds each bucket to get the total DSO for that month. Using January 2009 as the example, dollars are in thousands:

$$44{,}143 + 4{,}980 + 5{,}024 + 1{,}502 + 830 + 984 = 57{,}465^{1}$$

[1] Totals is out due to rounding

Ontario Energy Board

Commission de l'énergie de l'Ontario

Ontario

**EB-2011-0054**

**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 Hydro Ottawa Limited for an order approving or fixing just and reasonable rates and other charges for the distribution of electricity to be effective January 1, 2012.

**BEFORE:** Marika Hare
Presiding Member

Ken Quesnelle
Member

# DECISION AND ORDER
## (Original December 28, 2011, as corrected December 30, 2011)

## BACKGROUND

Hydro Ottawa Limited ("Hydro Ottawa" or the "Applicant") filed an application (the "Application") with the Ontario Energy Board (the "Board") on June 17, 2011. The Application was filed under section 78 of the *Ontario Energy Board Act, 1998*, S.O 1998, c. 15 (Schedule B) (the "Act"), seeking approval for changes to the rates that Hydro Ottawa charges for electricity distribution to be effective January 1, 2012. The Board assigned the Application file number EB-2011-0054.

issues as filed, but requested full reference to the evidence and interrogatories. The document, compliant with the Board request, was re-filed on November 10, 2011.

The Settlement Agreement filed on November 1, 2011 and approved by the Board is provided at Appendix A to this Decision. The Supplementary Settlement Agreement filed on November 10, 2011 is provided at Appendix B to this Decision.

The Board's findings with respect to the issues that were not settled are set out below. Hydro Ottawa's Application was completed on a Canadian Generally Accepted Accounting Principles ("CGAAP") basis, and included a final exhibit that converted the results of the application to MIFRS. Unless otherwise noted, the references below are on a CGAAP basis.

**RATE BASE**

2.1 Is the proposed rate base for the test year appropriate?
2.2 Is the working capital allowance for the test year appropriate?

As updated on September 14, 2011, Hydro Ottawa proposed a rate base for 2012 in the amount of $669.1 M on a CGAAP basis and $670.6 M on a MIFRS basis. Hydro Ottawa and the participating intervenors agreed on the capital expenditure forecast for 2012. Agreement was not reached on the working capital allowance and the capitalization policy and allocation procedure. The latter is discussed in the MIFRS section of this Decision.

**Working Capital Allowance**

Hydro Ottawa has proposed a working capital allowance ("WCA") factor of 14.2% of the sum of the cost of power and controllable expenses. As noted in the Application, the WCA requirement is $106.0 M.

In its previous 2008 Cost of Service application, a WCA factor of 12.5% was accepted as part of the Settlement Agreement approved by the Board in its Decision and Order (EB-2007-0713). In this Application, the 14.2% WCA factor was derived as a result of a lead-lag study prepared by Hydro Ottawa and reviewed by Navigant Consulting Inc. ("Navigant").

Energy Probe made detailed submissions that are summarized below. CCC, SEC and VECC supported the submissions of Energy Probe.

Service Lag

During the oral hearing it was confirmed that, while revenue weighting is used for most components of the lead-lag study, customer weighting is used to estimate the service lag.

Board staff submitted that customer weighting overestimates the service lag and that revenue weighting is appropriate. Board staff referred to Energy Probe's cross-examination. That cross-examination reviewed an example in which the service lag based on revenue-weighting was unchanged even when the billing cycles for different customer classes were reversed. Board staff acknowledged that the demand and associated revenues of customers within a class with a common billing cycle (i.e. every month or every two months) is not taken into consideration for the service lag, but noted that most revenues are from customers on monthly billing cycles, while the customer-weighting of the service lag is largely determined by the residential class currently on bi-monthly billing.

Energy Probe submitted that, based on the response to Energy Probe interrogatory #15, a service lag based on revenue weighting would be lower by 8 days and would reduce the WCA factor to less than 12%.[1]

Hydro Ottawa replied that customer weighting is more appropriate because it more closely reflects the time between the service being provided and reading of the meter, and that prior to meter readings and a price from the IESO, revenue has not yet been considered. Further, Hydro Ottawa stated that adjustments would need to be made to other components to use revenue weighting in order to be consistent in the analysis.

Collection Lag

Hydro Ottawa used the Days Sales Outstanding ("DSO") approach to determine collection lag. During the oral hearing, the witness from Navigant stated that the use of DSO is an industry standard. Energy Probe submitted that Hydro Ottawa's calculation of collection lag should be rejected as it does not take into account the age of the receivables. Energy Probe suggested that 11.5 days should be the mid-point for the first bucket of receivables. Hydro Ottawa used 16 days, which Navigant stated is the period prescribed by the Board in the Distribution System Code. Based on responses to undertakings (LT1.2 and L1.3) and a mid-point of 11.5 days for the first bucket,

[1] Exh K2-2-5

Energy Probe submitted that the revenue lag should be reduced by a further 2.28 days and that the WCA factor should be 11.0%. This would result in a rate base reduction of $24.0 M.

Hydro Ottawa disagreed with Energy Probe's submission, stating that some customers will be late or may never pay, the analysis is based on the premise that customers generally wait as long as possible to pay, and the approach is consistent with that used in the rest of the WCA determination – including Hydro Ottawa's payment of suppliers.

Comparison with Other Utilities

Recognizing that comparisons with other utilities are not definitive in themselves, Board staff observed that Hydro Ottawa's proposed WCA factor of 14.2% is higher than the 11.9% approved for Hydro One Networks Inc., 12.9% for Toronto Hydro-Electric System Limited ("THESL") and 13.5% approved for Horizon. In light of Board staff's submission that the customer weighting of the service lag results in an upwardly biased WCA factor, Board staff submitted that a WCA factor within the range of THESL and Horizon may be more appropriate. Energy Probe noted that the Board approved WCA factor for Horizon was virtually identical to that suggested by Energy Probe. However, Horizon differs from Hydro Ottawa as Hydro Ottawa has a larger proportion of bi-monthly billed customers.

Hydro Ottawa replied that the Horizon decision is not an endorsement of revenue weighting of service lag, noting that the Horizon decision approved a 13.5% WCA factor rather than a 13.0% WCA factor that would have resulted from revenue weighting. Hydro Ottawa also observed that the Horizon decision stated that the WCA failed to include the impact of smart meters in reducing WCA. Hydro Ottawa stated that smart meters do not impact the WCA in its Application because there is a dependence on receipt of the IESO pricing. Hydro Ottawa submitted that the proposed 14.2% WCA factor is more consistent with the WCA factor approved for other utilities than the 11.0% proposed by Energy Probe.

Proposed WCA Factor

Hydro Ottawa reviewed Energy Probe's determination of the 11.0% WCA factor in undertaking L1.2. Hydro Ottawa argued that it would be more accurate to first separate customers into monthly and bi-monthly groups and that if the service lag were to be revenue weighted that all components of the revenue lag should be revenue weighted also. Hydro Ottawa determined a WCA factor of 14.4% using this methodology, but

asserted that the 14.2% in its application is the most appropriate WCA factor. Energy Probe submitted that the methodology for the determination of the 14.4% had not been tested.

Hydro Ottawa's proposed 14.2% WCA factor is below the default value of 15% established by the Board for utilities that do not file a lead-lag study. Hydro Ottawa observed that the Board has not approved a WCA factor that approaches 11.0%, and that the Energy Probe proposal is based on only two elements of the WCA calculations without regard to circumstances and the use of an internally consistent approach.

Hydro Ottawa agreed that the WCA should be recalculated to reflect the updated cost of power and approved OM&A.

Monthly Billing

Finally, as Hydro Ottawa plans to move to monthly billing in late 2013 for all its customers, Energy Probe submitted that Hydro Ottawa should be directed to file an updated lead-lag study in its next cost of service application. Hydro Ottawa replied that it intends to file an updated lead-lag study with its next cost of service application, but does not agree that direction from the Board is necessary or appropriate.

**Board Findings**

Energy Probe has identified several issues with Hydro Ottawa's lead-lag study, however, the Board notes that these issues relate to only two elements of the WCA factor determination. The Board finds that the 11.0% WCA factor proposed by Energy Probe is too low when compared with Hydro One Networks, Horizon and THESL, and this may be the result of changing only two elements in isolation.

In the Horizon proceeding, EB-2010-0131, the Board found that the operational impacts of smart meters and TOU pricing should have been considered in the WCA determination. As a result, the Board directed that a 13.5% WCA factor be used which was also closer to the range of the WCA factor used by Hydro One Networks and THESL than the 14.0% proposed by Horizon.

Hydro Ottawa did consider smart meters and provided the view that they will have no impact on cash flow. This view was not successfully challenged during this proceeding and the Board therefore does not believe the comparability to Horizon to be sufficient to draw a conclusion. While at the same time noting that this argument has not been fully

tested by Board staff and the interveners, the Board is prepared to accept it for now. The Board however, directs that Hydro Ottawa prepare a new lead-lag study for its next cost of service application to reflect the move to monthly billing at the end of 2013. This will allow further examination of the differences in approaches at that time. The Board further notes that it has made this finding with an awareness that the default for Hydro Ottawa for the 2012 year might have been to use the default WCA factor of 15%.

In conclusion, the Board accepts 14.2% as the WCA factor. The determination of working capital is subject to adjustments the Board has determined are appropriate for OM&A.

**LOAD FORECASTING AND OPERATING REVENUE**

3.1 Is the load forecast methodology including weather normalization appropriate?
3.2 Are the proposed customers/connections and load forecasts (both kWh and kW) for the test year appropriate?
3.4 Is the proposed forecast of test year throughput revenue appropriate?

The customer/connection count for the test year, the impact of CDM on the load forecast, and demand sales were agreed to by Hydro Ottawa and the participating intervenors. Agreement was not reached on energy sales.

Hydro Ottawa used a statistical modeling software program from Itron Inc. to develop its system energy forecast. The model forecast a test year system energy of 8,030 GWh based on historical systems purchases, weather data and GDP data.

The forecast system energy was adjusted by a loss factor to derive a billed load forecast. As noted in Technical Conference undertaking LT2.6, Hydro Ottawa is seeking Board approval for a test year billed load forecast before adjustments of 7,753 GWh. This represents a 1.44% increase from 2010 actual billed load.

Class sales forecast models were also created. The results of these models, totaling 7,880 GWh, were calibrated to the loss adjusted system energy forecast of 7,753 GWh.

Board staff considered the billed sales forecast and compared it with the 2010 normalized actual year load and the growth trend for the period 2005 to 2010. Board staff submitted that the system energy forecast of 7,753 GWh was appropriate.

# WORKING CAPITAL (LEAD-LAG STUDY)

## 1.0 INTRODUCTION

Working capital is the amount of funds required to finance the day-to-day operations of a regulated utility and is included as part of rate base for ratemaking purposes. The determination of working capital relies on a lead-lag study.

In 2009, Hydro One commissioned Navigant to carry out a lead-lag study. In the OEB's EB-2009-0096 Decision with Reasons, the OEB accepted the results of the Navigant lead-lag study. In 2013, Hydro One commissioned Navigant to conduct an updated lead-lag study which is included in Exhibit D1, Tab 1, Schedule 3, Attachment A (entitled Working Capital Requirements of Hydro One Networks' Distribution Business – dated December 3, 2013).

## 2.0 SUMMARY

Hydro One Distribution's net cash working capital requirement for the 2015 test year is $236.2 million or 7.4% of OM&A ($564.3M) and Cost of Power expenses ($2,626.9M). Applying the same formula the remaining test years are: 2016 - 7.4%; 2017 - 7.5%; 2018 - 7.5% and 2019 - 7.6%. Table 1 summarizes the net cash working capital requirements determined by using the lead/lag days from the Navigant study filed in Exhibit D1, Tab 1, Schedule 3, Attachment 1 to reflect the 2015 and 2019 test year revenues, expenses and HST amounts (Table 2).

The methodology used to determine the net working cash required is based on the Navigant study that was accepted by the OEB and updated as part of this filing, and it takes the following into consideration:

- has considered the most important elements of revenue lags, including the service, billing and collection lags;
- includes the most important elements of expense leads such as payroll and benefits, operations, maintenance, administration expenses, and taxes, including property taxes; and
- takes the major cost elements into consideration in calculating the net cash working capital.

## Table 1

## Distribution Net Cash Working Capital Requirement

## (All Data in $millions Except Lead/Lag Days)

| | Revenue Lag (Days) | Expense Lag (Days) | Net Lag (Lead Days) | 2015 Test Year | 2016 Test Year | 2017 Test Year | 2018 Test Year | 2019 Test Year |
|---|---|---|---|---|---|---|---|---|
| | (A) | (B) | (C) | (D) | (E) | (F) | (G) | (H) |
| **Expenses** | | | | | | | | |
| Cost of Power | 52.25 | 32.74 | 19.51 | 2626.9 | 2623.4 | 2614.4 | 2586.2 | 2582.5 |
| OM&A | 52.25 | 27.11 | 25.14 | 564.3 | 610.2 | 614.0 | 603.9 | 600.0 |
| Removal Costs | 52.25 | 16.51 | 35.74 | 54.5 | 57.0 | 60.4 | 63.3 | 65.8 |
| Environmental Costs | 52.25 | 40.98 | 11.27 | 14.2 | 22.0 | 22.4 | 22.0 | 21.6 |
| Interest on Long-Term Debt | 52.25 | 8.93 | 43.32 | 177.9 | 188.6 | 200.4 | 217.5 | 238.2 |
| PILS | 52.25 | 128.37 | (76.12) | 55.6 | 61.6 | 62.2 | 65.6 | 69.4 |
| **Total** | | | | 3493.2 | 3562.7 | 3573.8 | 3558.5 | 3577.6 |
| HST (see Table 2) | | | | 941.4 | 957.1 | 961.2 | 960.3 | 966.7 |
| **Total Amounts Paid/Accrued** | | | | **4434.7** | **4519.8** | **4534.9** | **4518.7** | **4544.4** |
| **Working Capital Required** (Calculations based on above values, for each expense category, calculated using the following formula: For Test Years 2015 to 2019 (Col (D)*Col (C)/365)) | | | | | | | | |
| Cost of Power | | | | 140.4 | 139.8 | 139.7 | 138.2 | 138.0 |
| OM&A | | | | 38.9 | 41.9 | 42.3 | 41.6 | 41.3 |
| Removal Costs | | | | 5.3 | 5.6 | 5.9 | 6.2 | 6.4 |
| Environmental Costs | | | | 0.4 | 0.7 | 0.7 | 0.7 | 0.7 |
| Interest on Long-Term Debt | | | | 21.1 | 22.3 | 23.8 | 25.8 | 28.3 |
| Income & Capital Tax | | | | (11.6) | (12.8) | (13.0) | (13.7) | (14.5) |
| Total | | | | 194.6 | 197.5 | 199.4 | 198.8 | 200.3 |
| HST (see Table 2) | | | | 41.7 | 41.6 | 41.4 | 41.0 | 40.9 |
| **Net Working Cash Required** | | | | **236.2** | **239.1** | **240.8** | **239.8** | **241.1** |

**Table 2**

**Distribution Summary of HST Cash Working Capital Requirement**

**(All Data in $M Except Lead-Lag Days)**

| | HST Lead Time (Days) | Working Capital Factor | 2015 Test Year | 2016 Test Year | 2017 Test Year | 2018 Test Year | 2019 Test Year |
|---|---|---|---|---|---|---|---|
| Revenue (external) | (7.13) | -2.0% | (10.3) | (10.5) | (10.6) | (10.7) | (10.8) |
| OM&A | 42.92 | 11.8% | 3.2 | 3.5 | 3.5 | 3.5 | 3.4 |
| Cost of power | 45.92 | 12.6% | 43.0 | 42.9 | 42.8 | 42.3 | 42.2 |
| Removal costs | 44.30 | 12.1% | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Environmental costs | 44.30 | 12.1% | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Capital expenditures | 44.30 | 12.1% | 5.6 | 5.6 | 5.5 | 5.6 | 5.8 |
| **Total** | | | **41.7** | **41.8** | **41.4** | **41.0** | **40.9** |

Refer to page 11 of Attachment 1 for more detail on the Distribution HST Cash Working Capital Requirement.

Filed: 2013-12-19
EB-2013-0416
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# Working Capital Requirements of Hydro One Networks' Distribution Business

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December 3, 2013

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# Section I: Executive Summary

## *Summary*

In preparation for a 2015-2019 distribution rate filing before the Ontario Energy Board ("OEB"), Hydro One Networks, Incorporated ("HONI") retained Navigant Consulting Limited ("Navigant") to prepare an update to its prior working capital study. This report provides the results of the update and the working capital requirements of HONI's distribution business.

Listed below are key findings and conclusions from this study:

1. In terms of lead-lag days, the results from this study are generally comparable with HONI's previous distribution working capital study (EB-2009-0096). Where there are differences, they have been identified, explained, and their impact on working capital requirements quantified;
2. The approach and methods used in this study are generally consistent with prior HONI studies as well as studies performed by other local distribution companies in Ontario; and,
3. Data from calendar year 2012 was used as a basis for this analysis. Results from the lead-lag study applied to HONI's test years identify the following working capital amounts.

**Table 1: Summary of Working Capital Requirements**

| Year | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|
| **Percentage of OMA** | 7.40% | 7.39% | 7.46% | 7.52% | 7.58% |
| **Working Capital Requirement $(M)** | $236.21 | $239.08 | $240.76 | $239.75 | $241.11 |

## *Organization of the Report*

Section II of this report discusses the lag times associated with HONI's collections of revenues. This includes a description of the sources revenues and how an overall revenue lag is derived.

Section III presents the lead times associated with HONI's expenses. This includes a description of the types of expenses incurred by HONI's distribution operations and how expenses are treated for the purposes of deriving an overall expenses lead.

Section IV presents the working capital requirements of HONI's distribution business including the working capital requirement associated with the Harmonized Sales Tax ("HST").

Section V presents a summary comparison of the results from this study with results from EB-2009-0096 study. Differences between the two have been noted, explained, and their impacts on working capital quantified. The intent of presenting the discussion in Section V is to demonstrate that the approach used in this study is an accurate reflection of the current distribution operations of HONI and that the results are reasonable when compared with the prior distribution studies.

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## Section II: Working Capital Methodology

Working capital is the amount of funds that are required to finance the day-to-day operations of a regulated utility and which 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 Navigant for this purpose.

A lead-lag study analyzes the time between the date customers receive service and the date that customers' payments are available to HONI (or "lag") together with the time between which HONI receives goods and services from its vendors and pays for them at a later date (or "lead")[1]. "Leads" and "Lags" are both measured in days and are dollar-weighted where appropriate.[2] The dollar-weighted net lag (lag minus lead) days is then divided by 365 (or 366 for leap years) and then multiplied by the annual test year expenses to determine the amount of working capital required. The resulting amount of working capital is then included in HONI's rate base for the purpose of deriving revenue requirements.

### *Key Concepts*

Two key concepts need to be defined as they appear throughout this report:

**Mid-Point Method**

When a service is provided to (or by) HONI over a period of time, the service is deemed to have been provided (or received) evenly over the midpoint of the period, unless specific information regarding the provision (or receipt) of that service indicates 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 generally used is shown below. The formula uses the number of days in a year (A) and the number of periods in a year (B):

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

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

[2] The notion of dollar-weighting is pursued further in the sub-section titled "Key Concepts".

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**Statutory Approach**

In conjunction with 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 to (or by) HONI. In some instances, particularly for the HST, the due dates for payments are established by statute or by regulation with significant penalties for late payments. 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:

1. Service Lead component (services are assumed to be provided to HONI evenly around the mid-point of the service period), and
2. Payment Lead component (the time period from the end of the service period to the time payment was made and when funds have left HONI's possession).

**Dollar Weighting**

Both leads and lags should be dollar-weighted where appropriate and where data is available to accurately reflect the flow of dollars. For example, suppose that a particular transaction has a lead time of 100 days and has a dollar value of $100. Further, suppose that another transaction has a 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 lead time of 65 days ([100+30]/2). However, when these two transactions are dollar weighted, the resulting lead time would be closer to 30 days which is more representative of how the dollars actually flow.

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## *Methodology*

Performing a lead-lag study requires two key undertakings:

1. Developing an understanding of how the regulated distribution business operates in terms of products and services sold to customers/purchased from vendors, and the 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 HONI's operations, interviews with personnel within HONI's Accounts Payable, Customer Service, Wholesale Market Operations, Human Resources, Payroll, Treasury, and Tax Departments were conducted. Key questions that were addressed during the course of the interviews included:

1. What is being sold (or purchased)? If a service is being provided to (or by) HONI, over what time period was this service provided;
2. Who are the buyers (or sellers);
3. 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;
4. Are any changes to the terms for payment expected? Are these terms driven by industry or internally? What is the basis for any such changes;
5. Are there any new rules or regulations governing transactions relating to distribution operations that are expected to materialize over the time frame considered in this report; and,
6. How are payments made (or received)? Payment types have different payment lead times (i.e., internet payments have shorter deposit times than cheque deposit times)

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## Section III: Revenue Lags

A distribution utility providing service to its customers generally derives its revenue from bills paid for service by its customers. A revenue lag represents the number of days from the date service is rendered by HONI until the date payments are received from customers and funds are available to HONI.

Interviews with HONI personnel indicate that its distribution business receives funds from the following funding streams:

1. Retail Customers;
2. Rural Rate Assistant Customers;
3. The Ontario Ministry of Finance via the Independent Electricity System Operation ("IESO");
4. Other Sources (revenues from municipalities, electricity retailers and revenues for miscellaneous services such as jobbing and contracting work performed by HONI); and,
5. The Ontario Clean Energy Benefit ("OCEB").

The lag times associated with the funding streams above were weighted and combined to calculate an overall revenue lag time as shown below.

**Table 2: Summary of Revenue Lag**

| Description | Lag Days | Revenues ($M) | Weighting | Weighted Lag |
|---|---|---|---|---|
| Retail Revenue | 52.87 | $5,283 | 83% | 43.87 |
| Rural Rate Assistance | 32.74 | $164 | 3% | 0.84 |
| Other Revenue | 38.09 | $392 | 6% | 2.35 |
| Ontario Clean Energy Benefit | 62.58 | $528 | 8% | 5.19 |
| **Total** | | **$6,367** | **100%** | **52.25** |

Retail Revenue lag consists of the following components[3]:

1. Service Lag;
2. Billing Lag; and,
3. Collections Lag.

The lag times for each of the above components, when added together, results in the Retail Revenue Lag for the purpose of calculating the working capital requirements for HONI's distribution business. Table 3 below summarizes the total Retail Revenue Lag.

[3] There is no additional lag time for payment processing as funds are available to HONI immediately after funds are deposited

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**Table 3: Summary of Retail Revenue Lag**

| Description | Lag Days |
|---|---|
| Service Lag | 16.40 |
| Billing Lag | 7.70 |
| Collections Lag | 28.77 |
| **Total** | **52.87** |

The estimation of each component of the Retail Revenue Lag is described below.

## *Service Lag*

The Service Lag is the time from HONI'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 HONI indicated that based upon revenue weighting, approximately 96% of customers are on a monthly billing schedule, 0.4% of customers are on a bi-monthly billing schedule and 3.6% of customers are on a quarterly billing schedule. The breakdown of the customer meter reading frequency shows a shift of more customers into the monthly billing category versus the prior study due to the implementation of smart meters, which allow for accurate monthly meter readings. Taking this information into account and using a mid-point methodology, the Service Lag was estimated to be 16.40 days.

## *Billing Lag*

The Billing Lag is the time period from when the customer's service period ends, which is typically defined as when the meter is read, and the time that the customer's bill is generated and provided to the customer. Interviews with billing staff at HONI and analysis of meter billing data indicated that HONI customers have an average billing lag of 7.70 days, which is significantly shorter than billing lag in the prior study due to the implementation of a new customer information system.

## *Collections Lag*

The Collections Lag is the time period from when the customer's bill is provided to the customer, to the time period that the customer provides a payment to HONI and when that payment is recorded in HONI's billing system. This period of time is measured by analyzing the receivables aging data contained in receivables reports used by HONI for normal business purposes. Using such data provided by HONI for the calendar year 2012, a dollar-weighted average collections lag of 28.77 days was determined for HONI's distribution operations. This collections lag is shorter than the collections lag in the prior study due to HONI's increased efficiencies in the collection of receivables outstanding from customers.

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## Section IV: Expense Leads

The determination of working capital requires both a measurement of the lag in the collection of revenues for services provided by HONI's distribution business, and the lead times associated with payments for services provided to HONI. Therefore, in conjunction with the calculation of the revenue lag, expense lead times were calculated for the following items:

1. Cost of Power;
2. OM&A Expenses;
3. Removal & Environmental Remediation Costs;
4. Interest on Long Term Debt;
5. Payments in Lieu of Taxes; and,
6. HST.

### *Cost of Power*

HONI 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. Taking all this information on actual payments made by HONI in 2012, a dollar-weighted Cost of Power expense lead time of 32.74 days was calculated. Table 4 below summarizes the components of the Cost of Power expense lead calculation.

**Table 4: Summary of IESO Cost of Power Expenses**

| Delivery Month | Amounts ($M) | Weighting Factor % | Payment Date | Service Lead Time | Payment Lead Time | Total Lead Time | Weighted Lead Time |
|---|---|---|---|---|---|---|---|
| Jan 12 | $204.91 | 10.27% | 2/16/2012 | 15.50 | 16.00 | 31.50 | 3.23 |
| Feb 12 | $189.54 | 9.50% | 3/16/2012 | 14.50 | 16.00 | 30.50 | 2.90 |
| Mar 12 | $182.95 | 9.17% | 4/19/2012 | 15.50 | 19.00 | 34.50 | 3.16 |
| Apr 12 | $147.67 | 7.40% | 5/16/2012 | 15.00 | 16.00 | 31.00 | 2.29 |
| May 12 | $132.44 | 6.64% | 6/18/2012 | 15.50 | 18.00 | 33.50 | 2.22 |
| Jun 12 | $148.15 | 7.42% | 7/18/2012 | 15.00 | 18.00 | 33.00 | 2.45 |
| Jul 12 | $144.45 | 7.24% | 8/17/2012 | 15.50 | 17.00 | 32.50 | 2.35 |
| Aug 12 | $190.68 | 9.55% | 9/19/2012 | 15.50 | 19.00 | 34.50 | 3.30 |
| Sep 12 | $127.09 | 6.37% | 10/17/2012 | 15.00 | 17.00 | 32.00 | 2.04 |
| Oct 12 | $159.96 | 8.01% | 11/19/2012 | 15.50 | 19.00 | 34.50 | 2.76 |
| Nov 12 | $167.60 | 8.40% | 12/18/2012 | 15.00 | 18.00 | 33.00 | 2.77 |
| Dec 12 | $200.53 | 10.05% | 1/17/2013 | 15.50 | 17.00 | 32.50 | 3.27 |
| **Total** | **$1,995.97** | **100.00%** | | | | | **32.74** |

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## *OM&A Expenses*

For the purpose of the distribution lead-lag study, OM&A expenses were considered to consist of payments made by HONI to its vendors in the following categories:

1. Payroll & Benefits;
2. Property Taxes;
3. Corporate Procurement Card;
4. Trinity Lease Payments;
5. Payments to Inergi;
6. Consulting & Contract Staff; and,
7. Miscellaneous OM&A

Expense lead times were calculated individually for each of the items listed above and then dollar-weighted to derive a composite expense lead time of 27.11 days for OM&A expenses.

**Table 5: Summary of OM&A Expenses**

| Description | Amounts ($M) | Weighting | Expense Lead Time | Weighted Lead Time |
|---|---|---|---|---|
| Payroll & Benefits | $1,091.25 | 60% | 8.20 | 4.93 |
| Property Taxes | $22.10 | 1% | -38.56 | -0.47 |
| Corporate Procurement Card | $100.09 | 6% | 33.36 | 1.84 |
| Trinity Lease Payments | $11.95 | 1% | -14.25 | -0.09 |
| Payments to Inergi | $152.09 | 8% | 44.40 | 3.72 |
| Consulting and Contract Staff | $200.55 | 11% | 80.15 | 8.85 |
| Miscellaneous OM&A | $237.83 | 13% | 63.60 | 8.33 |
| **Total** | **$1,815.86** | **100%** | | **27.11** |

### Payroll & Benefits

The following items were considered to be expenses related to the Payroll & Benefits of HONI:

1. Four types of payroll including basic, trades, management, and board of directors payroll;
2. Three types of payroll withholdings including the Canada Pension Plan, Employment Insurance, and Income Tax withholdings;
3. Contributions made by Hydro One to the Hydro One Pension Plan;
4. Group Health, Dental, and Life Insurance related administrative fees and claims;
5. Payments made by Hydro One on account of the Employer Health Tax ("EHT"); and,
6. Payments made by Hydro One to the Worker Safety Improvement Board ("WSIB").

When all Payroll, Withholdings and Benefits were dollar-weighted using actual payment data, the weighted average expense lead time associated with Payroll & Benefits was determined to be 8.20 days as shown in Table 6 below.

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**Table 6: Summary of Payroll & Benefits Expenses**

| Description | Amounts ($M) | Weighting | Expense Lead Time | Weighted Lead Time |
|---|---|---|---|---|
| Pensions | $171.12 | 16% | -45.68 | -7.16 |
| WSIB | $6.61 | 1% | 45.28 | 0.27 |
| EHT | $17.54 | 2% | 30.88 | 0.50 |
| Group Life Insurance | $16.71 | 2% | 6.56 | 0.10 |
| Group Health & Dental – ASO | $6.71 | 1% | 30.83 | 0.19 |
| Group Health & Dental – Claims | $45.11 | 4% | 1.89 | 0.08 |
| Payroll – Basic | $355.68 | 33% | 18.50 | 6.03 |
| Payroll – Construction | $134.99 | 12% | 18.50 | 2.29 |
| Payroll – Management | $59.64 | 5% | -0.80 | -0.04 |
| Payroll – Board of Directors | $0.49 | 0% | 59.64 | 0.03 |
| Payroll – Sup Pensions | $2.18 | 0% | -15.13 | -0.03 |
| Payroll Withholdings – Basic | $181.20 | 17% | 26.14 | 4.34 |
| Payroll Withholdings – Construction | $57.44 | 5% | 26.16 | 1.38 |
| Payroll Withholdings – Management | $35.06 | 3% | 7.22 | 0.23 |
| Payroll Withholdings – Board of Directors | $0.19 | 0% | 66.38 | 0.01 |
| Payroll Withholdings – Sup Pensions | $0.59 | 0% | -8.50 | 0.00 |
| **Total** | **$1,091.25** | **100%** | **267.87** | **8.20** |

### Property Taxes

HONI makes property tax payments to a number of municipalities and taxing authorities in the Province of Ontario. These payments are made in the current year for the current year and are typically made in installments. Using actual payment dates and amounts associated with HONI's distribution business for calendar year 2012, a dollar-weighted expense lead (-lag) time of -0.47 days was determined.

### Corporate Procurement Card

Procurement (or charge) cards are used by the HONI's employees for a variety of company related reasons including, and not limited to, purchases of materials in the field, incidental expenses, and to settle charges for travel and accommodation. Based on actual invoices from the HONI's charge card provider and payments made by HONI, a dollar-weighted expense lead time of 1.84 days was determined.

### Trinity Lease Payments

HONI leases its office space in the Bell Trinity Square Building from Northam Realty. HONI generally makes its lease payments on or around the end of the month prior for the current month. Taking this information into account and using actual invoices and payments for 2012, a dollar-weighted expense lead (-lag) time of -0.09 days was determined.

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### Payments to Inergi

Inergi (a division of CapGemini) provides a number of services to HONI including (and not limited to) customer service operations, finance, human resources, accounts payable, information technology, IESO settlement services, and supply management services. HONI generally makes payments to Inergi on or around the last day of the month for the current month. Based on a review of payments made by HONI to Inergi in 2012, a dollar-weighted expense lead time of 3.72 days was determined.

### Consulting and Contract Staff

HONI engages consulting and contract staff to provide assistance in the areas of engineering, environmental services, receivables management, accounting, and general consulting.
A dollar-weighted expense lead time of 8.85 days was determined based on a review of invoices rendered and payments made by HONI in 2012.

### Miscellaneous OM&A

This category of expense includes items such as product purchases, equipment rentals, and provision of general services to HONI. Based on transactions in HONI's accounts payable system under this category, a dollar-weighted expense lead time of 8.33 days was derived.

## *Removal and Environmental Remediation Costs*

HONI incurs costs when removing or replacing equipment from existing sites or right of ways. Further, costs relating to environmental remediation at these sites are also incurred. While costs are required to be reported as a depreciation and amortization expense for accounting purposes, there is a cash flow impact associated with HONI's expenditures on such removal and environmental remediation costs. Based upon discussions with HONI staff, estimates for the derivation of removal and environmental remediation costs were determined and summarized in Table 7 below.

**Table 7: Summary of Removal and Environmental Remediation Expenses**

| Description | Expense Lead Time | % of Remediation Expenses | Weighted Lead Time |
|---|---|---|---|
| **Removal** | | | |
| HONI Labour | 8.20 | 85.00% | 6.97 |
| HONI Materials | 63.60 | 15.00% | 9.54 |
| External Labour | 80.15 | 0.00% | 0.00 |
| External Materials | 63.60 | 0.00% | 0.00 |
| **Total** | | **100.00%** | **16.51** |
| | | | |
| **Environmental Remediation** | | | |
| HONI Labour | 8.20 | 51.00% | 4.18 |
| HONI Materials | 63.60 | 9.00% | 5.72 |
| External Labour | 80.15 | 34.00% | 27.25 |
| External Materials | 63.60 | 6.00% | 3.82 |
| **Total** | | **100.00%** | **40.98** |

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### *Interest on Long Term Debt*

HONI makes interest payments on its long term debt outstanding out of current year revenues. Such payments are generally made twice a year. Taking into account the various bonds and other long term debt instruments, a dollar-weighted expense lead time of 8.93 days was determined for the 2012 calendar year.

### *Payments in Lieu of Taxes ("PILs")*

HONI makes payments in lieu of taxes in monthly installments to the relevant taxing authorities. Using payment amounts that were made in calendar year 2012, a dollar-weighted expense lead time of 128.37 days was determined for PIL's.

### *HST*

The expense lead times associated with the following items that attract HST were considered in HONI's distribution lead-lag study.

1. Revenues;
2. Cost of Power;
3. OM&A[4]; and,
4. Removals, Environmental Remediation and Capital Costs.

A summary of the expense lead times and working capital amounts associated with each of the above items is provided in Table 8. Note that the statutory approach described at the outset was used to determine the expense lead times associated with HONI's remittances and disbursements of HST (i.e., both remittances and collections are generally on the last day of the month following the date of the applicable invoice.

**Table 8: Summary of HST Working Capital Amounts**

| Description | HST Lead Time | Working Capital Factor | 2015 ($M) | 2016 ($M) | 2017 ($M) | 2018 ($M) | 2019 ($M) |
|---|---|---|---|---|---|---|---|
| Revenues | -7.13 | -2% | -$10.3 | -$10.5 | -$10.6 | -$10.7 | -$10.8 |
| Cost of Power | 45.92 | 13% | $43.0 | $42.9 | $42.8 | $42.3 | $42.2 |
| OM&A Expenses | 42.92 | 12% | $3.2 | $3.5 | $3.5 | $3.5 | $3.4 |
| Removals | 44.30 | 12% | $0.1 | $0.1 | $0.1 | $0.1 | $0.1 |
| Environmental Remediation | 44.30 | 12% | $0.1 | $0.1 | $0.1 | $0.1 | $0.1 |
| Capital | 44.30 | 12% | $5.6 | $5.6 | $5.5 | $5.6 | $5.8 |
| **Total** | | | **$41.7** | **$41.8** | **$41.4** | **$41.0** | **$40.9** |

[4] Costs within OM&A that attract HST include Corporate Procurement Card, Trinity Lease Payments, Payments to Inergi, Consulting and Contract Staff and Miscellaneous OM&A

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## Section V: Hydro One Distribution – Working Capital Requirements

Using the results described under the discussion of revenue lags and expense leads, and applying them to HONI's proposed distribution expenses for the 2015-2019 test years, HONI's working capital requirements were determined and shown in the tables below.

### Table 9: HONI Distribution Working Capital Requirements (2015)

| Description | Revenue Lag Days | Expense Lead Days | Net Lag Days | Working Capital Factor | Expenses ($M) | Working Capital Requirements ($M) |
|---|---|---|---|---|---|---|
| Cost of Power | 52.25 | 32.74 | 19.50 | 5% | $2,626.87 | $140.35 |
| OM&A Expenses | 52.25 | 27.11 | 25.14 | 7% | $564.30 | $38.87 |
| PILS | 52.25 | 128.37 | -76.12 | -21% | $55.60 | -$11.59 |
| Interest Expense | 52.25 | 8.93 | 43.32 | 12% | $177.86 | $21.11 |
| Environmental Remediation | 52.25 | 40.98 | 11.27 | 3% | $14.16 | $0.44 |
| Removals | 52.25 | 16.51 | 35.73 | 10% | $54.46 | $5.33 |
| **Total** | | | | | $3,493.25 | $194.51 |
| HST | | | | | | $41.70 |
| **Total - Including HST** | | | | | | **$236.21** |
| **Working Capital as a Percent of OM&A incl. Cost of Power** | | | | | | **7.40%** |

### Table 10: HONI Distribution Working Capital Requirements (2016)

| Description | Revenue Lag Days | Expense Lead Days | Net Lag Days | Working Capital Factor | Expenses ($M) | Working Capital Requirements ($M) |
|---|---|---|---|---|---|---|
| Cost of Power | 52.25 | 32.74 | 19.50 | 5% | $2,623.37 | $139.78 |
| OM&A Expenses | 52.25 | 27.11 | 25.14 | 7% | $610.18 | $41.91 |
| PILS | 52.25 | 128.37 | -76.12 | -21% | $61.60 | -$12.81 |
| Interest Expense | 52.25 | 8.93 | 43.32 | 12% | $188.57 | $22.32 |
| Environmental Remediation | 52.25 | 40.98 | 11.27 | 3% | $22.00 | $0.68 |
| Removals | 52.25 | 16.51 | 35.73 | 10% | $56.99 | $5.56 |
| **Total** | | | | | $3,562.71 | $197.45 |
| HST | | | | | | $41.64 |
| **Total - Including HST** | | | | | | **$239.08** |
| **Working Capital as a Percent of OM&A incl. Cost of Power** | | | | | | **7.39%** |

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### Table 11: HONI Distribution Working Capital Requirements (2017)

| Description | Revenue Lag Days | Expense Lead Days | Net Lag Days | Working Capital Factor | Expenses ($M) | Working Capital Requirements ($M) |
|---|---|---|---|---|---|---|
| Cost of Power | 52.25 | 32.74 | 19.50 | 5% | $2,614.41 | $139.69 |
| OM&A Expenses | 52.25 | 27.11 | 25.14 | 7% | $613.97 | $42.29 |
| PILS | 52.25 | 128.37 | -76.12 | -21% | $62.24 | -$12.98 |
| Interest Expense | 52.25 | 8.93 | 43.32 | 12% | $200.37 | $23.78 |
| Environmental Remediation | 52.25 | 40.98 | 11.27 | 3% | $22.36 | $0.69 |
| Removals | 52.25 | 16.51 | 35.73 | 10% | $60.40 | $5.91 |
| **Total** | | | | | $3,573.75 | $199.38 |
| HST | | | | | | $41.38 |
| **Total - Including HST** | | | | | | **$240.76** |
| **Working Capital as a Percent of OM&A incl. Cost of Power** | | | | | | **7.46%** |

### Table 12: HONI Distribution Working Capital Requirements (2018)

| Description | Revenue Lag Days | Expense Lead Days | Net Lag Days | Working Capital Factor | Expenses ($M) | Working Capital Requirements ($M) |
|---|---|---|---|---|---|---|
| Cost of Power | 52.25 | 32.74 | 19.50 | 5% | $2,586.17 | $138.18 |
| OM&A Expenses | 52.25 | 27.11 | 25.14 | 7% | $603.86 | $41.59 |
| PILS | 52.25 | 128.37 | -76.12 | -21% | $65.57 | -$13.68 |
| Interest Expense | 52.25 | 8.93 | 43.32 | 12% | $217.54 | $25.82 |
| Environmental Remediation | 52.25 | 40.98 | 11.27 | 3% | $22.03 | $0.68 |
| Removals | 52.25 | 16.51 | 35.73 | 10% | $63.28 | $6.20 |
| **Total** | | | | | $3,558.46 | $198.79 |
| HST | | | | | | $40.96 |
| **Total - Including HST** | | | | | | **$239.75** |
| **Working Capital as a Percent of OM&A incl. Cost of Power** | | | | | | **7.52%** |

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### Table 13: HONI Distribution Working Capital Requirements (2019)

| Description | Revenue Lag Days | Expense Lead Days | Net Lag Days | Working Capital Factor | Expenses ($M) | Working Capital Requirements ($M) |
|---|---|---|---|---|---|---|
| Cost of Power | 52.25 | 32.74 | 19.50 | 5% | $2,582.55 | $137.99 |
| OM&A Expenses | 52.25 | 27.11 | 25.14 | 7% | $600.00 | $41.33 |
| PILS | 52.25 | 128.37 | -76.12 | -21% | $69.39 | -$14.47 |
| Interest Expense | 52.25 | 8.93 | 43.32 | 12% | $238.25 | $28.27 |
| Environmental Remediation | 52.25 | 40.98 | 11.27 | 3% | $21.62 | $0.67 |
| Removals | 52.25 | 16.51 | 35.73 | 10% | $65.82 | $6.44 |
| **Total** | | | | | $3,577.62 | $200.23 |
| HST | | | | | | $40.88 |
| **Total - Including HST** | | | | | | **$241.11** |
| **Working Capital as a Percent of OM&A incl. Cost of Power** | | | | | | **7.58%** |

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## Section VI: Findings and Conclusions

The purpose of this section is to compare the results from this study to HONI's prior working capital distribution study as per EB-2009-0096. In addition, this section demonstrates that the results from this study reflect the current operations of HONI.

### *Comparison with Prior Distribution Study*

**Table 14: Working Capital Requirements (2010)**

| Description | Revenue Lag Days | Expense Lead Days | Net Lag Days | Working Capital Factor | Expenses ($M) | Working Capital Requirements ($M) |
|---|---|---|---|---|---|---|
| Cost of Power | 69.99 | 32.67 | 37.32 | 10% | $2,008.40 | $205.33 |
| OM&A Expenses | 69.99 | 22.92 | 47.07 | 13% | $591.00 | $76.21 |
| PILS | 69.99 | 16.51 | 53.48 | 15% | $16.50 | $2.42 |
| Interest Expense | 69.99 | 52.87 | 17.12 | 5% | $155.50 | $7.29 |
| Environmental Remediation | 69.99 | 34.84 | 35.15 | 10% | $12.80 | $1.23 |
| Removals | 69.99 | 30.02 | 39.97 | 11% | $33.00 | $3.61 |
| **Total** | | | | | **$2,817.20** | **$296.10** |
| GST | | | | | | $8.02 |
| **Total - Including GST** | | | | | | **$304.13** |
| **Working Capital as a Percent of OM&A incl. Cost of Power** | | | | | | **11.70%** |

**Table 15: HONI Distribution Working Capital Requirements (2015)**

| Description | Revenue Lag Days | Expense Lead Days | Net Lag Days | Working Capital Factor | Expenses ($M) | Working Capital Requirements ($M) |
|---|---|---|---|---|---|---|
| Cost of Power | 52.25 | 32.74 | 19.50 | 5% | $2,626.87 | $140.35 |
| OM&A Expenses | 52.25 | 27.11 | 25.14 | 7% | $564.30 | $38.87 |
| PILS | 52.25 | 128.37 | -76.12 | -21% | $55.60 | -$11.59 |
| Interest Expense | 52.25 | 8.93 | 43.32 | 12% | $177.86 | $21.11 |
| Environmental Remediation | 52.25 | 40.98 | 11.27 | 3% | $14.16 | $0.44 |
| Removals | 52.25 | 16.51 | 35.73 | 10% | $54.46 | $5.33 |
| **Total** | | | | | $3,493.25 | $194.51 |
| HST | | | | | | $41.70 |
| **Total - Including HST** | | | | | | **$236.21** |
| **Working Capital as a Percent of OM&A incl. Cost of Power** | | | | | | **7.40%** |

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**Table 16: Working Capital Requirements (2015 VS 2010)**

| Description | Revenue Lag Days | Expense Lead Days | Net Lag Days | Working Capital Factor | Expenses ($M) | Working Capital Requirements ($M) |
|---|---|---|---|---|---|---|
| Cost of Power | -17.74 | 0.07 | -17.81 | -5% | $618.47 | -$64.98 |
| OM&A Expenses | -17.74 | 4.19 | -21.93 | -6% | -$26.70 | -$37.34 |
| PILS | -17.74 | 111.86 | -129.60 | -36% | $39.10 | -$14.01 |
| Interest Expense | -17.74 | -43.94 | 26.20 | 7% | $22.36 | $13.81 |
| Environmental Remediation | -17.74 | 6.13 | -23.88 | -7% | $1.36 | -$0.80 |
| Removals | -17.74 | -13.51 | -4.23 | -1% | $21.46 | $1.72 |
| **Total** | | | | | $676.05 | -$101.60 |
| HST | | | | | | $33.68 |
| **Total - Including HST** | | | | | | **-$67.92** |
| **Working Capital as a Percent of OM&A incl. Cost of Power** | | | | | | **-4.30%** |

### Revenue Lag

As shown in Table 16 above, the overall revenue lag in the current study has decreased significantly versus the prior study. The primary driver of this change is the reduction of the service lag which was due to a shift of the majority of the customers moving to monthly meter reading frequencies as a result of the implementation of smart meters. Another driver for this decrease in revenue lag is a result of HONI's new Customer Information System, which greatly reduced the billing lag. Furthermore, HONI's distribution collections lag also decreased indicating that HONI is collecting outstanding balances more efficiently.

### Cost of Power

Cost of Power expense lead days have not changed significantly versus the prior study. HONI distribution still procures power from the IESO on a monthly basis and pays the IESO approximately two weeks after the end of the prior service period. Since payment schedules have not changed since the prior study, Cost of Power expense lead days have not changed significantly either.

### OM&A Expenses

OM&A expense lead days have increased slightly by approximately 4 days versus the prior study. Factors driving this increase include longer expense lead times for Payments to Inergi, Consulting and Contract Staff and Miscellaneous OM&A. After dollar-weighting all OM&A categories however, the impact of these slightly increased expense lead times is minimal on HONI's overall working capital requirements.

**Interest Expense**

Interest expense lead days have increased significantly versus the prior study. This study has a revised methodology for calculating interest expense versus the prior study. Previously, the expense lead calculation summed the lead days relating to the two payments in the year for each outstanding debt instrument, and calculated the weighted lead days for this instrument by weighting the total bond value. This study treats each debt instrument payment as an individual payment and the weighted lead days for each payment is based upon that individual debt instrument payment amount. Navigant believes the change is an improvement in the methodology and is consistent with interest lead time calculations for other utilities across Ontario.

**PILs**

PILs expense lead days have increased significantly in this study versus the prior study primarily due to a large true-up payment made in 2012 for 2011. Discussions with HONI subject matter experts indicated that these true-up payments are expected to continue with the same magnitude and scheduling parameters in the future. Navigant believes the change is an improvement in the methodology and is consistent with PILs lead time calculations for other utilities across Ontario.

**Removals & Environmental Remediation**

Removals & Environmental Remediation expense lead days have decreased by approximately 13 days and increased by approximately 6 days respectively. This change is primarily driven by different allocations of Removals & Environmental Remediation expenses into HONI Labour/Materials, and Outside Labour/Materials. Discussions with HONI subject matter experts confirmed that these updated allocations are indicative of how Removals & Environmental Remediation expenses are currently allocated and how they are supposed to be allocated in the future. After dollar-weighting all OM&A categories however, the impact of these changes is minimal on HONI's overall working capital requirements.

### *Comparison with the Prior Distribution Working Capital Study Using Constant Revenue Lag Days*

Since the revenue lag days was one of the most significant changes over the prior study, an analysis using constant revenue lag days was conducted to show the individual impacts of the differences in expense leads days. Table 16 below shows that when holding revenue lag days constant, working capital requirement in 2015 is approximately 1% higher than the amount in 2010.

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**Table 17: Working Capital Requirements with 2010 Revenue Lag Days Held Constant (2015 VS 2010)**

| Description | Revenue Lag Days | Expense Lead Days | Net Lag Days | Working Capital Factor | Expenses ($M) | Working Capital Requirements |
|---|---|---|---|---|---|---|
| Cost of Power | 0.00 | 0.07 | -0.07 | 0% | $618.47 | $62.71 |
| OM&A Expenses | 0.00 | 4.19 | -4.19 | -1% | -$26.70 | -$9.91 |
| PILS | 0.00 | 111.86 | -111.86 | -31% | $39.10 | -$11.31 |
| Interest Expense | 0.00 | -43.94 | 43.94 | 12% | $22.36 | $22.46 |
| Environmental Remediation | 0.00 | 6.13 | -6.13 | -2% | $1.36 | -$0.11 |
| Removals | 0.00 | -13.51 | 13.51 | 4% | $21.46 | $4.37 |
| **Total** | | | | | $676.05 | $68.20 |
| HST | | | | | | $33.68 |
| **Total - Including HST** | | | | | | **$101.88** |
| **Working Capital as a Percent of OM&A incl. Cost of Power** | | | | | | **1.02%** |

## *Conclusions*

The results of this study indicate a lower working capital requirement compared to HONI's EB-2009-0096 distribution lead-lag study. The reasons for the differences lie primarily with the revenue lag days, where this figure has decreased significantly in the current study due to the shift of customers to monthly billing frequencies, the upgrade of HONI's Customer Information System, and HONI's ability to collect outstanding balances more efficiently. Table 17 below summarizes the working capital requirements calculated in this study along with historical working capital amounts.

**Table 18: Summary of Historical Working Capital Requirements**

| Year | Working Capital Requirements % |
|---|---|
| *2010* | *11.7%* |
| *2011* | *11.9%* |
| **2015** | **7.40%** |
| **2016** | **7.39%** |
| **2017** | **7.46%** |
| **2018** | **7.52%** |
| **2019** | **7.58%** |

### *Comparison with Other Lead-Lag Studies*

Navigant has prepared a table comparing the components of lead-lag studies that have been filed and is public. The results are shown in Table 19 below. Note that the prior studies are based on data of an older vintage and are mostly based on the customer weighting method for revenue lags. This is an obsolete methodology and HONI's current study is based upon the revenue weighting method for revenue lags.

**Table 19: Comparison with Other Lead-Lag Studies**

| Name of Utility | Working Capital Requirements (Filed ) | Vintage For Base Year Data | Type of Service | Customer/Retail Revenues | IESO/ISO Revenues | Other Revenues | Payroll & Withholdings | Employee Benefits | Cost of Power | Other OM&A | Income & Related Taxes | GST/HST | Interest Expense |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hydro One Networks | 11.70% | 2009 | Electric Distribution | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Toronto Hydro | 12.45% | 2005 | Electric Distribution | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Hydro Ottawa Ltd. | 14.20% | 2008 | Electric Distribution | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Horizon's Utilities Corp. | 14.20% | 2009 | Electric Distribution | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| London Hydro Inc. | 11.42% | 2010 | Electric Distribution | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |

**2-Staff-23 Working Capital Allowance**

**Reference:**

**1. Exhibit 2 Tab 4 Appendix 2-3 - A Determination of the Working Capital Requirements of Horizon Utilities' Distribution Business**

**Preamble:**

**Horizon retained Navigant Consulting Inc. to perform a lead lag study to establish the working capital factor to be applied to controllable OM&A and the cost of power for setting the level of working capital to be included in rate base. The analysis resulted in a Billing Service Lag of 27.6 days.**

**a. Please provide the details of the calculation of the Billing Service Lag of 27.6 days.**

**b. Is Horizon planning to bill monthly at any time during the CIR period? If so, when?**

**Response:**

a. Subsequent to the submission of its Application, Horizon Utilities reviewed the inputs used to calculate the Billing Service Lag of 27.06. It determined that some of the revenue allocations between monthly and bi-monthly billing were incorrect.

Navigant Consulting Inc. ("Navigant") recalculates the Billing Service Lag to be 25.02 days, based on the correct revenue allocations. The details of the calculation of the Billing Service Lag of 25.02 days are filed as attachment 2-Staff-23a_Attch 3_Service Lag Revised Table. Horizon Utilities has provided the revised Navigant Report, which incorporates the revised Billing Service Lag as 2-Staff-23a_Attch 1_Revised Navigant Working Capital Report. Horizon Utilities has also provided a marked-up (track changes) version of the same report as 2-Staff-23a_Attch 2_Revised Navigant Working Capital Report_Track Changes. The revised Navigant Report was also updated for minor typographical errors in the original report (Tables 5, 6 and 7 as well as the expense lead time for Property Taxes on page 16 - revised Navigant Working Capital Report and service, payment and expense lead times for Payments in Lieu of Taxes on page 16 – revised Navigant Working Capital Report). None of the typographical errors affected the Working Capital % calculation.

The revised Billing Service Lag of 25.02 has been used to calculate a revised Working Capital Allowance. This revision results in a reduction in the Working Capital Allowance of 0.7% from 12.7% to 12.0%.

The impact on revenue requirement due to the change in Working Capital Allowance is identified in the table below:

**Table 1: Impact on Revenue Requirement**

| | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|
| Submitted Base Revenue Requirement | $ 112,956,026 | $ 118,628,501 | $ 121,743,444 | $ 123,920,317 | $ 127,881,899 |
| Base Revenue Requirement (WC at 12%) | $ 112,665,477 | $ 118,326,485 | $ 121,430,522 | $ 123,592,298 | $ 127,540,488 |
| Variance in Revenue Requirement | $ (290,549) | $ (302,016) | $ (312,922) | $ (328,019) | $ (341,411) |

b. Horizon Utilities is not planning to transition customers to monthly billing at any time during the CIR period.

Horizon Utilities is aware of the recent policy review initiated by the Board on July 27, 2014 related to *Electricity and Natural Gas Distributors' Residential Customer Billing Practices and Performance* (EB-2014-0198). Changes to billing practices during the term of the rate plan may result from this policy review.

Please also see Horizon Utilities' response to Interrogatory 2-EP-11 b) for a discussion of the one-time and ongoing incremental costs for such a transition.

# 2-Staff-23a_Attch 1_ Revised Navigant Working Capital Report

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NAVIGANT

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

**Prepared for:**

**Horizon Utilities Corporation**


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March 31, 2014
Updated July 17, 2014

NAVIGANT

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## Section I: Executive Summary

### *Summary*

In preparation for HUC's 2014 Distribution Cost of Service Rate Application before the Ontario Energy Board ("OEB" or "Board"), Horizon Utilities Corporation ("HUC") retained Navigant Consulting Ltd. ("Navigant") to perform a lead-lag study using the most recent data available, and to derive HUC's Working Capital Amount ("WCA") using historical 2012 data with known and measurable forward looking changes applied. This report provides the results of the study and the WCA of HUC's distribution business.

This report includes the following changes from the previous report dated March 31, 2014:

- The updated report reflects a change from the prior study in which the revenues associated with Residential, General Service <50, Unmetered and Scattered, and Streetlighting customer classes were reflected as being billed on a bi-monthly basis, instead of being billed based upon a split between monthly and bi-monthly frequencies. As a result of this change, the WCA of 12.7% in the previous report was overstated. When the correction was captured in the analysis the resulting WCA becomes 12.0%.
- Typographical errors were corrected in the following sections of the report which had no impact on the resulting WCA percentage:
  - Pg 11 – Table 5: Delivery month for IESO COP;
  - Pg 11 – Table 6: Service lead time for Hydro One COP;
  - Pg 12 & 13 – Table 7: Expense lead time for Group Life Insurance & LTD Insurance;
  - Pg 16 – Expense lead time for Property Taxes; and
  - Pg 16 – Service, payment and expense lead times for Payments in Lieu of Taxes.
- All calculation changes in this report are a result of the change in frequency of monthly versus bi-monthly customer billing for the service lag component.

Results from the lead-lag study applied to HUC's 2012 distribution expenses identify an average working capital percentage of 12.0% of the Cost of Power and OM&A Expenses for the 2014-2019 test years. This report also represents the 2014-2019 time periods. Inasmuch as slight variation exists from year-to-year in our analysis Navigant believes application of the 12.0% provides an accurate recovery of the cost of working capital for the time period 2014 through 2019. Based upon the working capital dollar amounts for each of the test years, the weighted average working capital was calculated to be 12.0%. Table 1 below provides the estimated working capital dollars and percentages for the test years 2014-2019.

**Table 1: Estimated Working Capital Requirements**

| | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2014 to 2019 |
|---|---|---|---|---|---|---|---|
| **Estimated Working Capital Requirements ($)** | $69,456,886 | $70,287,875 | $72,767,684 | $75,440,421 | $78,139,129 | $80,754,758 | $74,474,459 |
| **Estimated Working Capital Requirements (%)** | 12.0% | 12.0% | 12.0% | 12.0% | 12.0% | 12.0% | 12.0% |

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### *Organization of the Report*

Section I of this report is the Executive Summary and discusses the key findings and conclusions from this study.

Section II presents the methods and assumptions used in determining the lead-lag approach. Included in this section is a description of two key concepts; the mid-point method and the statutory approach for services and materials provided and expensed.

Section III of this report discusses the lags associated with HUC's collections of revenues. This includes a description of the sources of such revenues, how they were treated for the purposes of deriving an overall revenue lag, and how it affects HUC's distribution operations.

Section IV presents a description of the various expenses and their attendant lead times. Included in this discussion are the lead times on Payroll and Benefits, OM&A, Taxes, Interest, Debt Retirement Charges and the Harmonized Sales Tax ("HST"). 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.

Section V presents the cash WCA of HUC's distribution business including the WCA associated with the HST.

## Section II: Methodology Used to Estimate Cash Working Capital

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

A lead-lag study analyzes the time between the date customers receive service and the date customers' payments are available to HUC (or "lag") together with the time between which HUC receives goods and services from its vendors and pays for them at a later date (or "lead")[1]. "Leads" and "Lags" are both measured in days and are generally where appropriate, dollar-weighted.[2] The dollar-weighted net lag (i.e., lag minus lead) days is 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 HUC's rate base for the purpose of deriving revenue requirement.

### *Key Concepts*

Two key concepts need to be defined up-front as they appear throughout the lead-lag study described in this report:

**Mid-Point Method**: When a service is provided to (or by) HUC over a period of time, the service is deemed to have been provided (or received) evenly over the midpoint of the 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:

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

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"):

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

**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 HUC. In some instances, particularly for the HST, the due dates for payments are established by statute or by regulation with significant penalties in place for late payments. In these instances, the due date established by statute has been used in lieu of when payments were actually made.

[1] A positive lag (or lead) indicates that payments are received (or paid for) after the provision of a good or service.
[2] The notion of dollar-weighting is pursued further in the sub-section titled "Key Concepts".

**Expense Lead Components**: As used in this study, Expense Leads are defined to consist of two components:

1. A Service Lead component (i.e., services are assumed to be provided to HUC evenly around the mid-point of the service period); and
2. 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 HUC's possession).

**Dollar-Weighting**: Both "Leads" and "Lags" should be dollar-weighted where appropriate and where data is available to more accurately reflect the flow of dollars. As an example, suppose that a transaction has a Cash Outflow Lead time of 100 days and its dollar value was $100. Suppose further that another transaction has a Cash Outflow Lead time of 30 days with a dollar value of $1M. A simple un-weighted average of the two transactions would give us a Cash Outflow Lead time of 65 days ([100+30]/2). On the other hand, dollar-weighting the two transactions gives us a Cash Outflow Lead time closer to 30 days; an answer which is more representative of how the dollars actually flowed in this example.

## *Methodology*

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 HUC's operations, interviews with HUC personnel were conducted. Key questions that were addressed during the interviews included:

1. What is being sold (or bought)? If a service is being provided (purchased), over what time period was the service provided (or purchased);
2. Who are the buyers (sellers);
3. 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;
4. Are any changes expected to the terms for payment either driven by industry or internally by HUC? What is the basis for such changes (if any);
5. Are there any new rules and regulations governing such transactions that are expected to materialize over the time frame considered in this report; and
6. How payments are made (i.e., cash, check, electronic funds transfer).

Data for calendar year 2012 was used in the analysis. Development of the data set entailed gathering raw data from the HUC's General Accounting, Accounts Payable, Customer Service, Payroll, and Tax Systems. Once the raw data had been gathered from the multiple in-house systems, data validation was performed to the extent necessary and appropriate.

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## Section III: Revenue Lags

A distribution utility providing service to its customers generally derives its revenue from bills paid for service by its customers. A revenue lag represents the number of days from the date service is rendered by HUC until the date payments are received from customers and funds are available to HUC.

Interviews with HUC personnel indicate that its distribution business primarily receives funds from Retail Customers. The Ontario Clean Energy Benefit ("OCEB") was considered in this study, however since the OCEB expires on December 31, 2015 and since Horizon is applying for a 2014-2019 rate application, the OCEB will be excluded from the calculation of Retail Customer Revenue lag.

Retail Customer Revenue lag consists of the four following sequential components:

1. Service Lag;
2. Billing Lag;
3. Collections Lag; and
4. Payment Processing Lag.

The lag times for each of the above components, when added together, results in the Retail Customer Revenue Lag for the purpose of calculating the WCA for HUC's distribution business. Table 2 below summarizes the total weighted average Revenue Lag.

**Table 2: Summary of Weighted Average Revenue Lag Days**

| Description | Lag Days |
|---|---|
| Retail Revenue | 67.30 |

Table 3 below summarizes the components of Retail Revenue Lag.

**Table 3: Summary of Retail Revenue Lag**

| Description | Weighted Lag Days |
|---|---|
| Service Lag | 25.02 |
| Billing Lag | 18.98 |
| Collections Lag | 21.77 |
| Payment Lag | 1.54 |
| **Total** | **67.30** |

The estimation of each component of the Retail Revenue Lag is described below.

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### *Service Lag*

The Service Lag is the time from HUC'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 HUC indicated that "Residential Retail", "General Service < 50", "Unmetered and Scattered" and "Sentinel" customers are on a monthly and bi-monthly service schedule, and "General Service > 50", "Large User" and "Streetlight" 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 25.02 days. Note that this report reflects an update from the Navigant study dated March 31, 2014. The prior study had a larger percentage of customers billed on a bi-monthly basis, which resulted in a WCA of 12.7%. The 12.0% WCA shown in this report reflects updated data from the client regarding the customer monthly/bi-monthly split, which was provided by HUC to Navigant after the March 31, 2014 report submission.

### *Billing Lag*

The Billing Lag is the time period from when the customer's service period ends, which is typically defined as when the meter is read, and the time that the customer's bill is generated and provided to the customer. Interviews with Billing Staff at HUC and analyses regarding meter reading and billing dates both indicated that both Residential and General Service customers have an average billing lag of 18.98 days.

### *Collections Lag*

The Collections Lag is the time period from when the customer's bill is provided to the customer, to the time period that the customer provides a payment to HUC and when that payment is recorded in HUC's billing system. This period of time is measured by analyzing the receivables aging data contained in receivables reports used by HUC for normal business purposes. Using such data provided by HUC for the calendar year 2012, a dollar-weighted average collections lag of 21.77 days was determined for HUC's operations.

### *Payment Processing Lag*

The Payment Processing Lag is the time period between the recording of a payment as having been received by HUC from the customer, and the payment being deposited into HUC's bank account. Based on interviews with HUC's staff, it was discovered that different payment methods result in different dates in which the payment is received in HUC's bank account. The following payment processing methods were considered in this study:

1. If the customer paid by Credit Card, that payment is in HUC's bank account two days after;
2. If the customer paid by Cheques or through ATM/Tellers, that payment is in the HUC's bank account three days after; and
3. If the customer paid by Internet, or Pre-authorization, that payment is in HUC's bank account two days after.

Taking into account HUC's different Payment Processing methods, an overall Payment Processing Lag of 1.54 days is the result and was used in the determination of HUC's overall revenue lag time.

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## Section IV: Expense Leads

The determination of working capital requires both a measurement of the lag in the collection of revenues for services provided by HUC's distribution business, and the lead times associated with payments for services provided to HUC. Therefore, in conjunction with the calculation of the revenue lag, expense lead times were calculated for the following items:

1. Cost of Power;
2. Payroll and Benefits;
3. OM&A Expenses;
4. Payments in Lieu of Taxes;
5. Interest Expenses; and
6. Debt Retirement Charge.

HUC's benefits and costs in terms of the WCA associated with the HST are discussed separately.

### *Cost of Power*

HUC 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. HUC also settles payments to Hydro One for the use of their transmission system. Taking all this information on actual payments made by HUC in 2012, a dollar-weighted Cost of Power expense lead time of 32.86 days was calculated. Table 4 below summarizes the components of the Cost of Power expense lead calculation. Table 5 and Table 6 show the derivation of the weighted lag days for the components of Cost of Power.

**Table 4: Summary of Cost of Power Expenses**

| Description | Amounts ($M) | Weighting Factor % | Lead Time | Weighted Lead Time |
|---|---|---|---|---|
| IESO | $399.68 | 98.93% | 32.58 | 32.23 |
| Hydro One | $4.32 | 1.07% | 58.84 | 0.63 |
| **Total** | **$404.00** | **100.00%** | | **32.86** |

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## Table 5: Summary of IESO Cost of Power Expenses

| Delivery Month[3] | Amounts ($M) | Weighting Factor % | Payment Date | Service Lead Time | Payment Lead Time | Total Lead Time | Weighted Lead Time |
|---|---|---|---|---|---|---|---|
| Dec 11 | $32.62 | 8.16% | 1/18/2012 | 15.50 | 18.00 | 33.50 | 2.73 |
| Jan 12 | $32.05 | 8.02% | 2/16/2012 | 15.50 | 16.00 | 31.50 | 2.53 |
| Feb 12 | $31.31 | 7.83% | 3/16/2012 | 14.50 | 16.00 | 30.50 | 2.39 |
| Mar 12 | $30.95 | 7.74% | 4/19/2012 | 15.50 | 19.00 | 34.50 | 2.67 |
| Apr 12 | $28.82 | 7.21% | 5/16/2012 | 15.00 | 16.00 | 31.00 | 2.24 |
| May 12 | $31.80 | 7.96% | 6/18/2012 | 15.50 | 18.00 | 33.50 | 2.67 |
| Jun 12 | $36.89 | 9.23% | 7/18/2012 | 15.00 | 18.00 | 33.00 | 3.05 |
| Jul 12 | $39.47 | 9.88% | 8/17/2012 | 15.50 | 17.00 | 32.50 | 3.21 |
| Aug 12 | $42.81 | 10.71% | 9/19/2012 | 15.50 | 19.00 | 34.50 | 3.69 |
| Sep 12 | $29.52 | 7.39% | 10/17/2012 | 15.00 | 17.00 | 32.00 | 2.36 |
| Oct 12 | $30.99 | 7.75% | 11/15/2012 | 15.50 | 15.00 | 30.50 | 2.37 |
| Nov 12 | $32.46 | 8.12% | 12/18/2012 | 15.00 | 18.00 | 33.00 | 2.68 |
| **Total** | **$399.68** | **100.00%** | | | | | **32.58** |

## Table 6: Summary of Hydro One Cost of Power Expenses

| Delivery Month | Amounts ($M) | Weighting Factor % | Payment Date | Service Lead Time | Payment Lead Time | Total Lead Time | Weighted Lead Time |
|---|---|---|---|---|---|---|---|
| Jan 12 | $0.32 | 7.38% | 3/20/2012 | 16.00 | 42.00 | 58.00 | 4.28 |
| Feb 12 | $0.31 | 7.24% | 4/19/2012 | 15.00 | 43.00 | 58.00 | 4.20 |
| Mar 12 | $0.29 | 6.74% | 5/18/2012 | 15.00 | 43.00 | 58.00 | 3.91 |
| Apr 12 | $0.28 | 6.44% | 6/20/2012 | 17.00 | 43.00 | 60.00 | 3.86 |
| May 12 | $0.40 | 9.20% | 7/19/2012 | 15.00 | 43.00 | 58.00 | 5.33 |
| Jun 12 | $0.45 | 10.53% | 8/16/2012 | 15.50 | 41.00 | 56.50 | 5.95 |
| Jul 12 | $0.46 | 10.66% | 9/18/2012 | 15.00 | 45.00 | 60.00 | 6.40 |
| Aug 12 | $0.42 | 9.84% | 10/18/2012 | 17.00 | 42.00 | 59.00 | 5.81 |
| Sep 12 | $0.38 | 8.76% | 11/19/2012 | 15.00 | 45.00 | 60.00 | 5.25 |
| Oct 12 | $0.30 | 7.01% | 12/18/2012 | 16.50 | 42.00 | 58.50 | 4.10 |
| Nov 12 | $0.32 | 7.47% | 1/21/2013 | 15.50 | 46.00 | 61.50 | 4.60 |
| Dec 12 | $0.38 | 8.74% | 2/19/2013 | 17.00 | 42.00 | 59.00 | 5.16 |
| **Total** | **$4.32** | **100.00%** | | | | | **58.84** |

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## *Payroll and Benefits*

For the purpose of the distribution lead-lag study, the following items were considered to be expenses related to the Payroll and Benefits of HUC:

1. Regular Staff Payroll;
2. Board of Director Payroll;
3. Great West Life – MDV;
4. Great West Life – HCS;
5. Group Life Insurance & LTD Insurance;
6. WSIB; and,
7. Pensions.

Expense lead times were calculated individually for each of the items listed above and then dollar-weighted to derive a composite expense lead time of 11.82 days for Payroll and Benefit expenses. A summary of the dollar-weighted expense lead time is provided in Table 7 below.

**Table 7: Summary of Payroll and Benefit Expenses**

| Description | Amounts ($M) | Weighting Factor % | Lead (Lag) Time | Weighted Lead Time |
|---|---|---|---|---|
| Regular Staff Payroll | $37.64 | 78.95% | 6.00 | 4.74 |
| Board of Directors Payroll | $0.43 | 0.90% | 47.75 | 0.43 |
| Great West Life – MDV | $3.01 | 6.32% | 27.93 | 1.77 |
| Great West Life – HCS | $0.04 | 0.09% | 53.13 | 0.05 |
| Group Life Insurance & LTD Insurance | $3.01 | 6.32% | 27.36 | 1.73 |
| WSIB | $0.31 | 0.66% | 29.30 | 0.19 |
| Pensions (OMERS) | $3.22 | 6.76% | 43.09 | 2.91 |
| **Total** | **$47.67** | **100.00%** | | **11.82** |

### Regular Payroll

HUC's Regular Payroll Staff are paid on a weekly basis on every Wednesday of every week for the prior week's services. Based on HUC's payroll data for 2012, an average service lead time of 4.00 days and an average payment lag time of 2.00 days were determined. Taking this information into account, a dollar-weighted net expense lead time of 6.00 days was determined for Regular Staff Payroll.

### Board of Directors Payroll

HUC's Board of Directors Staff is paid to ADP on a quarterly basis on every second day of the quarter beginning month for the prior quarters pay period services. Based on HUC's payroll data for 2012, an average service lead time of 45.75 days and an average payment lead time of 2.00 days were determined. Taking this information into account, a dollar-weighted expense lead time of 47.75 days was determined for Board of Directors Payroll.

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**Great West Life – Medical, Dental, and Vision**

HUC pays for Medical, Dental, and Vision medical coverage in arrears for the prior month. Based on HUC's benefits data for 2012, an average service lead time of 15.25 days and an average payment lead time of 12.68 days were determined. Taking this information into account, a dollar-weighted expense lead time of 27.93 days was determined for Great West Life – Medical, Dental and Vision medical coverage.

**Great West Life – Health Care Spending Account**

HUC pays for employee Health Care Spending accounts in arrears for the prior month. Based on HUC's benefits data for 2012, an average service lead time of 15.23 days and an average payment lead time of 37.90 days were determined. Taking this information into account, a dollar-weighted expense lead time of 53.13 days was determined for Great West Life – Medical, Dental and Vision medical coverage.

**Group Life & Long Term Disability Insurance**

HUC pays for employee Group Life & Long Term Disability Insurance in arrears for the prior month. Based on HUC's benefits data for 2012, an average service lead time of 15.25 days and an average payment lead time of 12.11 days were determined. Taking this information into account, a dollar-weighted expense lead time of 27.36 days was determined for Group Life & Long Term Disability Insurance.

**Workplace Safety & Insurance Board**

HUC pays for employee Workplace Safety & Insurance Board payments in arrears for the prior month. Based on HUC's benefits data for 2012, an average service lead time of 15.23 days and an average payment lead time of 14.08 days were determined. Taking this information into account, a dollar-weighted expense lead time of 29.30 days was determined for Workplace Safety & Insurance Board payments.

**Pensions (OMERS)**

HUC pays for employee Pensions, also known as Ontario Municipal Employees Retirement System ("OMERS") payments in arrears for the prior month. Based on HUC's benefits data for 2012, an average service lead time of 15.23 days and an average payment lead time of 27.86 days were determined. Taking this information into account, a dollar-weighted expense lead time of 43.09 days was determined for Pensions (OMERS) payments.

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### *OM&A Expenses*

For the purpose of the distribution lead-lag study, OM&A expenses were considered to consist of payments made by HUC to its vendors in the following categories:

1. P Card;
2. Contract Labour;
3. Vehicles;
4. Computer Maintenance;
5. Software;
6. Cellphone & Pager;
7. Wireless;
8. Freight, Postage & Delivery;
9. Consulting;
10. Tree Trimming;
11. Outside Services; and,
12. Property Taxes.

Expense lead times were calculated individually for each of the items listed above and then dollar-weighted to derive a composite expense lead time of 1.23 days for OM&A expenses. A summary of the dollar-weighted expense lead time is provided in Table 8 below.

**Table 8: Summary of OM&A Expenses**

| Description | Amounts ($M) | Weighting Factor % | Lead Time | Weighted Lead Time |
|---|---|---|---|---|
| Credit Card | $0.30 | 2.86% | 44.21 | 1.27 |
| Contract Labour | $0.21 | 2.02% | 29.30 | 0.59 |
| Vehicles | $0.02 | 0.16% | 31.65 | 0.05 |
| Computer Maintenance | $0.63 | 6.03% | (357.55) | (21.57) |
| Software | $2.42 | 23.23% | 15.21 | 3.53 |
| Cell & Pager | $0.29 | 2.76% | 29.45 | 0.81 |
| Wireless | $0.23 | 2.22% | 31.84 | 0.71 |
| Freight / Postage / Delivery | $0.11 | 1.09% | 33.31 | 0.36 |
| Consulting Services | $2.37 | 22.75% | 33.03 | 7.52 |
| Tree Trimming | $0.55 | 5.27% | 33.71 | 1.78 |
| Outside Services | $2.62 | 25.11% | 31.76 | 7.98 |
| Property Taxes | $0.68 | 6.47% | (27.66) | (1.79) |
| **Total** | **$10.43** | **100.00%** | | **1.23** |

#### P Card

During 2012, HUC used Credit Cards for a variety of services procured by its employees. Based on HUC's Credit Card expense data for 2012, an average service lead time of 15.24 days and an average payment lead time of 28.97 days were determined. Taking this information into account, a dollar-weighted expense lead time of 44.21 days was determined for Credit Card expenses.

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**Contract Labour**

During 2012, HUC procured Contract Labour for a variety of services required for distribution services. Based on HUC's Contract Labour data for 2012, an average service lead time of 15.26 days and an average payment lead time of 14.03 days were determined. Taking this information into account, a dollar-weighted expense lead time of 29.30 days was determined for Contract Labour.

**Vehicles**

During 2012, HUC expensed Vehicles for a variety of services required for distribution services. Based on HUC's Vehicle spending data for 2012, an average service lead time of 15.38 days and an average payment lead time of 16.27 days were determined. Taking this information into account, a dollar-weighted expense lead time of 31.65 days was determined for Vehicle expenses.

**Computer Maintenance**

During 2012, HUC procured services from multiple vendors for Computer Maintenance agreements. Based on HUC's Computer Maintenance Procurement data for 2012, an average service lead time of 373.61 days and an average payment lead time of (731.16) days were determined. Taking this information into account, a dollar-weighted expense lead time of (357.55) days were determined for Computer Maintenance.

**Software**

During 2012, HUC procured licenses from multiple vendors for computer Software. Based on HUC's Software Procurement data for 2012, an average service lead time of 23.93 days and an average payment lead time of (8.71) days were determined. Taking this information into account, a dollar-weighted expense lead time of 15.21 days was determined for Software expenses.

**Cellphone & Pager**

During 2012, HUC expensed Cellphone & Pager use for a variety of services required for distribution services. Based on HUC's Cellphone & Pager data for 2012, an average service lead time of 15.25 days and an average payment lead time of 14.20 days were determined. Taking this information into account, a dollar-weighted expense lead time of 29.45 days was determined for Cellphone & Pager expenses.

**Wireless Services**

During 2012, HUC expensed Wireless Services for a variety of services required for distribution services. Based on HUC's Wireless Services data for 2012, an average service lead time of 15.28 days and an average payment lead time of 16.55 days were determined. Taking this information into account, a dollar-weighted expense lead time of 31.84 days was determined for Wireless expenses.

**Freight / Postage / Delivery**

During 2012, HUC expensed Freight / Postage / Delivery services for a variety of activities required for distribution services. Based on HUC's Freight / Postage / Delivery data for 2012, an average service lead time of 15.25 days and an average payment lead time of 18.06 days were determined. Taking this information into account, a dollar-weighted expense lead time of 33.31 days was determined for Freight / Postage / Delivery expenses.

**Consulting Services**

During 2012, HUC procured Consulting Services required for a variety of activities related to distribution services. Based on HUC's Consulting Services data for 2012, an average service lead time of 15.23 days and an average payment lead time of 17.79 days were determined. Taking this information into account, a dollar-weighted expense lead time of 33.03 days was determined for Consulting Services.

**Tree Trimming**

During 2012, HUC expensed Tree Trimming services required for distribution services. Based on HUC's Tree Trimming spending data for 2012, an average service lead time of 15.17 days and an average payment lead time of 18.53 days were determined. Taking this information into account, a dollar-weighted expense lead time of 33.71 days was determined for Tree Trimming expenses.

**Outside Services**

During 2012, HUC procured Outside Services for a variety of activities required for distribution services. Based on HUC's Outside Services data for 2012, an average service lead time of 15.28 days and an average payment lead time of 16.48 days were determined. Taking this information into account, a dollar-weighted expense lead time of 31.76 days was determined for Outside Services.

**Property Taxes**

During 2012, HUC paid property tax payments to the following municipalities:

1. City of Hamilton; and,
2. City of St. Catharines.

Based on HUC's Property Tax data for 2012, an average service lead time of 183.00 days and an average payment lead (lag) time of (210.66) days were determined. Since property taxes are an annual expense, services were rendered on an annual basis, with (27.66) days resulting as the expense lead time associated with property taxes.

## *Payments in Lieu of Taxes*

HUC makes payments in lieu of taxes ("PILs") in monthly installments to the relevant taxing authorities. In 2012, HUC made (12) payments for each month of the year. Based on HUC's PILs data for 2012, an average service lead time of 183.00 days and an average payment lead (lag) time of (168.50) days were determined. Taking this information into account, a dollar-weighted expense lead time of 14.50 days was determined for PILs.

## *Debt Retirement Charge*

HUC makes a Debt Retirement Charge in monthly installments to the Ontario Electricity Finance Corporation. The payment for the current charge month is made during the middle of the following month. Based on HUC's Debt Retirement Charge data for 2012, an average service lead time of 15.26 days and an average payment lead time of 10.34 days were determined. Taking this information into account, a dollar-weighted expense lead time of 25.59 days was determined for Debt Retirement Charge.

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### *Interest Expense*

HUC has two outstanding debt issuances which incur interest expenses. Based on HUC's Interest Expense data for 2012, an average service lead time of 91.50 days and an average payment lead (lag) time of (158.65) days were determined. Taking this information into account, a dollar-weighted expense lead (lag) time of (67.15) days were determined for Interest Expense.

### *Harmonized Sales Tax*

The expense lead (lag) times associated with the following items that attract HST were considered in this study:

1. Customer Revenues including Cost of Power;
2. Cost of Power expenses; and
3. OM&A Expenses.

Effective July 1, 2010, the Ontario government implemented the harmonization of the Provincial Sales Tax with the Federal Goods and Service Tax into a single Harmonized Sales Tax. Given this is a known and measurable change forward looking; the WCA was calculated using the HST rate of 13.00%. Note that the statutory approach described at the outset was used to determine the expense lead times associated with HUC's remittances and disbursements of HST (i.e., both remittances and collections are generally on the last day of the month following the date of the applicable invoice)
A summary of the expense lead (lag) times associated with each of the above items is provided in Table 10 and Table 10 below.

**Table 9: HST Working Capital Factor**

| HST Category | HST Lead/Lag Days | Working Capital Factor | Working Capital Factor (Leap Year) |
|---|---|---|---|
| HST Rate | 13% | 13% | 13% |
| Revenues [inc. COP] Lead Days | (23.12) | (6.33%) | (6.32%) |
| Cost of Power Lead Days | 43.73 | 11.98% | 11.95% |
| OM&A Lead Days | 2.55 | 0.70% | 0.70% |

**Table 10: Summary of Expense Lead Times Associated With HST**

| HST Category | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|---|
| Revenues [incl. COP] | $622,203,415 | $638,342,404 | $664,944,611 | $688,586,511 | $711,468,938 | $734,283,591 |
| HST Rate | 13.00% | 13.00% | 13.00% | 13.00% | 13.00% | 13.00% |
| | | | | | | |
| Cost of Power | $514,946,434 | $520,720,617 | $542,171,542 | $562,422,662 | $583,269,859 | $602,042,446 |
| OM&A | $30,783,301 | $29,728,985 | $29,849,980 | $30,659,445 | $31,709,813 | $33,108,690 |
| | | | | | | |
| Revenues [incl. COP] | -$5,123,216 | -$5,256,105 | -$5,460,188 | -$5,669,814 | -$5,858,228 | -$6,046,083 |
| Cost of Power | $8,020,726 | $8,110,664 | $8,421,707 | $8,760,209 | $9,084,921 | $9,377,320 |
| OM&A | $28,011 | $27,052 | $27,088 | $27,899 | $28,854 | $30,127 |
| **Total** | **$2,925,521** | **$2,881,611** | **$2,988,607** | **$3,118,293** | **$3,255,548** | **$3,361,364** |

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## Section V: HUC's Working Capital Allowance

Using the results described under the discussion of revenue lags and expense leads, and applying them to HUC's distribution expenses for 2014-2019, the weighted average WCA was determined to be 12.0% of HUC's distribution OM&A expenses (including Cost of Power) for each of the test years 2014-2019. A summary of HUC's WCA for individual 2014-2019 years is provided in the subsequent tables below. These tables include HST amounts which have been derived from Table 10 above.

### Table 11: Summary of Working Capital Allowance - 2014

| Description | Revenue Lag Days | Expense Lead Days | Net Lag Days | Working Capital Factor | Amounts ($M) | Working Capital Allowance ($M) |
|---|---|---|---|---|---|---|
| Cost of Power | 67.30 | 32.86 | 34.44 | 9.4% | $514,946,434 | $48,584,754 |
| OM&A Expenses[4] | 67.30 | 7.30 | 60.00 | 16.4% | $64,986,015 | $10,683,086 |
| PILs | 67.30 | 14.50 | 52.80 | 14.5% | $555,146 | $80,303 |
| Debt Retirement Charge | 67.30 | 25.59 | 41.70 | 11.4% | $32,180,619 | $3,676,858 |
| Interest Expense | 67.30 | (67.15) | 134.45 | 36.8% | $9,519,067 | $3,506,363 |
| **Sub-Total** | | | | | **$622,187,281** | **$66,531,364** |
| HST | | | | | | $2,925,521 |
| **Total** | | | | | | **$69,456,886** |
| **WCA as a % of OM&A (incl. Cost of Power)** | | | | | | **12.0%** |

### Table 12: Summary of Working Capital Allowance - 2015

| Description | Revenue Lag Days | Expense Lead Days | Net Lag Days | Working Capital Factor | Amounts ($M) | Working Capital Allowance ($M) |
|---|---|---|---|---|---|---|
| Cost of Power | 67.30 | 32.86 | 34.44 | 9.4% | $520,720,617 | $49,129,543 |
| OM&A Expenses[5] | 67.30 | 7.30 | 60.00 | 16.4% | $64,479,807 | $10,599,871 |
| PILs | 67.30 | 14.50 | 52.80 | 14.5% | $2,874,217 | $415,763 |
| Debt Retirement Charge | 67.30 | 25.59 | 41.70 | 11.4% | $31,854,423 | $3,639,588 |
| Interest Expense | 67.30 | (67.15) | 134.45 | 36.8% | $9,831,640 | $3,621,500 |
| **Sub-Total** | | | | | **$629,760,705** | **$67,406,264** |
| HST | | | | | | $2,881,611 |
| **Total** | | | | | | **$70,287,875** |
| **WCA as a % of OM&A (incl. Cost of Power)** | | | | | | **12.0%** |

[4] Includes Payroll and Benefits
[5] Includes Payroll and Benefits

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### Table 13: Summary of Working Capital Allowance - 2016

| Description | Revenue Lag Days | Expense Lead Days | Net Lag Days | Working Capital Factor | Amounts ($M) | Working Capital Allowance ($M) |
|---|---|---|---|---|---|---|
| Cost of Power | 67.30 | 32.86 | 34.44 | 9.4% | $542,171,542 | $51,013,656 |
| OM&A Expenses[6] | 67.30 | 7.30 | 60.00 | 16.4% | $65,940,947 | $10,810,450 |
| PILs | 67.30 | 14.50 | 52.80 | 14.4% | $4,252,792 | $613,496 |
| Debt Retirement Charge | 67.30 | 25.59 | 41.70 | 11.4% | $31,531,534 | $3,592,852 |
| Interest Expense | 67.30 | (67.15) | 134.45 | 36.7% | $10,204,633 | $3,748,622 |
| **Sub-Total** | | | | | **$654,101,448** | **$69,779,077** |
| HST | | | | | | $2,988,607 |
| **Total** | | | | | | **$72,767,684** |
| **WCA as a % of OM&A (incl. Cost of Power)** | | | | | | **12.0%** |

### Table 14: Summary of Working Capital Allowance - 2017

| Description | Revenue Lag Days | Expense Lead Days | Net Lag Days | Working Capital Factor | Amounts ($M) | Working Capital Allowance ($M) |
|---|---|---|---|---|---|---|
| Cost of Power | 67.30 | 32.86 | 34.44 | 9.4% | $562,422,662 | $53,064,095 |
| OM&A Expenses[7] | 67.30 | 7.30 | 60.00 | 16.4% | $67,692,855 | $11,128,065 |
| PILs | 67.30 | 14.50 | 52.80 | 14.5% | $4,496,240 | $650,392 |
| Debt Retirement Charge | 67.30 | 25.59 | 41.70 | 11.4% | $31,211,917 | $3,566,177 |
| Interest Expense | 67.30 | (67.15) | 134.45 | 36.8% | $10,624,086 | $3,913,398 |
| **Sub-Total** | | | | | **$676,447,760** | **$72,322,128** |
| HST | | | | | | $3,118,293 |
| **Total** | | | | | | **$75,440,421** |
| **WCA as a % of OM&A (incl. Cost of Power)** | | | | | | **12.0%** |

[6] Includes Payroll and Benefits
[7] Includes Payroll and Benefits

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### Table 15: Summary of Working Capital Allowance - 2018

| Description | Revenue Lag Days | Expense Lead Days | Net Lag Days | Working Capital Factor | Amounts ($M) | Working Capital Allowance ($M) |
|---|---|---|---|---|---|---|
| Cost of Power | 67.30 | 32.86 | 34.44 | 9.4% | $583,269,859 | $55,031,010 |
| OM&A Expenses[8] | 67.30 | 7.30 | 60.00 | 16.4% | $69,773,217 | $11,470,057 |
| PILs | 67.30 | 14.50 | 52.80 | 14.5% | $3,925,141 | $567,781 |
| Debt Retirement Charge | 67.30 | 25.59 | 41.70 | 11.4% | $30,895,541 | $3,530,029 |
| Interest Expense | 67.30 | (67.15) | 134.45 | 36.8% | $11,632,105 | $4,284,704 |
| **Sub-Total** | | | | | **$699,495,863** | **$74,883,581** |
| HST | | | | | | $3,255,548 |
| **Total** | | | | | | **$78,139,129** |
| **WCA as a % of OM&A (incl. Cost of Power)** | | | | | | **12.0%** |

### Table 16: Summary of Working Capital Allowance - 2019

| Description | Revenue Lag Days | Expense Lead Days | Net Lag Days | Working Capital Factor | Amounts ($M) | Working Capital Allowance ($M) |
|---|---|---|---|---|---|---|
| Cost of Power | 67.30 | 32.86 | 34.44 | 9.4% | $602,042,446 | $56,802,187 |
| OM&A Expenses[9] | 67.30 | 7.30 | 60.00 | 16.4% | $72,228,903 | $11,873,749 |
| PILs | 67.30 | 14.50 | 52.80 | 14.5% | $4,021,290 | $581,690 |
| Debt Retirement Charge | 67.30 | 25.59 | 41.70 | 11.4% | $30,582,371 | $3,494,247 |
| Interest Expense | 67.30 | (67.15) | 134.45 | 36.8% | $12,600,791 | $4,641,521 |
| **Sub-Total** | | | | | **$721,475,801** | **$77,393,394** |
| HST | | | | | | $3,361,364 |
| **Total** | | | | | | **$80,754,758** |
| **WCA as a % of OM&A (incl. Cost of Power)** | | | | | | **12.0%** |

[8] Includes Payroll and Benefits
[9] Includes Payroll and Benefits

# 2-Staff-23a_Attch 3_Service Lag Revised Table

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| Service Lag Derivation | # Days | # Months | Mid-Point Service Lag |
|---|---|---|---|
| | A | B | C = A / B / 2 |
| Monthly Service Lag | 366 | 12 | 15.25 |
| Bi-Monthly Sevice Lag | 366 | 6 | 30.5 |

| | | | | SERVICE LAG | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **DISTRIBUTION REVENUES** | Year: | 2012 | | Weighting Factors | | | | | | |
| **Rate Classification** | Monthly | Bi Monthly | Total | Monthly | Monthly Service Lag | | Bi Monthly | Bi-Monthly Service Lag | | Weighted Lag |
| Residential | $ 1,985,015 | $ 60,046,695 | $ 62,031,710 | 2.0% | 15.25 | 0.31 | 61.79% | 30.50 | 18.84 | 19.16 |
| General Service < 50 | $ 10,496,135 | $ 2,180,356 | $ 12,676,491 | 10.8% | 15.25 | 1.65 | 2.24% | 30.50 | 0.68 | 2.33 |
| General Service > 50 | $ 14,435,421 | | $ 14,435,421 | 14.9% | 15.25 | 2.27 | 0.00% | 30.50 | - | 2.27 |
| Large Users | $ 5,422,396 | | $ 5,422,396 | 5.6% | 15.25 | 0.85 | 0.00% | 30.50 | - | 0.85 |
| Unmetered and Scattered | $ 498,067 | $ 2,000 | $ 500,067 | 0.5% | 15.25 | 0.08 | 0.00% | 30.50 | 0.00 | 0.08 |
| Sentinel | $ 22,165 | $ 15,788 | $ 37,953 | 0.0% | 15.25 | 0.00 | 0.02% | 30.50 | 0.00 | 0.01 |
| Streetlights | $ 2,081,032 | | $ 2,081,032 | 2.1% | 15.25 | 0.33 | 0.00% | 30.50 | - | 0.33 |
| | **$ 34,940,230** | **$ 62,244,840** | **$ 97,185,070** | | | | | | | **25.02** |

**2-Energy Probe-11**

**Ref: Exhibit 2, Tab 4, Appendix 2-3**

**a) Does Horizon have any plans to move customers from bi-monthly to monthly billing?**

**b) If all customers were moved to monthly billing, please show the impact on the overall working capital percentage along with the changes in days for the components of the revenue lag and expense lead, and any change associated with the HST.**

**c) If Horizon does move some or all customers to monthly billing in 2015-2019, would this adjustment be part of the annual adjustment to the working capital calculation? If not, why not?**

**Response:**

Subsequent to the submission of its Application, Horizon Utilities reviewed the inputs used to calculate the Revenue Lag of 27.06. It determined that some of the revenue allocations between monthly and bi-monthly billing were incorrect. Navigant Consulting Inc. recalculates the Revenue Lag to be 25.02 days, based on the correct revenue allocations. The revised Revenue Lag of 25.02 has been used to calculate a revised Working Capital Allowance. This revision results in a reduction in the Working Capital Allowance of 0.7% from 12.7% to 12.0%. Horizon Utilities has included a revised Lead/Lag Report from Navigant as an attachment to its response to 2-Staff-23a. Horizon Utilities response to part b) is based on the revised Working Capital Allowance of 12.0%.

a) Please see Horizon Utilities' response to Interrogatory 2-Staff-23b).

b) Horizon Utilities provides the impact of switching to monthly billing to its overall working capital percentage along with the changes in days for the components of the revenue lag and expense lead, and any change associated with the HST in an attachment to this response as 2-EP-11b_Attch 1_Impact of Switching All Customers to Monthly Billing. A summary of the impact is identified in Table 1 below:

**Table 1**

| | | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|---|
| Revenue Lag Days | Current State | 67.30 | 67.30 | 67.30 | 67.30 | 67.30 |
| | Monthly Billing - all Customers | 57.53 | 57.53 | 57.53 | 57.53 | 57.53 |
| | | | | | | |
| Expense Lead Days | | no change | | | | |
| | | | | | | |
| Working Capital Allowance | Current State | 12.0% | 12.0% | 12.0% | 12.0% | 12.0% |
| | Monthly Billing - all Customers | 8.8% | 8.7% | 8.7% | 8.7% | 8.7% |
| | | | | | | |
| Total Working Capital Requirement including HST | Current State | $70,287,875 | $72,767,684 | $75,440,421 | $78,139,129 | $80,754,758 |
| | Monthly Billing - all Customers | $51,215,047 | $53,005,107 | $54,943,476 | $56,945,822 | $58,893,908 |

The transition to monthly billing results in the issuance of an additional 1.2MM invoices annually.

The transition would require one-time implementation costs that are forecasted to be approximately $0.5MM. This cost includes: the development of implementation plans; testing; documentation, and training; the provision of necessary programming changes for the Customer Information System; and the development of a customer communications strategy and related materials.

Incremental annual operating expenditures are anticipated to be approximately $1.4MM annually (adjusted for inflation). These costs include: increased paper, printing, and mailing/ postage expenditures corresponding to increased billing volumes and Call Centre requirements. Horizon Utilities estimates it will require an additional five Call Centre staff to manage the increased call volumes arising from monthly billing. Approximately $0.84MM of this annual expenditure corresponds to additional postage expense; which has increased at super-inflationary levels and may continue to do so.

Horizon Utilities has estimated the net impact on Revenue Requirement (summarized in Table 2 below) resulting from:

i) The reduction in Revenue Requirement corresponding to the reduction in Working Capital Allowance provided in Table 1 above (Refer to Table 3 below);

ii) The ongoing increase in Revenue Requirement corresponding to an increase in annual operating expenditures necessary to support monthly billing (Refer to Table 4 below);

iii) The increase in Revenue Requirement from 2015 to 2019 corresponding to the recovery of implementation costs for monthly billing (Refer to Table 5 below).

**Table 2**

**Impact on Revenue Requirement from Change to Monthly Billing**
($000s)

| | Reference | 2015 | 2016 | 2017 | 2018 | 2019 | Totals |
|---|---|---|---|---|---|---|---|
| **Impact on Revenue Requirement** | | | | | | | |
| Reduction of Working Capital Allowance | Table 3 | (1,358) | (1,407) | (1,460) | (1,528) | (1,592) | (7,346) |
| Increase in OM&A | Table 4 | 1,409 | 1,437 | 1,466 | 1,495 | 1,525 | 7,332 |
| Implementation Impact | Table 5 | (6) | 74 | 157 | 150 | 143 | 520 |
| **Net Increase/ (Decrease)** | | 44 | 104 | 163 | 117 | 76 | 505 |

Table 2 demonstrates that Revenue Requirement would increase approximately $0.5MM across 2015 to 2019 as a result of implementing monthly billing. Thereafter, the outcome is marginally positive to ratepayers following the full amortization of one-time implementation costs and under the cost and inflation assumptions identified above and in Tables 3 through 5 below. Horizon Utilities submits that there is relative ratepayer indifference to monthly billing insofar as the impact on their distribution rates.

Horizon Utilities has not evaluated customer preferences with respect to monthly vs. bi-monthly billing. There have been very few calls from customers in the past requesting monthly billing, which may suggest relative indifference. Customers seeking to make electricity payments monthly for budgeting purposes already have opportunity to do so through Horizon Utilities equal monthly payment plan. Based on historical billing amounts, Horizon Utilities computes the monthly billing amount and settles on any differences relative to actual charges on an annual basis.

It is clear that a transition to monthly billing would effectively cause customers to advance one month of their electricity bills, which may be viewed negatively from a cash flow perspective.

**Table 3**

**Impact on Revenue Requirement**
**Reduction of Working Capital Allowance from Change to Monthly Billing**
($000s)

| | | | | | | |
|---|---|---|---|---|---|---|
| **Assumptions:** | | | | | | |
| Working Capital Rate | 8.80% | | | | | |
| PILs Rate | 26.50% | | | | | |
| Deemed Debt % | 60.00% | | | | | |
| Deemed Equity % | 40.00% | | | | | |
| | **2015** | **2016** | **2017** | **2018** | **2019** | **Totals** |
| **Working Capital Allowance Impact** | | | | | | |
| Current State | 70,288 | 72,768 | 75,440 | 78,139 | 80,755 | |
| Monthly Billing - All | 51,215 | 53,005 | 54,943 | 56,946 | 58,894 | |
| **Working Capital Impact** | 19,073 | 19,763 | 20,497 | 21,193 | 21,861 | |
| **Cost of Capital** | | | | | | |
| Debt | 3.38% | 3.38% | 3.38% | 3.53% | 3.65% | |
| Equity | 9.36% | 9.36% | 9.36% | 9.36% | 9.36% | |
| **Revenue Requirement** | | | | | | |
| Cost of Capital: | | | | | | |
| Debt | 387 | 401 | 416 | 449 | 479 | 2,131 |
| Equity | 714 | 740 | 767 | 793 | 818 | 3,833 |
| PILs Gross-Up | 257 | 267 | 277 | 286 | 295 | 1,382 |
| Total | 1,358 | 1,407 | 1,460 | 1,528 | 1,592 | 7,346 |

**Table 4**

**Impact on Revenue Requirement**
**Increase in OM&A from Change to Monthly Billing**
($000s)

| **Assumptions:** | |
|---|---|
| OMA - Annual | 1,400 |
| Inflation Rate | 2.00% |
| Working Capital Rate | 8.80% |
| PILs Rate | 26.50% |
| Deemed Debt % | 60.00% |
| Deemed Equity % | 40.00% |

| | **2015** | **2016** | **2017** | **2018** | **2019** | **Totals** |
|---|---|---|---|---|---|---|
| **Cost of Capital** | | | | | | |
| Debt | 3.38% | 3.38% | 3.38% | 3.53% | 3.65% | |
| Equity | 9.36% | 9.36% | 9.36% | 9.36% | 9.36% | |
| **Revenue Requirement** | | | | | | |
| OM&A | 1,400 | 1,428 | 1,457 | 1,486 | 1,515 | 7,286 |
| Cost of Capital: | | | | | | |
| Debt | 2 | 3 | 3 | 3 | 3 | 13 |
| Equity | 5 | 5 | 5 | 5 | 5 | 24 |
| PILs Gross-Up | 2 | 2 | 2 | 2 | 2 | 9 |
| Total | 1,409 | 1,437 | 1,466 | 1,495 | 1,525 | 7,332 |
| **Working Capital Impact** | 123 | 126 | 128 | 131 | 133 | |

1 **Table 5**

**Implementation Costs - Monthly Billing**
**Impact of Increase in OM&A from Change to Monthly Billing**
($000s)

| **Assumptions:** | |
|---|---|
| Implementation CapEx | 500 |
| Depreciable Life (Years) | 5 |
| CCA Rate | 100.00% |
| PILs Rate | 26.50% |
| Deemed Debt % | 60.00% |
| Deemed Equity % | 40.00% |

| | **2015** | **2016** | **2017** | **2018** | **2019** | **Totals** |
|---|---|---|---|---|---|---|
| **Fixed Asset Continuity** | | | | | | |
| Opening Balance | - | 450 | 350 | 250 | 150 | |
| Additions | 500 | | | | | |
| Depreciation | (50) | (100) | (100) | (100) | (100) | |
| Closing Balance | 450 | 350 | 250 | 150 | 50 | |
| Average Balance | 225 | 400 | 300 | 200 | 100 | |
| **UCC Continuity** | | | | | | |
| Opening | - | 250 | - | - | - | |
| Additions | 500 | - | - | - | - | |
| CCA | (250) | (250) | - | - | - | |
| Closing | 250 | - | - | - | - | |
| **Cost of Capital** | | | | | | |
| Debt (Exhibit 5) | 3.38% | 3.38% | 3.38% | 3.53% | 3.65% | |
| Equity (Exhibit 5) | 9.36% | 9.36% | 9.36% | 9.36% | 9.36% | |
| **Revenue Requirement** | | | | | | |
| Depreciation | 50 | 100 | 100 | 100 | 100 | 450 |
| Cost of Capital: | | | | | | |
| Debt | 5 | 8 | 6 | 4 | 2 | 25 |
| Equity | 8 | 15 | 11 | 7 | 4 | 46 |
| PILs Gross-Up (1) | (69) | (49) | 40 | 39 | 37 | (1) |
| Total | (6) | 74 | 157 | 150 | 143 | 520 |
| **PILs Calculation** | | | | | | |
| Cost of Equity Capital | 8 | 15 | 11 | 7 | 4 | 46 |
| Add: | | | | | | |
| Depreciation | 50 | 100 | 100 | 100 | 100 | 450 |
| Deduct: | | | | | | |
| CCA | (250) | (250) | - | - | - | (500) |
| PILs Income | (192) | (135) | 111 | 107 | 104 | (4) |
| PILs before Gross-Up | (51) | (36) | 29 | 28 | 27 | (1) |
| PILs Gross-Up | (69) | (49) | 40 | 39 | 37 | (1) |

1) PILs Gross-Up only applies to change in Cost of Equity

c) Yes.

However, it is Horizon Utilities' expectation that it would commence recovery of one-time and ongoing incremental costs identified in b) at the same time as the adjustment to working capital.

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# 2-EP-11b_Attch 1_Impact of Switching All Customers to Monthly Billing

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As per updated filed report

**2014 WORKING CAPITAL REQUIREMENT**

2014

| Description | Revenue Lag Days | Expense Lead Days | Net Lag Days | Working Capital Factor | 2014 Expenses | 2014 Working Capital Requirement |
|---|---|---|---|---|---|---|
| Cost of Power | 67.30 | 32.86 | 34.44 | 9.4% | $514,946,434 | $48,584,754 |
| OM&A Expenses | 67.30 | 7.30 | 60.00 | 16.4% | $64,986,015 | $10,683,086 |
| PILS | 67.30 | 14.50 | 52.80 | 14.5% | $555,146 | $80,303 |
| DRC | 67.30 | 25.59 | 41.70 | 11.4% | $32,180,619 | $3,676,858 |
| Interest Expense | 67.30 | (67.15) | 134.45 | 36.8% | $9,519,067 | $3,506,363 |
| **Total** | | | | | **$622,187,281** | **$66,531,364** |
| HST | | | | | | $2,925,521 |
| **Total - Including HST** | | | | | | **$69,456,886** |
| **Working Capital as a Percent of OM&A incl. Cost of Power** | | | | | | **12.0%** |

**2015 WORKING CAPITAL REQUIREMENT**

2015

| Description | Revenue Lag Days | Expense Lead Days | Net Lag Days | Working Capital Factor | 2015 Expenses | 2015 Working Capital Requirement |
|---|---|---|---|---|---|---|
| Cost of Power | 67.30 | 32.86 | 34.44 | 9.4% | $520,720,617 | $49,129,543 |
| OM&A Expenses | 67.30 | 7.30 | 60.00 | 16.4% | $64,479,807 | $10,599,871 |
| PILS | 67.30 | 14.50 | 52.80 | 14.5% | $2,874,217 | $415,763 |
| DRC | 67.30 | 25.59 | 41.70 | 11.4% | $31,854,423 | $3,639,588 |
| Interest Expense | 67.30 | (67.15) | 134.45 | 36.8% | $9,831,640 | $3,621,500 |
| **Total** | | | | | **$629,760,705** | **$67,406,264** |
| HST | | | | | | $2,881,611 |
| **Total - Including HST** | | | | | | **$70,287,875** |
| **Working Capital as a Percent of OM&A incl. Cost of Power** | | | | | | **12.0%** |

**2016 WORKING CAPITAL REQUIREMENT**

2016

| Description | Revenue Lag Days | Expense Lead Days | Net Lag Days | Working Capital Factor | 2016 Expenses | 2016 Working Capital Requirement |
|---|---|---|---|---|---|---|
| Cost of Power | 67.30 | 32.86 | 34.44 | 9.4% | $542,171,542 | $51,013,656 |
| OM&A Expenses | 67.30 | 7.30 | 60.00 | 16.4% | $65,940,947 | $10,810,450 |
| PILS | 67.30 | 14.50 | 52.80 | 14.4% | $4,252,792 | $613,496 |
| DRC | 67.30 | 25.59 | 41.70 | 11.4% | $31,531,534 | $3,592,852 |
| Interest Expense | 67.30 | (67.15) | 134.45 | 36.7% | $10,204,633 | $3,748,622 |
| **Total** | | | | | **$654,101,448** | **$69,779,077** |
| HST | | | | | | $2,988,607 |
| **Total - Including HST** | | | | | | **$72,767,684** |
| **Working Capital as a Percent of OM&A incl. Cost of Power** | | | | | | **12.0%** |

**2017 WORKING CAPITAL REQUIREMENT**

2017

| Description | Revenue Lag Days | Expense Lead Days | Net Lag Days | Working Capital Factor | 2017 Expenses | 2017 Working Capital Requirement |
|---|---|---|---|---|---|---|
| Cost of Power | 67.30 | 32.86 | 34.44 | 9.4% | $562,422,662 | $53,064,095 |
| OM&A Expenses | 67.30 | 7.30 | 60.00 | 16.4% | $67,692,855 | $11,128,065 |
| PILS | 67.30 | 14.50 | 52.80 | 14.5% | $4,496,240 | $650,392 |
| DRC | 67.30 | 25.59 | 41.70 | 11.4% | $31,211,917 | $3,566,177 |
| Interest Expense | 67.30 | (67.15) | 134.45 | 36.8% | $10,624,086 | $3,913,398 |
| **Total** | | | | | **$676,447,760** | **$72,322,128** |
| HST | | | | | | $3,118,293 |
| **Total - Including HST** | | | | | | **$75,440,421** |
| **Working Capital as a Percent of OM&A incl. Cost of Power** | | | | | | **12.0%** |

**2018 WORKING CAPITAL REQUIREMENT**

2018

| Description | Revenue Lag Days | Expense Lead Days | Net Lag Days | Working Capital Factor | 2018 Expenses | 2018 Working Capital Requirement |
|---|---|---|---|---|---|---|
| Cost of Power | 67.30 | 32.86 | 34.44 | 9.4% | $583,269,859 | $55,031,010 |
| OM&A Expenses | 67.30 | 7.30 | 60.00 | 16.4% | $69,773,217 | $11,470,057 |
| PILS | 67.30 | 14.50 | 52.80 | 14.5% | $3,925,141 | $567,781 |
| DRC | 67.30 | 25.59 | 41.70 | 11.4% | $30,895,541 | $3,530,029 |
| Interest Expense | 67.30 | (67.15) | 134.45 | 36.8% | $11,632,105 | $4,284,704 |
| **Total** | | | | | **$699,495,863** | **$74,883,581** |
| HST | | | | | | $3,255,548 |
| **Total - Including HST** | | | | | | **$78,139,129** |
| **Working Capital as a Percent of OM&A incl. Cost of Power** | | | | | | **12.0%** |

**2019 WORKING CAPITAL REQUIREMENT**

2019

| Description | Revenue Lag Days | Expense Lead Days | Net Lag Days | Working Capital Factor | 2019 Expenses | 2019 Working Capital Requirement |
|---|---|---|---|---|---|---|
| Cost of Power | 67.30 | 32.86 | 34.44 | 9.4% | $602,042,446 | $56,802,187 |
| OM&A Expenses | 67.30 | 7.30 | 60.00 | 16.4% | $72,228,903 | $11,873,749 |
| PILS | 67.30 | 14.50 | 52.80 | 14.5% | $4,021,290 | $581,690 |
| DRC | 67.30 | 25.59 | 41.70 | 11.4% | $30,582,371 | $3,494,247 |
| Interest Expense | 67.30 | (67.15) | 134.45 | 36.8% | $12,600,791 | $4,641,521 |
| **Total** | | | | | **$721,475,801** | **$77,393,394** |
| HST | | | | | | $3,361,364 |
| **Total - Including HST** | | | | | | **$80,754,758** |
| **Working Capital as a Percent of OM&A incl. Cost of Power** | | | | | | **12.0%** |

As per switching all customers to monthly billing

**2014 WORKING CAPITAL REQUIREMENT**

2014

| Description | Revenue Lag Days | Expense Lead Days | Net Lag Days | Working Capital Factor | 2014 Expenses | 2014 Working Capital Requirement |
|---|---|---|---|---|---|---|
| Cost of Power | 57.53 | 32.86 | 24.67 | 6.8% | $514,946,434 | $34,804,956 |
| OM&A Expenses | 57.53 | 7.30 | 50.24 | 13.8% | $64,986,015 | $8,944,082 |
| PILS | 57.53 | 14.50 | 43.03 | 11.8% | $555,146 | $65,448 |
| DRC | 57.53 | 25.59 | 31.94 | 8.7% | $32,180,619 | $2,815,715 |
| Interest Expense | 57.53 | (67.15) | 124.68 | 34.2% | $9,519,067 | $3,251,636 |
| **Total** | | | | | **$622,187,281** | **$49,881,837** |
| HST | | | | | | $761,026 |
| **Total - Including HST** | | | | | | **$50,642,863** |
| **Working Capital as a Percent of OM&A incl. Cost of Power** | | | | | | **8.7%** |

**2015 WORKING CAPITAL REQUIREMENT**

2015

| Description | Revenue Lag Days | Expense Lead Days | Net Lag Days | Working Capital Factor | 2015 Expenses | 2015 Working Capital Requirement |
|---|---|---|---|---|---|---|
| Cost of Power | 57.53 | 32.86 | 24.67 | 6.8% | $520,720,617 | $35,195,230 |
| OM&A Expenses | 57.53 | 7.30 | 50.24 | 13.8% | $64,479,807 | $8,874,412 |
| PILS | 57.53 | 14.50 | 43.03 | 11.8% | $2,874,217 | $338,850 |
| DRC | 57.53 | 25.59 | 31.94 | 8.7% | $31,854,423 | $2,787,174 |
| Interest Expense | 57.53 | (67.15) | 124.68 | 34.2% | $9,831,640 | $3,358,408 |
| **Total** | | | | | **$629,760,705** | **$50,554,074** |
| HST | | | | | | $660,973 |
| **Total - Including HST** | | | | | | **$51,215,047** |
| **Working Capital as a Percent of OM&A incl. Cost of Power** | | | | | | **8.8%** |

**2016 WORKING CAPITAL REQUIREMENT**

2016

| Description | Revenue Lag Days | Expense Lead Days | Net Lag Days | Working Capital Factor | 2016 Expenses | 2016 Working Capital Requirement |
|---|---|---|---|---|---|---|
| Cost of Power | 57.53 | 32.86 | 24.67 | 6.7% | $542,171,542 | $36,544,963 |
| OM&A Expenses | 57.53 | 7.30 | 50.24 | 13.7% | $65,940,947 | $9,050,714 |
| PILS | 57.53 | 14.50 | 43.03 | 11.8% | $4,252,792 | $500,004 |
| DRC | 57.53 | 25.59 | 31.94 | 8.7% | $31,531,534 | $2,751,384 |
| Interest Expense | 57.53 | (67.15) | 124.68 | 34.1% | $10,204,633 | $3,476,295 |
| **Total** | | | | | **$654,101,448** | **$52,323,360** |
| HST | | | | | | $681,747 |
| **Total - Including HST** | | | | | | **$53,005,107** |
| **Working Capital as a Percent of OM&A incl. Cost of Power** | | | | | | **8.7%** |

**2017 WORKING CAPITAL REQUIREMENT**

2017

| Description | Revenue Lag Days | Expense Lead Days | Net Lag Days | Working Capital Factor | 2017 Expenses | 2017 Working Capital Requirement |
|---|---|---|---|---|---|---|
| Cost of Power | 57.53 | 32.86 | 24.67 | 6.8% | $562,422,662 | $38,013,849 |
| OM&A Expenses | 57.53 | 7.30 | 50.24 | 13.8% | $67,692,855 | $9,316,627 |
| PILS | 57.53 | 14.50 | 43.03 | 11.8% | $4,496,240 | $530,074 |
| DRC | 57.53 | 25.59 | 31.94 | 8.7% | $31,211,917 | $2,730,957 |
| Interest Expense | 57.53 | (67.15) | 124.68 | 34.2% | $10,624,086 | $3,629,101 |
| **Total** | | | | | **$676,447,760** | **$54,220,608** |
| HST | | | | | | $722,868 |
| **Total - Including HST** | | | | | | **$54,943,476** |
| **Working Capital as a Percent of OM&A incl. Cost of Power** | | | | | | **8.7%** |

**2018 WORKING CAPITAL REQUIREMENT**

2018

| Description | Revenue Lag Days | Expense Lead Days | Net Lag Days | Working Capital Factor | 2018 Expenses | 2018 Working Capital Requirement |
|---|---|---|---|---|---|---|
| Cost of Power | 57.53 | 32.86 | 24.67 | 6.8% | $583,269,859 | $39,422,900 |
| OM&A Expenses | 57.53 | 7.30 | 50.24 | 13.8% | $69,773,217 | $9,602,949 |
| PILS | 57.53 | 14.50 | 43.03 | 11.8% | $3,925,141 | $462,746 |
| DRC | 57.53 | 25.59 | 31.94 | 8.7% | $30,895,541 | $2,703,275 |
| Interest Expense | 57.53 | (67.15) | 124.68 | 34.2% | $11,632,105 | $3,973,432 |
| **Total** | | | | | **$699,495,863** | **$56,165,302** |
| HST | | | | | | $780,520 |
| **Total - Including HST** | | | | | | **$56,945,822** |
| **Working Capital as a Percent of OM&A incl. Cost of Power** | | | | | | **8.7%** |

**2019 WORKING CAPITAL REQUIREMENT**

2019

| Description | Revenue Lag Days | Expense Lead Days | Net Lag Days | Working Capital Factor | 2019 Expenses | 2019 Working Capital Requirement |
|---|---|---|---|---|---|---|
| Cost of Power | 57.53 | 32.86 | 24.67 | 6.8% | $602,042,446 | $40,691,729 |
| OM&A Expenses | 57.53 | 7.30 | 50.24 | 13.8% | $72,228,903 | $9,940,927 |
| PILS | 57.53 | 14.50 | 43.03 | 11.8% | $4,021,290 | $474,081 |
| DRC | 57.53 | 25.59 | 31.94 | 8.7% | $30,582,371 | $2,675,873 |
| Interest Expense | 57.53 | (67.15) | 124.68 | 34.2% | $12,600,791 | $4,304,328 |
| **Total** | | | | | **$721,475,801** | **$58,086,938** |
| HST | | | | | | $806,970 |
| **Total - Including HST** | | | | | | **$58,893,908** |
| **Working Capital as a Percent of OM&A incl. Cost of Power** | | | | | | **8.7%** |

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# Working Capital Requirements of Toronto Hydro Electric System Limited's Distribution Business

**Prepared for:**


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June 27, 2014

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This report (the "report") was prepared for Toronto Hydro Electric System, Limited ("THESL") by Navigant Consulting, Ltd. ("Navigant"). The report was prepared solely for the purposes of THESL's rate filing to before the Ontario Energy Board and may not be used for any other purpose. Use of this report by any third party outside of THESL's rate filing is prohibited. Use of this report should not, and does not, absolve the third party from using due diligence in verifying the report's contents. Any use which a third party makes of this report, or any reliance on it, is the responsibility of the third party. Navigant extends no warranty to any third party.

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## Section I: Executive Summary

### *Summary*

This report provides the results of the working capital requirements of THESL's distribution business.

Performing a lead-lag study requires two key undertakings:

1. Developing an understanding of how the regulated distribution business operates in terms of products and services sold to customers/purchased from vendors, and the 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.

Results from the lead-lag study using 2012 data identify the following working capital amount in Table 1, below.

**Table 1: Summary of Working Capital Requirements**

| Year | 2012 |
|---|---|
| Percentage of OMA | 7.91% |
| Working Capital Requirement | $218,720,393 |

The results of the study indicate a lower working capital requirement compared to THESL's EB-2007-0680 distribution lead-lag study. A considerable amount of time has lapsed between the two studies. The primary reason for the difference is the decrease in retail revenue lag days due to the upgrade of THESL's Customer Information System since the prior study. The retail revenue lag days have decreased by approximately 20 percent. Table 2, below summarizes the detailed working capital requirements for 2012 calculated in the study.

**Table 2: THESL Distribution Working Capital Requirements (2012)**

| Description | Revenue Lag Days | Expense Lead Days | Net Lag Days | Working Capital Factor | Expenses | Working Capital Requirements |
|---|---|---|---|---|---|---|
| Cost of Power | 55.04 | 32.84 | 22.20 | 6.07% | $ 2,450,597,565 | $ 148,654,316 |
| OM&A Expenses | 55.04 | 33.86 | 21.19 | 5.79% | $ 312,961,220 | $ 18,115,434 |
| PILS | 55.04 | (48.95) | 103.99 | 28.41% | $ 7,831,000 | $ 2,225,034 |
| Interest Expense | 55.04 | 46.17 | 8.87 | 2.42% | $ 76,173,950 | $ 1,845,550 |
| DRC | 55.04 | 33.31 | 21.74 | 5.94% | $ 162,416,324 | $ 9,645,577 |
| **Total** | | | | | **$ 3,009,980,059** | **$ 180,485,912** |
| HST | | | | | | $ 38,234,481 |
| **Total - Including HST** | | | | | | **$ 218,720,393** |
| **Working Capital as a Percent of OM&A incl. Cost of Power** | | | | | | **7.91%** |

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### *Organization of the Report*

Section II of the report discusses the lag times associated with THESL's collections of revenues. The section includes a description of the sources revenues and how an overall revenue lag is derived.

Section III presents the lead times associated with THESL's expenses. The section includes a description of the types of expenses incurred by THESL's distribution operations and how expenses are treated for the purposes of deriving an overall prov expenses lead.

Section IV presents a summary of the results from the study.

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## Section II: Revenue Lags

A distribution utility providing service to its customers generally derives its revenue from bills paid for service by its customers. A revenue lag represents the number of days from the date service is rendered by THESL until the date payments are received from customers and funds are available to THESL.

Interviews with THESL personnel indicate that its distribution business receives funds from the following funding streams:

1. Retail Customers;
2. Other Sources (revenues from electricity retailers and revenues for miscellaneous services such as jobbing and contracting work performed by THESL); and,
3. The Ontario Clean Energy Benefit (OCEB).

The lag times associated with the funding streams above were weighted and combined to calculate an overall revenue lag time as shown below. Detailed data tables are provided in Appendix B.

**Table 3: Summary of Revenue Lag**

| Description | Lag Days | Revenues | Weighting | Weighted Lag |
|---|---|---|---|---|
| Retail Revenue | 54.78 | $ 3,265,502,197 | 94.18% | 51.59 |
| Other Revenue | 33.93 | $ 25,540,425 | 0.74% | 0.25 |
| Ontario Clean Energy Benefit | 62.98 | $ 176,156,432 | 5.08% | 3.20 |
| **Total** | | **$ 3,467,199,054** | **100.00%** | **55.04** |

### *Retail Revenue Lag*

Retail Revenue lag consists of the following components:

1. Service Lag;
2. Billing Lag;
3. Collections Lag; and,
4. Payment Processing Lag.

The lag times for each of the above components, when added together, results in the Retail Revenue Lag for the purpose of calculating the working capital requirements for THESL's distribution business. The components are intended to represent a continuous process from the end date of the customer's previous billing cycle to the date in which the payment is available to THESL. Figure 1 illustrates the start and end point for each component of THESL's retail revenue lag.

**Figure 1: Retail Revenue Lag**

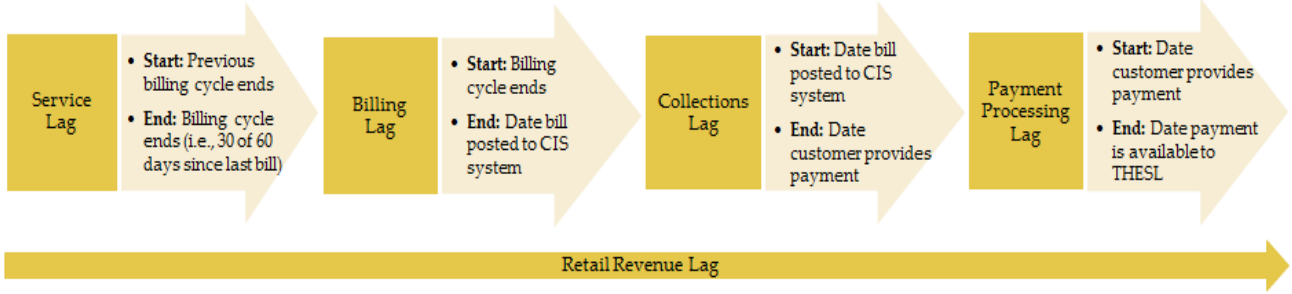

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Table 3, below summarizes the total Retail Revenue Lag.

**Table 4: Summary of Retail Revenue Lag**

| Description | Lag Days |
|---|---|
| Service Lag | 18.72 |
| Billing Lag | 12.52 |
| Collections Lag | 22.21 |
| Payment Processing Lag | 1.32 |
| **Total** | **54.78** |

The estimation of each component of the Retail Revenue Lag is described below.

**Service Lag**

The Service Lag is the time from THESL'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. Customer Service staff at THESL provided data which documented that approximately 78% of revenues are billed monthly and 22% of revenues are billed bi-monthly. Using the information provided, the Service Lag was estimated to be 18.72 days.

**Billing Lag**

The Billing Lag is the time period from when the customer's service period ends, which is typically defined as when the meter is read, and the time that the customer's bill is generated in the customer information system (CIS). Interviews with billing staff at THESL and analysis of meter billing data indicated that THESL customers have an average billing lag of 12.52 days, which is significantly shorter than billing lag in the prior study due to the implementation of a new CIS.

**Collections Lag**

The Collections Lag is the time period from when the bill is generated in the CIS, until the time when the customer provides a payment to THESL. The Collections Lag is measured by analyzing the receivables aging data provided by THESL. THESL's Collection lag was calculated to be 22.21 days was determined for THESL's distribution operations.

**Payment Processing Lag**

The Payment Processing lag is the time period from when the customer provides a payment to THESL until such time as the funds associated with that payment are available to the company. The Payment Processing Lag is measured by analyzing the payment methods used by THESL customers. Some examples of the payment methods used include credit card, pre-authorized payment and branch payment. THESL provided the processing time associated with each method of payment and the number of customers using each method of payment. Using such data provided by THESL for the calendar year 2012, a customer-weighted average payment processing lag of 1.32 days was determined for THESL's distribution operations.

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## Section III: Expense Leads

Expense Leads are defined as the time period between when a service is provided to THESL and when payment is required for that service. Typically services are provided in advance of payment which reduces the capital requirement of the company. Therefore, in conjunction with the calculation of the revenue lag, expense lead times were calculated for the following items:

1. Cost of Power;
2. OM&A Expenses;
3. Interest on Long Term Debt;
4. Payments in Lieu of Taxes; and,
5. Harmonized Sales Tax.

### *Cost of Power*

For the purpose of the distribution lead-lag study, cost of power expenses were considered to consist of payments made by THESL to its vendors in the following categories:

1. Independent Electricity System Operator (IESO) Cost of Power Expenses;
2. Hydro One Low Voltage Charges;
3. Payments to Non-Utility Generators; and,
4. Payments to Renewable Energy Standard Offer Program (RESOP), Micro Feed-in Tariff (MFIT), and Feed-in Tariff (FIT) customers.

Expense lead times were calculated individually for each of the items listed above and then dollar-weighted to derive a composite expense lead time of 32.84 days for cost of power expenses.

**Table 5: Summary of Cost of Power Expenses**

| Description | Amounts | Weighting | Expense Lead Time | Weighted Lead Time |
|---|---|---|---|---|
| IESO Cost of Power | $ 2,442,084,555 | 99.65% | 32.80 | 32.68 |
| Hydro One Low Voltage Charges | $ 352,519 | 0.01% | 32.22 | 0.00 |
| Payments to Non-Utility Generators | $ 293,330 | 0.01% | 32.26 | 0.00 |
| Payments to RESOP, MFIT, and FIT customers | $ 7,867,160 | 0.32% | 46.29 | 0.15 |
| **Total** | **$ 2,450,597,565** | **100.00%** | | **32.84** |

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### IESO Cost of Power Expenses

THESL purchases its power supply requirements on a monthly basis from the IESO and pays for such supplies on a schedule defined by the IESO's billing and settlement procedures. Taking the information on actual payments made by THESL in 2012, a dollar-weighted Cost of Power expense lead time of 32.80 days was calculated. Table 6 below summarizes the components of the Cost of Power expense lead calculation.

**Table 6: Summary of IESO Cost of Power Expenses**

| Delivery Period | Amounts | Weighting Factor % | Payment Date | Service Lead Time | Payment Lead Time | Total Lead Time | Weighted Lead Time |
|---|---|---|---|---|---|---|---|
| Jan 12 | $ 201,741,673 | 8.26% | 2/21/2012 | 15.50 | 21.00 | 31.50 | 2.60 |
| Feb 12 | $ 189,300,906 | 7.75% | 3/20/2012 | 14.50 | 20.00 | 30.50 | 2.36 |
| Mar 12 | $ 200,593,695 | 8.21% | 4/23/2012 | 15.50 | 23.00 | 34.50 | 2.83 |
| Apr 12 | $ 182,265,321 | 7.46% | 5/18/2012 | 15.00 | 18.00 | 31.00 | 2.31 |
| May 12 | $ 202,835,582 | 8.31% | 6/20/2012 | 15.50 | 20.00 | 33.50 | 2.78 |
| Jun 12 | $ 217,612,164 | 8.91% | 7/20/2012 | 15.00 | 20.00 | 33.00 | 2.94 |
| Jul 12 | $ 220,868,561 | 9.04% | 8/21/2012 | 15.50 | 21.00 | 32.50 | 2.94 |
| Aug 12 | $ 231,368,962 | 9.47% | 9/21/2012 | 15.50 | 21.00 | 34.50 | 3.27 |
| Sep 12 | $ 195,552,497 | 8.01% | 10/19/2012 | 15.00 | 19.00 | 32.00 | 2.56 |
| Oct 12 | $ 198,526,123 | 8.13% | 11/21/2012 | 15.50 | 21.00 | 34.50 | 2.80 |
| Nov 12 | $ 204,231,158 | 8.36% | 12/20/2012 | 15.00 | 20.00 | 33.00 | 2.76 |
| Dec 12 | $ 197,187,913 | 8.07% | 1/21/2013 | 15.50 | 21.00 | 32.50 | 2.62 |
| **Total** | **$ 2,442,084,555** | **100.00%** | | | | | **32.80** |

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### Hydro One Low Voltage Charges

THESL provides payment to Hydro One for low voltage charges on a monthly basis and pays for such charges on a monthly basis. Based upon information on payments made by THESL in 2012, a dollar-weighted Hydro One Low Voltage Charges Cost of Power expense lead time of 32.22 days was calculated. Table 7, below summarizes the components of the Hydro One Low Voltage Charges expense lead calculation.

**Table 7: Summary of Hydro One Low Voltage Charges**

| Delivery Period | Amounts | Weighting Factor % | Payment Date | Service Lead Time | Payment Lead Time | Total Lead Time | Weighted Lead Time |
|---|---|---|---|---|---|---|---|
| Jan 12 | $ 27,386 | 7.77% | 2/16/2012 | 15.50 | 16.00 | 31.50 | 2.45 |
| Feb 12 | $ 37,379 | 10.60% | 3/16/2012 | 14.50 | 16.00 | 30.50 | 3.23 |
| Mar 12 | $ 26,011 | 7.38% | 4/19/2012 | 15.50 | 19.00 | 34.50 | 2.55 |
| Apr 12 | $ 24,835 | 7.04% | 5/16/2012 | 15.00 | 16.00 | 31.00 | 2.18 |
| May 12 | $ 24,866 | 7.05% | 6/16/2012 | 15.50 | 16.00 | 31.50 | 2.22 |
| Jun 12 | $ 26,303 | 7.46% | 7/18/2012 | 15.00 | 18.00 | 33.00 | 2.46 |
| Jul 12 | $ 31,504 | 8.94% | 8/17/2012 | 15.50 | 17.00 | 32.50 | 2.90 |
| Aug 12 | $ 29,118 | 8.26% | 9/19/2012 | 15.50 | 19.00 | 34.50 | 2.85 |
| Sep 12 | $ 38,369 | 10.88% | 10/17/2012 | 15.00 | 17.00 | 32.00 | 3.48 |
| Oct 12 | $ 36,131 | 10.25% | 11/17/2012 | 15.50 | 17.00 | 32.50 | 3.33 |
| Nov 12 | $ 25,235 | 7.16% | 12/16/2012 | 15.00 | 16.00 | 31.00 | 2.22 |
| Dec 12 | $ 25,384 | 7.20% | 1/17/2013 | 15.50 | 17.00 | 32.50 | 2.34 |
| **Total** | **$ 352,519** | **100.00%** | | | | | **32.22** |

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**Payments to Non-Utility Generators**

THESL purchases power supply from Non-Utility Generators on a monthly basis and pays for such supplies on a monthly basis. For the year 2012, a dollar-weighted expense lead time of 32.26 days was calculated. Table 8 below summarizes the components of the Non-Utility Generator payments expense lead calculation.

**Table 8: Summary of Non-Utility Generator Payments**

| Delivery Period | Amounts | Weighting Factor % | Payment Date | Service Lead Time | Payment Lead Time | Total Lead Time | Weighted Lead Time |
|---|---|---|---|---|---|---|---|
| Jan 12 | $ 34,011 | 11.59% | 2/16/2012 | 15.50 | 16.00 | 31.50 | 3.65 |
| Feb 12 | $ 18,356 | 6.26% | 3/16/2012 | 14.50 | 16.00 | 30.50 | 1.91 |
| Mar 12 | $ 13,579 | 4.63% | 4/19/2012 | 15.50 | 19.00 | 34.50 | 1.60 |
| Apr 12 | $ 13,586 | 4.63% | 5/16/2012 | 15.00 | 16.00 | 31.00 | 1.44 |
| May 12 | $ 14,235 | 4.85% | 6/16/2012 | 15.50 | 16.00 | 31.50 | 1.53 |
| Jun 12 | $ 13,825 | 4.71% | 7/18/2012 | 15.00 | 18.00 | 33.00 | 1.56 |
| Jul 12 | $ 31,504 | 10.74% | 8/17/2012 | 15.50 | 17.00 | 32.50 | 3.49 |
| Aug 12 | $ 29,118 | 9.93% | 9/19/2012 | 15.50 | 19.00 | 34.50 | 3.42 |
| Sep 12 | $ 38,369 | 13.08% | 10/17/2012 | 15.00 | 17.00 | 32.00 | 4.19 |
| Oct 12 | $ 36,131 | 12.32% | 11/17/2012 | 15.50 | 17.00 | 32.50 | 4.00 |
| Nov 12 | $ 25,235 | 8.60% | 12/16/2012 | 15.00 | 16.00 | 31.00 | 2.67 |
| Dec 12 | $ 25,384 | 8.65% | 1/17/2013 | 15.50 | 17.00 | 32.50 | 2.81 |
| **Total** | **$ 293,330** | **100.00%** | | | | | **32.26** |

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**Payments to RESOP, MFIT, and FIT Customers**

THESL purchases power supply from RESOP, MFIT and FIT customers. Using payment information in 2012 and the service and billing lag values determined from the revenue analysis, a dollar-weighted expense lead time of 46.29 days was calculated. Table 9 below summarizes the components of the RESOP, MFIT, and FIT payments expense lead calculation. Additional detail can be found in Appendix B.

**Table 9: RESOP, MFIT, and FIT Customer Payments**

| Description | Amounts | Weighting | Expense Lead Time | Weighted Lead Time |
|---|---|---|---|---|
| RESOP | $ 113,497 | 1.44% | 38.41 | 0.55 |
| MFIT | $ 1,843,520 | 23.43% | 43.31 | 10.15 |
| FIT | $ 5,910,143 | 75.12% | 47.38 | 35.59 |
| **Total** | **$ 7,867,160** | **100.00%** | | **46.29** |

## *OM&A Expenses*

For the purpose of the distribution lead-lag study, OM&A expenses were considered to consist of payments made by THESL to its vendors in the following categories:

1. Payroll & Benefits;
2. Property Taxes;
3. Non-Resident Withholding Tax;
4. Corporate Procurement Card;
5. Lease Payments;
6. Outside Services; and,
7. Miscellaneous OM&A.

Expense lead times were calculated individually for each of the items listed above and then dollar-weighted to derive a composite expense lead time of 33.86 days for OM&A expenses.

**Table 10: Summary of OM&A Expenses**

| Description | Amounts | Weighting | Expense Lead Time | Weighted Lead Time |
|---|---|---|---|---|
| Payroll & Benefits | $ 207,829,884 | 66.41% | 27.30 | 18.13 |
| Property Taxes | $ 6,494,693 | 2.08% | (27.57) | (0.57) |
| Non-Resident Withholding Tax | $ 249,209 | 0.08% | 29.44 | 0.02 |
| Corporate Procurement Card | $ 187,473 | 0.06% | 26.21 | 0.02 |
| Lease Payments | $ 8,971,928 | 2.87% | 12.85 | 0.37 |
| Outside Services | $ 49,864,366 | 15.93% | 53.51 | 8.53 |
| Miscellaneous OM&A | $ 39,363,668 | 12.58% | 58.56 | 7.37 |
| **Total** | **$ 312,961,220** | **100.00%** | | **33.86** |

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**Payroll & Benefits**

The following items were considered to be expenses related to the Payroll & Benefits of THESL:

1. Two types of payroll including basic and board of directors payroll;
2. Three types of payroll withholdings including the Canada Pension Plan, Employment Insurance, and Income Tax withholdings;
3. Contributions made by THESL to the THESL Pension Plan;
4. Group Health, Dental, and Life Insurance related administrative fees and claims, long-term disability, accidental death and dismemberment, and employee assistance program;
5. Payments made by THESL on account of the Employer Health Tax (EHT); and,
6. Payments made by THESL to the Workplace Safety and Insurance Board (WSIB).

When all Payroll, Withholdings and Benefits were dollar-weighted using actual payment data, the weighted average expense lead time associated with Payroll & Benefits was determined to be 27.30 days as shown in Table 11, below. Additional detail can be found in Appendix B.

**Table 11: Summary of Payroll & Benefits Expenses**

| Description | Amounts | Weighting | Expense Lead Time | Weighted Lead Time |
|---|---|---|---|---|
| Payroll | $ 102,963,943 | 19.68 | 49.54% | 9.75 |
| Withholdings | $ 52,044,775 | 33.58 | 25.04% | 8.41 |
| Pensions | $ 29,800,561 | 56.83 | 14.34% | 8.15 |
| Group Life Insurance | $ 2,760,011 | (4.25) | 1.33% | (0.06) |
| Group Medical & Dental Claims | $ 13,286,318 | 0.50 | 6.39% | 0.03 |
| Long-Term Disability | $ 2,160,971 | (4.25) | 1.04% | (0.04) |
| Accidental Death and Dismemberment | $ 28,747 | (4.25) | 0.01% | (0.00) |
| Employee Assistance Program | $ 118,870 | (4.10) | 0.06% | (0.00) |
| EHT | $ 3,167,626 | 42.39 | 1.52% | 0.65 |
| WSIB | $ 1,498,062 | 57.96 | 0.72% | 0.42 |
| **Total** | **$ 207,829,884** | | **100.00%** | **27.30** |

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### Property Taxes

THESL makes property tax payments to the City of Toronto and taxing authorities in the Province of Ontario. These payments are made in the current year for the current year and are typically made in installments. Using the payment dates and amounts associated with THESL's distribution business for calendar year 2012, a dollar-weighted expense lead (-lag) time of negative 27.57 days was determined. Table 12, below summarizes the components of the property tax expense lead calculation. Additional detail can be found in Appendix B.

**Table 12: Summary of Property Tax Expenses**

| Description | Amounts | Weighting | Expense Lead Time | Weighted Lead Time |
|---|---|---|---|---|
| PIL Property Tax | $ 53,851 | 0.83% | (15.39) | (0.13) |
| Property Tax | $ 6,440,842 | 99.17% | (27.67) | (27.44) |
| **Total** | **$ 6,494,693** | **100.00%** | | **(27.57)** |

### Non-Resident Withholding Tax

THESL makes non-resident withholding tax payments to the relevant taxing authority. These payments are made on a monthly basis. Using actual payment dates and amounts provided by THESL, a dollar-weighted expense lead time of 29.44 days was determined. Table 13, below summarizes the components of the non-resident withholding tax expense lead calculation.

**Table 13: Summary of Non-Resident Withholding Tax Expenses**

| Delivery Period | Amounts | Weighting Factor % | Payment Date | Service Lead Time | Payment Lead Time | Total Lead Time | Weighted Lead Time |
|---|---|---|---|---|---|---|---|
| Jan 12 | $ 17,561 | 7.05% | 1/13/2012 | 15.50 | 13.00 | 28.50 | 2.01 |
| Feb 12 | $ 32,228 | 12.93% | 2/15/2012 | 15.50 | 15.00 | 30.50 | 3.94 |
| Mar 12 | $ 5,623 | 2.26% | 3/15/2012 | 14.00 | 16.00 | 30.00 | 0.68 |
| Apr 12 | $ 56,377 | 22.62% | 4/13/2012 | 15.50 | 13.00 | 28.50 | 6.45 |
| May 12 | $ 9,885 | 3.97% | 5/15/2012 | 15.00 | 15.00 | 30.00 | 1.19 |
| Jun 12 | $ 12,593 | 5.05% | 6/15/2012 | 15.50 | 15.00 | 30.50 | 1.54 |
| Jul 12 | $ 16,577 | 6.65% | 7/13/2012 | 15.00 | 13.00 | 28.00 | 1.86 |
| Aug 12 | $ 4,793 | 1.92% | 8/15/2012 | 15.50 | 15.00 | 30.50 | 0.59 |
| Sep 12 | $ 23,459 | 9.41% | 9/14/2012 | 15.50 | 14.00 | 29.50 | 2.78 |
| Oct 12 | $ 37,550 | 15.07% | 10/15/2012 | 15.00 | 15.00 | 30.00 | 4.52 |
| Nov 12 | $ 15,812 | 6.34% | 11/15/2012 | 15.50 | 15.00 | 30.50 | 1.94 |
| Dec 12 | $ 16,751 | 6.72% | 12/14/2012 | 15.00 | 14.00 | 29.00 | 1.95 |
| **Total** | **$ 249,209** | **100.00%** | | | | | **29.44** |

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### Corporate Procurement Card

Procurement (or charge) cards are used by the THESL's employees for a variety of company related reasons including, and not limited to, purchases of materials in the field, incidental expenses, and to settle charges for travel and accommodation. Based on invoice and payment information provided by THESL, a dollar-weighted expense lead time of 26.21 days was determined. Table 14 below summarizes the components of the corporate procurement card expense lead calculation.

**Table 14: Summary of Corporate Procurement Card Expenses**

| Delivery Period | Amounts | Weighting Factor % | Payment Date | Service Lead Time | Payment Lead Time | Total Lead Time | Weighted Lead Time |
|---|---|---|---|---|---|---|---|
| Jan 12 | $ 15,927 | 8.50% | 1/13/2012 | 15.50 | 11.00 | 26.50 | 2.25 |
| Feb 12 | $ 11,782 | 6.28% | 2/15/2012 | 14.50 | 11.00 | 25.50 | 1.60 |
| Mar 12 | $ 4,624 | 2.47% | 3/15/2012 | 15.50 | 11.00 | 26.50 | 0.65 |
| Apr 12 | $ 5,756 | 3.07% | 4/13/2012 | 15.00 | 11.00 | 26.00 | 0.80 |
| May 12 | $ 12,882 | 6.87% | 5/15/2012 | 15.50 | 11.00 | 26.50 | 1.82 |
| Jun 12 | $ 14,794 | 7.89% | 6/15/2012 | 15.00 | 11.00 | 26.00 | 2.05 |
| Jul 12 | $ 4,246 | 2.27% | 7/13/2012 | 15.50 | 11.00 | 26.50 | 0.60 |
| Aug 12 | $ 5,776 | 3.08% | 8/15/2012 | 15.50 | 11.00 | 26.50 | 0.82 |
| Sep 12 | $ 6,420 | 3.42% | 9/14/2012 | 15.00 | 11.00 | 26.00 | 0.89 |
| Oct 12 | $ 13,849 | 7.39% | 10/15/2012 | 15.50 | 11.00 | 26.50 | 1.96 |
| Nov 12 | $ 59,012 | 31.48% | 11/15/2012 | 15.00 | 11.00 | 26.00 | 8.18 |
| Dec 12 | $ 32,403 | 17.28% | 12/14/2012 | 15.50 | 11.00 | 26.50 | 4.58 |
| **Total** | **$ 187,473** | **100.00%** | | | | | **26.21** |

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**Lease Payments**

Using actual payment dates and amounts provided by THESL, a dollar-weighted lease expense lead time of 12.85 days was determined. Table 15, below summarizes the components of the lease expense lead calculation.

**Table 15: Summary of Lease Expenses**

| Delivery Period | Amounts | Weighting Factor % | Service Lead Time | Payment Lead Time | Total Lead Time | Weighted Lead Time |
|---|---|---|---|---|---|---|
| Jan 12 | $ 844,861 | 9.42% | 48.81 | 0.51 | 49.32 | 4.64 |
| Feb 12 | $ 740,722 | 8.26% | 14.93 | 5.63 | 20.56 | 1.70 |
| Mar 12 | $ 740,722 | 8.26% | 15.07 | (7.91) | 7.16 | 0.59 |
| Apr 12 | $ 740,722 | 8.26% | 15.21 | (7.35) | 7.86 | 0.65 |
| May 12 | $ 740,722 | 8.26% | 15.29 | (9.35) | 5.94 | 0.49 |
| Jun 12 | $ 740,722 | 8.26% | 15.21 | (2.36) | 12.86 | 1.06 |
| Jul 12 | $ 719,847 | 8.02% | 15.28 | (3.25) | 12.03 | 0.97 |
| Aug 12 | $ 740,722 | 8.26% | 15.50 | (6.91) | 8.59 | 0.71 |
| Sep 12 | $ 740,722 | 8.26% | 15.21 | (10.48) | 4.73 | 0.39 |
| Oct 12 | $ 740,722 | 8.26% | 15.29 | (4.20) | 11.08 | 0.91 |
| Nov 12 | $ 740,722 | 8.26% | 15.21 | (10.76) | 4.45 | 0.37 |
| Dec 12 | $ 740,722 | 8.26% | 15.29 | (10.77) | 4.52 | 0.37 |
| **Total** | **$ 8,971,928** | **100.00%** | | | | **12.85** |

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### Outside Services

THESL engages outside services to provide assistance in the areas of engineering, information technology, receivables management, accounting, and general consulting. Based on 2012 transactions in THESL's accounts payable system under the outside services category, a dollar-weighted expense lead time of 53.51 days was determined. Table 16, below summarizes the components of outside services expense lead calculation.

**Table 16: Summary of Outside Services Expenses**

| Delivery Period | Amounts | Weighting Factor % | Service Lead Time | Payment Lead Time | Total Lead Time | Weighted Lead Time |
|---|---|---|---|---|---|---|
| Jan-12 | $ 4,612,817 | 9.25% | 14.38 | 37.70 | 52.08 | 4.82 |
| Feb-12 | $ 2,781,515 | 5.58% | 14.58 | 43.98 | 58.56 | 3.27 |
| Mar-12 | $ 3,033,721 | 6.08% | 12.29 | 41.93 | 54.22 | 3.30 |
| Apr-12 | $ 2,865,796 | 5.75% | 14.44 | 46.31 | 60.75 | 3.49 |
| May-12 | $ 6,084,596 | 12.20% | 28.24 | 13.45 | 41.68 | 5.09 |
| Jun-12 | $ 5,110,106 | 10.25% | 14.48 | 47.74 | 62.22 | 6.38 |
| Jul-12 | $ 3,904,682 | 7.83% | 29.29 | 13.85 | 43.14 | 3.38 |
| Aug-12 | $ 3,800,454 | 7.62% | 13.96 | 35.58 | 49.54 | 3.78 |
| Sep-12 | $ 4,129,948 | 8.28% | 19.05 | 33.91 | 52.97 | 4.39 |
| Oct-12 | $ 5,325,608 | 10.68% | 30.95 | 32.32 | 63.28 | 6.76 |
| Nov-12 | $ 4,810,172 | 9.65% | 13.73 | 44.26 | 57.98 | 5.59 |
| Dec-12 | $ 3,404,952 | 6.83% | 13.81 | 34.29 | 48.10 | 3.28 |
| **Total** | **$ 49,864,366** | **100.00%** | | | | **53.51** |

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**Miscellaneous OM&A**

The Miscellaneous OM&A category includes items such as product purchases, equipment rentals, and provision of general services to THESL. Based on 2012 transactions in THESL's accounts payable system under the Miscellaneous OM&A category, a dollar-weighted expense lead time of 58.56 days was derived. Table 17, below summarizes the components of miscellaneous OM&A expense lead calculation.

**Table 17: Summary of Miscellaneous OM&A Expenses**

| Delivery Period | Amounts | Weighting Factor % | Service Lead Time | Payment Lead Time | Total Lead Time | Weighted Lead Time |
|---|---|---|---|---|---|---|
| Jan-12 | $ 5,024,613 | 12.76% | 74.53 | (17.64) | 56.88 | 7.26 |
| Feb-12 | $ 3,197,116 | 8.12% | 57.20 | (49.67) | 7.53 | 0.61 |
| Mar-12 | $ 3,513,623 | 8.93% | 39.78 | (0.92) | 38.86 | 3.47 |
| Apr-12 | $ 4,245,067 | 10.78% | 60.99 | 62.93 | 123.92 | 13.36 |
| May-12 | $ 3,438,457 | 8.74% | 59.78 | (30.27) | 29.51 | 2.58 |
| Jun-12 | $ 2,285,298 | 5.81% | 15.80 | 35.12 | 50.92 | 2.96 |
| Jul-12 | $ 3,326,833 | 8.45% | 49.06 | (0.03) | 49.03 | 4.14 |
| Aug-12 | $ 3,235,973 | 8.22% | 60.64 | (6.81) | 53.84 | 4.43 |
| Sep-12 | $ 2,390,997 | 6.07% | 16.04 | 42.90 | 58.94 | 3.58 |
| Oct-12 | $ 2,283,193 | 5.80% | 15.93 | 36.91 | 52.84 | 3.06 |
| Nov-12 | $ 3,132,224 | 7.96% | 56.56 | 18.42 | 74.98 | 5.97 |
| Dec-12 | $ 3,290,273 | 8.36% | 66.50 | 18.88 | 85.38 | 7.14 |
| **Total** | **$ 39,363,668** | **100.00%** | | | | **58.56** |

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## *Interest on Short-Term and Long-Term Debt*

THESL makes interest payments on long-term and short-term intercompany promissory notes out of current year revenues. Payments on long-term debt are generally made twice a year. Though short-term debt was not part of THESL's financing in the base year of the analysis (2012), discussions with THESL staff indicate that short-term debt is expected to be a part of THESL's financing in the 2015-2019 period. Payments for short-term intercompany promissory notes in 2013 were included to reflect a known and measurable change from the base year of the analysis. Table 18, below summarizes the components of the interest expense lead calculation. Taking into account the various long term and short term debt instruments, a dollar-weighted expense lead time of 46.17 days was determined for the 2012 calendar year.

**Table 18: Summary of Interest Expenses**

| Description | Amounts | Weighting | Expense Lead Time | Weighted Lead Time |
|---|---|---|---|---|
| 2012 Long-term debt | $ 75,272,180 | 98.82% | 46.38 | 45.83 |
| 2013 Short-term debt | $ 901,769 | 1.18% | 28.84 | 0.34 |
| **Total** | **$ 76,173,950** | **100.00%** | | **46.17** |

## *Debt Retirement Charge (DRC)*

THESL makes payments for the debt retirement charge on a monthly basis to the Ontario Electricity Financial Corporation. Using payment amounts that were made in calendar year 2012, a dollar-weighted expense lead time of 33.31 days was determined for DRC. Table 19, below summarizes the components of the DRC expense lead calculation.

**Table 19: Summary of DRC Expenses**

| Delivery Period | Amounts | Weighting Factor % | Payment Date | Service Lead Time | Payment Lead Time | Total Lead Time | Weighted Lead Time |
|---|---|---|---|---|---|---|---|
| Jan 12 | $ 12,414,868 | 7.64% | 1/18/2012 | 15.50 | 18.00 | 33.50 | 2.56 |
| Feb 12 | $ 13,362,129 | 8.23% | 2/17/2012 | 15.50 | 17.00 | 32.50 | 2.67 |
| Mar 12 | $ 13,574,039 | 8.36% | 3/16/2012 | 14.00 | 17.00 | 31.00 | 2.59 |
| Apr 12 | $ 14,210,958 | 8.75% | 4/18/2012 | 15.50 | 18.00 | 33.50 | 2.93 |
| May 12 | $ 12,537,844 | 7.72% | 5/18/2012 | 15.00 | 18.00 | 33.00 | 2.55 |
| Jun 12 | $ 12,721,780 | 7.83% | 6/18/2012 | 15.50 | 18.00 | 33.50 | 2.62 |
| Jul 12 | $ 12,952,542 | 7.97% | 7/18/2012 | 15.00 | 18.00 | 33.00 | 2.63 |
| Aug 12 | $ 14,352,950 | 8.84% | 8/20/2012 | 15.50 | 20.00 | 35.50 | 3.14 |
| Sep 12 | $ 15,787,738 | 9.72% | 9/18/2012 | 15.50 | 18.00 | 33.50 | 3.26 |
| Oct 12 | $ 14,192,275 | 8.74% | 10/18/2012 | 15.00 | 18.00 | 33.00 | 2.88 |
| Nov 12 | $ 13,282,921 | 8.18% | 11/19/2012 | 15.50 | 19.00 | 34.50 | 2.82 |
| Dec 12 | $ 13,026,281 | 8.02% | 12/18/2012 | 15.00 | 18.00 | 33.00 | 2.65 |
| **Total** | **$ 162,416,324** | **100.00%** | | | | | **33.31** |

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## *Payment in Lieu of Taxes (PILs)*

THESL makes payments in lieu of taxes in installments to the relevant taxing authorities. Using payment amounts that were made in calendar year 2012, a dollar-weighted expense lead time of negative 48.95 days was determined for PILs. Table 20, below summarizes the components of the PILS expense lead calculation.

**Table 20: Summary of PILs Expenses**

| Delivery Period | Amounts | Weighting Factor % | Payment Date | Service Lead Time | Payment Lead Time | Total Lead Time | Weighted Lead Time |
|---|---|---|---|---|---|---|---|
| 2012 | $ 1,665,000 | 21.26% | 1/31/2012 | 183.00 | (335.00) | (152.00) | (32.32) |
| 2012 | $ 1,665,000 | 21.26% | 2/29/2012 | 183.00 | (306.00) | (123.00) | (26.15) |
| 2012 | $ 1,822,000 | 23.27% | 4/30/2012 | 183.00 | (245.00) | (62.00) | (14.43) |
| 2012 | $ 914,000 | 11.67% | 5/31/2012 | 183.00 | (214.00) | (31.00) | (3.62) |
| 2012 | $ 541,000 | 6.91% | 9/28/2012 | 183.00 | (94.00) | 89.00 | 6.15 |
| 2012 | $ 612,000 | 7.82% | 10/31/2012 | 183.00 | (61.00) | 122.00 | 9.53 |
| 2012 | $ 612,000 | 7.82% | 11/30/2012 | 183.00 | (31.00) | 152.00 | 11.88 |
| **Total** | **$ 7,831,000** | **100.00%** | | | | | **(48.95)** |

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### *Harmonized Sales Tax (HST)*

The expense lead times associated with the following items that attract HST were considered in THESL's distribution lead-lag study.

1. Revenues;
2. Cost of Power; and,
3. OM&A[1].

A summary of the expense lead times and working capital amounts associated with each of the above items is provided in Table 21. Note that the statutory approach described at the outset was used to determine the expense lead times associated with THESL's remittances and disbursements of HST (i.e., remittances are generally on the last day of the month following the date of the applicable return).

**Table 21: Summary of HST Working Capital Amounts**

| Description | HST Lead Time | Working Capital Factor | 2012 |
|---|---|---|---|
| Revenues | (5.47) | -1.50% | $ (6,347,016) |
| Cost of Power | 45.92 | 12.55% | $ 39,967,966 |
| OM&A Expenses | 41.50 | 11.34% | $ 4,613,531 |
| **Total** | | | **$ 38,234,481** |

[1] Costs within OM&A that attract HST include Corporate Procurement Card, Outside Services, and Miscellaneous OM&A.

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## Section IV: Conclusions

Using the results described under the discussion of revenue lags and expense leads, and applying them to THESL's distribution expenses for 2012, THESL's working capital requirements were determined. Table 22, below summarizes the working capital requirements for 2012 calculated in the study.

**Table 22: THESL Distribution Working Capital Requirements (2012)**

| Description | Revenue Lag Days | Expense Lead Days | Net Lag Days | Working Capital Factor | Expenses | Working Capital Requirements |
|---|---|---|---|---|---|---|
| Cost of Power | 55.04 | 32.84 | 22.20 | 6.07% | $ 2,450,597,565 | $ 148,654,316 |
| OM&A Expenses | 55.04 | 33.86 | 21.19 | 5.79% | $ 312,961,220 | $ 18,115,434 |
| PILS | 55.04 | (48.95) | 103.99 | 28.41% | $ 7,831,000 | $ 2,225,034 |
| Interest Expense | 55.04 | 46.17 | 8.87 | 2.42% | $ 76,173,950 | $ 1,845,550 |
| DRC | 55.04 | 33.31 | 21.74 | 5.94% | $ 162,416,324 | $ 9,645,577 |
| **Total** | | | | | **$ 3,009,980,059** | **$ 180,485,912** |
| HST | | | | | | $ 38,234,481 |
| **Total - Including HST** | | | | | | **$ 218,720,393** |
| **Working Capital as a Percent of OM&A incl. Cost of Power** | | | | | | **7.91%** |

The results of the study indicate a lower working capital requirement compared to THESL's EB-2007-0680 distribution lead-lag study. A considerable amount of time has lapsed between the two studies. The primary reason for the difference is the decrease in retail revenue lag days, due to the upgrade of THESL's Customer Information System since the prior study. The retail revenue lag days have decreased by approximately 20 percent.

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## Appendix A: Working Capital Methodology

Working capital is the amount of funds that are required to finance the day-to-day operations of a regulated utility and which 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 Navigant for this purpose.

A lead-lag study analyzes the time between the date customers receive service and the date that customers' payments are available to THESL (or "lag") together with the time between which THESL receives goods and services from its vendors and pays for them at a later date (or "lead")[2]. "Leads" and "Lags" are both measured in days and are dollar-weighted where appropriate.[3] The dollar-weighted net lag (lag minus lead) days is then divided by 365 (or 366 for leap years) and then multiplied by the annual test year expenses to determine the amount of working capital required. The resulting amount of working capital is then included in THESL's rate base for the purpose of deriving revenue requirements.

### *Key Concepts*

Two key concepts need to be defined as they appear throughout the report:

**Mid-Point Method**

When a service is provided to (or by) THESL over a period of time, the service is deemed to have been provided (or received) evenly over the midpoint of the period, unless specific information regarding the provision (or receipt) of that service indicates 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 generally 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 mid-point method, it is important to note that not all areas of the study may utilize dates on which actual payments were made to (or by) THESL. In some instances, particularly for the HST, the due dates for payments are established by statute or by regulation with significant penalties for late payments. 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 the study, Expense Leads are defined to consist of two components:

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

[3] The notion of dollar-weighting is pursued further in the sub-section titled "Key Concepts".

1. Service Lead component (services are assumed to be provided to THESL evenly around the mid-point of the service period), and
2. Payment Lead component (the time period from the end of the service period to the time payment was made and when funds have left THESL's possession).

**Dollar Weighting**

Both leads and lags should be dollar-weighted where appropriate and where data is available to accurately reflect the flow of dollars. For example, suppose that a particular transaction has a lead time of 100 days and has a dollar value of $100. Further, suppose that another transaction has a 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 lead time of 65 days ([100+30]/2). However, when these two transactions are dollar weighted, the resulting lead time would be closer to 30 days which is more representative of how the dollars actually flow.

## *Methodology*

Performing a lead-lag study requires two key undertakings:

1. Developing an understanding of how the regulated distribution business operates in terms of products and services sold to customers/purchased from vendors, and the 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 THESL's operations, interviews with personnel within THESL's Accounts Payable, Customer Service, Wholesale Market Operations, Human Resources, Payroll, Treasury, and Tax Departments were conducted. Key questions that were addressed during the course of the interviews included:

1. What is being sold (or purchased)? If a service is being provided to (or by) THESL, over what time period was this service provided;
2. Who are the buyers (or sellers);
3. 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;
4. Are any changes to the terms for payment expected? Are these terms driven by industry or internally? What is the basis for any such changes;
5. Are there any new rules or regulations governing transactions relating to distribution operations that are expected to materialize over the time frame considered in this report; and,
6. How are payments made (or received)? Payment types have different payment lead times (i.e., internet payments have shorter deposit times than cheque deposit times)

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# Appendix B: Detailed Data Tables

## *Other Revenues*

### Table 23: Summary of Other Revenues

| Description | Amounts | Weighting | Revenue Lag Time | Weighted Lag Time |
|---|---|---|---|---|
| Hydro One Sub-Station | $ 431,151 | 1.69% | 273.00 | 4.61 |
| Demand Billable | $ 25,109,273 | 98.31% | 29.83 | 29.32 |
| **Total** | **$ 25,540,425** | **100.00%** | | **33.93** |

## *OCEB*

### Table 24: Summary of OCEB

| Delivery Period | Amounts | Weighting Factor % | Payment Date | Service Lead Time | Payment Lead Time | Total Lead Time | Weighted Lead Time |
|---|---|---|---|---|---|---|---|
| Jan 12 | $ 14,777,518 | 8.39% | 3/16/2012 | 15.50 | 45.00 | 60.50 | 5.08 |
| Feb 12 | $ 16,082,331 | 9.13% | 4/18/2012 | 14.50 | 49.00 | 63.50 | 5.80 |
| Mar 12 | $ 15,985,774 | 9.07% | 5/16/2012 | 15.50 | 46.00 | 61.50 | 5.58 |
| Apr 12 | $ 14,762,648 | 8.38% | 6/18/2012 | 15.00 | 49.00 | 64.00 | 5.36 |
| May 12 | $ 14,085,387 | 8.00% | 7/18/2012 | 15.50 | 48.00 | 63.50 | 5.08 |
| Jun 12 | $ 13,976,849 | 7.93% | 8/17/2012 | 15.00 | 48.00 | 63.00 | 5.00 |
| Jul 12 | $ 16,150,445 | 9.17% | 9/19/2012 | 15.50 | 50.00 | 65.50 | 6.01 |
| Aug 12 | $ 18,228,456 | 10.35% | 10/17/2012 | 15.50 | 47.00 | 62.50 | 6.47 |
| Sep 12 | $ 14,618,252 | 8.30% | 11/16/2012 | 15.00 | 47.00 | 62.00 | 5.15 |
| Oct 12 | $ 12,904,170 | 7.33% | 12/18/2012 | 15.50 | 48.00 | 63.50 | 4.65 |
| Nov 12 | $ 12,919,262 | 7.33% | 1/16/2013 | 15.00 | 47.00 | 62.00 | 4.55 |
| Dec 12 | $ 11,665,341 | 6.62% | 2/18/2013 | 15.50 | 49.00 | 64.50 | 4.27 |
| **Total** | **$ 176,156,432** | **100.00%** | | | | | **62.98** |

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## *RESOP*

**Table 25: Summary of Payments to RESOP Customers**

| Payment Period | Amounts | Weighting Factor % | Service Lead Time | Payment Lead Time | Total Lead Time | Weighted Lead Time |
|---|---|---|---|---|---|---|
| Jan 12 | $ 2,254 | 1.99% | 15.79 | 22.43 | 38.21 | 0.76 |
| Feb 12 | $ 4,998 | 4.40% | 16.29 | 22.43 | 38.71 | 1.70 |
| Mar 12 | $ 6,013 | 5.30% | 16.29 | 22.43 | 38.71 | 2.05 |
| Apr 12 | $ 11,184 | 9.85% | 15.29 | 22.43 | 37.71 | 3.72 |
| May 12 | $ 13,375 | 11.78% | 16.11 | 22.43 | 38.54 | 4.54 |
| Jun 12 | $ 12,914 | 11.38% | 15.90 | 22.43 | 38.33 | 4.36 |
| Jul 12 | $ 9,305 | 8.20% | 16.29 | 22.43 | 38.71 | 3.17 |
| Aug 12 | $ 19,542 | 17.22% | 15.79 | 22.43 | 38.21 | 6.58 |
| Sep 12 | $ 8,905 | 7.85% | 16.29 | 22.43 | 38.71 | 3.04 |
| Oct 12 | $ 12,650 | 11.15% | 16.28 | 22.43 | 38.71 | 4.31 |
| Nov 12 | $ 8,856 | 7.80% | 15.79 | 22.43 | 38.21 | 2.98 |
| Dec 12 | $ 3,500 | 3.08% | 16.29 | 22.43 | 38.71 | 1.19 |
| **Total** | **$ 113,497** | **100.00%** | | | | **38.41** |

## *MFIT*

**Table 26: Summary of Payments to MFIT Customers**

| Payment Period | Amounts | Weighting Factor % | Service Lead Time | Payment Lead Time | Total Lead Time | Weighted Lead Time |
|---|---|---|---|---|---|---|
| Jan 12 | $ 34,830 | 1.89% | 15.98 | 27.09 | 43.07 | 0.81 |
| Feb 12 | $ 45,649 | 2.48% | 16.46 | 27.09 | 43.54 | 1.08 |
| Mar 12 | $ 73,170 | 3.97% | 16.43 | 27.09 | 43.52 | 1.73 |
| Apr 12 | $ 125,758 | 6.82% | 15.46 | 27.09 | 42.54 | 2.90 |
| May 12 | $ 145,497 | 7.89% | 16.44 | 27.09 | 43.53 | 3.44 |
| Jun 12 | $ 149,706 | 8.12% | 15.96 | 27.09 | 43.05 | 3.50 |
| Jul 12 | $ 261,612 | 14.19% | 16.44 | 27.09 | 43.53 | 6.18 |
| Aug 12 | $ 308,020 | 16.71% | 15.96 | 27.09 | 43.05 | 7.19 |
| Sep 12 | $ 247,772 | 13.44% | 16.46 | 27.09 | 43.54 | 5.85 |
| Oct 12 | $ 218,745 | 11.87% | 16.45 | 27.09 | 43.54 | 5.17 |
| Nov 12 | $ 121,296 | 6.58% | 15.96 | 27.09 | 43.04 | 2.83 |
| Dec 12 | $ 111,465 | 6.05% | 16.46 | 27.09 | 43.54 | 2.63 |
| **Total** | **$ 1,843,520** | **100.00%** | | | | **43.31** |

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## *FIT*

**Table 27: Summary of Payments to FIT Customers**

| Payment Period | Amounts | Weighting Factor % | Service Lead Time | Payment Lead Time | Total Lead Time | Weighted Lead Time |
|---|---|---|---|---|---|---|
| Jan 12 | $ 51,547 | 0.87% | 15.88 | 31.24 | 47.12 | 0.41 |
| Feb 12 | $ 106,029 | 1.79% | 16.38 | 31.24 | 47.62 | 0.85 |
| Mar 12 | $ 154,218 | 2.61% | 16.38 | 31.24 | 47.62 | 1.24 |
| Apr 12 | $ 339,753 | 5.75% | 15.38 | 31.24 | 46.62 | 2.68 |
| May 12 | $ 411,174 | 6.96% | 15.65 | 31.24 | 46.89 | 3.26 |
| Jun 12 | $ 680,917 | 11.52% | 16.09 | 31.24 | 47.34 | 5.45 |
| Jul 12 | $ 607,174 | 10.27% | 16.38 | 31.24 | 47.62 | 4.89 |
| Aug 12 | $ 785,193 | 13.29% | 16.03 | 31.24 | 47.28 | 6.28 |
| Sep 12 | $ 885,352 | 14.98% | 16.38 | 31.24 | 47.62 | 7.13 |
| Oct 12 | $ 757,723 | 12.82% | 16.38 | 31.24 | 47.62 | 6.11 |
| Nov 12 | $ 635,045 | 10.74% | 15.88 | 31.24 | 47.12 | 5.06 |
| Dec 12 | $ 496,019 | 8.39% | 16.38 | 31.24 | 47.62 | 4.00 |
| **Total** | **$ 5,910,143** | **100.00%** | | | | **47.38** |

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## *Payroll*

**Table 28: Summary of Payroll Expenses**

| Delivery Period (Pay Period) | Amounts | Weighting Factor % | Payment Date | Service Lead Time | Payment Lead Time | Total Lead Time | Weighted Lead Time |
|---|---|---|---|---|---|---|---|
| 12/18/2011 to 12/31/2011 | $ 3,743,615 | 3.64% | 1/4/2012 | 7.00 | 4.00 | 11.00 | 0.40 |
| 01/01/2012 to 01/14/2012 | $ 3,685,570 | 3.58% | 1/18/2012 | 7.00 | 4.00 | 11.00 | 0.39 |
| 01/15/2012 to 01/28/2012 | $ 3,637,840 | 3.53% | 2/1/2012 | 7.00 | 4.00 | 11.00 | 0.39 |
| 01/29/2012 to 02/11/2012 | $ 3,951,309 | 3.84% | 2/15/2012 | 7.00 | 4.00 | 11.00 | 0.42 |
| 02/12/2012 to 02/25/2012 | $ 3,939,521 | 3.83% | 2/29/2012 | 7.00 | 4.00 | 11.00 | 0.42 |
| 02/26/2012 to 03/10/2012 | $ 3,593,195 | 3.49% | 3/14/2012 | 7.00 | 4.00 | 11.00 | 0.38 |
| 03/11/2012 to 03/24/2012 | $ 3,448,774 | 3.35% | 3/28/2012 | 7.00 | 4.00 | 11.00 | 0.37 |
| 03/25/2012 to 04/07/2012 | $ 3,323,462 | 3.23% | 4/11/2012 | 7.00 | 4.00 | 11.00 | 0.36 |
| 04/08/2012 to 04/21/2012 | $ 3,638,829 | 3.53% | 4/25/2012 | 7.00 | 4.00 | 11.00 | 0.39 |
| 04/22/2012 to 05/05/2012 | $ 3,722,814 | 3.62% | 5/9/2012 | 7.00 | 4.00 | 11.00 | 0.40 |
| 05/06/2012 to 05/19/2012 | $ 3,674,061 | 3.57% | 5/23/2012 | 7.00 | 4.00 | 11.00 | 0.39 |
| 05/20/2012 to 06/02/2012 | $ 3,737,336 | 3.63% | 6/6/2012 | 7.00 | 4.00 | 11.00 | 0.40 |
| 06/03/2012 to 06/16/2012 | $ 3,721,799 | 3.61% | 6/20/2012 | 7.00 | 4.00 | 11.00 | 0.40 |
| 06/17/2012 to 06/30/2012 | $ 3,750,644 | 3.64% | 7/4/2012 | 7.00 | 4.00 | 11.00 | 0.40 |
| 07/01/2012 to 07/14/2012 | $ 3,863,603 | 3.75% | 7/18/2012 | 7.00 | 4.00 | 11.00 | 0.41 |
| 07/15/2012 to 07/28/2012 | $ 3,823,881 | 3.71% | 8/1/2012 | 7.00 | 4.00 | 11.00 | 0.41 |
| 07/29/2012 to 08/11/2012 | $ 3,908,038 | 3.80% | 8/15/2012 | 7.00 | 4.00 | 11.00 | 0.42 |
| 08/12/2012 to 08/25/2012 | $ 3,880,714 | 3.77% | 8/29/2012 | 7.00 | 4.00 | 11.00 | 0.41 |
| 08/26/2012 to 09/08/2012 | $ 3,841,950 | 3.73% | 9/12/2012 | 7.00 | 4.00 | 11.00 | 0.41 |
| 09/09/2012 to 09/22/2012 | $ 3,811,314 | 3.70% | 9/26/2012 | 7.00 | 4.00 | 11.00 | 0.41 |
| 09/23/2012 to 10/06/2012 | $ 3,802,499 | 3.69% | 10/10/2012 | 7.00 | 4.00 | 11.00 | 0.41 |
| 10/07/2012 to 10/20/2012 | $ 3,934,557 | 3.82% | 10/24/2012 | 7.00 | 4.00 | 11.00 | 0.42 |
| 10/21/2012 to 11/03/2012 | $ 4,193,257 | 4.07% | 11/7/2012 | 7.00 | 4.00 | 11.00 | 0.45 |
| 11/04/2012 to 11/17/2012 | $ 4,329,636 | 4.21% | 11/21/2012 | 7.00 | 4.00 | 11.00 | 0.46 |
| 11/18/2012 to 12/01/2012 | $ 4,121,857 | 4.00% | 12/5/2012 | 7.00 | 4.00 | 11.00 | 0.44 |
| 12/02/2012 to 12/15/2012 | $ 4,157,888 | 4.04% | 12/19/2012 | 7.00 | 4.00 | 11.00 | 0.44 |
| 01/01/2011 to 12/31/2011 | $ 3,416,730 | 3.32% | 3/28/2012 | 182.50 | 88.00 | 270.50 | 8.98 |
| 01/01/2012 to 03/31/2012 | $ 92,750 | 0.09% | 3/15/2012 | 45.50 | (16.00) | 29.50 | 0.03 |
| 04/01/2012 to 06/30/2012 | $ 87,750 | 0.09% | 7/5/2012 | 45.50 | 5.00 | 50.50 | 0.04 |
| 07/01/2012 to 09/30/2012 | $ 65,875 | 0.06% | 9/13/2012 | 46.00 | (17.00) | 29.00 | 0.02 |
| 10/01/2012 to 12/31/2012 | $ 62,875 | 0.06% | 12/6/2012 | 46.00 | (25.00) | 21.00 | 0.01 |
| **Total** | **$ 102,963,943** | **100.00%** | | | | | **19.68** |

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## *Withholdings*

**Table 29: Summary of Withholdings Expenses**

| Delivery Period (Pay Period) | Amounts | Weighting Factor % | Payment Date | Service Lead Time | Payment Lead Time | Total Lead Time | Weighted Lead Time |
|---|---|---|---|---|---|---|---|
| 12/18/2011 to 12/31/2011 | $ 2,371,119 | 4.48% | 1/4/2012 | 7.00 | 11.00 | 18.00 | 0.82 |
| 01/01/2012 to 01/14/2012 | $ 2,314,472 | 4.37% | 1/18/2012 | 7.00 | 11.00 | 18.00 | 0.80 |
| 01/15/2012 to 01/28/2012 | $ 2,291,856 | 4.33% | 2/1/2012 | 7.00 | 13.00 | 20.00 | 0.88 |
| 01/29/2012 to 02/11/2012 | $ 2,472,835 | 4.67% | 2/15/2012 | 7.00 | 13.00 | 20.00 | 0.95 |
| 02/12/2012 to 02/25/2012 | $ 2,397,009 | 4.53% | 2/29/2012 | 7.00 | 16.00 | 23.00 | 1.06 |
| 02/26/2012 to 03/10/2012 | $ 2,173,168 | 4.99% | 3/14/2012 | 7.00 | 16.00 | 23.00 | 0.96 |
| 03/11/2012 to 03/24/2012 | $ 2,827,668 | 10.63% | 3/28/2012 | 7.00 | 11.00 | 18.00 | 0.98 |
| 03/25/2012 to 04/07/2012 | $ 1,922,646 | 4.45% | 4/11/2012 | 7.00 | 11.00 | 18.00 | 0.66 |
| 04/08/2012 to 04/21/2012 | $ 2,153,758 | 4.07% | 4/25/2012 | 7.00 | 12.00 | 19.00 | 0.79 |
| 04/22/2012 to 05/05/2012 | $ 2,102,868 | 3.97% | 5/9/2012 | 7.00 | 12.00 | 19.00 | 0.77 |
| 05/06/2012 to 05/19/2012 | $ 1,942,826 | 3.67% | 5/23/2012 | 7.00 | 17.00 | 24.00 | 0.90 |
| 05/20/2012 to 06/02/2012 | $ 1,981,111 | 3.74% | 6/6/2012 | 7.00 | 10.00 | 17.00 | 0.65 |
| 06/03/2012 to 06/16/2012 | $ 1,863,961 | 3.52% | 6/20/2012 | 7.00 | 10.00 | 17.00 | 0.61 |
| 06/17/2012 to 06/30/2012 | $ 1,734,066 | 3.28% | 7/4/2012 | 7.00 | 11.00 | 18.00 | 0.60 |
| 07/01/2012 to 07/14/2012 | $ 1,710,896 | 3.23% | 7/18/2012 | 7.00 | 11.00 | 18.00 | 0.59 |
| 07/15/2012 to 07/28/2012 | $ 1,560,219 | 2.95% | 8/1/2012 | 7.00 | 13.00 | 20.00 | 0.60 |
| 07/29/2012 to 08/11/2012 | $ 1,564,785 | 2.96% | 8/15/2012 | 7.00 | 13.00 | 20.00 | 0.60 |
| 08/12/2012 to 08/25/2012 | $ 1,476,121 | 2.79% | 8/29/2012 | 7.00 | 12.00 | 19.00 | 0.54 |
| 08/26/2012 to 09/08/2012 | $ 1,432,966 | 2.71% | 9/12/2012 | 7.00 | 11.00 | 18.00 | 0.50 |
| 09/09/2012 to 09/22/2012 | $ 1,404,023 | 2.65% | 9/26/2012 | 7.00 | 11.00 | 18.00 | 0.49 |
| 09/23/2012 to 10/06/2012 | $ 1,383,932 | 2.61% | 10/10/2012 | 7.00 | 11.00 | 18.00 | 0.48 |
| 10/07/2012 to 10/20/2012 | $ 1,480,490 | 2.80% | 10/24/2012 | 7.00 | 16.00 | 23.00 | 0.65 |
| 10/21/2012 to 11/03/2012 | $ 1,661,792 | 3.14% | 11/7/2012 | 7.00 | 16.00 | 23.00 | 0.73 |
| 11/04/2012 to 11/17/2012 | $ 1,788,194 | 3.38% | 11/21/2012 | 7.00 | 18.00 | 25.00 | 0.86 |
| 11/18/2012 to 12/01/2012 | $ 1,604,248 | 3.03% | 12/5/2012 | 7.00 | 11.00 | 18.00 | 0.55 |
| 12/02/2012 to 12/15/2012 | $ 1,626,355 | 3.07% | 12/19/2012 | 7.00 | 13.00 | 20.00 | 0.62 |
| **Total** | **$ 52,044,775** | **100.00%** | | | | | **33.58** |

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## *Pensions*

**Table 30: Summary of Pension Expenses**

| Delivery Period | Amounts | Weighting Factor % | Payment Date | Service Lead Time | Payment Lead Time | Total Lead Time | Weighted Lead Time |
|---|---|---|---|---|---|---|---|
| Feb 12 | $ 2,207,160 | 7.41% | 2/28/2012 | 7.00 | 51.49 | 58.49 | 4.33 |
| Mar 12 | $ 2,379,281 | 7.98% | 3/31/2012 | 7.00 | 55.99 | 62.99 | 5.03 |
| Apr 12 | $ 5,293,218 | 17.76% | 4/30/2012 | 7.00 | 46.61 | 53.61 | 9.52 |
| May 12 | $ 2,398,137 | 8.05% | 5/31/2012 | 7.00 | 47.01 | 54.01 | 4.35 |
| Jun 12 | $ 2,397,522 | 8.05% | 6/30/2012 | 7.00 | 49.02 | 56.02 | 4.51 |
| Jul 12 | $ 2,372,761 | 7.96% | 7/31/2012 | 7.00 | 51.94 | 58.94 | 4.69 |
| Aug 12 | $ 2,346,717 | 7.87% | 8/31/2012 | 7.00 | 55.02 | 62.02 | 4.88 |
| Sep 12 | $ 3,505,145 | 11.76% | 9/30/2012 | 7.00 | 50.00 | 57.00 | 6.70 |
| Oct 12 | $ 2,310,456 | 7.75% | 10/31/2012 | 7.00 | 46.04 | 53.04 | 4.11 |
| Nov 12 | $ 2,301,748 | 7.72% | 11/30/2012 | 7.00 | 48.01 | 55.01 | 4.25 |
| Dec 12 | $ 2,288,416 | 7.68% | 12/31/2012 | 7.00 | 51.00 | 58.00 | 4.45 |
| **Total** | **$ 29,800,561** | **100.00%** | | | | | **56.83** |

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## *Group Life Insurance*

**Table 31: Summary of Group Life Insurance Expenses**

| Delivery Period | Amounts | Weighting Factor % | Payment Date | Service Lead Time | Payment Lead Time | Total Lead Time | Weighted Lead Time |
|---|---|---|---|---|---|---|---|
| Jan-12 | $ 225,021 | 8.15% | 1/11/2012 | 15.50 | (20.00) | (4.50) | (0.37) |
| Feb-12 | $ 225,814 | 8.18% | 2/11/2012 | 14.50 | (18.00) | (3.50) | (0.29) |
| Mar-12 | $ 228,422 | 8.28% | 3/11/2012 | 15.50 | (20.00) | (4.50) | (0.37) |
| Apr-12 | $ 243,951 | 8.84% | 4/11/2012 | 15.00 | (19.00) | (4.00) | (0.35) |
| May-12 | $ 246,579 | 8.93% | 5/11/2012 | 15.50 | (20.00) | (4.50) | (0.40) |
| Jun-12 | $ 226,522 | 8.21% | 6/11/2012 | 15.00 | (19.00) | (4.00) | (0.33) |
| Jul-12 | $ 225,714 | 8.18% | 7/11/2012 | 15.50 | (20.00) | (4.50) | (0.37) |
| Aug-12 | $ 226,913 | 8.22% | 8/11/2012 | 15.50 | (20.00) | (4.50) | (0.37) |
| Sep-12 | $ 226,673 | 8.21% | 9/11/2012 | 15.00 | (19.00) | (4.00) | (0.33) |
| Oct-12 | $ 229,313 | 8.31% | 10/11/2012 | 15.50 | (20.00) | (4.50) | (0.37) |
| Nov-12 | $ 228,291 | 8.27% | 11/11/2012 | 15.00 | (19.00) | (4.00) | (0.33) |
| Dec-12 | $ 226,797 | 8.22% | 12/11/2012 | 15.50 | (20.00) | (4.50) | (0.37) |
| **Total** | **$ 2,760,011** | **100.00%** | | | | | **(4.25)** |

## *Group Medical and Dental Claims*

**Table 32: Summary of Group Medical and Dental Claims Expenses**

| Delivery Period | Amounts | Weighting Factor % | Service Lead Time | Payment Lead Time | Total Lead Time | Weighted Lead Time |
|---|---|---|---|---|---|---|
| Jan-12 | $ 1,125,344 | 8.37% | 0.50 | 0.00 | 0.50 | 0.04 |
| Feb-12 | $ 1,052,741 | 7.97% | 0.50 | 0.00 | 0.50 | 0.04 |
| Mar-12 | $ 1,125,344 | 8.76% | 0.50 | 0.00 | 0.50 | 0.04 |
| Apr-12 | $ 1,089,042 | 7.97% | 0.50 | 0.00 | 0.50 | 0.04 |
| May-12 | $ 1,125,344 | 8.76% | 0.50 | 0.00 | 0.50 | 0.04 |
| Jun-12 | $ 1,089,042 | 8.37% | 0.50 | 0.00 | 0.50 | 0.04 |
| Jul-12 | $ 1,125,344 | 8.37% | 0.50 | 0.00 | 0.50 | 0.04 |
| Aug-12 | $ 1,125,344 | 8.76% | 0.50 | 0.00 | 0.50 | 0.04 |
| Sep-12 | $ 1,089,042 | 7.57% | 0.50 | 0.00 | 0.50 | 0.04 |
| Oct-12 | $ 1,125,344 | 8.76% | 0.50 | 0.00 | 0.50 | 0.04 |
| Nov-12 | $ 1,089,042 | 8.76% | 0.50 | 0.00 | 0.50 | 0.04 |
| Dec-12 | $ 1,125,344 | 7.57% | 0.50 | 0.00 | 0.50 | 0.04 |
| **Total** | **$ 13,286,318** | **100.00%** | | | | **0.50** |

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## *Long-term Disability*

**Table 33: Summary of Long-term Disability Expenses**

| Delivery Period | Amounts | Weighting Factor % | Payment Date | Service Lead Time | Payment Lead Time | Total Lead Time | Weighted Lead Time |
|---|---|---|---|---|---|---|---|
| Jan-12 | $ 193,181 | 8.94% | 1/11/2012 | 15.50 | (20.00) | (4.50) | (0.40) |
| Feb-12 | $ 191,492 | 8.86% | 2/11/2012 | 14.50 | (18.00) | (3.50) | (0.31) |
| Mar-12 | $ 190,374 | 8.81% | 3/11/2012 | 15.50 | (20.00) | (4.50) | (0.40) |
| Apr-12 | $ 179,311 | 8.30% | 4/11/2012 | 15.00 | (19.00) | (4.00) | (0.33) |
| May-12 | $ 177,478 | 8.21% | 5/11/2012 | 15.50 | (20.00) | (4.50) | (0.37) |
| Jun-12 | $ 177,478 | 8.21% | 6/11/2012 | 15.00 | (19.00) | (4.00) | (0.33) |
| Jul-12 | $ 176,332 | 8.16% | 7/11/2012 | 15.50 | (20.00) | (4.50) | (0.37) |
| Aug-12 | $ 176,177 | 8.15% | 8/11/2012 | 15.50 | (20.00) | (4.50) | (0.37) |
| Sep-12 | $ 175,007 | 8.10% | 9/11/2012 | 15.00 | (19.00) | (4.00) | (0.32) |
| Oct-12 | $ 174,191 | 8.06% | 10/11/2012 | 15.50 | (20.00) | (4.50) | (0.36) |
| Nov-12 | $ 174,702 | 8.08% | 11/11/2012 | 15.00 | (19.00) | (4.00) | (0.32) |
| Dec-12 | $ 175,247 | 8.11% | 12/11/2012 | 15.50 | (20.00) | (4.50) | (0.36) |
| **Total** | **$ 2,160,971** | **100.00%** | | | | | **(4.25)** |

## *Accidental Death and Dismemberment*

**Table 34: Summary of Accidental Death and Dismemberment Expenses**

| Delivery Period | Amounts | Weighting Factor % | Payment Date | Service Lead Time | Payment Lead Time | Total Lead Time | Weighted Lead Time |
|---|---|---|---|---|---|---|---|
| Jan-12 | $ 2,498 | 8.69% | 1/11/2012 | 15.50 | (20.00) | (4.50) | (0.39) |
| Feb-12 | $ 2,440 | 8.49% | 2/11/2012 | 14.50 | (18.00) | (3.50) | (0.30) |
| Mar-12 | $ 2,324 | 8.08% | 3/11/2012 | 15.50 | (20.00) | (4.50) | (0.36) |
| Apr-12 | $ 2,376 | 8.27% | 4/11/2012 | 15.00 | (19.00) | (4.00) | (0.33) |
| May-12 | $ 2,400 | 8.35% | 5/11/2012 | 15.50 | (20.00) | (4.50) | (0.38) |
| Jun-12 | $ 2,374 | 8.26% | 6/11/2012 | 15.00 | (19.00) | (4.00) | (0.33) |
| Jul-12 | $ 2,506 | 8.72% | 7/11/2012 | 15.50 | (20.00) | (4.50) | (0.39) |
| Aug-12 | $ 2,356 | 8.20% | 8/11/2012 | 15.50 | (20.00) | (4.50) | (0.37) |
| Sep-12 | $ 2,554 | 8.89% | 9/11/2012 | 15.00 | (19.00) | (4.00) | (0.36) |
| Oct-12 | $ 2,302 | 8.01% | 10/11/2012 | 15.50 | (20.00) | (4.50) | (0.36) |
| Nov-12 | $ 2,305 | 8.02% | 11/11/2012 | 15.00 | (19.00) | (4.00) | (0.32) |
| Dec-12 | $ 2,310 | 8.04% | 12/11/2012 | 15.50 | (20.00) | (4.50) | (0.36) |
| **Total** | **$ 28,747** | **100.00%** | | | | | **(4.25)** |

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## *Employee Assistance Program*

**Table 35: Summary of Employee Assistance Program Expenses**

| Delivery Period | Amounts | Weighting Factor % | Payment Date | Service Lead Time | Payment Lead Time | Total Lead Time | Weighted Lead Time |
|---|---|---|---|---|---|---|---|
| Jan-12 | $ - | 0.00% | 1/11/2012 | 15.50 | (20.00) | (4.50) | 0.00 |
| Feb-12 | $ 23,403 | 19.69% | 2/11/2012 | 14.50 | (18.00) | (3.50) | (0.69) |
| Mar-12 | $ - | 0.00% | 3/11/2012 | 15.50 | (20.00) | (4.50) | 0.00 |
| Apr-12 | $ 17,756 | 14.94% | 4/11/2012 | 15.00 | (19.00) | (4.00) | (0.60) |
| May-12 | $ - | 0.00% | 5/11/2012 | 15.50 | (20.00) | (4.50) | 0.00 |
| Jun-12 | $ 17,755 | 14.94% | 6/11/2012 | 15.00 | (19.00) | (4.00) | (0.60) |
| Jul-12 | $ - | 0.00% | 7/11/2012 | 15.50 | (20.00) | (4.50) | 0.00 |
| Aug-12 | $ 19,328 | 16.26% | 8/11/2012 | 15.50 | (20.00) | (4.50) | (0.73) |
| Sep-12 | $ 5,932 | 4.99% | 9/11/2012 | 15.00 | (19.00) | (4.00) | (0.20) |
| Oct-12 | $ 19,234 | 16.18% | 10/11/2012 | 15.50 | (20.00) | (4.50) | (0.73) |
| Nov-12 | $ 7,178 | 6.04% | 11/11/2012 | 15.00 | (19.00) | (4.00) | (0.24) |
| Dec-12 | $ 8,284 | 6.97% | 12/11/2012 | 15.50 | (20.00) | (4.50) | (0.31) |
| **Total** | **$ 118,870** | **100.00%** | | | | | **(4.10)** |

## *EHT*

**Table 36: Summary of EHT Expenses**

| Delivery Period | Amounts | Weighting Factor % | Payment Date | Service Lead Time | Payment Lead Time | Total Lead Time | Weighted Lead Time |
|---|---|---|---|---|---|---|---|
| Dec-11 | $ 256,358 | 8.09% | 2/15/2012 | 7.00 | 39.05 | 46.05 | 3.73 |
| Jan-12 | $ 258,387 | 8.16% | 3/15/2012 | 7.00 | 39.91 | 46.91 | 3.83 |
| Feb-12 | $ 257,282 | 8.12% | 4/16/2012 | 7.00 | 43.94 | 50.94 | 4.14 |
| Mar-12 | $ 387,857 | 12.24% | 4/16/2012 | 7.00 | 27.85 | 34.85 | 4.27 |
| Apr-12 | $ 251,921 | 7.95% | 5/15/2012 | 7.00 | 32.48 | 39.48 | 3.14 |
| May-12 | $ 249,372 | 7.87% | 6/15/2012 | 7.00 | 35.60 | 42.60 | 3.35 |
| Jun-12 | $ 248,825 | 7.86% | 7/16/2012 | 7.00 | 37.95 | 44.95 | 3.53 |
| Jul-12 | $ 250,312 | 7.90% | 8/15/2012 | 7.00 | 41.41 | 48.41 | 3.83 |
| Aug-12 | $ 246,973 | 7.80% | 9/17/2012 | 7.00 | 30.03 | 37.03 | 2.89 |
| Sep-12 | $ 243,255 | 7.68% | 10/15/2012 | 7.00 | 30.03 | 37.03 | 2.84 |
| Oct-12 | $ 245,346 | 7.75% | 11/15/2012 | 7.00 | 32.87 | 39.87 | 3.09 |
| Nov-12 | $ 271,737 | 8.58% | 12/17/2012 | 7.00 | 36.86 | 43.86 | 3.76 |
| **Total** | **$ 3,167,626** | **100.00%** | | | | | **42.39** |

NAVIGANT

## *WSIB*

**Table 37: Summary of WSIB Expenses**

| Delivery Period | Amounts | Weighting Factor % | Payment Date | Service Lead Time | Payment Lead Time | Total Lead Time | Weighted Lead Time |
|---|---|---|---|---|---|---|---|
| Jan-12 | $ 138,266 | 9.23% | 2/28/2012 | 14.00 | 45.00 | 59.00 | 5.45 |
| Feb-12 | $ 139,473 | 9.31% | 3/31/2012 | 14.00 | 49.00 | 63.00 | 5.87 |
| Mar-12 | $ 270,991 | 18.09% | 4/30/2012 | 21.00 | 37.00 | 58.00 | 10.49 |
| Apr-12 | $ 132,178 | 8.82% | 5/31/2012 | 14.00 | 40.00 | 54.00 | 4.76 |
| May-12 | $ 129,906 | 8.67% | 6/30/2012 | 14.00 | 42.00 | 56.00 | 4.86 |
| Jun-12 | $ 129,136 | 8.62% | 7/31/2012 | 14.00 | 45.00 | 59.00 | 5.09 |
| Jul-12 | $ 123,585 | 8.25% | 8/31/2012 | 14.00 | 48.00 | 62.00 | 5.11 |
| Aug-12 | $ 165,653 | 11.06% | 9/30/2012 | 21.00 | 36.00 | 57.00 | 6.30 |
| Sep-12 | $ 91,769 | 6.13% | 10/31/2012 | 14.00 | 39.00 | 53.00 | 3.25 |
| Oct-12 | $ 77,282 | 5.16% | 11/30/2012 | 14.00 | 41.00 | 55.00 | 2.84 |
| Nov-12 | $ 59,741 | 3.99% | 12/31/2012 | 14.00 | 44.00 | 58.00 | 2.31 |
| Dec-12 | $ 40,083 | 2.68% | 1/31/2013 | 14.00 | 47.00 | 61.00 | 1.63 |
| **Total** | **$ 1,498,062** | **100.00%** | | | | | **57.96** |

## *PILs Property Tax*

**Table 38: Summary of PILs Property Tax Expenses**

| Delivery Period | Amounts | Weighting Factor % | Payment Date | Service Lead Time | Payment Lead Time | Total Lead Time | Weighted Lead Time |
|---|---|---|---|---|---|---|---|
| 2012 | $ 36,310 | 67.43% | 4/16/2012 | 183.00 | (258.00) | (75.00) | (50.57) |
| 2012 | $ 17,541 | 32.57% | 10/16/2012 | 183.00 | (75.00) | 108.00 | 35.18 |
| **Total** | **$ 53,851** | **100.00%** | | | | | **(15.39)** |

## *Property Tax*

**Table 39: Summary of Property Tax Expenses**

| Delivery Period | Amounts | Weighting Factor % | Payment Date | Service Lead Time | Payment Lead Time | Total Lead Time | Weighted Lead Time |
|---|---|---|---|---|---|---|---|
| 2012 | $ 1,064,974 | 16.53% | 3/1/2012 | 183.00 | (304.00) | (121.00) | (20.01) |
| 2012 | $ 1,064,869 | 16.53% | 4/2/2012 | 183.00 | (272.00) | (89.00) | (14.71) |
| 2012 | $ 1,064,792 | 16.53% | 5/1/2012 | 183.00 | (243.00) | (60.00) | (9.92) |
| 2012 | $ 1,082,192 | 16.80% | 7/3/2012 | 183.00 | (180.00) | 3.00 | 0.50 |
| 2012 | $ 1,082,063 | 16.80% | 8/1/2012 | 183.00 | (151.00) | 32.00 | 5.38 |
| 2012 | $ 1,081,952 | 16.80% | 9/4/2012 | 183.00 | (117.00) | 66.00 | 11.09 |
| **Total** | **$ 6,440,842** | **100.00%** | | | | | **(27.67)** |

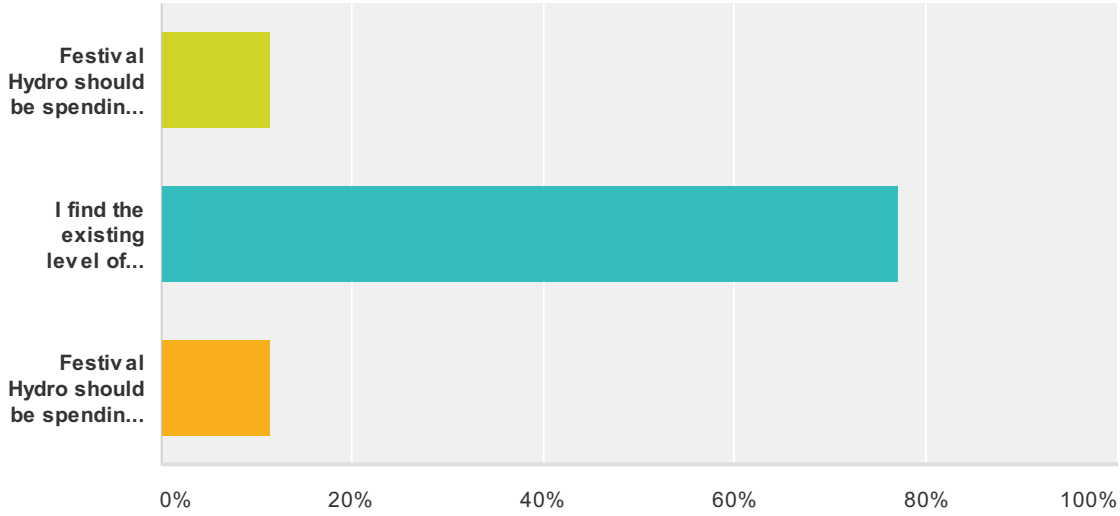
# SUMMARY OF NET CAPITAL ADDITIONS CLOSED TO RATE BASE

| YEAR | OLD CGAAP | NEW CGAPP | ADJUSTMENTS | NORMALIZED ADDITIONS |
|---|---|---|---|---|
| 2010 | 2,707,301 | | | 2,707,301 |
| 2011 | 2,952,336 | | | 2,952,336 |
| 2012 | 6,710,201 | | 3,634,589 | 3,075,612 |
| 2013 | 5,208,765 | 4,957,247 | 1,710,026 | 3,247,221 |
| 2014 | 2,790,817 | 2,623,001 | | 2,623,001 |
| 2015 | | 17,783,282 | 15,311,782 | 2,471,500 |
| 2016 | | 2,462,000 | | 2,462,000 |
| 2017 | | 2,895,000 | | 2,895,000 |
| 2018 | | 2,549,000 | | 2,549,000 |
| 2019 | | 2,554,500 | | 2,554,500 |

**2010-2015 - Ex. 2, Tab 1, Sch. 1, Atta 1, Appendix 2-BA**
**2016-2019 - Ex. 2, Tab 2, Sch. 1, Apppendix 2-AB**
**2012 - ADJUSTMENT - SMART METERS - Ex. 2, Tab 1, Sch. 1, Att. 1, Appendix 2-BA**
**2013 ADJUSTMENT - CCRA & BYPASS - Ex. 2, Tab 1, Sch. 1, page 12 & Ex. 2, Tab 1, Sch. 1, Att. 1, Appendix 2-BA**
**2015 ADJUSTMENT - TS - Ex. 2, Tab 1, Sch. 1, page 2**

## Q1 We understand that a reliable supply of electricity is important to our customers, and the primary focus of our construction and maintenance work is maintaining or improving the reliability of our system. However, we recognize that customers are also concerned about rising electricity prices. With this in mind, please select a statement that best represents your view.

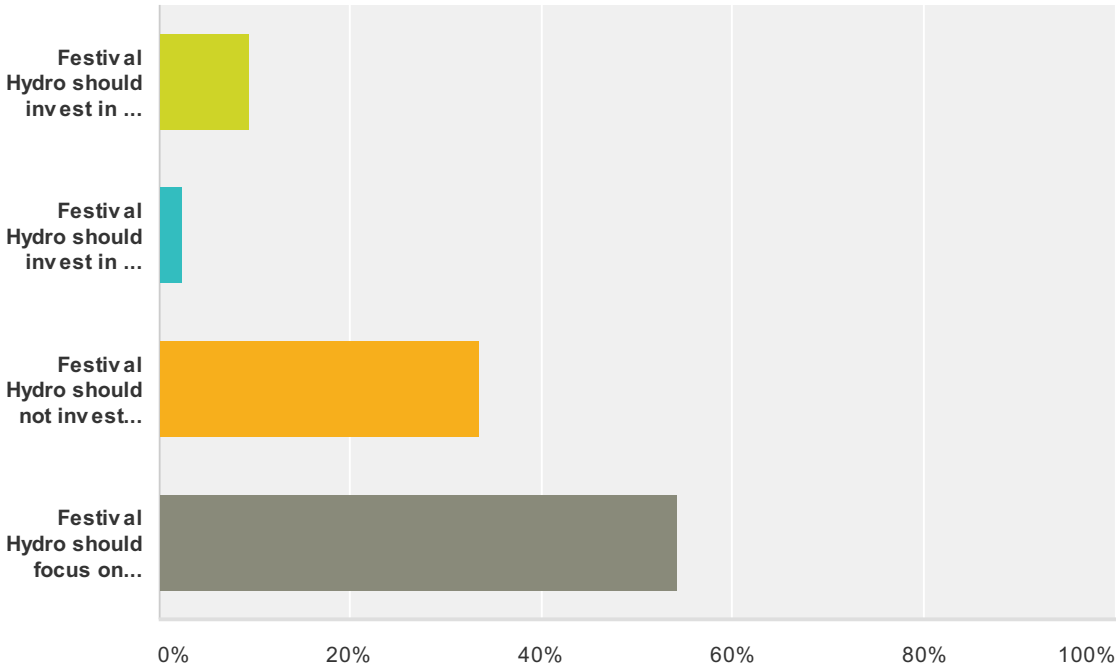
Answered: 470 Skipped: 0




| Answer Choices | Responses |
|---|---|
| Festival Hydro should be spending more to decrease the frequency and duration of outages and I understand this will increase my monthly hydro bill. | 11.49% 54 |
| I find the existing level of reliability is acceptable. | 77.02% 362 |
| Festival Hydro should be spending less and I would be willing to tolerate increased outages if it meant a decrease in my monthly hydro bill. | 11.49% 54 |
| **Total** | **470** |

## Q2 Outages happen and when they do, it is important for our customers to know when the power is coming back on. Today, the only way to find this out is to call our office. Some utilities have developed interactive web sites that showcase outage areas and expected restoration times. For Festival Hydro to develop a similar website would require an increase to monthly hydro bills. With this in mind, please select a statement that best represents your view.

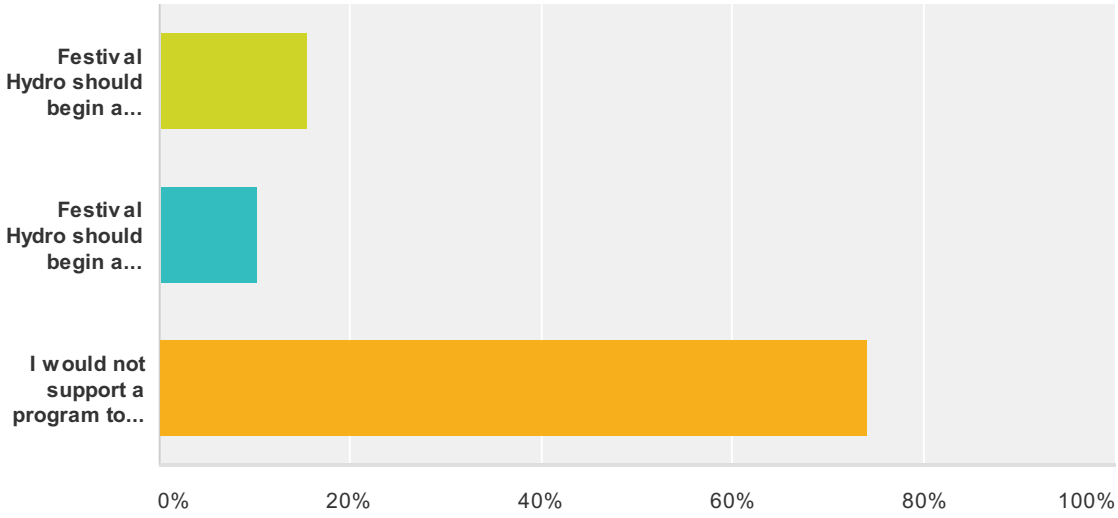
Answered: 470 Skipped: 0




| Answer Choices | Responses |
|---|---|
| Festival Hydro should invest in a web-based, outage map and increase my monthly hydro bill up $0.50 to have this application available. | 9.57% 45 |
| Festival Hydro should invest in a web-based, outage map and increase my monthly hydro bill up $1.00 to have this application available. | 2.55% 12 |
| Festival Hydro should not invest in a web-based, outage map. | 33.62% 158 |
| Festival Hydro should focus on system improvements that decrease the frequency and duration of outages rather than develop a web-based, outage map. | 54.26% 255 |
| **Total** | **470** |

## Q3 Converting existing overhead power lines to underground is expensive (between 4 times and 10 times the cost) and underground lines need to be replaced much sooner resulting in higher future costs. Aside from an improved appearance, burying hydro lines will decrease the number of outages, but when an outage does occur, it takes longer to repair. With this in mind, please select a statement that best represents your view.

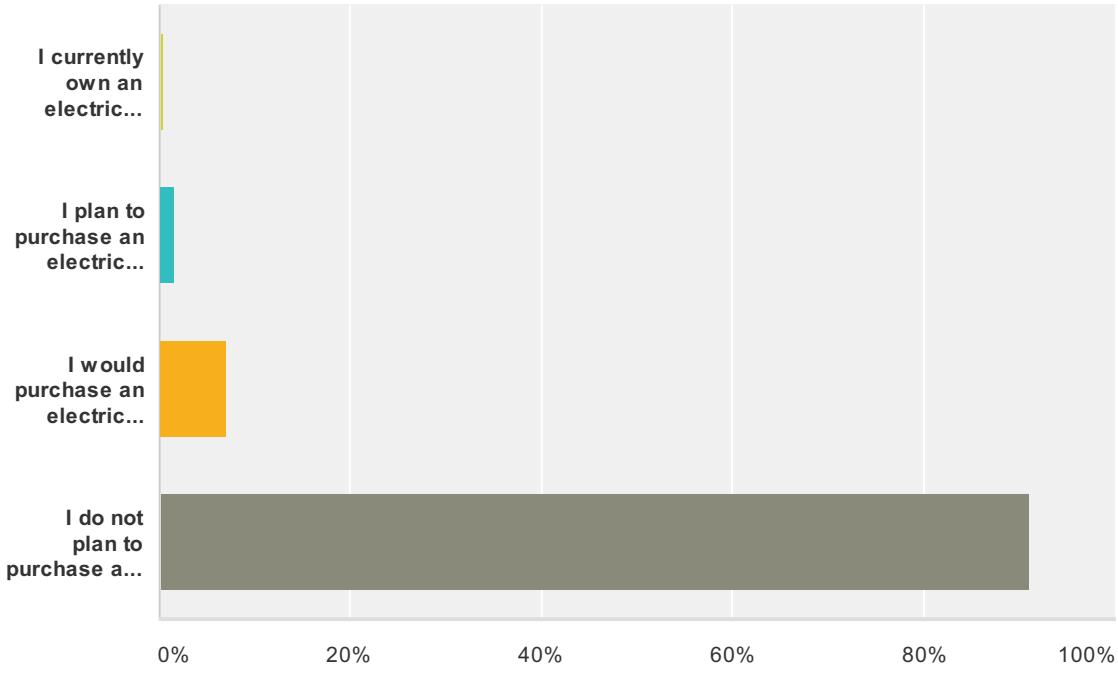
Answered: 456 Skipped: 14




| Answer Choices | Responses |
|---|---|
| Festival Hydro should begin a program to start burying hydro lines in residential areas and I would consider an increase in my monthly hydro bill of up $1.00 to be reasonable to begin this program. | 15.57% 71 |
| Festival Hydro should begin a program to start burying hydro lines on major streets and I would consider an increase in my monthly hydro bill of up $1.00 to be reasonable to begin this program. | 10.31% 47 |
| I would not support a program to start burying hydro lines if it means an increase to my monthly hydro bill. | 74.12% 338 |
| **Total** | **456** |

## Q4 The charging of electric vehicles could add additional strain to the distribution system. Festival Hydro would like to know whether our customers already have or are considering purchasing an electric vehicle (fully electric or plug-in hybrid). Please select a statement that best represents you.

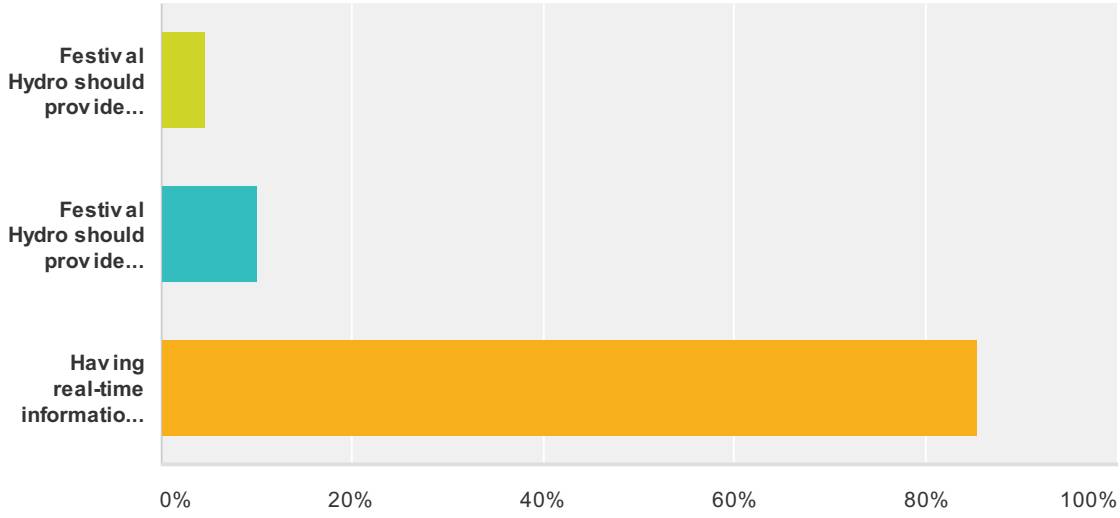
Answered: 456 Skipped: 14




| Answer Choices | Responses | |
|---|---|---|
| I currently own an electric vehicle. | **0.44%** | 2 |
| I plan to purchase an electric vehicle within the next five years. | **1.75%** | 8 |
| I would purchase an electric vehicle within the next five years if the price difference decreases to less than $3,000. | **7.02%** | 32 |
| I do not plan to purchase an electric vehicle within the next five years. | **90.79%** | 414 |
| **Total** | | **456** |

## Q5 One of the possible enhancements that can be made to the smart meter system is to provide customers with real-time information regarding their electricity usage and current pricing. This could be provided via a website, smart phone application, or in-home display. With this in mind, please select a statement that best represents your view. Festival Hydro should provide real time information about electricity usage and price through a secure website and I would accept an increase in my monthly hydro bill of up $1.00 to have this available to me.

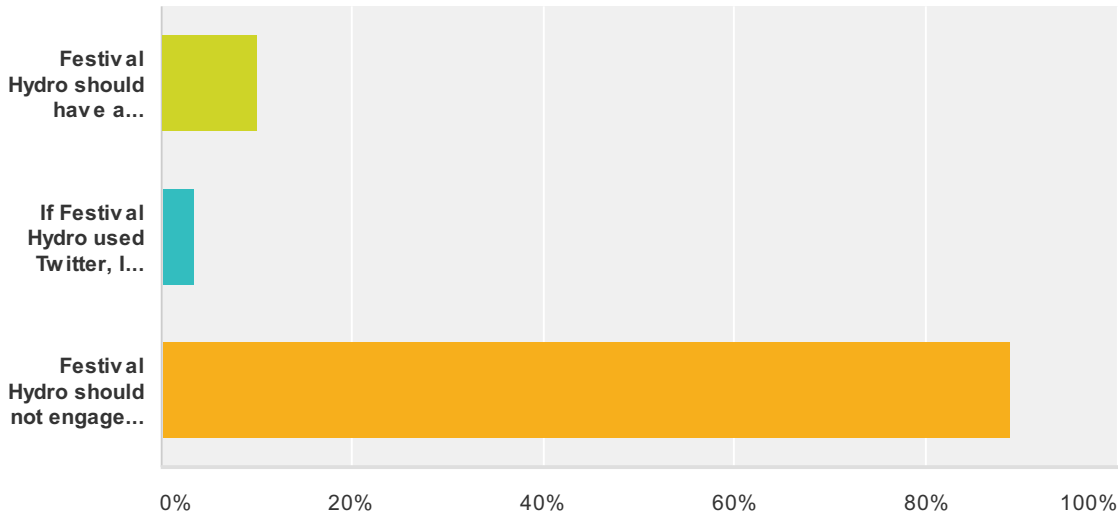
Answered: 456 Skipped: 14




| Answer Choices | Responses |
|---|---|
| Festival Hydro should provide real-time information about electricity usage and price through a smart phone application and I would accept an increase in my monthly hydro bill of up $1.00 to have this available to me. | 4.61% 21 |
| Festival Hydro should provide real-time information about electricity usage and price through an in-home display and I would accept an increase in my monthly hydro bill of up $1.00 to have this available to me. | 10.09% 46 |
| Having real-time information about my electricity usage and price is not worth increasing my monthly hydro bill by $1.00. | 85.31% 389 |
| **Total** | **456** |

## Q6 Some utilities have started using social media – Facebook and Twitter – to connect with their customers, providing them information about outages, electricity pricing, and conservation tips. To be effective with social media would require additional resources, especially for addressing outages outside of normal business hours. Alternatively, Festival Hydro could use existing staff to be involved with social media but this would mean less frequent updates and few, if any, after normal business hours. With this in mind, please select ALL of the following statements that best represent your view.

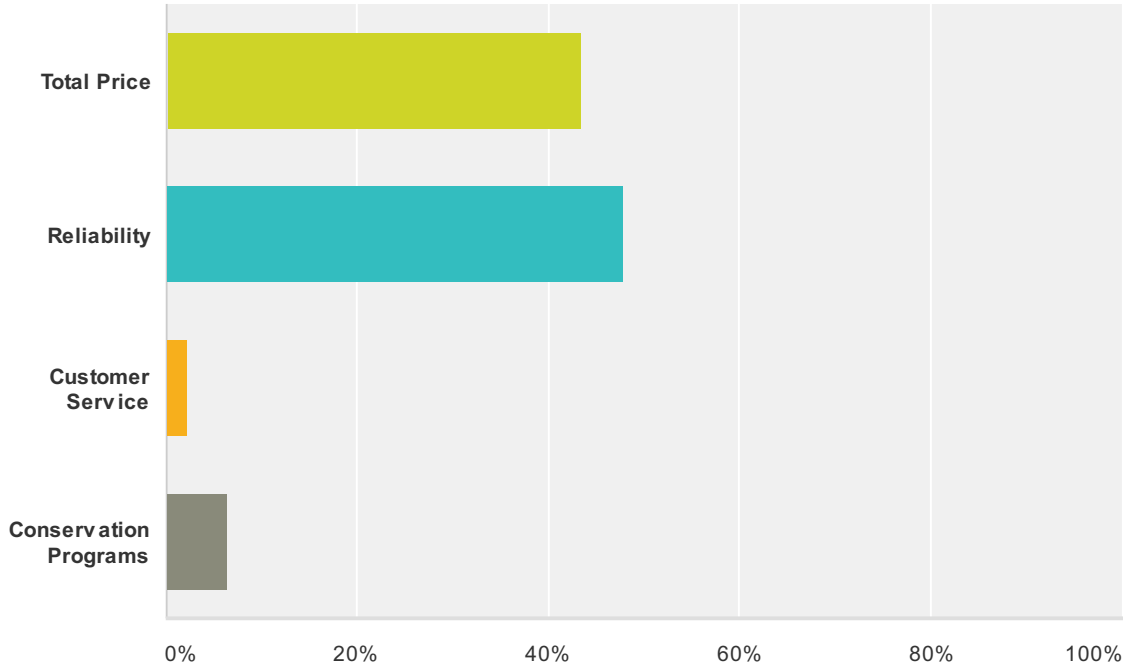
Answered: 454 Skipped: 16




| Answer Choices | Responses |
|---|---|
| Festival Hydro should have a Facebook page, and I would accept an increase in my monthly hydro bill of up $0.10 to have this available to me. | 10.13% 46 |
| If Festival Hydro used Twitter, I would follow and accept an increase in my monthly hydro bill of up $0.10 to have this available to me. | 3.52% 16 |
| Festival Hydro should not engage in social media if it means an increase in my monthly hydro bill. | 88.77% 403 |
| **Total Respondents: 454** | |

## Q9 What is the most important aspect of your electricity supply? (Select one)

Answered: 447 Skipped: 23




| Answer Choices | Responses | |
|---|---|---|
| Total Price | **43.40%** | 194 |
| Reliability | **47.87%** | 214 |
| Customer Service | **2.24%** | 10 |
| Conservation Programs | **6.49%** | 29 |
| **Total** | | **447** |

*At the second reference it is stated in part that:*

*The main drivers for distribution meters are failure and mandated service obligations. This value takes into account historical growth rates and potential meter replacements as part of non-warranty smart meter failures. Festival Hydro smart meters have experienced a failure rate of 7.5% per year since their installation in 2011. These failures are for the most part still being covered by Trilliant outside of the warranty period, but it is unclear how long this may continue. Given the uncertainty of warranty coverage FHI is budgeting 26% of its metering budget to the replacement of failed smart meters.*

*a) Please indicate whether or not FHI received any warranty from Trilliant for the Smart Meters? If not, please elaborate as the reasons for not receiving such a warranty.*
*b) Is the failure rate of 7.5% per year in the range experienced by other Distributors?*
*c) Please provide the number of Smart Meter failures from January 1, 2014 to present date? Please indicate whether or not Trilliant charged FHI for the cost of replacing these Smart Meters.*
*d) What is the total number of smart meters installed by FHI in 2011, and what is the installed cost per meter, broken to (Meter & Material) and labour.*

### *Response:*

a) Trilliant provided a one year warranty on defective meters. The warranty only covers the replacement of the meter and does not cover the labour or shipping costs associated with a warranty exchange.

b) FHI cannot speak to the failure rates for all other distributors, but based on some discussions had with some distributors the current Trilliant failure rate seems to exceed the expected industry failure rate.

c) From Jan 1 2014 to present there have been 600 meter failures. Trilliant has covered the cost of repair of all but 19 meters. (again Trilliant only covers the meter costs)

d) There were 104 meters installed by FHI in 2011. Meter costs were $40,275 and labour costs were $7,226. The equals a per meter cost of $387 and an installation cost of $69.

## ***48.*** 2. OEB STAFF 25

### Ref: E2/T2/S1/Att. 1/p. 68 & Appendix 4/p. 15; E2/T2/S1/Att. 1/Appendix 2 "Customer Consultation Results"/Question 4 and Report of the Board, Supplementary Report on Smart Grid, February 11, 2013 (EB-2011-0004) – 5.4.5.2 Material Investments – Electric Vehicle

*At the first reference under "Vehicles and Trailers", it is indicated that introducing an electric vehicle, within FHI's fleet would allow for assessment of the impact on the electrical system; and potential operational efficiencies gained through hybrid technology. On page 15 of Appendix 4, Festival Hydro shows that the cost of the electric vehicle is $70,000.*

*In the second reference, at Appendix 2, respondents to Question 4 in regard to their intentions to purchase either a fully electric or plug-in hybrid in the next five years indicated that: 90.79% do not intend to purchase an electric vehicle in the next 5 years; 7.02% would purchase in the next five years if the price difference decreases to less than $3,000; 1.75% would buy within the next five years; and 0.44% currently own an electric vehicle.*

*At page 14 of the third reference, it is indicated that:*

- *Following Board approval, some distributors have already undertaken pilot and demonstration projects related to adaptive infrastructure, including electric vehicle charging. `*
- *The Board expects that distributors will report on the outcomes and learning from these pilots for the benefit all regulated entities. This expectation is consistent with the Board's policies (e.g., Filing Requirements: Distribution System Plans), which emphasize the need to avoid duplication of efforts in testing out and learning about new technologies.*

*a) Please provide the analysis used in support of the decision to purchase the $70,000 electric vehicle. In providing the analysis, please include the original cost of the vehicle, the estimated energy cost (gas and electricity as appropriate), maintenance cost over the expected useful life of the vehicles, insurance cost including contingencies for the electric vehicle's battery in case of failure past the warranty period.*

*b) Given the low response of the respondents in regard to their intent to purchase electric vehicles outlined in the second reference, please indicate whether FHI communicated with other distributors in Ontario regarding any projects in progress that may be similar to what it plans to learn from its electric vehicle purchase, so duplications can be averted? If so, please provide description of such projects.*

*c) If FHI did not communicate with other distributors in Ontario as outlined in 2) above, please indicate what steps FHI would take to address the potential duplication of its project.*

*d) Does Festival plan to put any corporate branding on the vehicle and to promote it as a clean/zero tailpipe emissions vehicle? If so, please explain whether the shareholder will bear a portion of the vehicle's costs given its marketing benefits.*

## *Response:*

a) An analysis has not yet been completed for the purchase of an electric vehicle. This analysis will be completed before the purchase (2015). The main reason for the purchase of the electric vehicle is to see the impact within FHI distribution system. Its ability to act as a fleet vehicle provides a secondary benefit. The total cost of the vehicle has been estimated based on costs determined online. When FHI goes out for competitive quote it is quite possible that the total cost of the electric vehicle may not be material.

b) Before the purchase of an electric vehicle, FHI will speak with some other distributors to gain insight on their programs to ensure our efforts are not being duplicated. Although Stratford residents have responded that only a few plan to purchase an electric vehicle, the City of Stratford is unique in that over 600,000 tourists per year visit Stratford's Shakespearean Festival. It's this influx in population with the potential of electric vehicles that FHI is trying to understand. The impact of charging electric vehicles in commercial locations (hotels, restaurants, shopping areas, bed & breakfasts) will be of primary concern, rather than customers charging electric vehicles at home.

c) Refer to B

d) Unknown at this time, but it's not expected for the shareholder to share in any costs.

## *49.* 2. OEB STAFF 26

### Ref: E2/T2/S1/Att. 3 – OEB Appendix 2-AA; E2/T2/S1/Att. 1/p. 69 and E2/T2/S1/Att. 1, Appendix 1; Asset Management Plan/Appendix 14/p. 6 – 5.4.5.2 Material Investments – GIS Development Plans

*At the first reference, the "Capital Projects Table" shows an investment in 2015 of $245,000 against Computer Equipment.*

*At page 69 of the second reference, it indicates that in Appendix 14 of the Asset Management Plan "Computer Equipment" is made of a number of small projects – none of which exceed materiality threshold.*

*At page 6 of the third reference, under "GIS system phase 1" it is indicates that:*

- *Festival Hydro does not currently have a GIS to track assets and their status in the field*
- *This phase 1 would Cost: $30,000 (For the RFP phase of this project)*
- *Risks if not completed is Loss of GIS data, work planned based on inconsistent information, prevention of intelligent OMS system build.*

*a) Please clarify the full name for the abbreviated "OMS system", and also provide:*
*i.) description of its current status, what functions that OMS system currently performs,*
*ii.) description of any future enhancements, costs of such enhancements and year of expected implementation.*

*b) As a Geographic Information System (GIS) system is one of the important tools for a Distributor's Asset Management System, please provide details of all the phases for the proposed GIS outlining for each phase its cost, year of completion and expected achievements*

*c) Please also indicate whether FHI intends to include in its proposed GIS, all asset groups such as Poles, Distribution Transformers (Overhead, Underground and Pad Mounted Transformers), Switchgear (Overhead Line Switches and Pad-Mounted), and Underground Cables.*

### *Response:*

a)

i. OMS stands for "Outage Management System". At its core an OMS system helps utilities identify the cause of outages. This would allow for quicker response and restoration in outage situation. An OMS can also help communicate outage conditions to customers in an automated fashion.

ii. Currently FHI does not have and has not priced out an OMS solution (which is usually dependent on the GIS system).

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **Total PP&E** | **$ 85,296,155** | **$ 5,208,765** | **-$ 51,193** | **$ 90,453,727** | **-$ 49,899,309** | **-$ 3,102,887** | **$ 30,930** | **-$ 52,971,266** | **$ 37,482,461** |

| | | |
|---|---|---|
| 10 | | Transportation |
| 8 | | Stores Equipment |

**Less:** *Fully Allocated Depreciation*
Transportation
Stores Equipment
**Net Depreciation** -$ 3,102,887

**Appendix 2-BA**
**Fixed Asset Continuity Schedule - CGAAP/ASPE/USGAAP**
**Year 2013-new capitalization/depreciation policies**

| | | | Cost | | | | Accumulated Depreciation | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **CCA Class** | **OEB** | **Description** | **Opening Balance** | **Additions** | **Disposals** | **Closing Balance** | **Opening Balance** | **Additions** | **Disposals** | **Closing Balance** | **Net Book Value** |
| 12 | 1611 | Computer Software (Formally known as Account 1925) | $ 723,669 | $ 92,110 | $ - | $ 815,779 | -$ 565,560 | -$ 63,112 | $ - | -$ 628,672 | $ 187,107 |
| N/A | 1805 | Land | $ 1,239,823 | $ 12,379 | -$ 913,474 | $ 338,728 | $ - | $ - | $ - | $ - | $ 338,728 |
| 47 | 1808 | Buildings | $ 1,672,115 | $ - | $ - | $ 1,672,115 | -$ 1,074,568 | -$ 27,359 | $ - | -$ 1,101,927 | $ 570,188 |
| 47 | 1820 | Distribution Station Equipment <50 kV | $ 1,745,896 | $ - | $ - | $ 1,745,896 | -$ 1,446,935 | -$ 44,163 | $ - | -$ 1,491,098 | $ 254,797 |
| 47 | 1830 | Poles, Towers & Fixtures | $ 16,325,290 | $ 764,979 | $ - | $ 17,090,269 | -$ 7,519,076 | -$ 232,475 | $ - | -$ 7,751,551 | $ 9,338,718 |
| 47 | 1835 | Overhead Conductors & Devices | $ 10,097,497 | $ 508,752 | $ - | $ 10,606,249 | -$ 4,474,844 | -$ 102,702 | $ - | -$ 4,577,546 | $ 6,028,703 |
| 47 | 1840 | Underground Conduit | $ 8,997,403 | $ 234,213 | $ - | $ 9,231,616 | -$ 5,440,978 | -$ 88,365 | $ - | -$ 5,529,343 | $ 3,702,273 |
| 47 | 1845 | Underground Conductors & Devices | $ 16,723,463 | $ 949,195 | $ - | $ 17,672,658 | -$ 11,263,780 | -$ 488,604 | $ - | -$ 11,752,384 | $ 5,920,274 |
| 47 | 1850 | Line Transformers | $ 14,130,137 | $ 306,739 | $ - | $ 14,436,876 | -$ 8,764,245 | -$ 192,731 | $ - | -$ 8,956,976 | $ 5,479,900 |
| 47 | 1855 | Services | $ 4,577,474 | $ 103,580 | $ - | $ 4,681,054 | -$ 2,671,587 | -$ 63,749 | $ - | -$ 2,735,336 | $ 1,945,718 |
| 47 | 1860 | Meters | $ 7,521,031 | $ 91,274 | $ - | $ 7,612,305 | -$ 3,176,768 | -$ 569,662 | $ - | -$ 3,746,430 | $ 3,865,875 |
| | 1890 | Major Spare parts | $ 489,209 | $ - | -$ 20,263 | $ 468,946 | $ - | $ - | $ - | $ - | $ 468,946 |
| | 1905 | Land | $ 17,041 | $ - | $ - | $ 17,041 | -$ 17,041 | $ - | $ - | -$ 17,041 | $ - |
| 47 | 1908 | Buildings & Fixtures | $ 539,278 | $ 45,708 | $ - | $ 584,986 | -$ 102,209 | -$ 68,053 | $ - | -$ 170,262 | $ 414,724 |
| 13 | 1910 | Leasehold Improvements | $ 21,798 | $ - | | $ 21,798 | -$ 21,798 | $ - | $ - | -$ 21,798 | $ - |
| 8 | 1915 | Office Furniture & Equipment (10 years) | $ 381,569 | $ 3,684 | $ - | $ 385,253 | -$ 343,300 | -$ 7,866 | $ - | -$ 351,166 | $ 34,087 |
| 10 | 1920 | Computer Equipment - Hardware | $ 540,191 | $ - | $ - | $ 540,191 | -$ 540,191 | $ - | $ - | -$ 540,191 | $ - |
| 45 | 1920 | Computer Equip.-Hardware(Post Mar. 22/04) | $ 75,674 | $ - | $ - | $ 75,674 | -$ 75,674 | $ - | $ - | -$ 75,674 | $ - |
| 45.1 | 1920 | Computer Equip.-Hardware(Post Mar. 19/07) | $ 484,082 | $ 210,756 | $ - | $ 694,838 | -$ 360,829 | -$ 64,302 | $ - | -$ 425,131 | $ 269,707 |
| 10 | 1930 | Transportation Equipment | $ 3,056,370 | $ 32,154 | -$ 30,930 | $ 3,057,594 | -$ 2,072,729 | -$ 112,230 | $ 30,930 | -$ 2,154,029 | $ 903,565 |
| 8 | 1935 | Stores Equipment | $ 36,199 | $ - | $ - | $ 36,199 | -$ 36,199 | $ - | $ - | -$ 36,199 | $ - |
| 8 | 1940 | Tools, Shop & Garage Equipment | $ 805,781 | $ 20,797 | $ - | $ 826,578 | -$ 664,501 | -$ 29,740 | $ - | -$ 694,241 | $ 132,337 |
| 8 | 1945 | Measurement & Testing Equipment | $ 39,170 | $ - | | $ 39,170 | -$ 26,291 | -$ 3,220 | $ - | -$ 29,511 | $ 9,659 |
| 8 | 1955 | Communications Equipment | $ 106,528 | $ - | $ - | $ 106,528 | -$ 105,866 | -$ 295 | $ - | -$ 106,161 | $ 367 |
| 8 | 1960 | Miscellaneous Equipment | $ 7,842 | $ - | $ - | $ 7,842 | -$ 3,921 | -$ 784 | $ - | -$ 4,705 | $ 3,137 |
| 47 | 1970 | Load Management Controls Customer Premises | $ 245,119 | $ - | $ - | $ 245,119 | -$ 176,672 | -$ 24,698 | $ - | -$ 201,370 | $ 43,749 |
| 47 | 1980 | System Supervisor Equipment | $ 353,504 | $ 23,847 | $ - | $ 377,351 | -$ 253,228 | -$ 9,356 | $ - | -$ 262,584 | $ 114,767 |
| 47 | 1995 | Contributions & Grants | -$ 4,747,715 | -$ 148,758 | $ - | -$ 4,896,473 | $ 1,299,487 | $ 97,408 | $ - | $ 1,396,895 | -$ 3,499,578 |
| 14 | 1609 | Intangible assets | $ 535,630 | | -$ 535,630 | $ - | $ - | | | $ - | $ - |
| 14 | 1609 | Intangible assets | $ - | $ 1,710,026 | | $ 1,710,026 | $ - | -$ 18,278 | | -$ 18,278 | $ 1,691,748 |
| 43.2 | 2075 | Non-utility property owned under capital lease | $ 294,688 | | $ - | $ 294,688 | -$ 22,102 | -$ 14,863 | $ - | -$ 36,965 | $ 257,724 |
| 47 | 2055 | Construction work in progress | $ 8,113,559 | $ - | -$ 8,113,559 | $ - | $ - | $ - | $ - | $ - | $ - |
| | | **Sub-Total** | **$ 95,149,318** | **$ 4,961,435** | **-$ 9,613,856** | **$ 90,496,896** | **-$ 49,921,407** | **-$ 2,129,199** | **$ 30,930** | **-$ 52,019,676** | **$ 38,477,220** |
| | | **Less Socialized Renewable Energy Generation Investments (input as negative)** | | | | $ - | | | | $ - | $ - |
| | | ***Less Other Non Rate-Regulated Utility Assets (input as negative)*** | -$ 9,853,163 | -4188 | $ 9,562,663 | -$ 294,688 | $ 22,102 | $ 14,863 | | $ 36,965 | -$ 257,724 |
| | | **Total PP&E** | **$ 85,296,154** | **$ 4,957,247** | **-$ 51,193** | **$ 90,202,208** | **-$ 49,899,305** | **-$ 2,114,336** | **$ 30,930** | **-$ 52,982,711** | **$ 38,219,497** |

| | | |
|---|---|---|
| 10 | | Transportation |
| 8 | | Stores Equipment |

**Less:** *Fully Allocated Depreciation*
Transportation -$ 146,269
Stores Equipment
**Net Depreciation** -$ 1,968,067

**Appendix 2-BA**
**Fixed Asset Continuity Schedule - CGAAP/ASPE/USGAAP**

"Old CGAAP" **Year 2014 without changing policies**

| | | | Cost | | | | Accumulated Depreciation | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **CCA Class** | **OEB** | **Description** | **Opening Balance** | **Additions** | **Disposals** | **Closing Balance** | **Opening Balance** | **Additions** | **Disposals** | **Closing Balance** | **Net Book Value** |
| 12 | 1611 | Computer Software (Formally known as Account 1925) | $ 815,779 | $ 252,000 | | $ 1,067,779 | -$ 628,672 | -$ 94,235 | | -$ 722,907 | $ 344,872 |
| N/A | 1805 | Land | $ 338,729 | | | $ 338,729 | $ - | | | $ - | $ 338,729 |
| 47 | 1808 | Buildings | $ 1,679,203 | | | $ 1,679,203 | -$ 1,107,719 | -$ 31,344 | | -$ 1,139,063 | $ 540,140 |
| 47 | 1820 | Distribution Station Equipment <50 kV | $ 1,745,896 | | | $ 1,745,896 | -$ 1,487,358 | -$ 37,446 | | -$ 1,524,804 | $ 221,092 |
| 47 | 1830 | Poles, Towers & Fixtures | $ 13,187,253 | $ 832,226 | | $ 14,019,479 | -$ 6,145,807 | -$ 613,537 | | -$ 6,759,344 | $ 7,260,135 |
| 47 | 1835 | Overhead Conductors & Devices | $ 14,513,843 | $ 373,919 | | $ 14,887,762 | -$ 6,801,269 | -$ 395,690 | | -$ 7,196,959 | $ 7,690,803 |
| 47 | 1840 | Underground Conduit | $ 7,178,045 | $ 257,144 | | $ 7,435,189 | -$ 4,621,623 | -$ 289,312 | | -$ 4,910,935 | $ 2,524,254 |
| 47 | 1845 | Underground Conductors & Devices | $ 18,101,149 | $ 294,598 | | $ 18,395,747 | -$ 11,861,290 | -$ 535,817 | | -$ 12,397,107 | $ 5,998,640 |
| 47 | 1850 | Line Transformers | $ 15,660,741 | $ 279,020 | | $ 15,939,761 | -$ 9,922,776 | -$ 398,452 | | -$ 10,321,228 | $ 5,618,533 |
| 47 | 1855 | Services (Overhead & Underground) | $ 5,328,122 | $ 202,014 | | $ 5,530,136 | -$ 3,175,551 | -$ 157,637 | | -$ 3,333,188 | $ 2,196,948 |
| 47 | 1860 | Meters | $ 7,613,139 | $ 191,896 | | $ 7,805,035 | -$ 3,512,375 | -$ 339,144 | | -$ 3,851,519 | $ 3,953,516 |
| 47 | 1890 | Major Spare parts | $ 468,946 | | | $ 468,946 | $ - | | | $ - | $ 468,946 |
| N/A | 1905 | Land | $ 17,041 | | | $ 17,041 | -$ 17,041 | | | -$ 17,041 | $ - |
| 47 | 1908 | Buildings & Fixtures | $ 578,150 | $ 80,000 | | $ 658,150 | -$ 121,906 | -$ 24,306 | | -$ 146,212 | $ 511,938 |
| 13 | 1910 | Leasehold Improvements | $ 21,798 | | | $ 21,798 | -$ 21,798 | | | -$ 21,798 | $ - |
| 8 | 1915 | Office Furniture & Equipment (10 years) | $ 385,253 | | | $ 385,253 | -$ 349,128 | -$ 5,733 | | -$ 354,861 | $ 30,392 |
| 10 | 1920 | Computer Equipment - Hardware | $ 540,191 | | | $ 540,191 | -$ 540,191 | | | -$ 540,191 | $ 0 |
| 45 | 1920 | Computer Equip.-Hardware(Post Mar. 22/04) | $ 75,674 | | | $ 75,674 | -$ 75,674 | | | -$ 75,674 | $ - |
| 45.1 | 1920 | Computer Equip.-Hardware(Post Mar. 19/07) | $ 694,838 | $ 38,000 | | $ 732,838 | -$ 425,143 | -$ 76,041 | | -$ 501,184 | $ 231,654 |
| 10 | 1930 | Transportation Equipment | $ 3,057,594 | $ 60,000 | | $ 3,117,594 | -$ 2,287,332 | -$ 237,620 | | -$ 2,524,952 | $ 592,642 |
| 8 | 1935 | Stores Equipment | $ 36,199 | | | $ 36,199 | -$ 36,199 | | | -$ 36,199 | $ - |
| 8 | 1940 | Tools, Shop & Garage Equipment | $ 826,578 | $ 30,000 | | $ 856,578 | -$ 694,241 | -$ 29,790 | | -$ 724,031 | $ 132,547 |
| 8 | 1945 | Measurement & Testing Equipment | $ 39,170 | | | $ 39,170 | -$ 29,511 | -$ 3,220 | | -$ 32,731 | $ 6,439 |
| 8 | 1955 | Communications Equipment | $ 106,528 | | | $ 106,528 | -$ 106,161 | -$ 295 | | -$ 106,456 | $ 72 |
| 8 | 1960 | Miscellaneous Equipment | $ 7,842 | | | $ 7,842 | -$ 4,705 | -$ 784 | | -$ 5,489 | $ 2,353 |
| 47 | 1970 | Load Management Controls Customer Premises | $ 245,119 | | | $ 245,119 | -$ 201,184 | -$ 24,512 | | -$ 225,696 | $ 19,423 |
| 47 | 1980 | System Supervisor Equipment | $ 377,351 | $ 50,000 | | $ 427,351 | -$ 270,704 | -$ 19,938 | | -$ 290,642 | $ 136,709 |
| 47 | 1995 | Contributions & Grants | -$ 4,896,473 | -$ 150,000 | | -$ 5,046,473 | $ 1,492,371 | $ 198,859 | | $ 1,691,230 | -$ 3,355,243 |
| 14 | 1609 | Intangible assets | $ 1,710,026 | | | $ 1,710,026 | -$ 18,278 | -$ 59,334 | | -$ 77,612 | $ 1,632,414 |
| 43.2 | 2075 | Non-utility property owned under capital lease | $ 294,688 | | | $ 294,688 | -$ 36,836 | -$ 14,734 | | -$ 51,570 | $ 243,118 |
| 47 | 2055 | Construction - work in progress | $ - | | | $ - | $ - | | | $ - | $ - |
| | | **Sub-Total** | **$ 90,748,416** | **$ 2,790,817** | **$ -** | **$ 93,539,233** | **-$ 53,008,103** | **-$ 3,190,062** | **$ -** | **-$ 56,198,165** | **$ 37,341,068** |
| | | **Less Socialized Renewable Energy Generation Investments (input as negative)** | $ - | | | $ - | $ - | | | $ - | $ - |
| | | ***Less Other Non Rate-Regulated Utility Assets (input as negative)*** | -$ 294,689 | $ - | $ - | -$ 294,689 | $ 36,836 | $ 14,734 | | $ 51,570 | -$ 243,119 |
| | | **Total PP&E** | **$ 90,453,727** | **$ 2,790,817** | **$ -** | **$ 93,244,544** | **-$ 52,971,267** | **-$ 3,175,328** | **$ -** | **-$ 56,146,595** | **$ 37,097,949** |

| | | |
|---|---|---|
| 10 | | Transportation |
| 8 | | Stores Equipment |

**Less:** *Fully Allocated Depreciation*
Transportation
Stores Equipment
**Net Depreciation** -$ 3,175,328

**Appendix 2-BA**
**Fixed Asset Continuity Schedule - CGAAP/ASPE/USGAAP**

| Description | Number of Years | Amount | Amortization |
|---|---|---|---|
| **CCRA – St. Marys Transformer Station** | 25 year agreement (15 years remaining) | $480,000 | Amortized over remaining 15 years; 2013 half year rule. |
| **Connection and Cost Recovery Agreement - Stratford Transformer Station ("Festival MTS1) (Part of budget for ICM Rate Rider. In USOA # 1508 for 2013 and 2014;transferring to # 1609 effective Jan 1, 2015)** | 25 year agreement (25 years remaining) | $436,468 | Amortized over 25 year agreement; 2013 amortized only one month – same as TS asset |
| **Stratford Transformer Station – Permanent Bypass Agreement** | Permanent | $1,230,026 | Amortized over 45 years (same life as major components of the TS Asset; 2013 amortized only one month – same as TS asset |
| **Gross Asset Values**<br>**Less: Amortization – 2013**<br>**- 2014**<br>**Net Book Value for Rate Base Purposes - 2015** | | **$2,146,494**<br>**(19,733)**<br>**(76,793)**<br>**$2,049,968** | |

A description of each agreement is given below along with a copy of the agreements with Hydro One.

**Connection and Cost Recovery Agreement - St. Mary's Transformer Station ("TS"):**

The Company and Hydro One Networks Inc. entered into a twenty-five year capital cost Recovery agreement ("CCRA") in September, 2002 relating to Hydro One Networks Inc. building new feeder positions at the existing St. Mary's Transformer Station. Under the terms of the agreement, Festival guaranteed an amount of load growth which, if not met, would require the Company to provide a financial contribution toward the capital investment of the Transformer Station.

# EB-2014-0073 - FESTIVAL

**(NORMALIZED OM&A - INCLUDES PROPERTY TAXES & OTHER)**

## SECTION 1 OM&A COMPOSITION

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|
| Total OM&A - E4T2S1 Att 1, 2015 from RRWF) | 4,039,859 | 4,002,784 | 4,739,503 | 4,950,908 | 5,016,404 | 5,171,405 |
| Employee Costs Allocated to OM&A - 4-Staff-40 | 3,088,858 | 3,334,551 | 3,345,148 | 3,710,598 | 3,800,695 | 3,895,712 |
| Percent of OM&A that is Employee Costs | 76.46% | 83.31% | 70.58% | 74.95% | 75.77% | 75.33% |

## SECTION 2 ADJUSTMENTS TO OM&A

| | 2010 BA | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|
| Total OM&A - E4T2S1 Att 1, 2015 from RRWF) | 3,980,676 | 4,039,859 | 4,002,784 | 4,739,503 | 4,950,908 | 5,016,404 | 5,171,405 |
| Special Purpose Charge (App 2-JB) | | (114,813) | | | | | |
| Smart Meter Expense (E4T2S1)) | | | | (546,293) | | | |
| Smart Meter Expense (4-EP-23) | 115,494 | 115,494 | 189,001 | 241,798 | | | |
| PST costs (E4T2S1) | | | | | (79,393) | | |
| PST costs (4-EP-23) | | | 11,593 | 32,627 | 35,173 | | |
| Accounting Change (App. 2-DA & 4-EP-26) | | | | | (254,313) | (167,816) | (148,417) |
| Billable Work (4-SEC-15 & 4-EP-46TC) | | | | | (44,433) | ? | (25,000) |
| Adjusted Total | **4,096,170** | **4,040,540** | **4,203,378** | **4,467,635** | **4,607,942** | **4,848,588** | **4,997,988** |

| | |
|---|---|
| **File Number:** | EB 2014 0073 |
| **Exhibit:** | 4 |
| **Tab:** | 2 |
| **Schedule:** | 1 |
| **Attachment:** | 1 |
| **Date:** | 25-Apr-14 |

## Appendix 2-JA
## Summary of Recoverable OM&A Expenses

| | Last Rebasing Year (2010 Board-Approved) | Last Rebasing Year (2010 Actuals) | 2011 Actuals | 2012 Actuals | 2013 Draft Actuals | 2014 Bridge Year | 2015 Test Year |
|---|---|---|---|---|---|---|---|
| *Reporting Basis* | CGAAP | CGAAP | CGAAP | CGAAP | CGAAP | CGAAP | MIFRS |
| Operations | $ 658,190 | $ 574,450 | $ 616,923 | $ 660,638 | $ 748,926 | $ 783,503 | $ 924,800 |
| Maintenance | $ 787,807 | $ 872,068 | $ 922,897 | $ 1,541,600 | $ 1,279,121 | $ 1,205,307 | $ 1,217,987 |
| **SubTotal** | **$ 1,445,997** | **$ 1,446,518** | **$ 1,539,820** | **$ 2,202,238** | **$ 2,028,047** | **$ 1,988,810** | **$ 2,142,787** |
| %Change (year over year) | | | 6.5% | 43.0% | -7.9% | -1.9% | 7.7% |
| %Change (Test Year vs Last Rebasing Year - Actual) | | | | | | 37.5% | 48.1% |
| Billing and Collecting | $ 1,005,013 | $ 866,998 | $ 936,527 | $ 893,996 | $ 1,210,565 | $ 1,195,792 | $ 1,212,817 |
| Community Relations | $ 42,930 | $ 16,223 | $ 15,232 | $ 11,931 | $ 6,777 | $ 10,965 | $ 11,249 |
| Administrative and General | $ 1,486,736 | $ 1,710,120 | $ 1,511,205 | $ 1,631,338 | $ 1,705,519 | $ 1,820,837 | $ 1,777,398 |
| **SubTotal** | **$ 2,534,679** | **$ 2,593,341** | **$ 2,462,964** | **$ 2,537,265** | **$ 2,922,861** | **$ 3,027,594** | **$ 3,001,464** |
| %Change (year over year) | | | -5.0% | 3.0% | 15.2% | 3.6% | -0.9% |
| %Change (Test Year vs Last Rebasing Year - Actual) | | | | | | 16.7% | 15.7% |
| **Total** | **$ 3,980,676** | **$ 4,039,859** | **$ 4,002,784** | **$ 4,739,503** | **$ 4,950,908** | **$ 5,016,404** | **$ 5,144,251** |
| %Change (year over year) | | | -0.9% | 18.4% | 4.5% | 1.3% | 2.5% |

| | Last Rebasing Year (2010 Board-Approved) | Last Rebasing Year (2010 Actuals) | 2011 Actuals | 2012 Actuals | 2013 Draft Actuals | 2014 Bridge Year | 2015 Test Year |
|---|---|---|---|---|---|---|---|
| Operations | $ 658,190 | $ 574,450 | $ 616,923 | $ 660,638 | $ 748,926 | $ 783,503 | $ 924,800 |
| Maintenance | $ 787,807 | $ 872,068 | $ 922,897 | $ 1,541,600 | $ 1,279,121 | $ 1,205,307 | $ 1,217,987 |
| Billing and Collecting | $ 1,005,013 | $ 866,998 | $ 936,527 | $ 893,996 | $ 1,210,565 | $ 1,195,792 | $ 1,212,817 |
| Community Relations | $ 42,930 | $ 16,223 | $ 15,232 | $ 11,931 | $ 6,777 | $ 10,965 | $ 11,249 |
| Administrative and General | $ 1,486,736 | $ 1,710,120 | $ 1,511,205 | $ 1,631,338 | $ 1,705,519 | $ 1,820,837 | $ 1,777,398 |
| **Total** | **$ 3,980,676** | **$ 4,039,859** | **$ 4,002,784** | **$ 4,739,503** | **$ 4,950,908** | **$ 5,016,404** | **$ 5,144,251** |
| %Change (year over year) | | | -0.9% | 18.4% | 4.5% | 1.3% | 2.5% |

| | Last Rebasing Year (2010 Board-Approved) | Last Rebasing Year (2010 Actuals) | Variance 2010 BA – 2010 Actuals | 2011 Actuals | Variance 2011 Actuals vs. 2010 Actuals | 2012 Actuals | Variance 2012 Actuals vs. 2011 Actuals | 2013 Draft Actuals | Variance 2013 Draft Actuals vs. 2012 Actuals | 2014 Bridge Year | Variance 2014 Bridge vs. 2013 Draft Actuals | 2015 Test Year | Variance 2015 Test Year vs. 2014 Bridge Year |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Operations** | $ 658,190 | $ 574,450 | $ 83,740 | $ 616,923 | $ 42,473 | $ 660,638 | $ 43,715 | $ 748,926 | $ 88,288 | $ 783,503 | $ 34,577 | $ 924,800 | $ 141,297 |
| **Maintenance** | $ 787,807 | $ 872,068 | -$ 84,261 | $ 922,897 | $ 50,829 | $ 1,541,600 | $ 618,703 | $ 1,279,121 | -$ 262,479 | $ 1,205,307 | -$ 73,814 | $ 1,217,987 | $ 12,680 |
| **Billing and Collecting** | $ 1,005,013 | $ 866,998 | $ 138,015 | $ 936,527 | $ 69,529 | $ 893,996 | -$ 42,531 | $ 1,210,565 | $ 316,569 | $ 1,195,792 | -$ 14,773 | $ 1,212,817 | $ 17,025 |
| **Community Relations** | $ 42,930 | $ 16,223 | $ 26,707 | $ 15,232 | -$ 991 | $ 11,931 | -$ 3,301 | $ 6,777 | -$ 5,154 | $ 10,965 | $ 4,188 | $ 11,249 | $ 284 |
| **Administrative and General** | $ 1,486,736 | $ 1,710,120 | -$ 223,384 | $ 1,511,205 | -$ 198,915 | $ 1,631,338 | $ 120,133 | $ 1,705,519 | $ 74,181 | $ 1,820,837 | $ 115,318 | $ 1,777,398 | -$ 43,439 |
| **Total OM&A Expenses** | $ 3,980,676 | $ 4,039,859 | -$ 59,183 | $ 4,002,784 | -$ 37,075 | $ 4,739,503 | $ 736,719 | $ 4,950,908 | $ 211,405 | $ 5,016,404 | $ 65,496 | $ 5,144,251 | $ 127,847 |
| **Adjustments for Total non-recoverable items (from Appendices 2-JA and 2-JB)** | | | | | | | | | | | | | |
| **Total Recoverable OM&A Expenses** | $ 3,980,676 | $ 4,039,859 | -$ 59,183 | $ 4,002,784 | -$ 37,075 | $ 4,739,503 | $ 736,719 | $ 4,950,908 | $ 211,405 | $ 5,016,404 | $ 65,496 | $ 5,144,251 | $ 127,847 |

| | 2013 6mo. Actuals | 2014 6mo. Actuals | |
|---|---|---|---|
| ***Reporting Basis*** | **CGAAP** | **CGAAP** | |
| Operations | $ 415,714 | $ 419,426 | |
| Maintenance | $ 767,115 | $ 690,965 | |
| **SubTotal** | **$ 1,182,829** | **$ 1,110,391** | |
| %Change (year over year) | | -6.1% | |
| %Change (Test Year vs Last Rebasing Year - Actual) | | | |
| Billing and Collecting | $ 593,950 | $ 622,432 | |
| Community Relations | $ 7,001 | $ 9,242 | |
| Administrative and General | $ 810,922 | $ 898,785 | |
| **SubTotal** | **$ 1,411,873** | **$ 1,530,459** | |
| %Change (year over year) | | 8.4% | |
| %Change (Test Year vs Last Rebasing Year - Actual) | | | |
| **Total** | **$ 2,594,702** | **$ 2,640,850** | |
| %Change (year over year) | | 1.8% | |

| | 2013 6mo. Actuals | 2014 6mo. Actuals | Variance 2014 6 Mo. Actuals vs. 2013 6 Mo. Actuals |
|---|---|---|---|
| Operations | $ 415,714 | $ 419,426 | -$ 3,712 |
| Maintenance | $ 767,115 | $ 690,965 | $ 76,150 |
| Billing and Collecting | $ 593,950 | $ 622,432 | -$ 28,482 |
| Community Relations | $ 7,001 | $ 9,242 | -$ 2,241 |
| Administrative and General | $ 810,922 | $ 898,785 | -$ 87,863 |
| **Total** | **$ 2,594,702** | **$ 2,640,850** | **-$ 46,148** |
| %Change (year over year) | | 1.8% | |

## ***120.*** 4. ENERGY PROBE 26

Ref: Exhibit 4, Tab 2, Schedule 1, Attachment 2 & Attachment 4 & Exhibit 6, Tab 1, Schedule 1

*a) Please provide a reconciliation of the figures for 2013 with respect to the $298,746 related to overhead policy changes and ($133,302) related allocated depreciation costs on trucks in Appendix 2-JB with the figure of $254,313 shown in Appendix 2-DA for the historic year.*

*b) Do the OM&A figures shown in Appendix 2-DA for the bridge and test years ($167,816 and $148,417, respectively) mean that Festival estimates that overall OM&A costs in 2014 and 2015 are higher by these amounts because of the accounting change that was made in 2013?*

*c) On page 3 of Exhibit 6, Tab 1, Schedule 1, the evidence states that the 2015 test year OM&A is higher due to the accounting changes by $267,660. Please reconcile this figure with the two figures noted in Attachments 2 and 4 in Exhibit 4, Tab 2, Schedule 1.*

*d) Based on any changes or updates, please provide the estimated increase in OM&A for each of 2013, 2014 and 2015 as a result of the change in accounting policies adopted in 2013.*

## *Response:*

a) The $133,302 cost driver reported in Appendix 2-JB is the total depreciation difference for trucks when comparing old depreciation policies to new depreciation polices. As per appendix 2-BA the 2013 continuity schedule under old policies shows a depreciation amount for trucks of $245,533 as compared to $112,230 shown in the 2013 fixed asset continuity under new accounting policies. Appendix 2-DA was used to highlight impacts to overhead capitalized versus overhead expensed. As such – the $133,302 is not something that should be reconciled with the total of the historical column in appendix 2-DA.

b) Festival agrees that we have estimated the OM&A impact of overhead capitalization policy changes in 2014 and 2015 to increase OM&A by $167,816 and $148,417 respectively.

c) Festival notes that the $267K quoted in E6/T1/S1 and referenced to appendix 2-DA in E4/T2/S1/A4 is an outdated figure and was meant to reference $254,313 documented in appendix 2-DA for the historical year. Festival notes that the figure included in appendix 2-JB (E4/T2/S1/A2) as a cost driver relating to the policy change in the historical year of $298,746 includes not only the capital impact of $254,313 – but also the impact of not allocating any additional linemen charges after the policy changes in 2013 to items such as billable work, and work on revenue offsets like street-lighting projects. For more detail on the types of additional linemen charges that are no longer allocated and all remain in OM&A under the new policies refer to 4-Staff-37b. In exhibit 6 this impacts two drivers of test year deficiency. A revised table has been included below.

| | |
|---|---|
| **File Number:** | EB 2014 0073 |
| **Exhibit:** | 4 |
| **Tab:** | 2 |
| **Schedule:** | 1 |
| **Attachment:** | 4 |
| **Date:** | 25-Apr-14 |

## Appendix 2-DA
## Overhead Expense

The following table should be completed based on the information requested below. An explanation should be provided for any blank entries. The entries should include overhead costs that are currently capitalized on self-constructed assets under MIFRS.

| Nature of the Overhead Costs | (A) [1] Dollar Impact on PP&E Historic Year | (B) Dollar Impact on PP&E Bridge Year | (C) Dollar Impact on PP&E Test Year | (D) Dollar Impact - PP&E Variance Test versus Bridge | (E) [1] Dollar Impact - PP&E Variance Test versus Historic | (F) Directly Attributable? (Y/N) | (G) Reasons why the overhead costs are allowed to be capitalized under MIFRS or an alternate accounting standard given limitations on capitalized overhead |
|---|---|---|---|---|---|---|---|
| employee benefits | $ 236,383 | $ 242,293 | $ 248,350 | $ 6,057 | $ 11,967 | Y | |
| costs of site preparation | $ - | | | $ - | $ - | | Specific site preparation costs would be capitalized to project, not through overhead application |
| initial delivery and handling costs | $ - | | | $ - | $ - | | Specific delivery & handling costs would be capitalized directly |
| costs of testing whether the asset is functioning properly | $ - | | | $ - | $ - | | Specific testing charges would be capitalized directly to capital |
| professional fees | $ - | | | $ - | $ - | | Specific professional fees relating to a project would be capital |
| | | | | $ - | $ - | | |
| costs of opening a new facility | $ - | | | $ - | $ - | | N/A |
| costs of introducing a new product or service (including costs of advertising and promotional activities) | $ - | | | $ - | $ - | | N/A |
| costs of conducting business in a new location or with a new class of customer (including costs of staff training) | $ - | | | $ - | $ - | | N/A |
| administration and other general overhead costs | $ - | | | $ - | $ - | | N/A |
| Engineering overhead | $ 139,744 | $ 143,238 | $ 146,819 | $ 3,581 | $ 7,075 | Y | |
| Supervision overhead | $ 74,084 | $ 75,936 | $ 77,835 | $ 1,898 | $ 3,751 | Y | |
| Trucking allocation | $ 222,429 | $ 222,429 | $ 222,429 | $ - | $ - | Y | |
| Insert description of additional item(s) and new rows if needed. | | | | $ - | $ - | | |
| **Total** | $ 672,640 | $ 683,895 | $ 695,432 | $ 11,537 | $ 22,792 | | |

The following table should be completed based on the information requested below. An explanation should be provided for any blank entries. The entries should include overhead costs that were capitalized on self-constructed assets under CGAAP but are no longer capitalized under MIFRS or an alternate accounting standard and are included in OM&A.

| Nature of the Overhead Costs | (A) [1] Dollar Impact on OM&A Historic Year | (B) Dollar Impact on OM&A Bridge Year | (C) Dollar Impact on OM&A Test Year | (D) Dollar Impact - OM&A Variance Test versus Bridge | (E) [1] Dollar Impact - OM&A Variance Test versus Historic | (F) Directly Attributable? (Y/N) | (G) Reasons why the overhead costs are not allowed to be capitalized under MIFRS or an alternate accounting standard given limitations on capitalized overhead |
|---|---|---|---|---|---|---|---|
| employee benefits | $ - | $ - | $ - | $ - | $ - | Y | |
| costs of site preparation | | | | $ - | $ - | | Specific site preparation costs would be capitalized to project, not through overhead application |
| initial delivery and handling costs | | | | $ - | $ - | | Specific delivery & handling costs would be capitalized directly |
| costs of testing whether the asset is functioning properly | | | | $ - | $ - | | Specific testing charges would be capitalized directly to capital |
| professional fees | | | | $ - | $ - | | Specific professional fees relating to a project would be capital |
| | | | | | | | |
| costs of opening a new facility | | | | $ - | $ - | | N/A |
| costs of introducing a new product or service (including costs of advertising and | | | | $ - | $ - | | N/A |
| costs of conducting business in a new location or with a new class of customer | | | | $ - | $ - | | N/A |
| administration and other general overhead costs | | | | $ - | $ - | | N/A |
| Supervision overhead | $ 22,557 | $ 14,885 | $ 13,164 | -$ 1,721 | -$ 9,393 | N | |
| Miscellaneous linemen costs including training | $ 89,504 | $ 59,062 | $ 52,235 | -$ 6,827 | -$ 37,269 | N | |
| Stores allocation | $ 151,580 | $ 100,025 | $ 88,462 | -$ 11,563 | -$ 63,118 | N | |
| Trucking allocation | -$ 9,328 | -$ 6,155 | -$ 5,444 | $ 712 | $ 3,884 | N | |
| **Total** | $ 254,313 | $ 167,816 | $ 148,417 | -$ 19,399 | -$ 105,896 | | |
| | | $ 167,816 | $ 148,417 | | | | |

**Notes:**

[1] If the applicant chooses to adopt IFRS for financial reporting purposes in 2014, the applicant does not need to complete Columns A, E. If the applicant adopts IFRS for financial reporting purposes in 2012 or 2013, the applicant must complete all columns.

*c) As per the Filing Requirements for 2015 Rate Applications, please explain how the variance account meets the criteria of causation, materiality and prudence.*

*Response:*

a) Festival has in previous years recognized the charge to our P and L for the higher expense and is warranted recovery on this incurred cost, similar to the impact of the change in depreciation.
b) The form of account Festival should be requesting is a deferral account.
c) The amount does not meet the materiality level, however, from a causality point of view ,it was the belief that LDCs and the ratepayer would be held whole on amounts arising from the conversion from CGAAP to IFRS.

## *25.* 4-Energy Probe-46TC

### Ref: 4-Energy Probe-26

*The response to part (a) does not explain the difference in the figures of $298,746 related to overhead policy changes shown in Appendix 2-JB and the figure of $254,313 shown in Appendix 2-DA.*
*a) Please explain the difference in the two figures.*
*b) Which figure is the actual impact on OM&A due to the change in accounting methodologies?*

*Response:*

a) The difference between the two figures of $44K represents the amount of overhead cost that had previously been included in billable work performed by Festival and billed out to third parties. Upon making the accounting policy changes whereby these overheads no longer were to be capitalized as non-directly attributable items, Festival made the decision to also exclude these overheads from billable work. As such the amounts now impact OM&A expenses. Festival did not include this $44K differential in the analysis of appendix 2-DA as it was an internal decision to absorb these costs going forward versus continuing to bill them out to third parties on billable work order projects.

b) That actual OM&A impact as a result of the accounting policy changes is the amount of $298K reported in the cost driver appendix (2-JB). Festival has only claimed recovery through a variance account of the $254K which is the impact on internal capital projects and excludes the OM&A impact as a result of no longer charging the mark ups on billable work.

| TOTAL INTERIM BILLING FOR 2014 | TOTAL PROJECTED BILLING FOR 2014 |
|---|---|
| $52,611.40 | $107,339.55 |

c) The total property taxes paid in 2014 to date for the transformer station property is $4,963. The total projected expense for this property in 2014 based on the interim tax bills is $12,280. In the $140,000 operating costs of the transformer station for the test year, $78K is included for property taxes, which was based on discussions with the City tax department and MPAC. The tax bills for 2014 are only interim bills and at some point in time, once MPAC has completed their assessment, we expect to be assessed back to the date in which the TS was energized (December 2013).

d) Please refer to response 4-Staff-46.

## *126.* 4. SEC 14

### Ref: [Ex.4/1/1, p. 4]

*Please provide details of the issue of "parity of wages and benefits with neighbouring utilities". Please provide details of the extent, if any, to which wages and benefits payable to employees of Hydro One Networks exert any influence, or have any impact, on the compensation costs of the Applicant.*

### *Response:*

Festival has not hired a Hydro One employee for several years but has hired staff from other utilities. As such, Festival is not aware of any direct influence that the wages and benefits payable to employees of Hydro One Networks have on Festival's wages and benefits. Festival notes however that there are several utilities within commuting distance of Festival and its compensation is influenced by the wages and benefits offered by these utilities which may be influenced by the wages and benefits payable to Hydro One but the extent of influence, if any, is not known to Festival. Festival is aware that it must provide a competitive compensation package to maintain its employees and attract new employees to fill job vacancies.

## *127.* 4. SEC 15

### Ref: [Ex.4/2/1, Attach. 3]

*Please confirm that, excluding the impacts of accounting changes, and the additional OM&A associated with the transformer station, OM&A per customer in 2015 is expected to be approximately 11% higher than actual OM&A per customer in 2010.*

### *Response:*

Festival notes that as per 4-EP-26c, the impact of policy changes of $267,660 is incorrect. The correct figure for policy changes impacting capital and OM&A in 2015 is $148,417. Festival also notes that in 2013 – there was an impact of approximately $44K of cost that would have been allocated to billable work and revenue offsetting work under old policies. As all of this cost is now remaining in the OM&A expenses, it should also be considered in the analysis below. Festival estimates these costs for 2015 are approximately $25K. After making these changes, the % increase per customer of OM&A costs since 2010 is 14%.

| **OM&A Increase Per Customer** | |
|---|---|
| | |
| 2015 Projected OM&A | 5,114,251 |
| Less: TS Operating costs | - 140,000 |
| Less: Impact of accounting policy changes between capital & OM&A | - 148,417 |
| Less: Impact of policy changes outside of capital on OM&A | - 25,000 |
| Net OM&A projected for 2015 | 4,800,834 |
| 2015 projected customers | 20,554 |
| Net 2015 OM&A cost per customer | 233.57 |
| 2010 Actual OM&A cost per customer | 205.62 |
| % Increase in cost per customer from 2010 | 14% |
| % Increase per year since 2010 | 3% |

## ***128.*** 4. SEC 16

### Ref: [Ex.4/3/2, Attach. 2]

*Please provide this table with two additional rows on the bottom, dividing the total amount of compensation costs in each column into the amounts allocated to OM&A and to capital.*

### *Response:*

See table with additions requested below.

| | |
|---|---|
| **File Number:** | EB 2014 0073 |
| **Exhibit:** | 4 |
| **Tab:** | 2 |
| **Schedule:** | 1 |
| **Attachment:** | 3 |
| **Date:** | 25-Apr-14 |

## Appendix 2-L
## Recoverable OM&A Cost per Customer and per FTE

| | Last Rebasing Year - 2010- Board Approved | Last Rebasing Year - 2010- Actual | 2011 Actuals | 2012 Actuals | 2013 Actuals | 2014 Bridge Year | 2015 Bridge Year |
|---|---|---|---|---|---|---|---|
| **Reporting Basis** | CGAAP | CGAAP | CGAAP | CGAAP | CGAAP | CGAAP | MIFRS |
| **Number of Customers** | 19,828 | 19,647 | 19,832 | 20,069 | 20,210 | 20,381 | 20,554 |
| **Total Recoverable OM&A from Appendix 2-JB** | $ 3,980,676 | $ 4,039,859 | $ 4,002,784 | $ 4,739,503 | $ 4,950,908 | $ 5,016,404 | $ 5,144,251 |
| **OM&A cost per customer** | $ 200.76 | $ 205.62 | $ 201.83 | $ 236.16 | $ 244.97 | | $ 250.28 |
| **Number of FTEs** | 45 | 47 | 45 | 47 | 47 | 45 | 45 |
| **Customers/FTEs** | 441 | 418 | 441 | 427 | 430 | 453 | 457 |
| **OM&A Cost per FTE** | $ 88,459.47 | $ 85,954.45 | $ 88,950.76 | $ 100,840.50 | $ 105,338.48 | $ 111,475.65 | $ 114,316.69 |

**Notes:**

1 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.
2 The method of calculating the number of customers must be identified.
3 The method of calculating the number of FTEs must be identified. See also Appendix 2-K
4 The number of customers and the number of FTEs should correspond to mid-year or average of January 1 and December 31 figures.

- LTD – Long Term Disability – company paid premiums for Long Term Disability coverage for employees. There is a six month waiting period before an employee is eligible for Long Term Disability.

**Summary of Inflationary Increases**

The table below summarizes the inflationary increases documented in the commentary above.

| Summary of Inflationary Increases | | | | | | |
|---|---|---|---|---|---|---|
| | 2010(A) | 2011(A) | 2012(A) | 2013(A) | 2014(B) | 2015(T) |
| Senior Management | 3% | 3% | 3% | 2% | 2.50% | 2.50% |
| | Jan-01 | Jan-01 | Jan-01 | Jan-01 | May-01 | May-01 |
| | | | | | | |
| Management | 3% | 3% | 3% | 2% | 2.50% | 2.50% |
| | May-01 | May-01 | May-01 | May-01 | May-01 | May-01 |
| | | | | 1% | | |
| | | | | Nov-01 | | |
| | | | | | | |
| Union/Non Management | 3% | 3% | 3% | 2% | 2.50% | 2.50% |
| | May-01 | May-01 | May-01 | May-01 | May-01 | May-01 |
| | | | | 1% | | |
| | | | | Nov-01 | | |

| | |
|---|---|
| File Number: | EB 2014 0073 |
| Exhibit: | 4 |
| Tab: | 3 |
| Schedule: | 2 |
| Attachment: | 2 |
| Date: | 25-Apr-14 |

**Appendix 2-K**
**Employee Costs**

| | Last Rebasing Year - 2010-Board Approved | Last Rebasing Year - 2010-Actual | 2011 Actuals | 2012 Actuals | 2013 Actuals | 2014 Bridge Year | 2015 Test Year |
|---|---|---|---|---|---|---|---|
| **Number of Employees (FTEs including Part-Time)[1]** | | | | | | | |
| Management (including executive) | 11 | 11 | 12 | 12 | 12 | 11 | 11 |
| Non-Management (union and non-union) | 34 | 36 | 33 | 35 | 35 | 34 | 34 |
| Total | 45 | 47 | 45 | 47 | 47 | 45 | 45 |
| **Total Salary and Wages including ovetime and incentive pay** | | | | | | | |
| Management (including executive) | $ 872,182 | $ 1,095,323 | $ 1,206,051 | $ 1,251,645 | $ 1,299,464 | $ 1,170,301 | $ 1,135,863 |
| Non-Management (union and non-union) | $ 2,217,898 | $ 2,203,848 | $ 2,335,579 | $ 2,350,858 | $ 2,500,330 | $ 2,456,962 | $ 2,489,336 |
| Total | $ 3,090,080 | $ 3,299,171 | $ 3,541,630 | $ 3,602,503 | $ 3,799,794 | $ 3,627,263 | $ 3,625,199 |
| **Total Benefits (Current + Accrued)** | | | | | | | |
| Management (including executive) | $ 153,857 | $ 209,762 | $ 242,437 | $ 281,993 | $ 302,820 | $ 264,811 | $ 263,139 |
| Non-Management (union and non-union) | $ 313,638 | $ 477,560 | $ 521,265 | $ 550,963 | $ 586,369 | $ 580,559 | $ 599,136 |
| Total | $ 467,495 | $ 687,322 | $ 763,702 | $ 832,956 | $ 889,189 | $ 845,370 | $ 862,275 |
| **Total Compensation (Salary, Wages, & Benefits)** | | | | | | | |
| Management (including executive) | $ 1,026,039 | $ 1,305,085 | $ 1,448,488 | $ 1,533,638 | $ 1,602,284 | $ 1,435,112 | $ 1,399,002 |
| Non-Management (union and non-union) | $ 2,531,536 | $ 2,681,408 | $ 2,856,844 | $ 2,901,821 | $ 3,086,699 | $ 3,037,521 | $ 3,088,472 |
| Total | $ 3,557,575 | $ 3,986,493 | $ 4,305,332 | $ 4,435,459 | $ 4,688,983 | $ 4,472,633 | $ 4,487,474 |
| | | | | | | | |
| Total Compensation Allocated to OM&A | | 3,088,858 | 3,334,551 | 3,345,148 | 3,710,598 | 3,800,695 | 3,895,712 |
| Total Compensation Allocated to Capital | | 897,635 | 970,781 | 1,090,311 | 978,385 | 671,938 | 591,762 |
| | | | | | | $ 3,263 | $ 24,895 |

## *106.* 4. OEB STAFF 41

### Ref: E3/T3/S1/p. 9; E4/T3/S1; and Accounting Procedures Handbook, effective January 1, 2012

*Festival indicated that it has recorded gains or losses related to the change in the discount rate for the Employee Future Benefit cost determination in Account 4335 Pension Actuarial Gains and Losses. It has also not recorded any amounts for gains and losses for 2014 and 2015 and is of the opinion that it should not be considered in its revenue requirement.*

*a) Per APH effective January 1, 2014, Account 4335 is for Profits and Losses from Financial Instrument Hedges that is be used to record profits and losses from financial instruments used as hedges against financial risks such as price risk credit risk, liquidity risk and cash flow risk. Please explain why Festival is not adhering to the APH's definition of Account 4335.*

*b) As Festival is proposing that actuarial gains and losses be excluded from its revenue requirement,*

*i. Please explain if Festival will be requesting any refund or recovery in the future when Festival actually incurs the actuarial gain or loss.*

*ii. From 2000 to 2005, please confirm that Festival recovered OPEB costs in rates on a cash basis.*

*iii. Please provide a table comparing the actuarial gain/loss included in Festival's revenue requirement to the actual actuarial gain/loss incurred from the year Festival first included the gain/loss in its revenue requirement to 2015.*

*iv. Please provide a table similar to the one below for each year from the first year Festival included Other Post-Employment Benefits ("OPEB") in rates on an accrual basis of accounting to 2015, comparing to amounts Festival actually paid.*

| ICM Rate Rider ACCOUNT # 1508 - Continuity Schedule (REVISED to agree to 2 staff 8) | | | | |
|---|---|---|---|---|
| | | **2013** | **2014** | **Jan 1, 2015 transfer** |
| **Opening, Jan 1** | | 0 | 15,058,931 | 14,710,516 |
| **TS O & M Expenses** | | 104,816 | 140,000 | -244,816 |
| **Interest** | | 17,623 | 217,469 | -235,093 |
| **Transfer in from CWIP** | | 15,311,782 | 0 | -15,311,782 |
| **Depreciation & Amortization** | | 28,137 | 337,647 | -365,784 |
| **Accumulated Depreciation & Amort** | | -28,137 | -337,647 | 365,784 |
| **Less ICM Rate Rider Recovery** | | -375,291 | -705,884 | 1,081,174 |
| **Ending Bal, Dec 31** | | **15,058,931** | **14,710,516** | **-0** |
| | | | | |
| | | | | |
| | | | | |
| **Entry required for Jan 1, 2015 disposition:** | | | | |
| | | **USOA** | | |
| TS Land | DR | 1805 | 913,474.39 | |
| TS capital | DR | 1815 | 13,961,839.83 | |
| CCRA agreement | DR | 1609 | 436,468.00 | |
| Interest Income | DR | 4405 | 235,092.89 | |
| Distribution Revenue | CR | 4080 | | 1,081,174.36 |
| Depn Exp | DR | 5705 | 346,870.00 | |
| Amort Exp | DR | 5715 | 18,914.00 | |
| Accum Depn | CR | 2105 | | 346,870.00 |
| Accum Amort | CR | 2120 | | 18,914.00 |
| TS O & M Expenses | DR | 5015 | 244,815.74 | |
| ICM Variance Acct | CR | 1508 | | 14,710,516.49 |
| | | | 16,157,474.85 | 16,157,474.85 |
| | | | | |
| **Transfer back to fixed asssets1805,1815,1609 (gross)** | | | 15,311,782.22 | |
| **Less Accuimulated Depreciation/Amortization** | | | -365,784.00 | |
| **Net book value upon transfer , Jan 1, 2015** | | | 14,945,998.22 | |

## *32.* 2. OEB STAFF 9

Ref: E2/T2/S1, p. 14 – Stratford Transformer Station – Permanent Bypass Agreement

*On page 14, Festival Hydro states that:*

*As a result of Festival constructing a new transformer station, Festival entered into a Permanent Bypass Compensation Agreement with Hydro One for the purpose of addressing the bypass compensation payable by Festival in accordance with Section 6.7.7 of the Transmission System Code. The agreement allows for a Bypass Capacity from the existing Hydro One station at an estimate 20 MW with a Bypass Compensation Estimate amount of $1,230,026.*

*The cost of this Bypass agreement was not part of the original construction budget used for the ICM rate rider. However, the cost is a component of the overall cost of the transformer station. Festival commenced the bypass on December 1, 2013 upon energizing its first customer for the new TS. Currently (Feb 2014), there is about 12 MW being bypassed with a plan to migrate close to the 20 MW during 2014.*

*a) Please confirm that Festival is including an incremental $1.23M in rate base for a permanent Bypass Agreement with HONI.*
*b) Please explain why the cost of the Bypass agreement was not part of the ICM application for the 2013 rate year.*
*c) Please provide a revised assessment that shows that the cost of the new transformer station, including the cost of the bypass agreement, was still the best option.*
*d) Has the amount of $1.23M been paid in full to HONI as a one-time cost?*
*i. If so, provide the date the transaction.*
*ii. If not, please provide a payment schedule and describe the accounting treatment of the off-setting entry to intangible assets.*
*iii. Does Festival Hydro expect to incur future costs related to the bypass agreement?*
*e) Please explain how Festival believes the Stratford Transformer Station Permanent Bypass meets the definition of an intangible asset under IAS 38.*
*f) Please indicate if Festival has discussed this with its external auditor and provide any documents received by Festival that express the views and opinions of its external auditor.*

## *Response:*

a) Confirmed. $1.23M has been added to the rate base for the Permanent Bypass Agreement with HONI.

b) At the time of creating the Transformer Station (TS) budget, it was not envisage that a Permanent Bypass arrangement was going to be required.

c) Below is the table presented in Festival's 2013 IRM Application (EB-2012-0124) comparing the various options available to Festival Hydro for construction of the TS. The decision to build was not solely based on the Net present value of the best option, but also on how the option would best address other critical factors such as capacity requirements, voltage issues and reliability performance. The preferred option which addressed all issues and was also the lowest cost was the 4th option - Festival Hydro to construct the TS.

| Scenario | NPV[1] | Address Capacity Issue? | Address Voltage Issue? | Address Reliability Issue? |
|---|---|---|---|---|
| Hydro One Replaces One Transformer at Devon TS in 2010, Festival Builds New Feeder in 2010, Hydro One Builds Second TS in 2015 | $16.8M | yes | Not until 2015 | Minimal until 2015 |
| Hydro One Replaces One Transformer at Devon TS in 2010, Festival Builds New Feeder in 2010, Festival Hydro Builds Second TS in 2015 | $14.7M | yes | Not until 2015 | Minimal until 2015 |
| Hydro One Builds Second TS in 2010 | $13.3M | yes | yes | Yes |
| Festival Hydro Builds Second TS in 2010 | $10.5M | yes | yes | Yes |

Festival is of the opinion that with the addition of the cost of the Permanent Bypass the decision for Festival to construct was still the best option. The TS has been successfully up and operational since December 2013 with minimal problems encountered. With the TS build completed by Festival, Festival has been able to successfully achieve the requirements of the other major criteria identified as critical to the project, that being the issues of capacity, voltage and reliability.

Outlined below is the financial analysis of the actual TS expenditure compared to budget if Permanent Bypass is considered :

| | |
|---|---|
| Original TS Budget | $15,863,114 (on page 15 of 2013 IRM) |
| Actual Expenditures: | |
| Capital spend | $15,311,782 (capital transferred to 1508) |
| Permanent Bypass | 1,025,481 ($1,230,026 in 2010 dollars) |
| Total Capital Spend | $16,337,263 |
| Amount over original budget | $ 474,149 |

If the over budget amount of $474K is added to the original projected NPV of $10.5 the amount of $11.0M is still less than the $13.3M for the second lowest cost option, and this is without even taking into account the $475K being saved annually on transmission connection charges.

d) The $1.23M bypass agreement was set up as an Accounts Payable at December 31, 2013. The transformer station went into service on December 2, 2013 and Festival's customers have been receiving the benefits of reduced transmission charges since that date through reductions in transmission charges form the IESO. However, the bypass assessment date is not being completed until in or around June 1, 2014, and the payment due date is 180 days following that, so Festival

[1] A discount rate of 5.5% was used. Adjusting the discount rate from a low of 2.5% to a high of 7.5% made no difference in the relative ranking of the scenarios.

Hydro expects to make the payment in December 2014. The accounting entry to set up the bypass agreement as an asset was Debit 1609 Capital Contributions Paid and Credit # 2205 Accounts Payable. Upon settlement, the entry will be to Debit #2205 Accounts Payable and Credit #1005 Cash. At this time, Festival does not expected to incur any additional costs related to the Permanent Bypass. Excerpts from the Permanent Bypass agreement are copied below:

in or around June 1, 2014, the Customer intends to by-pass Hydro One's Stratford TS (the "**Station & Line Assets**") in respect of a portion of the Existing Load; and

**Bypass Compensation – Estimate:**

**$1,230,026** $= [NBV_T + DC_T - SC_T] \times [BC/TNSC_T] + [NBV_L + DC_L - SC_L] \times [BC/TNSC_L]$

e) Article 410 of the OEB Handbook is fairly specific that intangible assets include capital contributions paid by the distributor to other distributors for capital projects. While the payment was not directly attributed to a capital project of another distributor, it was a payment to HONI to facilitate the full operation of the asset Festival constructed. The account definition of USOA # 1609 states "This account shall include capital contributions paid by a distributor to a host distributor, a transmitter or a generator for capital expenditures (e.g., under a Connection and Cost Recovery Agreement) that meet the IAS 38 Intangible Assets requirements for classification as an intangible asset. "The nature of the agreement fits the description of Acct # 1609
From an IAS 38 standpoint:
    a) The payment meets the definition of an asset - it is an identifiable non-monetary asset without physical substance that was/is controlled by Festival as a result of past events; and will derive future economic benefit from making the payment.
    b) The payment is identifiable because it meets both criteria in IAS 38, paragraph 12.
    c) Festival controls the asset – as Festival has the power to obtain future economic benefit from it – i.e. the ability to distribute power through the TS and bill customers for it
    d) Can be recognized as an intangible according to IAS 38, paragraphs 21 and 22, because the payment meets the criteria required for recognition as an intangible.

f) The accounting treatment was discussed in advance of the 2013 yearend audit with our external auditors to ensure proper accounting treatment was met. Being it was a material dollar value, the agreement was subject to external audit review. In the Notes to the 2013 audited financial statements, Section 1 Significant Accounting Policies – section f) provides the policy related to Intangible Assets. Under Note 5 is provided the details of the agreements associated with the balance in the Intangible Asset account.

The auditors issued an unqualified auditors' report on Festival's 2013 financial statements which include this amount being included as an intangible asset.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | File Number: | EB 2014 0073 |
| | | | | | | | | | Exhibit: | |
| | | | | | | | | | Tab: | |
| | | | | | | | | | Schedule: | |
| | | | | | | | | | Page: | |
| | | | | | | | | | Date: | |

**Appendix 2-EC**
**Account 1576 - Accounting Changes under CGAAP**
**2013 Changes in Accounting Policies under CGAAP**

**For applicants that made capitalization and depreciation expense accounting policy changes under CGAAP effective January 1, 2013**

| | 2010 Rebasing Year | 2011 | 2012 | 2013 | 2014 | 2015 Rebasing Year |
|---|---|---|---|---|---|---|
| **Reporting Basis** | CGAAP | IRM | IRM | IRM | IRM | MIFRS |
| | Forecast | Actual | Actual | Actual | Forecast | Forecast |
| | | | | | $ | $ |
| **PP&E Values under former CGAAP** | | | | | | |
| Opening net PP&E - Note 1 | | | | 35,396,846 | 37,482,461 | |
| Net Additions - Note 4 | | | | 5,157,572 | 2,790,817 | |
| Net Depreciation (amounts should be negative) - Note 4 | | | | -3,071,957 | -3,175,328 | |
| **Closing net PP&E (1)** | | | | 37,482,461 | 37,097,950 | |
| **PP&E Values under revised CGAAP (Starts from 2013)** | | | | | | |
| Opening net PP&E - Note 1 | | | | 35,396,846 | 38,219,494 | |
| Net Additions - Note 4 | | | | 4,906,054 | 2,623,001 | |
| Net Depreciation (amounts should be negative) - Note 4 | | | | -2,083,406 | -1,900,978 | |
| **Closing net PP&E (2)** | | | | 38,219,494 | 38,941,517 | |
| **Difference in Closing net PP&E, former CGAAP vs. revised CGAAP** | | | | -737,033 | -1,843,567 | |

| | | | |
|---|---|---|---|
| **Effect on Deferral and Variance Account Rate Riders** | | | |
| Closing balance in Account 1576 | - 1,843,567 | **WACC** | 6.25% |
| Return on Rate Base Associated with Account 1576 balance at WACC - Note 2 | - 460,892 | **# of years of rate rider disposition period** | 4 |
| **Amount included in Deferral and Variance Account Rate Rider Calculation** | - 2,304,459 | | |

**Notes:**
revised CGAAP should be the same.
2 Return on rate base associated with Account 1576 balance is calculated as:
the variance account opening balance as of 2015 rebasing year x WACC X # of years of rate rider disposition period
* Please note that the calculation should be adjusted once WACC is updated and finalized in the rate application.
3 Account 1576 is cleared by including the total balance in the deferral and variance account rate rider calculation.
4 Net additions are additions net of disposals; Net depreciation is additions to depreciation net of disposals.

## *171.* 9. OEB STAFF 62

Ref: E9/T3/S12 and Filing Requirements for Electricity Distribution Rate Applications 2015 Rate Applications, dated July 18, 2014

*a) Per Chapter 2, Section 2.5.2.7 of the Filing Requirements, please provide the account balances recorded under:*

- *Account 1508 Other Regulatory Asset, Sub-account, Incremental Capital Expenditures, including a breakdown of the carrying charges*
- *Account 1508 Other Regulatory Asset, Sub-account, Depreciation Expense*

- *Account 1508 Other Regulatory Asset, Sub-account Accumulated Depreciation and*
- *Account 1508 Other Regulatory Asset, Sub-account Incremental Capital Expenditures Rate Rider,*

*including a breakdown of the carrying charges*

*Response:*

The following is the breakdown of the account balances under Acct # 1508 ICM Rate Rider account as at December 31, 2004:

| **Account # 1508 ICM Account** | **December 31, 2014** |
|---|---|
| ICM Capital Expenditures – Capital | $15,311,782 |
| ICM Capital Expenditure–Carrying charges @1.47% | 243,465 |
| Total Capital | 15,555,247 |
| ICM Depreciation & Amort Expense | 365,784 |
| ICM Accumulated Depreciation & Amort | -365,784 |
| ICM Rate Rider- Recoveries | -1,081,174 |
| ICM Rate Rider – Interest on Recoveries @ 1.47% | -11,423 |
| Total ICM Recoveries | -1,081,174 |
| Balance prior to O & M Expenditures | 14,461,325 |
| TS O & M Expenditures (cost not in 2010 COS) | 244,816 |
| TS O & M Expenditures -Carrying charges @ 1.47% | 3,051 |
| **Total Balance at December 31, 2014** | **14,710,517** |

## *172.* 9. OEB STAFF 63

Ref: E9/T3/S12/p.2-3 and Supplemental Report of the Board on 3rd Generation Incentive Regulation, September 17, 2008 ("Supplemental Report")

*For the ICM Rate Rider Account #1522 table,*

*a) Please confirm that the ICM Rate Rider Account #1522 should be Account 1508. If not, please explain what Account 1522 is.*

*b) On p. 30 of the Supplemental Report of the Board, the Board stated that the capital module is intended to be reserved for unusual circumstances…and where the distributor has no other options for meeting its capital requirements within the context of its financial capacity underpinned by existing rates. Festival Hydro is showing OM&A of $244,816 related to the TS.*

*vi.) Please explain what is included in this amount and why Festival Hydro is recording out-of-period OM&A expenses in account 1522.*

*vii.) Please state if these OM&A expenses where approved as part of Festival Hydro 2013 IRM-ICM application.*

*viii.) Please revise the evidence as necessary.*

*c) Please confirm whether or not the Interest line of $235,093 represents the carrying charges for Incremental Capital Expenditures and Incremental Capital Expenditures rate rider. If not, please clarify what the interest amount is for.*

*d) Festival is proposing to transfer all accumulated depreciation to Account 2218 and depreciation expense to Account 5705. Please explain what Account 2218 is.*

*e) Please revise the evidence to reflect the accumulated amortization in Account 2105 Accumulated Depreciation of Electric Utility Plant - Property, Plant and Equipment and Account 2120 Accumulated Amortization of Electric Utility Plant – Intangibles and the depreciation expense in Account 5705 and Account 5715 Amortization of Limited Term Electric Plant.*

## *Response:*

a) Agreed. The account for the ICM Rate Rider is USOA # 1508. Account # 1522 as noted is used for internal record keeping purposes only.

b)

i. Festival has adopted accounting practices for its ICM account similar to what was followed for Smart meter, whereby O & M costs were recorded into the smart meter variance account until time of disposition. As was the case for smart meters, for the TS there were no O & M expenses approved as part of 2010 Rate application for operation and maintenance. It is Festival's belief that these costs would be recorded into Account # 1508 and disposed of as part of the overall disposition of the ICM Variance account. The amount represents the December 2013 and 2014 operating costs actually incurred including such items as property taxes, insurance maintenance, monitoring costs (excluding depreciation), of which none of these costs were part of the 2010 O & M expense. As the ICM is intended for extraordinary capital expenses the resulting OM&A from such capital expenses should also be considered extraordinary and such costs should be considered in the same manner and recoverable.

ii. In terms of approval of the expense, the 2013 IRM Decision and Order (EB-2012-0124) does not specifically state whether or not OM & A may be added to the ICM account # 1508.

iii. Under 9 Staff 62 the table breaking down the contents of Acct # 1508 is shown before adding in the O & M expenses (and related interest) and the total including O & M expenses.

c) The $235,093 is the net carrying charges related to the Incremental Capital Expenditures, O & M expenses and Incremental Capital Expenditures rate rider. as broken down for 9 staff 62.

d) The accounts which Festival Hydro uses for recording are: 2105 Accumulated Depreciation of Electric Utility Plant - Property, Account 2120 Accumulated Amortization of Electric Utility Plant – Intangibles: Transformer station > 50 KV depreciation expense in Account 5705 and Account 5715 Amortization of Limited Term Electric Plant.

e) Evidence has been revised accordingly.

| 9 Staff 63 table | | | | |
|---|---|---|---|---|
| **ICM Rate Rider ACCOUNT # 1508 - Continuity Schedule** (REVISED -agrees to 2 staff 8) | | | | |
| | | **2013** | **2014** | **Jan 1, 2015 transfer** |
| **Opening, Jan 1** | | 0 | 15,058,931 | 14,710,516 |
| **TS O & M Expenses** | | 104,816 | 140,000 | -244,816 |
| **Interest** | | 17,623 | 217,469 | -235,093 |
| **Transfer in from CWIP** | | 15,311,782 | 0 | -15,311,782 |
| **Depreciation & Amortization** | | 28,137 | 337,647 | -365,784 |
| **Accumulated Depreciation & Amort** | | -28,137 | -337,647 | 365,784 |
| **Less ICM Rate Rider Recovery** | | -375,291 | -705,884 | 1,081,174 |
| **Ending Bal, Dec 31** | | **15,058,931** | **14,710,516** | **-0** |
| **(with one mth depn in 2013)** | | | | |
| | | | | |
| | | | | |
| **Entry required for Jan 1, 2015 disposition:** | | | | |
| | | **USOA** | | |
| TS Land | DR | 1805 | 913,474.39 | |
| TS capital | DR | 1815 | 13,961,839.83 | |
| CCRA agreement | DR | 1609 | 436,468.00 | |
| Interest Income | DR | 4405 | 235,092.89 | |
| Distribution Revenue | CR | 4080 | | 1,081,174.36 |
| Depn Exp | DR | 5705 | 346,870.00 | |
| Amort Exp | DR | 5715 | 18,914.00 | |
| Accum Depn | CR | 2105 | | 346,870.00 |
| Accum Amort | CR | 2120 | | 18,914.00 |
| TS O & M Expenses | DR | 5015 | 244,815.74 | |
| ICM Variance Acct | CR | 1508 | | 14,710,516.49 |
| | | | 16,157,474.85 | 16,157,474.85 |
| | | | | |
| **Transfer back to fixed asssets1805,1815,1609 (gross)** | | | 15,311,782.22 | |
| **Less Accuimulated Depreciation/Amortization** | | | -365,784.00 | |
| **Net book value upon transfer , Jan 1, 2015** | | | 14,945,998.22 | |

## *173.* 9. OEB STAFF 64

### Ref: E9/T3/S12, pp. 1-9 – Incremental Capital Module True-up

*Festival Hydro has provided a true-up of its new 62 MVA Transformer station, which was funded through an incremental capital module as part of its 2013 IRM application. As part of its current application Festival Hydro is requesting additional ICM rate riders to recover incremental revenue requirement as follows:*

| Description | 2013 | 2014 (8 months) | Total |
|---|---|---|---|
| Inc. Revenue Requirement – as originally filed EB-2001-0124) (2014=2013/12*8) | $672,412 | $448,275 | $1,120,687 |
| Inc. Revenue Requirement – true up of costs, depreciation and CCA) | $508,652 | $938,371 | $1,447,023 |
| **Variance arising on true up – additional inc capital requirement** | **$(163,760)** | **$490,096** | **$326,336** |

| Proposed Incremental Capital Volumetric Rate Rider effective Jan 1, 2015 to Dec 31, 2015 (1 year) | | | | | $ 326,336.00 | |
|---|---|---|---|---|---|---|
| Rate Class | 2015 Test Year kWh | 2015 Test Year kW | Allocatoin based on 2015 TY kWh | Allocated Balance | Volumetric Rate Rider | Unit |
| Residential | 140,900,798 | - | 23.7% | 77,347 | $ 0.0005 | kWh |
| GS < 50 kW | 64,179,621 | - | 10.8% | 35,231 | $ 0.0005 | kWh |
| GS >50 kW to 4,999 kW | 361,832,480 | 946,164 | 60.9% | 198,627 | $ 0.2099 | kW |
| Large Use | 22,191,326 | 34,422 | 3.7% | 12,182 | $ 0.3539 | kW |
| USL | 660,967 | - | 0.1% | 363 | $ 0.0005 | kWh |
| Sentinel Lights | 150,156 | 356 | 0.0% | 82 | $ 0.2315 | kW |
| Street Lighting | 4,559,343 | 12,017 | 0.8% | 2,503 | $ 0.2083 | kW |
| Total | 594,474,691 | 992,959 | 1 | 326,336 | | |

*a) Please provide a true-up calculation applying the half-year rule as originally applied for, adjusting only for the capital expenditure reduction of $551,330 and final TS asset values.*

*b) Please provide the resulting net book value for the TS station as of January 1, 2015.*

## *Response:*

a) Festival has recalculated the Incremental capital module as requested using the Final TS balances (net of the $551,330) and applying the half year rule. The attached models are called:

9 staff 64 Festival_2013_Incremental_Capital_Project_V1.0_20140827_
9 staff 64 FESTIVAL_2013_IRM3_Incremental_Capital_Wrkfrm_V1.0_20140827
9 staff 64 with Bypass Festival_2013_Incremental_Capital_Project_V1.0_20140827_
9 staff 64 with bypass FESTIVAL_2013_IRM3_Incremental_Capital_Wrkfrm_V1.0_20140827

With the revised model, the 2013 amount is $631,181 plus 8 months of $420,787 for a total of $1,051,968 or $68,719 less than the original filed request.

Festival has also calculated the incremental revenue requirement including the $1.2 M Permanent Bypass arrangement. Even though it was not in the original budget, the spending would never have occurred without the existence of the TS station. As such, given the nature of this expenditure this should also be part of the project. When Festival recalculates the Incremental Capital Modules including the Bypass agreement it results in an amount of $682,746 plus 8 months at $455,164 for a total of $1,137,910 or $17,223 higher than the original filed request.

Festival is still of the belief the half year rule should only apply to the 2013 period and the 8 months for 2014 should be compensated at the full asset value, as outlined in E9/T3/S12 of the original filing.

b) *The resulting net book value would be $14,945,998. The change in the values in the ICM model impacts the distribution revenue earned as opposed to the net book value of the asset being transferred.*

## *174.* 9. OEB STAFF 65

### Ref: E9/T3/S11 – Stranded Meter Costs

*Festival Hydro provided a cost allocation for stranded meter costs based on number of customers.*

*a) Please provide sheet I 7.1 from Festival Hydro last rebasing cost allocation study.*

*b) Please provide a cost allocation of stranded meters by rate class based on the breakdown of conventional meter costs found on sheet I7.1 as shown in Festival Hydro's 2010 cost of service application.*

### *Response:*

a) Sheet I7.1 from Festival's final 2010 COS Cost Allocation Model attached below.

b) The following is the determination of the stranded meter rate rider based on the 2010 COS Sheet I7.1:

| | **Residential** | **G.S> < 50 kW** | **Total** |
|---|---|---|---|
| **Number of Customers/meters per Sheet I7.1** | 17,115 | 1,968 | 19,083 |
| **Total weighted metering costs per Sheet I7.1** | $1,097,812 | $413,280 | $1,511,092 |
| **% of total costs** | 72.65% | 27.35% | 100.00% |
| **Total stranded SM costs per EDVAR continuity Tab 6 Rate Rider Calculation** | $170,391 | 64,146 | $234,537 |
| **# customers per EDVAR** | 18,224 | 2,029 | 20,363 |
| **Monthly per customer fixed Stranded meter RR charge** | $0.78 per month fixed charge | $2.63 per month fixed charge | |

Festival proposes placing these costs for 2013 and 2014 into account # 1572 Extraordinary Event Costs. Festival has included these amounts on the EDVARR schedule to be disposed of as part of the Rate Rider Calculation for Deferral / Variance Accounts Balances (excluding Global Adj.). The bill impacts under Undertaking JT 1.24 have been presented including the $244,815 in the variance account.

## *14.* UNDERTAKING NO. JT1. 13:

### Ref: Page 49

***To update the response to 4-STAFF-75-TCQ regarding the employee future benefit accrual.***

### *Response:*

Festival incorrectly reported the amount of $44,850 as owing to Festival Hydro, when in fact it is owing to the customers as follows:

**2015 DVA Account**
**Required:**

| | | |
|---|---|---|
| Closing Accrual under CICA, Dec 31, 2014 | 1,401,958 | (Festival accrued/expensed) |
| Closing Accrual under IAS19, Dec 31, 2014 | 1,357,108 | (Accrual needed under IAS 19) |
| Difference arising on converting to IFRS | 44,850 | (owing to ~~Festival Hydro~~customers) |

The deferral account, if directed by the Board to be established, will be recorded as a payable to customers. The amount does not meet the materiality level, however, from a causality point of view; it was Festival's belief that LDCs and the ratepayer would be held whole on amounts arising from the conversion from CGAAP to IFRS.
The bill impacts under Undertaking JT 1.24 have been presented including the $(44,850) in the DVA accounts. Festival has included it in the Acct 1572, as an offset to the $244,815 TS expenses for net amount of $199,965.

## *15.* UNDERTAKING NO. JT1. 14:

### Ref: Page 50

***To provide a letter from Festival's auditor that under IFRS a bypass agreement would be considered an intangible asset.***

### *Response:*

Festival again contacted our auditors regarding a letter and their response was that they prefer not to provide an opinion to a governing body on a single accounting decision. As noted, in our previous submissions, the auditors have issued an unqualified opinion on the 2013 financial statements, which presents the permanent bypass as an intangible asset.

The discussion to date has related to whether the permanent bypass constitutes an intangible asset. At the technical conference, it was suggested by Board staff that it may be considered a penalty (i.e. expense). To support Festival's arguments for intangible asset treatment, as opposed to an expense or penalty item, the following analysis of assets versus expenditures is being presented.

**Background**

Festival Hydro Inc. ("Festival") constructed a new TS Station in Stratford. Festival's new TS Station was put into operation in December 2013, and had the capacity to service customers previously serviced by a Hydro One Inc. ("HONI") TS Station. Festival desired to connect these customers to its new TS Station in order to improve their service and reliability.

In order to energize the Festival TS Station and connect these customers by by-passing the HONI Stratford Station, Festival was given two options; a temporary or permanent by-pass agreement with HONI. Management's analysis showed that with the temporary by-pass arrangement, Festival had to ensure there was no loss revenue to HONI, so from a customer's financial perspective the customer was indifferent as to the bypass arrangement. However, through the $1.2 million permanent by-pass agreement, customers would receive an annual net benefit of $475,000 through a reduction of transmission connection charges to customers.

As the permanent by-pass agreement option provided a generous benefit to customers, Festival entered into an agreement with HONI to pay approximately $1,230,000 for the right to by-pass 20 MW of load from the HONI TS Station. The by-pass charge is directly related to both the capital spend on the new TS Station (i.e. the charge would not have been incurred if the new TS Station had not been built), the future benefit to customers (the permanent by-pass option benefits customers approximately $475,000 annually), and Festival's ability to improve service and reliability to its customers.

**Accounting Treatment**

***Does the permanent by-pass charge represent an asset or expenditure?***

Under Canadian GAAP, Part IV of the CPA Canada Handbook – Accounting:

*1000.29 Assets are economic resources controlled by an entity as a result of past transactions or events and from which future economic benefits may be obtained.*

*1000.30 Assets have three essential characteristics:*

*(a) they embody a future benefit that involves a capacity, singly or in combination with other assets, in the case of profit-oriented enterprises, to contribute directly or indirectly to future net cash flows, and, in the case of not-for-profit organizations, to provide services;*

*(b) the entity can control access to the benefit; and*

*(c) the transaction or event giving rise to the entity's right to, or control of, the benefit has already occurred.*

In Festival's case, the by-pass charge meets the definition of an asset. Only by payment of the permanent by-pass charge can the net benefit of future cash flows be realized. In addition, Festival controls the TS Station, by virtue of ownership. Customers cannot be connected through the TS Station unless Festival allows the connection, and cannot earn the financial benefit without the existence of the permanent bypass and existence of the TS itself. The transaction giving the right to or control of, the benefit occurred when the TS Station was put into operation and the by-pass agreement signed in December of 2013.

If we compare the definition of an asset to an expense, alternatively, expenses are defined in CPA HBV 1000.38 as:

*Decreases in economic resources, either by way of outflows or reduction of assets or incurrences of liabilities, resulting from an entity's ordinary revenue generating or service delivery activities.*

As expenses typically relate to the performance of service or revenue generating activities, they would typically be recorded when the full benefit of any outlay has been realized (i.e. revenue has been generated, or an asset has been used to completion). An expense could also be incurred if the future benefits from the expense could not be measured reliably.

In the case of the by-pass agreement charge, the outlay cannot be an expense as the charge provides the right to recover future cash flows from providing service to customers. The benefit of the charge will be realized in the current year and many future dates. This benefit can also be forecasted reliably by management. Furthermore, it is the future potential of revenue generation or service delivery activities that led to the charge, not current revenue or service delivery activities.

<u>What is the nature of the payment?</u>

It should also be considered as to what the actual by-pass charge is for. The calculation of the by-pass charge shows that the payment relates primarily to lost future transmission for HONI as the decommissioning costs are actually less than the salvage value of the HONI TS Station. If the decommissioning cost was higher than salvage, we would expect that a portion of the payment would be for past service used; however, this is not the case. As a result, it appears that Festival is paying for lost future transmission by HONI (essentially the right to the customer base). This is more indicative of an asset which relates to future economic benefit than an expense.

<u>Future Treatment under existing IFRS Standards</u>

The IFRS definition of an asset is more detailed, however, less prescriptive (IFRS "The conceptual framework for financial reporting – Chapter 4.8 – Assets"). Under IFRS, assets embody future economic benefits and result from a past transaction or event. However, control does not necessarily need to be established in order for an asset to exist.

Under existing IFRS standards, it is reasonable that the permanent by-pass charge would also be considered an asset.

***Is the Payment to HONI an Intangible asset or an item of Property Plant and Equipment?***

***Property, Plant and Equipment ("PP&E")***

Under Canadian GAAP, Part IV of the CPA Canada Handbook – Accounting:

*3061.04, PP&E are identifiable tangible assets that meet all of the following criteria:*

*(a) are held for use in the production or supply of goods and services, for rental to others, for administrative purposes or for the development, construction, maintenance or repair of other property, plant and equipment;*

*(b) have been acquired, constructed or developed with the intention of being used on a continuing basis; and*

*(c) are not intended for sale in the ordinary course of business.*

The by-pass charge, in and of itself, does not appear to directly meet the above criteria as it lacks physical substance (i.e., not tangible). However, the new transformer station that was constructed does meet this definition.

*Under 3061.10, rate regulated PP&E are items of PP&E held for use in operations meeting all of the following criteria:*

*(a) The rates for regulated services or products provided to customers are established by or are subject to approval by a regulator or a governing body empowered by statute or contract to establish rates to be charged for services or products.*
*(b) The regulated rates are designed to recover the cost of providing the services or products.*
*(c) It is reasonable to assume that rates set at levels that will recover the cost can be charged to and collected from customers in view of the demand for the services or products and the level of direct and indirect competition. This criterion requires consideration of expected changes in levels of demand or competition during the recovery period for any capitalized costs.*

Based on our understanding of the use of the transformer station and the rate setting process, it is reasonable to assume that the transformer station itself is an item of rate regulated PP&E.

*CPA Canada HBV 3061.05 defines the cost as "the amount of consideration given up to acquire, construct, develop, or better an item of property, plant and equipment and includes all costs directly attributable to the acquisition, construction, development or betterment of the asset including installing it at the location and in the condition necessary for its intended use"*.

Further guidance as to what is included in the cost of PP&E is provided in CPA Canada HBV 3061.17 as follows:

*Purchase price and other acquisition costs such as option costs when an option is exercised, brokers' commissions, installation costs including architectural, design and engineering fees, legal fees, survey costs, site preparation costs, freight charges, transportation insurance costs, duties, testing and* preparation charges.

While the Standard doesn't specially list by-pass costs, it is clear that the expenditure on the permanent bypass would not have occurred without the existence of the new transformer station into service; and can be argued that the charge is directly attributable.

Further to be considered is the recoverable amount of the charge, if included in PP&E. Assuming the regulator will permit the inclusion of the charge as a component of PP&E for the purposes of rate setting, it is reasonably certain that the amount will be recovered in future periods.

*Intangible Asset*

Since the by-pass charge lacks physical substance, it should be considered whether the charge is representative of an intangible asset.

CPA Canada HBV 3064.04 provides guidance with respect to the classification between PP&E and intangible assets:

*Standards for the recognition, measurement, presentation and disclosure of tangible capital assets are provided in PROPERTY, PLANT AND EQUIPMENT, Section 3061. Some intangible assets may be contained in or on a physical substance such as a compact disc (in the case of computer software), legal documentation (in the case of a license or patent) or film. In determining whether an asset that incorporates both intangible and tangible elements should be treated under Section 3061 or as an intangible asset under this Section, an entity uses judgment to assess which element is more significant. For example, computer software for a computer-controlled machine tool that cannot operate without that specific software is an integral part of the related hardware and it is treated as property, plant and equipment. The same applies to the operating system of a computer. When the software is not an integral part of the related hardware, computer software is treated as an intangible asset.*

In Festival's case, the by-pass charge is a payment to compensate for the decommissioning of the existing asset or cost associated with the stranded asset. As it has been argued in the PPE discussion, this was a critical payment with the purpose of creating future economic benefits to Festival Hydro and to its customers. As a result, it may be more appropriate to recognize the by-pass charge as an asset separate from the TS Station.
CPA Canada HBV 3064.11 describes the criteria for recognition of intangible assets. First, an intangible asset needs to meet the definition of an intangible asset (identifiable, control, future economic benefits). Second, the recognition criteria must be met.

In meeting the definition criteria, identifiability is met as the by-pass charge arose from a contractual right (3064.12(b)). Control over future economic benefits has been established by virtue of ownership of the TS station and the payment of the by-pass fee, which gives Festival control over servicing the customer base. Finally, future economic benefits are expected from the by-pass agreement payment both to Festival, in being able to service customers reliably, and to the customers in terms of future savings. This is not possible without the payment to HONI, as is the situation in the temporary bypass arrangement.

The by-pass charge meets the recognition criteria (3064.21-23) since it is probable that the expected future economic benefits attributable to the asset will flow to the entity and the cost of the asset is measured reliably. As previously discussed, future economic benefits will be received as a result of the by-pass agreement, primarily through obtaining new customers. The cost of the asset is measured reliably as it is outlined in a calculation as part of the by-pass agreement.

Conclusion on classification
The nature of the by-pass payment is that it could be treated as either an intangible asset or PPE. The payment is for a right to access customers and obtain future economic benefit for Festival. This would lead towards treatment as a definite life intangible asset as the asset meets the criteria for recognition. Separate treatment from the PPE TS Station asset may be desirable as it would better highlight the underlying nature of the transaction and seems to comply more reasonably with the guidance in 3064 & 3061. However, the asset could also be reclassified to PPE and shown as a component of the TS Station, since the asset would not exist without the existence of the TS. In either event, the amortization of the asset would be consistent with the TS Station itself and would not have an impact on the amortization affecting the Statement of Operations. Furthermore, whether the classification should be PPE or Intangible is not significant or material to the financial statements as both asset classifications are long-term.

Treatment under current IFRS
The treatment for recognition of PPE (IAS 16.7) under IFRS is similar to CPA HB V. Assets are recognized as PPE when it is probable that future economic benefits associated with the item will flow to the entity and the cost of the item can be measured reliably. As discussed above, both of these arguments are met. Furthermore IAS16.11 indicates that initial costs may be PPE if they are directly or indirectly related to items of PPE to obtain future economic benefits. Under the current standards it is reasonable to assume that the asset would be able to be recognized as PPE under IAS16.

Similarly, IAS 38.11-24 Intangible Assets currently set out the same criteria as CPA HBV – 3064 (identifiability, control, future economic benefit, etc.). The guidance in both handbooks point to the asset meeting the recognition criteria. As we have noted above in the CPA HBV-3064 section, the following (IAS38.21-22) has been met as well using the same arguments:

*IAS38.21 An intangible asset shall be recognized if, and only if:*

*(a) it is probable that the expected future economic benefits that are attributable to the asset will flow to the entity; and*

*(b) the cost of the asset can be measured reliably.*

*IAS38.22 An entity shall assess the probability of expected future economic benefits using reasonable and supportable assumptions that represent management's best estimate of the set of economic conditions that will exist over the useful life of the asset.*

***Additional considerations***

The OEB has issued the Accounting Procedures Handbook ("APH") for Electricity Distributors in order to provide guidance in accounting for transactions. The following are excerpts from the APH related to intangible assets:

Article 220 (Balance Sheet Accounts) describes intangible assets:

*1609 Capital Contributions Paid*

*This account shall include capital contributions paid by a distributor to a host distributor, a transmitter or a generator for capital expenditures (e.g., under a Connection and Cost Recovery Agreement) that meet the IAS 38 Intangible Assets requirements for classification as an intangible asset.*

*1610 Miscellaneous Intangible Plant*

*This account shall include the cost of patent rights, licenses, privileges, capitalizable load profile development costs and other intangible property necessary or valuable in the conduct of utility operations and not specifically chargeable to any other account.*

Article 410 (Property, Plant and Equipment and Intangible Assets) of the OEB Accounting Procedures Handbook describes accounting for contributions in aid of construction and states:

*Contributions paid by a distributor: in some cases distributors will incur expenditures for amounts paid to other distributors or transmitters for capital projects. Distributors who incur such costs, should record the amounts in USoA Account 1609, Intangible Assets – Capital Contributions Paid.*

Expenses

The APH does not provide guidance specific to 'penalty payments'.

It is reasonable to conclude that the APH guide suggest using 1609 Capital Contributions Paid (an intangible account). While the payment was not directly attributed to a capital project of another distributor, it was a payment to HONI to facilitate the full operation of the asset Festival constructed and the asset meets the requirements of IAS38.

**Conclusion**

It is Festival's opinion that after review of the transaction facts and applicable accounting guidance, the transaction embodies the characteristics of an asset and not an expense. Furthermore, the asset meets the definition of an intangible asset under CGAAP and IAS38. The asset could also be considered part of the PPE costs required to get the asset ready for its intended use. However, for accounting purposes, the impact to the financial statements would not be significantly different, aside from the intangible being reported on a separate line item than PPE.

The other factor that needs emphasized is that Festival entered in to this permanent bypass arrangement for the financial benefit to the customer. From Festival's perspective, the transfer of 20 MWh of load represents benefits interms of improved service and reliability. Not to forget, Festival could have entered into a temporary bypass which would have been revenue natural for customers and achieved the same results for Festival. Festival made a conscious decision to add this asset to their rate base and to invest the $1.2 million so as to pass along the $475,000 annual savings to its customers. It is arguably a good investment in terms of return on investment from the customer's perspective.

Festival had not looked into any other Board document or policy on guidance as to where the permanent bypass should be classified because Festival was confident it met the definition of an intangible asset and that it also met the criteria of USoA # 1609.

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***To provide the difference in cost or revenue requirement if Festival were to use a deferral account to recover the amount of the bypass penalty over three years.***

*Response:*

Festival has completed an analysis comparing the NPV associated with treating the asset as an intangible asset within rate base compared to the recovery as a Deferral account over 3 years. As noted in the table below, including the costs in the rate base over a 45 year life span results in a much higher NPV value than treating it as an asset in a Deferral account.

With the deferral account method, there is a small positive net present value arise on the 3 year deferral account whether it is financed over a 25 year period or a 3 year period. This positive return is primarily due to the fact that the deferral account, which will be established effective January 1, 2014, will have the full value of the contract of $1,230,026 added to the account. At the OEB prescribed interest rate of 1.47%, that will result in $18,081 carrying charges being earned in 2014. Since Festival does not expect to borrow the funds until December 2014 at the earliest, the carrying charges earned in 2014 and 2015 to 2017 will more than offset the cost of borrowing associated with the loan over the three year period (the loan being calculated at 2.24% - the Infrastructure Ontario's current 5 year rate).