RATE BASE

1. INTRODUCTION

This Exhibit provides the forecast of Hydro One Transmission's rate base for the 2017 and 2018 test years and provides a detailed description of each of the rate base components. The composition of Hydro One Transmission's assets is described in Exhibit B1, Tab 1, Schedule 2.

The rate base underlying the test year revenue requirement includes a forecast of net utility plant, calculated on a mid-year average basis, plus a working capital allowance. Net utility plant is gross plant in-service minus accumulated depreciation. Working capital includes an allowance for cash working capital and materials and supplies inventory.

2. UTILITY RATE BASE

Hydro One Transmission's utility rate base for the transmission system for the test years is filed in Exhibit D2, Tab 1, Schedule 1. The calculation of average balances to derive net utility plant for the historical, bridge and test years is filed in Exhibit D2, Tab 2, Schedule 1 and Exhibit D2, Tab 2, Schedule 2.

Hydro One Transmission's forecast rate base for the 2017 test year is $10,554.4 million and for the 2018 test year is $11,225.5 million. Table 1 provides a summary of the calculation.

Table 1: Transmission Rate Base ($ Millions)[1]

Description	2017	2018
Gross Plant	16,641.1	17,616.4
Less: Accumulated Depreciation	(6,113.4)	(6,418.7)
Net plant in service	**10,527.8**	**11,197.7**
Working Capital	26.6	27.8
Total Rate Base	**10,554.4**	**11,225.5**

2.1 Derivation of Net Utility Plant

The mid-year gross plant balance reflects the in-service additions resulting from the capital expenditure program forecast for the test years. These programs are described in detail in the Company's written evidence at Exhibits B1, Tab 3, Schedule 1 through 8. The justifications for individual capital projects in excess of $3 million are filed in Exhibit B1, Tab 3, Schedule 11.

The 2017 Net Plant in-service of $10,527.8 million is $510.3 million or 5.1% higher than 2016 Board-approved Net Plant of $10,017.5 million approved in EB-2014-0140. The 2018 Net Plant in-service of $11,197.7 million is $669.9 million or 6.4% higher than 2017 Test Year. These increases reflect the Company's infrastructure investments to address asset replacement and refurbishment needs of the Transmission system; these investments are described in detail in Exhibit B of this application.

[1] Gross plant and accumulated depreciation values are calculated using a mid-year approach. Capital contributions have been netted out. Contributed capital refers to amounts contributed by third parties to specific capital projects, such as, for example, Joint Use Assets.

A continuity schedule for gross fixed assets for the test, bridge and historical years is shown in Exhibit D2, Tab 2, Schedule 1. In-service additions in that exhibit reflect the placing in-service of some of Hydro One Transmission's capital programs, shown in Exhibit D1, Tab 1, Schedule 2.

A continuity schedule for accumulated depreciation for the test, bridge and historical years is shown in Exhibit D2, Tab 2, Schedule 2. The accumulated depreciation balance for the test years incorporates the accepted Foster Associates' Inc. methodology. The depreciation expense is further discussed in Exhibit C1, Tab 7, Schedule 1.

2.2 Cash Working Capital

In 2015, Hydro One Transmission retained Navigant Consulting Inc. to undertake a lead-lag study. The provision for working capital in 2017 and 2018 incorporates the results of this new study.

The cash working capital requirement for the transmission system is based on the following factors:

- the forecast of revenues,
- the forecast of OM&A, taxes and other cash expenditures and the net lead lag days determined.

Applying the lead lag study methodology results in a net cash working capital requirement of $14.7 million for the 2017 test year and $15.6 million for the 2018 test year. The calculation of cash working capital is discussed in further detail in Exhibit D1, Tab 1, Schedule 4.

2.3 Materials and Supplies Inventory

The other component of working capital is materials and supplies inventory. The average annual materials and supplies inventory balances are $12.0 million for 2017 and $12.2 million for 2018. Materials and supplies inventory is discussed in further detail in Exhibit D1, Tab 2, Schedule 1.

3. COMPARISON OF RATE BASE TO BOARD APPROVED

Table 3 compares 2015 costs to the 2015 Rate Base approved by the Board in their Decision on Hydro One Transmission's previous application in EB-2014-0140.

Table 3: 2015 Board Approved versus 2015 Rate Base ($M)

Rate Base Component	2015 Actual	2015 Board Approved	Variance
Gross Plant	15,102.1	15,117.7	(15.5)
Accumulated Depreciation	(5,508.0)	(5,490.9)	17.1
Net Utility Plant	**9,594.1**	**9,626.8**	**(32.6)**
Cash Working Capital[1]	10.7	10.7	0.0
Materials & Supplies Inventory	12.2	13.7	(1.5)
Total Rate Base	**9,617.1**	**9,651.2**	**(34.1)**

Notes: [1]Hydro One Transmission does not calculate actual cash working capital, thus the 2015 approved amount was used for illustrative purposes.

Total rate base was $34.1 million below the Board approved amount; a variance of 0.4%.

Table 4 compares 2016 forecast costs to the 2016 Rate Base approved by the Board in their Decision on Hydro One Transmission's previous application EB-2014-0140.

Table 4: 2016 Board Approved versus 2016 Bridge Year Rate Base ($M)

Rate Base Component	2016 Bridge Year (Forecast)	2016 Board Approved	Variance
Gross Plant	15,794.8	15,805.2	(10.4)
Accumulated Depreciation	(5,802.8)	(5,787.7)	15.1
Net Utility Plant	**9,992.0**	**10,017.5**	**(25.5)**
Cash Working Capital[1]	8.5	8.5	0.0
Materials & Supplies Inventory	11.7	14.0	(2.3)
Total Rate Base	**10,012.2**	**10,040.0**	**(27.8)**

[1] Hydro One Transmission does not calculate actual cash working capital, thus the 2016 approved amount was used for illustrative purposes.

Total rate base was $27.8 million below the Board approved amount, a variance of 0.3%.

IN-SERVICE ADDITIONS

1. INTRODUCTION

In-service additions represent increases to rate base as a result of capital work being declared in-service and ready for use by Hydro One Transmission customers. The in-service additions vary from capital expenditures due to the multi-year nature of capital projects with defined in-service dates.

Table 1 provides an overview of Hydro One Transmission's in-service additions over the 2014 to 2016 period and the test years.

Table 1: In-Service Capital Additions 2014 – 2018 ($ Millions)

	2014	2014	2015	2015	2016	2016	Test Years	
	ISA Actuals	OEB Approved	ISA Actuals	OEB Approved	Bridge Projected	OEB Approved	2017	2018
Sustaining	655.8	588.4	569.7	572.2	604.5	480.9	771.1	747.7
Development	177.9	177.3	27.9	134.7	209.5	119.4	64.6	374.9
Operations	12.1	14.7	29.4	50.4	15.1	10.0	8.0	10.3
Common & Other	68.7	82.9	72.2	64.1	82.6	63.1	87.8	76.8
Total	**914.5**	**863.3**[1]	**699.1**	**821.3**	**911.7**	**673.3**	**931.4**	**1,209.7**

Hydro One is expecting to achieve the OEB- approved cumulative 2014 to 2016 in-service additions of $2,357.9 million. In addition Hydro One responded to emergent non-

[1] The total amount represents the revised in-service capital additions in 2014, presented in the Settlement Agreement which was subsequently accepted by the OEB in EB-2014-0140.

discretionary needs of $162 million, representing 7% incremental additions above the approved plan.

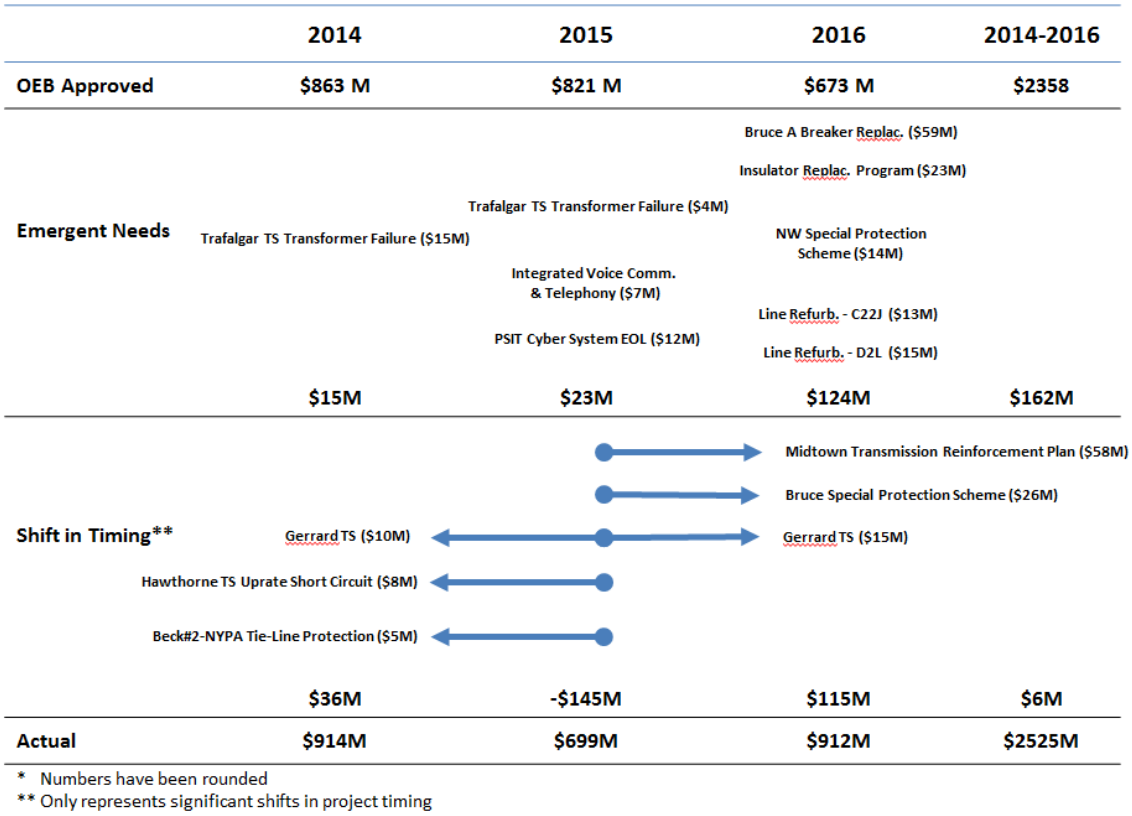
Hydro One is committing to achieving the projected level of in-service capital additions over the test years by using a mix of internal and external resources. Hydro One's capital work execution strategy is described in detail in Exhibit B1, Tab 4, Schedule 1, which outlines how Hydro One intends to accomplish the forecast level of in-service capital additions.

2. TREND ANALYSIS 2014-2016

As described in Exhibit B1, Tab 2, Schedule, 7, the development of an investment plan must be done in a manner that is dynamic and flexible to respond to changing and unforeseen circumstances. In response to some unforeseen events and based on execution constraints, Hydro One made tactical adjustments to its investment and execution plan in the 2014-2016 period. Typically, these adjustments are reflected as delays, prudent cost/scope increases, or a valid redirection of projects to address new risks related to development, compliance or anticipated expenditures associated with equipment failures.

Figure 1 compares Hydro One's forecast in-service additions for the period 2014 to 2016 to its OEB-approved in-service additions plan and summarizes the timing of emergent needs and projects with significant shifts in in-service timing.

Figure 1: 2014-2016 Actual/Forecast In-service Additions vs. OEB-approved Plan*



* Numbers have been rounded
** Only represents significant shifts in project timing

2.1 Emergent Needs

Table 2 describes the non-discretionary investments that Hydro One Transmission made and in-serviced during the 2014-2016 period in response to changes in circumstance and new information.

Table 2: Non-discretionary In-service Additions, 2014-2016

Project	Amount ($M)	Prudency Rationale
Bruce A – Air Blast Circuit Breaker Replacement	59	Advanced replacement of synchronizing breakers and all air blast circuit breakers that were negatively impacting Bruce Power's ability to connect to the transmission grid.
Insulator Replacements	23	Additional investment based on emerging information on insulator failure risk impacting safety and system reliability.
Trafalgar TS - Replace T15	19	Emergency replacement of T15 (750MVA 500kV) auto transformer failure. This was a demand capital replacement that was carried out to restore security of supply and system reliability.
Northwest Special Protection Scheme	14	Requested by the IESO in December 2014 to address northwest reliability issues.
PSIT Cyber System End-of-Life	12	Meeting NERC cyber security regulatory requirements.
Line Refurbishment: C22J/C24Z/C21J /C23Z - Chatham SS X Lauzon TS & Keith TS	13	Restore integrity of deficient structures supporting these circuits, which supply electricity to Chatham, Windsor and the surrounding area and the interconnection with Michigan.
Line Refurbishment - D2L	15	Laboratory testing of conductor samples revealed the lines were at end of life. Field inspections found structures required refurbishment to restore design integrity.
OGCC Integrated Voice Communication & Telephony (IVCT)	7	Updating the IVCT environment which was comprised of multiple customized applications supplied by different vendors, to maintain vendor support of a critical control centre communications system.
TOTAL	**162**	

2.2 Timing Changes

Table 3 lists projects which had in-service dates adjusted to capitalize on favourable outage and work conditions, respond to customer needs, external constraints, and project delivery issues.

Table 3: Timing Changes of In-service Additions, 2014-2016

Project	Shift in In Service year	Prudency Rationale
Midtown Transmission Reinforcement Plan	2015 to 2016	Delay of project to 2016 due to construction challenges with the tunnel portion of the work. See link below for the Project Status Update letter Hydro One sent to the OEB in September 2015. http://www.rds.ontarioenergyboard.ca/webdrawer/webdrawer.dll/webdrawer/rec/495637/view/
Bruce Special Protection Scheme	2015 to 2016	Delay of project due to vendor equipment failing type testing during the detailed engineering phase
Gerrard TS	2015 to 2014/16	Acceleration of replacement of T1/T2 to 2014 and the delay of replacement of T3/T4 to 2016 to ensure reliability of supply to Toronto Hydro during the 2015 Pan American games.
Hawthorne TS Uprate Short Circuit	2015 to 2014	Acceleration of the breaker replacements to meet the needs of customers and to connect additional generation.
Beck #2 NYPA Tie-line Protection	2015 to 2014	Acceleration of work to address the end of life protection equipment that affects the reliability of the tie line between Hydro One and New York Power Authority.

3. IN-SERVICE ADDITIONS IN 2017 AND 2018

In-service capital additions will increase slightly in 2017 as compared to the 2016 projected amount and increase more significantly in 2018 as compared to 2016.

Sustainment in-service capital additions will increase in 2017 as compared to the 2016 projected amount primarily due to increased investment in transmission overhead lines for insulator replacements, steel structure coating, and wood pole replacements.

Development in-service additions will increase in 2018 as compared to 2017 project amount primarily due to the Clarington TS project which was requested by the IESO (*formerly the OPA)* and presented in Proceeding EB-2012-0031, and the Supply to Essex

County Transmission Reinforcement project which was approved in Proceeding EB-2013-0421.

Operations in-service capital additions will decrease in 2017 and 2018 as compared to the 2014 to 2016 amount primarily due to the completion of major upgrades and enhancements of Operations tools over 2015 and 2016.

The associated capital expenditures in 2017 and 2018 are described at the program and major project level in Exhibit B1, Tab 3 and Tab 1. All projects with spending greater than $3 million in one of the test years are described in more detail in Exhibit B1, Tab 3, Schedule 11. The following is a list of in-service capital additions over the test years of greater than $50 million:

- Clarington TS: Build new 500/230 kV Station (D01) ($263.8 million in 2018)*;
- Insulator Replacements (S79) ($122.0 million over 2017 and 2018);
- Steel Structure Coating (S76) ($98.4 million over 2017 and 2018);
- Tx Wood Pole Replacements (S75) ($82.8 million over 2017 and 2018);
- Air Blast Circuit Breaker Replacement - Richview TS (S07) ($60.7 million in 2018)*; and
- Supply to Essex County Transmission Reinforcement (D14) ($50.5 million in 2018).

*Note some of these projects have been placed partially in-service prior to the test years.

ECONOMIC EVALUATION TRUE-UPS

1. INTRODUCTION

This Exhibit provides the forecast of the impact upon Hydro One Transmission's rate base for the 2017 and 2018 test years from Customer Connection and Cost Recovery Agreements true-up calculations in compliance to the Transmission System Code (TSC).

2. TRUE-UP PROCEDURE FOR LOAD CUSTOMERS

Hydro One Transmission carries out actual customer load true-up calculations for new and modified connection facilities at true-up points as per section 6.5.3. of the TSC:

1) For high risk connections, at the end of each year of operation, for five years;
2) for medium-high risk and medium-low risk connections, at the end of each of the third, fifth and tenth year of operation; and
3) for low risk connections, at the end of each of the fifth and tenth year of operation, and at the end of the fifteenth year of operation if actual load is 20% higher or lower than the initial load forecast at the end of the tenth year of operation.

For the true-up calculation, Hydro One shall use the same methodology used to carry out the initial economic evaluation, and the same inputs except for load as per section 6.5.4. of the TSC and detailed in the OEB approved Hydro One Transmission Connection Procedures section 2.5. Hydro One Transmission considers Hydro One Distribution as one of its customers, with no more or less rights than other customers, in accordance with the Affiliate Relationship Code.

The load used in the true up calculation is based on the actual load up to the true-up point and an updated load forecast from the customer for the remainder of the economic

evaluation period used. Hydro One Transmission does assess whether the updated load forecast is reasonable prior to inclusion in the true up calculations. Only incremental net new load is included in the true up calculation; if a customer has transferred load from an existing Hydro One owned connection facility already serving the customer to the new connection facility subject to the true up, the customer's actual load for true-up purposes will be reduced in proportion to the amount transferred. The updated load forecast will also be reduced to eliminate any transferred load. The incremental actual load of the customer is increased by the embedded generation and conservation and demand management activities in accordance with section 6.5.8 to section 6.5.10 of the TSC and detailed in Hydro One's CDM/DG Load Adjustments Guidelines for CCRA True-Ups.

When a load customer voluntarily and permanently disconnects its facilities from a transmitter's facilities prior to the last true-up point, Hydro One, at the time of disconnection, carries out a final true-up calculation in accordance with section 6.5.11 of the TSC.

When the true-up calculation shows that the load customer's load has not generated sufficient revenue for the present value of connection rate revenues equals the present value of costs, the transmitter shall require the load customer to make a payment to make up the shortfall, adjusted appropriately to reflect the time value of money and net of any previous true-up payments as per section 6.5.6. of the TSC. This capital contribution is credited against fixed assets and results in a reduction in rate base.

Where a true-up calculation shows that the load customer's load results in the present value of connection rate revenue exceeding the present value of costs, Hydro One applies this credit against any shortfall in subsequent true-up calculations. After the final true-up calculation is completed, any credited amount is adjusted appropriately to reflect the time value of money. Hydro One then rebates the load customer any excess, adjusted

appropriately to reflect the time value of money, but not exceeding previous capital contribution, adjusted to reflect the time value of money, previously paid by the load customer as per section 6.5.7. of the TSC. The notional account prior to the final true up does not adjust rate base. Only upon the final true up does Hydro One increase the net fixed assets of the connection facility, and thereby the rate base, once the customer has been refunded the required credit.

3. FORECASTED IMPACT ON RATE BASE.

Hydro One expects to undertake forty two customer economic true ups, which can encompass a Network, Transformation, and/or Line pool calculation, during the test years. The true ups range from those covering annual true ups for industrial customers classified as high risk to the fifth or tenth year true up for distributors classified as a low risk. The number of Customer Connection and Cost Recovery Agreements to be reviewed and resulting forecasted true up capital contributions for 2016 – 2018 are as follows:

Table 1: Forecast Customer Connection and Cost Recovery True Ups

Year	2015	2016	2017	2018
Number of Agreements to be Reviewed	37	18	7	20
Forecasted True Up Contributions	$69.0M	$23.6M	$11.7M	$7.2M

The 2015 true ups payments are disclosed as part of Hydro One Transmission's 2015 audited financial statements (see Exhibit A-7-1). The majority the contracts being reviewed during the bridge year 2016 were previously conducted up to five years ago depending upon the customers' risk classification. At that time (in 2011), most customers did not forecast load decline of either the depth nor for the length of time due to the global economic situation. The customer forecasts at that time generally assumed that their load would recover faster based on their previous historical experience. This

did not occur when compared to actual load in the subsequent period, even after accounting for potential conservation and demand management credits.

The required capital contributions from customers are forecast to decline during the test years (2017 – 2018). Customers during their previous true ups (performed 2012 or later), for the most part, had utilized a more pessimistic demand forecast. In fact, several customers currently have actual loads exceeding their previous true up forecast and will have the final required true up performed as per the TSC. This will result in Hydro One refunding the notional credit to these customers, which is why the total capital contributions decrease in 2017 and 2018.

WORKING CAPITAL

1. INTRODUCTION

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

In 2006, Hydro One Transmission commissioned Navigant Consulting Inc. (Navigant) to carry out a lead-lag study, the results of which were accepted by the Board in its EB-2006-0501 Decision with Reasons, dated August 16, 2007. The accepted methodology was reviewed by Navigant in 2010 and used in the Transmission rate filing EB-2010-0002. In 2015, Hydro One commissioned Navigant to conduct an updated lead-lag study which is included in Exhibit D1, Tab 1, Schedule 4, Attachment 1 (entitled "A Determination of the Working Capital Requirements of Hydro One Networks' Transmission Business – dated May 17, 2016.

2. SUMMARY

Hydro One Transmission's net cash working capital requirement for the 2017 test year is $14.7 million or 3.4% of OM&A expenses ($425.8M) or 0.14% of Rate Base ($10,554.4M). Net cash working capital for 2018 is $15.6 million, which is 3.7% of OM&A ($422.2M) expenses or 0.14% of Rate Base ($11,225.5M). Table 1 summarizes the net cash working capital requirements determined by using the lead-lag days from the Navigant study (see Exhibit D1, Tab 1, Schedule 4, Attachment 1) to reflect the 2017 and 2018 test years' revenue, expense 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 IESO billing lag,
- includes the most important elements of expense leads such as payroll and benefits, operations, maintenance, administration expenses, and taxes, including property taxes
- takes the major cost elements into consideration in calculating the net cash working capital.

Table 1: Transmission Net Cash Working Capital Requirement

($M Except Lead-Lag Days)

	Revenue Lag (Days)	**Expense Lead (Days)**	**Net Lag (Lead) (Days)**	**2017 Test Year Amount**	**2018 Test Year Amount**
	(A)	(B)	(C)	(D)	(E)
Expenses					
OM&A Expenses	32.79	33.83	(1.04)	425.8	422.2
Removal costs	32.79	27.62	5.18	53.4	69.2
Environmental Remediation	32.79	18.29	14.50	11.6	10.0
Interest on Long term debt	32.79	(1.33)	34.12	276.5	290.2
Income tax	32.79	19.63	13.16	81.3	90.4
Total				**848.6**	**882.0**
HST (see Table 2)				101.7	108.2
TOTAL AMOUNTS PAID/ACCRUED				**950.3**	**990.2**

Working Capital Required

(Calculations based on above values, for each expense category, calculated using the following formula:

For 2017 Col (D)*Col (C)/365)

For 2018 Col (E)*Col (C)/365)

	2017	**2018**
OM&A Expenses	(1.2)	(1.2)
Removal costs	0.8	1.0
Environmental Remediation	0.5	0.4
Interest on Long term debt	25.8	27.1
Income tax	2.9	3.3
Total	**28.8**	**30.6**
HST (see Table 2)	(14.1)	(15.0)
NET WORKING CASH REQUIRED	**14.7**	**15.6**

1

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

HST Category	**2017 Test Year**		**2018 Test Year**	
		13% HST Projection		**13% HST Projection**
	(A)	(B)	(A)	(B)
Revenue	1,619.0	210.5	1698.2	220.8
OM&A Expenses	139.7	(18.2)	138.5	(18.0)
Removal costs	6.2	(0.8)	8.0	(1.0)
Environmental Remediation	4.3	(0.6)	3.7	(0.5)
Capital	686.6	(89.3)	716.0	(93.1)
TOTAL		**101.7**		**108.2**

HST (Benefit) Cost	**2017 Test Year**		**2018 Test Year**	
	Expense Leads (Days)	**HST Amounts**	**Expense Leads (Days)**	**HST Amounts**
	(C)	(D)	(C)	(D)
The values shown in the Col (D) labeled "HST Amounts" are calculated using the expense leads shown in Col (C) divided by 365 and multiplied by the 13% HST projected amount in Col (B)				
Revenue	(46.42)	(26.7)	(46.42)	(28.1)
OM&A Expenses	43.23	2.2	43.23	2.1
Removal costs	42.24	0.1	42.24	0.1
Environmental Remediation	42.24	0.1	42.24	0.1
Capital	42.24	10.3	42.24	10.8
TOTAL		**(14.1)**		**(15.0)**

NAVIGANT

Working Capital Requirements of Hydro One Networks

Transmission Business

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Final Report
Reference No.: 179261
May 17, 2016

This report (the "report") was prepared for Hydro One Networking Inc. ("HONI") by Navigant Consulting, Ltd. ("Navigant"). The report was prepared solely for the purposes of HONI'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 HONI'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.

TABLE OF CONTENTS

LIST OF TABLES

NAVIGANT

SECTION I: EXECUTIVE SUMMARY

Summary

In preparation for an upcoming transmission 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 transmission 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 transmission working capital study (EB-2014-0140). 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 transmission studies as well as studies performed by other local distribution companies in Ontario; and,
3. Data from calendar year 2014 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	2017	2018
Percentage of OMA	**3.4%**	**3.7%**
Working Capital Requirement $(M)	**$15**	**$16**

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 of 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 transmission 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 transmission 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-2014-0140 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 transmission operations of HONI and that the results are reasonable when compared with the prior transmission studies.

NAVIGANT

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".

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.

Methodology

Performing a lead-lag study requires two key undertakings:

1. Developing an understanding of how the regulated transmission 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 transmission 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 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 transmission business receives funds from the following funding streams:

1. The Independent Electric System Operator ("IESO"); and,
2. Other sources including municipalities, electricity retailers, and for miscellaneous services such as jobbing and contracting work performed by HONI.

Data from HONI's billing system indicates that in 2014, payments from the IESO contributed approximately 81% of HONI's transmission revenues. 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
IESO Revenues	32.72	$ 1,557	81%	26.44
Other Revenues	33.11	$ 370	19%	6.35
Total		**$ 1,926**	**100%**	**32.79**

IESO Revenues

HONI receives revenues from the IESO monthly in a manner that is consistent with the settlement and payment procedures outlined in the IESO's tariff. Taking this information into account and using actual amounts and dates received for 2014, a revenue lag of 32.72 days was determined. The derivation is shown in Table 3 below.

Table 3: Summary of IESO Revenues

Period Beginning	Period Ending	Payment Date	Payment Amount	Weighting Factor	Service Lag Time	Payment Lag Time	Total Lag Time	Weighted Lag
1/1/2014	1/31/2014	2/14/2014	$ 142.36	9%	15.50	19.00	34.50	3.15
2/1/2014	2/28/2014	3/14/2014	$ 132.99	9%	14.00	18.00	32.00	2.73
3/1/2014	3/31/2014	4/14/2014	$ 131.66	8%	15.50	16.00	31.50	2.66
4/1/2014	4/30/2014	5/14/2014	$ 117.31	8%	15.00	16.00	31.00	2.34
5/1/2014	5/31/2014	6/13/2014	$ 118.98	8%	15.50	17.00	32.50	2.48
6/1/2014	6/30/2014	7/15/2014	$ 133.06	9%	15.00	17.00	32.00	2.74
7/1/2014	7/31/2014	8/15/2014	$ 136.51	9%	15.50	19.00	34.50	3.03
8/1/2014	8/31/2014	9/15/2014	$ 136.63	9%	15.50	17.00	32.50	2.85
9/1/2014	9/30/2014	10/15/2014	$ 138.03	9%	15.00	17.00	32.00	2.84
10/1/2014	10/31/2014	11/17/2014	$ 112.99	7%	15.50	19.00	34.50	2.50
11/1/2014	11/30/2014	12/12/2014	$ 127.04	8%	15.00	16.00	31.00	2.53
12/1/2014	12/31/2014	1/15/2015	$ 129.26	8%	15.50	19.00	34.50	2.86
Total			**$1,556.84**					**32.72**

Other Revenues

The lag time associated with other revenues is defined as the sum of an average service lag time and a dollar-weighted payment lag time. The expectation is that HONI bills monthly for services such as merchandising, jobbing, and rents and leases of HONI property. Thus, the mid-point of a month (i.e., 15.21 days) was used as indicative of the service lag, i.e., for non-energy related services provided by Hydro One to outside parties. Accounts receivable balances on other revenues for 2014 were reviewed to determine a dollar-weighted payment lag which was determined to be 17.90 days. Taken together, the lag time associated with other revenues was determined as 33.11 days.

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

OM&A Expenses

For the purpose of the transmission 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 33.83 days for OM&A expenses.

Table 4: Summary of OM&A Expenses

Description	Amounts ($M)	Weighting	Expense Lead Time	Weighted Lead Time
Payroll & Benefits	$ 503.21	41%	23.84	9.72
Property Taxes	$ 52.88	4%	23.89	1.02
Corporate Procurement Card	$ 36.96	3%	29.87	0.89
Trinity Lease Payments	$ 4.02	0%	-14.21	-0.05
Payments to Inergi	$ 102.51	8%	32.82	2.73
Consulting and Contract Staff	$ 44.90	4%	1.91	0.07
Miscellaneous OM&A	$ 489.65	40%	49.00	19.44
Total	**$ 1,234.14**	**100%**		**33.83**

Payroll & Benefits

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

1. Four types of payroll including Basic, Construction, Management, Board of Directors and Supervisor Pension payroll;
2. Three types of payroll withholdings including the Canada Pension Plan, Employment Insurance, and Income Tax withholdings for each of the payroll types;
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 23.84 days as shown in Table 5 below.

Table 5: Summary of Payroll & Benefits Expenses

Description	Amounts ($M)	Weighting	Expense Lead Time	Weighted Lead Time
Pensions	$ 84.89	17%	28.18	4.75
WSIB	$ 2.97	1%	44.76	0.26
Employee Health Tax	$ 7.19	1%	30.91	0.44
Group Life Insurance	$ 2.25	0%	0.86	0.00
Group Health & Dental - ASO	$ 3.08	1%	56.48	0.35
Group Health & Dental - Claims	$ 19.38	4%	10.90	0.42
Payroll				
Basic	$ 184.45	37%	26.70	9.79
Construction	$ 70.39	14%	11.49	1.61
Management	$ 1.55	0%	25.91	0.08
Board of Directors	$ 0.18	0%	59.51	0.02
Supervisor Pensions	$ 1.55	0%	25.91	0.08
Payroll Withholdings				
Basic	$ 92.95	18%	25.73	4.75
Construction	$ 31.01	6%	19.03	1.17
Management	$ 0.64	0%	40.29	0.05
Board of Directors	$ 0.08	0%	69.59	0.01
Supervisor Pensions	$ 0.64	0%	40.29	0.05
Total	**$ 503.21**	**100%**		**23.84**

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 transmission business for calendar year 2014, a dollar-weighted expense lead time of 23.89 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 29.87 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 2014, a dollar-weighted expense lag time of 14.21 days was determined.

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 2014, a dollar-weighted expense lead time of 32.82 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 1.91 days was determined based on a review of invoices rendered and payments made by HONI in 2014.

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 49.00 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 6 below.

Table 6: Summary of Removal and Environmental Remediation Expenses

Description	Expense Lead Time	% of Remediation Expenses	Weighted Lead Time
Removal			
HONI Labour	23.84	85.0%	20.27
HONI Materials	49.00	15.0%	7.35
External Labour	1.91	0.0%	0.00
External Materials	49.00	0.0%	0.00
Total		**100.0%**	**27.62**
Environmental Remediation			
HONI Labour	23.84	42.5%	10.13
HONI Materials	49.00	7.5%	3.67
External Labour	1.91	42.5%	0.81
External Materials	49.00	7.5%	3.67
Total		**100.0%**	**18.29**

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 (-lag) time of -1.33 days was determined for the 2014 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 2014, a dollar-weighted expense lead time of 19.63 days was determined for PIL's. [3]

HST

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

1. IESO Revenues;
2. OM&A[4]; and,
3. 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 7. 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 7: Summary of HST Working Capital Amounts

Description	HST Lead Time	Working Capital Factor	2017 ($M)	2018 ($M)
IESO Revenues	-46.42	-13%	-$26.76	-$28.07
OM&A Expenses	43.23	12%	$2.15	$2.13
Environmental Remediation	42.24	12%	$0.06	$0.06
Removals	42.24	12%	$0.09	$0.12
Capital	42.24	12%	$10.33	$10.77
Total			**-$14.13**	**-$14.99**

[3] HONI is now a publicly traded company as opposed to a Crown Corporation. HONI will depart from PILs and instead pay federal and provincial taxes, however the financial impact of this change on working capital should be neutral as the amount of total taxes is expected to be similar to that of the amount paid for PILs

[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 TRANSMISSION – WORKING CAPITAL REQUIREMENTS

Using the results described under the discussion of revenue lags and expense leads, and applying them to HONI's proposed transmission expenses for the 2017-2018 test years, HONI's working capital requirements were determined and shown in the tables below.

Table 8: HONI Transmission Working Capital Requirements (2017)

Description	Revenue Lag Days	Expense Lead Days	Net Lag Days	Working Capital Factor	Expenses ($M)	Working Capital Requirements ($M)
OM&A Expenses	32.79	33.83	-1.04	0%	$425.80	-$1.21
PILS	32.79	19.63	13.16	4%	$81.30	$2.93
Interest Expense	32.79	-1.33	34.12	9%	$276.54	$25.85
Environmental Remediation	32.79	18.29	14.50	4%	$11.62	$0.46
Removals	32.79	27.62	5.18	1%	$53.38	$0.76
Total					**$848.65**	**$28.80**
HST						-$14.13
Total - Including HST						**$14.67**
Working Capital as a Percent of OM&A incl. Cost of Power						**3.44%**

Table 9: HONI Transmission Working Capital Requirements (2018)

Description	Revenue Lag Days	Expense Lead Days	Net Lag Days	Working Capital Factor	Expenses ($M)	Working Capital Requirements ($M)
OM&A Expenses	32.79	33.83	-1.04	0%	$422.18	-$1.20
PILS	32.79	19.63	13.16	4%	$90.40	$3.26
Interest Expense	32.79	-1.33	34.12	9%	$290.22	$27.13
Environmental Remediation	32.79	18.29	14.50	4%	$9.97	$0.40
Removals	32.79	27.62	5.18	1%	$69.21	$0.98
Total					**$881.98**	**$30.57**
HST						-$14.99
Total - Including HST						**$15.58**
Working Capital as a Percent of OM&A incl. Cost of Power						**3.69%**

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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 transmission study as per EB-2012-0031. In addition, this section demonstrates that the results from this study reflect the current operations of HONI.

Comparison with Prior Transmission Study

Table 10: HONI Transmission Working Capital Requirements (2015) – Prior 2014 Study

Description	Revenue Lag Days	Expense Lead Days	Net Lag Days	Working Capital Factor	Expenses ($M)	Working Capital Requirements ($M)
OM&A Expenses	39.39	26.74	12.65	3%	$452.46	$15.68
PILS	39.39	114.74	-75.35	-21%	$72.43	-$14.95
Interest Expense	39.39	8.46	30.93	8%	$289.06	$24.50
Environmental Remediation	39.39	47.44	-8.05	-2%	$6.30	-$0.14
Removals	39.39	17.21	22.18	6%	$38.09	$2.31
Total					**$858.34**	**$27.40**
HST						-$15.34
Total - Including HST						**$12.06**
Working Capital as a Percent of OM&A incl. Cost of Power						**2.67%**

Table 11: HONI Transmission Working Capital Requirements (2017) – Current 2016 Study

Description	Revenue Lag Days	Expense Lead Days	Net Lag Days	Working Capital Factor	Expenses ($M)	Working Capital Requirements ($M)
OM&A Expenses	32.79	33.83	-1.04	0%	$425.80	-$1.21
PILS	32.79	19.63	13.16	4%	$81.30	$2.93
Interest Expense	32.79	-1.33	34.12	9%	$276.54	$25.85
Environmental Remediation	32.79	18.29	14.50	4%	$11.62	$0.46
Removals	32.79	27.62	5.18	1%	$53.38	$0.76
Total					**$848.65**	**$28.80**
HST						-$14.13
Total - Including HST						**$14.67**
Working Capital as a Percent of OM&A incl. Cost of Power						**3.44%**

Table 12: Working Capital Requirements (Current VS Prior)

Description	Revenue Lag Days	Expense Lead Days	Net Lag Days	Working Capital Factor	Expenses ($M)	Working Capital Requirements ($M)
OM&A Expenses	-6.60	7.09	-13.68	-4%	-$26.66	-$16.89
PILS	-6.60	(95.11)	88.52	24%	$8.87	$17.88
Interest Expense	-6.60	(9.78)	3.19	1%	-$12.52	$1.35
Environmental Remediation	-6.60	(29.14)	22.55	6%	$5.32	$0.60
Removals	-6.60	10.41	-17.00	-5%	$15.29	-$1.56
Total					**-$9.70**	**$1.40**
HST						$1.21
Total - Including HST						**$2.61**
Working Capital as a Percent of OM&A incl. Cost of Power						**0.78%**

Revenue Lag

As shown in Table 12 above, the overall revenue lag in the current study has decreased versus the prior study. The primary driver of this change is a decrease in IESO Revenue days and a decrease in the Other (External) Revenue that HONI is receiving. This indicates that HONI is receiving revenues in a timelier manner than before.

OM&A Expenses

OM&A expense lead days have increased overall by approximately 7 days versus the prior study. Factors driving the increase include longer expense lead times for Payroll & Benefits and Property Taxes. Factors driving the decrease is primarily due to a decrease in Consulting & Contract Staff, Payments to Inergi and Miscellaneous OM&A. Furthermore HONI was able to provide actual splits between distribution and transmission by expense line item, which was not available in prior study. After dollar-weighting all OM&A categories however, the impact of these increased and decreased expense lead times is minimal on HONI's overall working capital requirements.

Interest Expense

Interest expense lead days have decreased versus the prior study. The change is primarily driven by larger bond payments occurring in the first half of 2014 resulting in an expense lag instead of an expense lead. Furthermore a large bond that matured in 2014 and lower interest rates versus the prior study also contributed to the lower interest expense lead time. HONI was also able to provide actual splits between distribution and transmission by expense line item, which was not available in prior study.

PILs

PILs expense lead days have decreased significantly in this study versus the prior study primarily due to a large true-up payment made in 2012 for 2011, which was not present in this study. Discussions with HONI subject matter experts indicated that these true-up payments are not expected to continue with the same magnitude and scheduling parameters in the future. Based upon feedback from HONI subject matter experts, Navigant believes the change is an improvement to the prior methodology and is consistent with PILs lead time calculations for other utilities across Ontario.

Removals & Environmental Remediation

Removals & Environmental Remediation expense lead days have increased by approximately 10 days and decreased by approximately 29 days respectively. This change is driven by the differences in labour and materials lead times, which are directly impacted by the Payroll & Benefits and Miscellaneous OM&A lead days respectively. After dollar-weighting all OM&A categories however, the impact of these changes is minimal on HONI's overall working capital requirements.

Comparison with Prior Transmission 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 13 below shows that when holding revenue lag days constant, working capital requirement in 2017 is approximately 4.4% higher in the current study than the prior study.

Table 13: Working Capital Requirements with Revenue Lag Days Held Constant (Current VS Prior)

Description	Revenue Lag Days	Expense Lead Days	Net Lag Days	Working Capital Factor	Expenses ($M)	Working Capital Requirements ($M)
OM&A Expenses	0.00	7.09	-7.09	-2%	-$26.66	-$9.19
PILS	0.00	(95.11)	95.11	26%	$8.87	$19.35
Interest Expense	0.00	(9.78)	9.78	3%	-$12.52	$6.35
Environmental Remediation	0.00	(29.14)	29.14	8%	$5.32	$0.81
Removals	0.00	10.41	-10.41	-3%	$15.29	-$0.59
Total					**-$9.70**	**$16.73**
HST						$1.21
Total - Including HST						**$17.94**
Working Capital as a Percent of OM&A incl. Cost of Power						**4.38%**

Conclusions

The results of this study indicate a slightly higher working capital requirement compared to HONI's EB-2014-0140 transmission lead-lag study. Table 14 below summarizes the working capital requirements calculated in this study along with historical working capital amounts.

Table 14: Summary of Historical Working Capital Requirements

	2012 Study		2014 Study		2016 Study	
Test Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**
WCR as a % of OM&A	**2.80%**	**2.58%**	**2.81%**	**2.27%**	**3.44%**	**3.69%**

FORM A

Proceeding: EB-2016-160

ACKNOWLEDGMENT OF EXPERT'S DUTY

1. My name is Ralph Zarumba (*name)*. I live at Evanston (*city)*, in the State (*province/state*) of Illinois .

2. I have been engaged by or on behalf of Hydro One (*name of party/parties)* to provide evidence in relation to the above-noted proceeding before the Ontario Energy Board.

3. I acknowledge that it is my duty to provide evidence in relation to this proceeding as follows:
   (a) to provide opinion evidence that is fair, objective and non-partisan;
   (b) to provide opinion evidence that is related only to matters that are within my area of expertise; and
   (c) to provide such additional assistance as the Board may reasonably require, to determine a matter in issue.

4. I acknowledge that the duty referred to above prevails over any obligation which I may owe to any party by whom or on whose behalf I am engaged.

Date May 7, 2016

_____

Signature

Ontario Energy Board Rule 13A Statement

This Statement is provided in compliance with Ontario Energy Board ("Board") Rule 13A, regarding the report "EB-2016-0160 Working Capital Requirements of Hydro One Networks Transmission Business – 2016 ("Report") dated May 5, 2016, prepared by Navigant Consulting, Ltd. ("Expert").

Consultants:

Name	**Ralph Zarumba** Director	**Erik Larson** Associate Director	**Jodi Amy** Managing Consultant	**Andy Tam** Managing Consultant
Business Name and Address	Navigant 30 S. Wacker Suite 3100 Chicago, IL, 60606	Navigant 30 S. Wacker Suite 3100 Chicago, IL, 60606	Navigant Bay Adelaide Centre 333 Bay Street Suite 1250 Toronto, ON M5H 2Y2	Navigant Bay Adelaide Centre 333 Bay Street Suite 1250 Toronto, ON M5H 2Y2
General Areas of Expertise	• Cost of service • Regulatory & pricing • Electric transmission • Market & economic analysis • Testimony	• Regulatory finance & analysis • Market assessment	• Regulatory studies & analysis • Generation and Electricity markets	• Regulatory finance • Financial planning & analysis • Regulatory finance

Qualifications:

Name	**Ralph Zarumba** Director	**Erik Larson** Associate Director	**Jodi Amy** Managing Consultant	**Andy Tam** Managing Consultant
Professional History	• Director, Navigant • Director, Science Applications International Corporation • President, Zarumba Consulting • Management Consultant, Sargent & Lundy Consulting Group • President, Analytical Support Network, Inc. • Manager, Pricing Practice, Synergic Resources Corporation • Senior Analyst – San Diego Gas & Electric Company • Senior Analyst – Wisconsin Electric Power Company	• Associate Director, Navigant • Managing Consultant, Navigant • Senior Consultant, Navigant • Senior Associate, Deloitte & Touché	• Managing Consultant, Navigant • Senior Consultant, Navigant • Senior Business Analyst, OPA	• Managing Consultant, Navigant • Financial Analyst, Hydro One Networks Inc. • Leadership Rotation Program, Hydro One Networks Inc. • Systems Analyst, Nortel Networks Inc.
Education	• MA, Economics DePaul University,	• Master of Accounting, Ross	• Bachelor of Arts, Honours Economics	• Queens University, Honours, BSc,

Ontario Energy Board Rule 13A Statement

	Chicago, IL (USA) • BS, Economics Illinois State University, Normal, IL (USA)	School of Business, University of Michigan (USA) • B.B.A., Finance & Accounting, Ross School of Business, University of Michigan (USA)	University of Waterloo • MBA, (Candidate 2018) Rotman School of Management	Engineering (Computer Option) • Queens University, BA, Economics

The lead expert on this project was: Ralph Zarumba

Instructions Provided:
Navigant Consulting, Ltd (Navigant) was requested to prepare a report that provides estimates of the level of cash working capital for Hydro One Networks regulated transmission and distribution operations.

Basis of Evidence:
The basis of evidence and assumptions have been documented in the above-noted report.

Context of Evidence:
The context of evidence has been documented in the above-noted report.

Confirmation:
The expert has been made aware of and agrees to accept the responsibilities that are or may be imposed on the expert as set out in Rule 13A.

Signature:

Name of Expert:
Ralph Zarumba

Date:
May 9, 2016

MATERIALS AND SUPPLIES INVENTORY

1. STRATEGY

Hydro One Transmission maintains and optimizes materials and supplies inventory in support of our reliability, system growth and customer satisfaction objectives. Having the right material at the right work location at the right time is important in meeting these objectives.

The 2013 to 2018 inventory levels reflect impacts of the increasing work programs with compressed timelines, the increasing transmission asset base and its asset condition, age, and the external cost pressures offset by initiatives to manage inventory growth. Various initiatives undertaken by Hydro One Transmission to manage its inventories include the following:

- Integration of planning and procurement processes to maintain the primary strategy of securing materials for transmission capital projects directly from vendors;
- Adjustments in transmission maintenance related inventories to increase flexibility in executing maintenance protocols;
- An increased focus on stocking materials remaining at the end of capital projects to improve the visibility and redeployment of available materials; and
- The use of stock algorithms to maximize inventory performance.

A description of Hydro One Transmission's Supply Chain and initiatives undertaken are described in Exhibit C1, Tab 5, Schedule 1.

2. INVENTORY

As of December 31, 2015, Hydro One Transmission carried a total year-end inventory valued at $11.6 million. Table 1 provides the inventory levels for 2013 to 2018. Included are both the year-end levels and annual average levels for each year.

Table 1: Inventory Levels (Transmission) 2013 – 2018 ($ Million)

Year	Historic			Bridge	Test	
	2013	**2014**	**2015**	**2016**	**2017**	**2018**
Year End - Materials and Supplies	13.3	12.7	11.6	11.8	12.0	12.3
Annual Average[1]	**13.3**	**13.0**	**12.2**	**11.7**	**11.9**	**12.1**

[1] The average annual inventory level is calculated as the previous year-end level plus the current year-end level divided by two.

2.1 Planned Levels of Inventories

Much of Hydro One Transmission's materials and supplies are supplied directly from vendors. Inventory is established to provide faster response to planned and unplanned projects and programs from inventoried stock. The basis of forecasting inventory levels reflects planned work program changes.

Materials and Supplies for major transmission projects are often shipped directly to the project sites and are not included in the planned inventory levels, where timelines permit. Inventories are held for the maintenance of existing assets and new development activities. Inventory primarily includes component parts for major equipment and selected materials where lead times and response requirements dictate, as well as materials and equipment that remain at the end of a project.

2.2 Monthly Inventory Levels 2013 to 2015

In response to the Board's directive to the Company, to provide the monthly material and supplies inventory balances as part of rate applications, actual monthly net inventory numbers for the years 2013 through 2015 are shown in Table 2. Table 2 does not include the strategic spare inventory of items such as transformers.

Table 2: Historical Monthly Inventory Levels 2013 – 2015

$M	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2013	**13.3**	**13.3**	**13.4**	**13.3**	**13.5**	**13.5**	**13.5**	**13.4**	**13.5**	**13.5**	**13.4**	**13.3**
2014	**13.2**	**12.8**	**12.8**	**12.7**	**12.7**	**12.8**	**12.7**	**12.7**	**12.7**	**12.6**	**12.7**	**12.7**
2015	**12.7**	**12.7**	**12.7**	**12.8**	**12.7**	**12.6**	**12.6**	**12.7**	**12.7**	**12.7**	**12.4**	**11.6**

The inventories of consumable materials are relatively steady due to the nature of transmission work. Failures and maintenance are driven by equipment condition, age, service and available outages. Capital projects are conducted year round, with a slight increase in the summer months and the winter cold months.

INTEREST CAPITALIZED

Consistent with the Board's decision in EB-2008-0408, effective January 1, 2012, no allowance for funds used during construction ("AFUDC") rate is specified for use by Hydro One. In place of the AFUDC rate, Hydro One will base its interest capitalization rate on its embedded cost of debt used to finance the capital expenditures made. This is consistent with Hydro One's adoption of United States Generally Accepted Accounting Principles ("US GAAP") per the Board's decision in EB-2011-0268 and US GAAP requirements for determination of interest capitalized. The rates used in calculating capitalized interest for the bridge and test years represent the effective rate of Hydro One Transmission's forecasted average debt portfolio during the year.

Capitalized interest is included in the capital expenditures shown in Exhibit B1, Tab 3, Schedule 1. These expenditures are recovered through Revenue Requirement once they become in-service additions to Rate Base.

Table 1: Capitalized Interest

Year	Capitalization Rate	Transmission Capitalized Interest ($ Millions)
2012	5.00%	39.6
2013	4.76%	29.9
2014	4.70%	33.7
2015	4.73%	37.1
2016F	4.42%	37.1
2017F	4.83%	46.4
2018F	5.03%	49.7

COST OF CAPITAL

1. INTRODUCTION

The purpose of this evidence is to summarize the method and cost of financing Hydro One Transmission's capital requirements for the 2017 and 2018 test years.

2. CAPITAL STRUCTURE

Hydro One Transmission's deemed capital structure for rate making purposes is 60% debt and 40% common equity. This capital structure was approved by the Board as part of its December 23, 2010 Decision on Hydro One's Transmission Rate Application (EB-2010-0002). This is consistent with the Board's report on the cost of capital: see the Report of the Board on the Cost of Capital for Ontario's Regulated Utilities dated December 11, 2009 (EB-2009-0084). The 60% debt component is comprised of 4% deemed short term debt and 56% long term debt.

3. RETURN ON COMMON EQUITY

Hydro One Transmission's evidence reflects a return of 9.19% for the test year 2017 and 2018, based on the Cost of Capital Parameters released by the OEB on October 15, 2015, for rates effective January 1, 2016. It is calculated as per the Board's formulaic approach in Appendix B of the Cost of Capital Report dated December 11, 2009.

Hydro One assumes that the return on equity for each test year will be updated in accordance with the Board's formulaic approach in Appendix B of the Cost of Capital Report dated December 11, 2009, upon the final decision in this case.

Specifically, for 2017, the Board would determine the ROE for Hydro One Transmission based on the September 2016 Consensus Forecasts and Bank of Canada data which would be available in October 2016. Similarly, the 2018 ROE would be updated to reflect the September 2017 Consensus Forecasts and Bank of Canada data available in October 2017. The updated ROEs issued by the Board will be used in the calculation of the revenue requirement for the rate order.

4. DEEMED SHORT-TERM DEBT

The Board has determined that the deemed amount of short-term debt that should be factored into rate setting be fixed at 4% of rate base. The evidence reflects a deemed short-term rate of 1.65% for 2017 and 2018 based on the Cost of Capital Parameters released by the OEB on October 15, 2015, for 2016 rates.

Hydro One assumes that the deemed short term debt rate for each test year will be updated in accordance with the Cost of Capital Report, upon the final decision in this case. Specifically, for 2017, the Board would determine the deemed short term debt rate for Hydro One Distribution based on the September 2016 Bank of Canada data which would be available in October 2016 plus the average spread obtained by Board Staff in 2016. Similarly, for 2018, the Board would determine the deemed short term debt rate for Hydro One Distribution based on the September 2017 Bank of Canada data which would be available in October 2017 plus the average spread obtained by Board Staff in 2017.

5. LONG-TERM DEBT

The Board has determined that the deemed amount of long-term debt that should be factored into rate setting be fixed at 56% of rate base. The long term debt rate is

calculated to be 4.68% for 2017 and 4.62% for 2018. The long term debt rate is calculated as the weighted average rate on embedded debt, new debt and forecast debt planned to be issued in 2016, 2017 and 2018 as discussed in Exhibit D1, Tab 5, Schedule 1. Details of Hydro One Transmission's long term debt rate calculation for the 2017 and 2018 test years are identified at Exhibit D2, Tab 4, Schedule 2, pages 5 and 6. A detailed discussion of Hydro One Transmission's debt and forecast interest rate is provided at Exhibit D1, Tab 5, Schedule 1.

Historical long-term debt cost information is filed at Exhibit D2, Tab 4, Schedule 2, pages 1 to 3.

As discussed in this exhibit, forecast interest rates will be updated consistent with the methodology used for the return on common equity and deemed short term interest rate. In addition, Hydro One assumes that long term debt rate will be updated to reflect and take into account the actual issuances of debt since the time of original application consistent with the OEB Decision on Hydro One Transmission 2015 and 2016 rate application in EB-2014-0140.

As Hydro One Transmission has a market determined cost of debt, the weighted average long term debt rate is also applied to any notional debt that is required to match the actual amount of long term debt to the deemed amount of long term debt consistent with the Board's Decision in EB-2014-0140.

6. COST OF CAPITAL SUMMARY

Hydro One Transmission's 2017 rate base is $10,554.4 million which results in an after-tax required return of 6.36%. The 2018 rate base is $11,225.5 million, which results in an after-tax required return of 6.33%, as shown in Table 1, below:

Table 1: 2017 and 2018 Cost of Capital

	2017				2018			
Amount of Deemed	**($M)**	**%**	**Cost Rate (%)**	**Return ($M)**	**($M)**	**%**	**Cost Rate (%)**	**Return ($M)**
Long-term debt	5,910.4	56.0%	4.68%	276.5	6,286.3	56.0%	4.62%	290.1
Short-term debt	422.2	4.0%	1.65%	7.0	449.0	4.0%	1.65%	7.4
Common equity	4,221.7	40.0%	9.19%	388.0	4,490.2	40.0%	9.19%	412.6
Total	10,554.4	100.0%	6.36%	671.5	11,225.5	100.0%	6.33%	710.2

Historical, bridge and test year debt and equity summary schedules have been provided at Exhibit D2, Tab 4, Schedule 1.

COST OF THIRD PARTY LONG-TERM DEBT

1. HYDRO ONE TRANSMISSION LONG-TERM DEBT

The debt portfolio for Hydro One Transmission, as set out in Exhibit D2, Tab 4, Schedule 2, is based on debt issued by Hydro One Networks Inc. to Hydro One Inc., of which the Transmission business is mapped a portion. Hydro One Networks Inc. issues debt to Hydro One Inc., reflecting debt issues by Hydro One Inc. to third party public debt investors.

Third party public debt investors hold all of the long term debt issued by Hydro One Inc. Hydro One Inc.'s debt financing strategy takes into consideration the objectives of cost effectiveness, distributing debt maturities over time, and ensuring the term of the debt portfolio is compatible with the long life of the Company's assets.

Hydro One Inc. has a Medium Term Note ("MTN") Program that provides ready access to issue debt with a term greater than one year into the Canadian debt capital markets. The standard maturity terms in the area of five, ten and thirty years are preferred by investors and represent the main financing which Hydro One Inc. utilizes to execute its financing strategy and raise the required funds. The short form base shelf prospectus for the current $3.5 billion MTN Program is provided in Exhibit A, Tab 8, Schedule 5.

2. CREDIT RATINGS

As Hydro One Inc. issues medium term notes in the Canadian public debt markets, credit ratings are a requirement. The credit ratings of Hydro One Inc.'s debt obligations by Dominion Bond Rating Service, Moody's Investors Service and Standard & Poor's Rating Services are as follows:

Table 1: Credit Ratings for Hydro One Inc.

Rating Agency	Short-term Debt	Debt
Dominion Bond Rating Service (DBRS)	R-1(low)	A(high)
Moody's Investors Service (Moody's)	Prime-2	A3
Standard & Poor's Rating Services (S&P)	A-1	A

The most recent rating agency reports are provided in Exhibit A, Tab 8, Schedule 4.

3. COST OF LONG-TERM DEBT

The long term debt rate is calculated as the weighted average rate on embedded debt, new debt and forecast debt planned to be issued in 2016, 2017 and 2018. The weighted average rate on long term debt rate is 4.68% for 2017 and 4.62% for 2018. Details of Hydro One Transmission's long term debt rate calculation for the 2016 bridge year and 2017 and 2018 test years are identified at Exhibit D2, Tab 4, Schedule 2, pages 4 to 6.

The amount of each Hydro One Networks Inc. debt issue that is mapped to the Transmission business is based on its most recent forecast of borrowing requirements. Borrowing requirements are driven mainly by debt retirement, capital expenditures net of internally generated funds, and the maintenance of its capital structure. For example, in February of 2016, Hydro One Inc. issued $500 million of ten-year notes with a 2.77% coupon rate, of which $245 million was mapped to Hydro One Transmission, as shown on line 34 of Exhibit D2, Tab 4, Schedule 2, page 4.

The interest rates of debt issues mapped to the Transmission business, as shown in Exhibit D2, Tab 4, Schedule 2, are equal to the actual interest rates on debt issued by Hydro One Networks Inc. to Hydro One Inc., and by Hydro One Inc. to third party public debt investors.

3.1 Embedded Debt

The Board has determined in its Cost of Capital Report that for embedded debt, the rate approved in prior Board decisions shall be maintained for the life of each active instrument, unless a new rate is negotiated, in which case it will be treated as new debt. Hydro One Transmission's embedded long term debt, which was issued during the period from 2000 to 2015, is shown on lines 1 to 33 of Exhibit D2, Tab 4, Schedule 2, page 3. The rates on these embedded debt issues were approved by the Board as part of the Board's 2015 Rate Order in EB-2014-0140, dated January 8, 2015.

3.2 New Debt

The Board has determined in its Cost of Capital Report that the rate for new debt that is held by a third party will be the prudently negotiated contract rate. This would include recognition of premiums and discounts. The following discusses new debt issued in 2016, which are shown on lines 33 to 37 of Exhibit D2, Tab 4, Schedule 2, page 4.

In February of 2016, Hydro One Inc. issued $500 million of five-year notes with a 1.84% coupon rate, of which $250 million was mapped to Hydro One Transmission, as shown on line 35 of Exhibit D2, Tab 4, Schedule 2, page 4.

In February of 2016, Hydro One Inc. also issued $500 million of ten-year notes with a 2.77% coupon rate, of which $245 million was mapped to Hydro One Transmission, as shown on line 34 of Exhibit D2, Tab 4, Schedule 2, page 4.

In February of 2016, Hydro One Inc. also issued $350 million of thirty-year notes with a 3.91% coupon rate, of which $175 million was mapped to Hydro One Transmission, as shown on line 33 of Exhibit D2, Tab 4, Schedule 2, page 4.

3.3 Forecast Debt

Hydro One Transmission's forecast borrowing requirements are $431 million for 2016, $657 million for 2017 and $890 million for 2018. For planning purposes it is assumed that debt issuance will be distributed over the standard terms in the area of five, ten and thirty years, which are preferred by investors, while limiting total annual fixed rate debt maturities for Hydro One Inc. to avoid undue refinancing risk.

Table 2 lists the fixed rate MTN's which Hydro One Networks Inc. plans to issue in 2014, and will be mapped to the Transmission business, as shown on lines 36 to 37 of Exhibit D2, Tab 4, Schedule 2, page 4.

Table 2: Forecast Debt Issues for remainder of 2016

2016		
Principal Amount ($Millions)	**Term (Years)**	**Coupon**
125.0	10	2.92%
305.9	30	4.05%

Table 3 lists the fixed rate MTN's which Hydro One Networks Inc. plans to issue in 2017, and 2018 will be mapped to the Transmission business, as shown on lines 34 to 40 of Exhibit D2, Tab 4, Schedule 2, page 6.

Table 3: Forecast Debt Issues for 2017 and 2018

2017		
Principal Amount ($Millions)	**Term (Years)**	**Coupon**
219.1	30	4.30%
109.6	10	3.17%
109.6	30	4.30%
219.1	10	3.17%
2018		
Principal Amount ($Millions)	**Term (Years)**	**Coupon**
296.6	30	5.10%
296.6	10	3.97%
296.6	5	3.22%

3.4 Interest Rates for 2016, 2017 and 2018 Forecast Debt Issues

Transmission business borrowing will be financed at market rates applicable to Hydro One Inc. Table 4 summarizes the derivation of the forecast Hydro One Inc. yield for each of the planned issuance terms for 2016, 2017 and 2018.

Table 4: Forecast Yield for 2016-2018 Issuance Terms

	2016			2017			2018		
	5-year	**10-year**	**30-year**	**5-year**	**10-year**	**30-year**	**5-year**	**10-year**	**30-year**
Government of Canada	1.13%	1.65%	2.39%	1.38%	1.90%	2.64%	2.18%	2.70%	3.44%
Hydro One Spread	1.04%	1.27%	1.65%	1.04%	1.27%	1.65%	1.04%	1.27%	1.65%
Forecast Hydro One Yield	2.17%	2.92%	4.05%	2.42%	3.17%	4.30%	3.22%	3.97%	5.10%

Each rate is comprised of the forecast Canada bond yield plus the Hydro One Inc. credit spread applicable to that term. The ten-year Government of Canada bond yield forecast for 2016 is based on the average of the 3 month and 12 month forecast from the April 2016 Consensus Forecast. The ten-year Government of Canada bond yield forecast for 2017 and 2018 is based on the April 2016 Long Term Consensus Forecast. The five- and 30-year Government of Canada bond yield forecasts are derived by adding the April 1 to 13, 2016 average spreads (five-year to ten-year for the five-year forecast and 30-year to ten-year for the 30-year forecast) to the ten-year Government of Canada bond yield forecast. Hydro One's credit spreads over the Government of Canada bonds are based on the average of indicative new issue spreads for April 1 to 13, 2016 obtained from the Company's MTN dealer group for each planned issuance term.

Hydro One assumes that forecast debt issuance interest rates for each test year will be updated consistent with the ROE methodology, upon the final decision in this case. For rates effective January 1, 2017, the forecast interest rate for Hydro One Transmission debt issues will based on the September 2016 Consensus Forecasts and the average of indicative new issue spreads for September 2016 which will be obtained from the Company's MTN dealer group for each planned issuance term. For rates effective January 1, 2018, the forecast interest rate for Hydro One Transmission debt issues will be based on the September 2017 Consensus Forecasts and the average of indicative new

issue spreads for September 2017 which will be obtained from the Company's MTN dealer group for each planned issuance term. In addition Hydro One assumes that long term debt rate will be updated to reflect and take into account the actual issuances of debt since the time of original application consistent with the OEB's Decision on Hydro One Transmission's 2015 and 2016 rate application in EB-2014-0140 and changes in the interest rate forecast.

3.5 Treasury OM&A Costs

Treasury OM&A costs are incurred to:

- execute borrowing plans and issue commercial paper and long term debt;
- ensure compliance with securities regulations, bank and debt covenants;
- manage the company's daily liquidity position, control cash and manage the company's bank accounts;
- settle all transactions and manage the relationship with creditors; and
- communicate with debt investors, banks and credit rating agencies.

These costs are $1.8 million for 2017 and $2.0 million for 2018 as shown on line 41, page 5 and line 42, page 6 of Exhibit D2, Tab 4, Schedule 2.

3.6 Other Financing-Related Fees

Column (e) of Exhibit D2, Tab 4, Schedule 2 ("Premium, Discount and Expenses") represents the costs of issuing debt. These costs are specific to each debt issue and include commissions, legal fees, debt discounts or premiums on issues or re-openings of issues relative to par, and hedge gains or losses.

Other financing related fees, $4.1 million in both 2017 and 2018, identified on line 42, page 5 and line 43, page 6 of Exhibit D2, Tab 4, Schedule 2, include the Transmission allocation of Hydro One Inc.'s standby credit facility, annual credit rating agency, banking, custodial and trustee fees.

STATEMENT OF UTILITY RATE BASE

HYDRO ONE NETWORKS INC.
TRANSMISSION
Statement of Utility Rate Base
Test Years (2017 and 2018)
($ Millions)

Line No.	Particulars	2017	2018
	Electric Utility Plant		
1	Gross plant at cost	$ 16,641.1	$ 17,616.4
2	Less: accumulated depreciation	(6,113.4)	(6,418.7)
3	Net plant in service	$ 10,527.8	$ 11,197.7
4	Construction work in progress	0.0	0.0
5	Net utility plant	$ 10,527.8	$ 11,197.7
	Working Capital		
4	Cash working capital	$ 14.7	$ 15.6
5	Materials and Supplies Inventory	12.0	12.2
6	Total working capital	$ 26.6	$ 27.8
7	Total rate base	$ 10,554.4	$ 11,225.5

HYDRO ONE NETWORKS INC.
TRANSMISSION
Continuity of Property, Plant and Equipment
Historical (2013, 2014, 2015), Bridge (2016) & Test (2017, 2018) Years
Year Ending December 31
Total - Gross Balances
($ Millions)

Line No.	Year	Opening Balance	Additions	Retirements	Sales	Transfers In/Out	Closing Balance	Average	CCRA Capital Contributions True-Up Adjustment	Gross plant at cost
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
Historic										
1	2013	13,833.2	703.8	(67.0)	0.0	(5.6)	14,464.4	14,148.8		14,148.8
2	2014	14,464.4	917.0	(23.0)	(551.5)	(1.0)	14,805.9	14,635.2		14,635.2
3	2015	14,805.9	652.3	(40.4)	(19.8)	0.0	15,398.1	15,102.0		15,102.0
Bridge										
4	2016	15,398.1	911.7	(70.9)	0.0	(23.6)	16,215.2	15,806.6	(11.8)	15,794.8
Test										
5	2017	16,215.2	931.4	(56.2)	0.0	(11.7)	17,078.7	16,647.0	(5.9)	16,641.1
6	2018	17,078.7	1209.7	(120.0)	0.0	(7.2)	18,161.3	17,620.0	(3.6)	17,616.4

HYDRO ONE NETWORKS INC.
TRANSMISSION
Continuity of Property, Plant and Equipment - Accumulated Depreciation
Historical (2013, 2014, 2015), Bridge (2016) & Test (2017, 2018) Years
Year Ending December 31
Total - Gross Balances
($ Millions)

Line No.	Year	Opening Balance	Additions	Retirements	Sales	Transfers In/Out	Closing Balance	Average
		(a)	(b)	(c)	(d)	(e)	(f)	(g)
Historic								
1	2013	4,839.2	323.3	(67.0)	(5.0)	(1.2)	5,089.3	4,964.3
2	2014	5,089.3	319.0	(23.0)	(24.8)	(0.1)	5,360.4	5,224.9
3	2015	5,360.4	343.0	(40.4)	(10.9)	3.3	5,655.5	5,508.0
Bridge								
4	2016	5,655.5	365.5	(70.9)		0.0	5,950.2	5,802.8
Test								
5	2017	5,950.2	382.6	(56.2)		0.0	6,276.6	6,113.4
6	2018	6,276.6	404.1	(120.0)		0.0	6,560.7	6,418.7

Witness: Samir Chhelavda

HYDRO ONE NETWORKS INC.
TRANSMISSION
Continuity of Property, Plant and Equipment - Construction Work in Progress
Historical (2013, 2014, 2015), Bridge (2016) & Test (2017, 2018) Years
Year Ending December 31
($ Millions)

Line No.	Year	Opening Balance	Capital Expenditures	Transfers To Plant	Closing Balance
		(a)	(b)	(c)	(d)
Historic					
1	2013	721.3	697.2	(678.8)	739.7
2	2014	739.7	814.5	(885.7)	668.4
3	2015	668.4	896.8	(677.8)	887.4
Bridge					
4	2016	887.4	1003.8	(911.7)	979.5
Test					
5	2017	979.5	1076.1	(931.4)	1124.2
6	2018	1124.2	1122.2	(1209.7)	1036.8

STATEMENT OF WORKING CAPITAL

HYDRO ONE NETWORKS INC.
TRANSMISSION
Statement of Working Capital
Annual Average
Test Years (2017 and 2018)
($ Millions)

Line No.	Particulars	2017 (a)	2018 (b)
1	Cash Working Capital	$ 14.7	$ 15.6
2	Materials and Supplies	12.0	12.2
3	Total	$ 26.6	$ 27.8

DEBT AND EQUITY SUMMARY

HYDRO ONE NETWORKS INC.

TRANSMISSION

Debt and Equity Summary
Historical Years (2013, 2014, 2015) and Bridge Year (2016)
As at December 31
($ Millions)

Line No.	Particulars	Amount Outstanding 2013 Actual (a)	Amount Outstanding 2014 Actual (b)	Amount Outstanding 2015 Actual (c)	Amount Outstanding 2016 Projection (d)
I	Long-term debt *	4,916.1	4,969.1	4,819.1	5,310.9
2	Short-term debt	359.9	346.9	915.9	400.7
3	Preference shares	239.0	239.0	-	-
4	Common equity	4,286.0	4,133.0	4,125.0	4,006.9

* Includes debt payable within one year; excludes variable rate debt, unamortized debt premiums/discount, hedging gains/losses and marks to market

HYDRO ONE NETWORKS INC.
TRANSMISSION
Summary of Cost of Capital
Test Years (2017 and 2018)
Utility Capital Structure

Line No.	Particulars	2017 ($M)	2017 %	2017 Cost Rate (%)	2017 Return ($M)	2018 ($M)	2018 %	2018 Cost Rate (%)	2018 Return ($M)
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
I	Long-term debt	5,910.4	56.0%	4.68%	276.5	6,286.3	56.0%	4.62%	290.1
2	Short-term debt	422.2	4.0%	1.65%	7.0	449.0	4.0%	1.65%	7.4
4	Total debt	6,332.6	60.0%	4.48%	283.5	6,735.3	60.0%	4.42%	297.6
5	Common equity	4,221.7	40.0%	9.19%	388.0	4,490.2	40.0%	9.19%	412.6
6	Total rate base	10,554.4	100.0%	6.36%	671.5	11,225.5	100.0%	6.33%	710.2

HYDRO ONE NETWORKS INC.
TRANSMISSION
Cost of Long-Term Debt Capital
Historic Year (2013)
Year ending December 31

Line No.	Offering Date	Coupon Rate	Maturity Date	Principal Amount Offered ($Millions)	Premium Discount and Expenses ($Millions)	Net Capital Employed Total Amount ($Millions)	Net Capital Employed Per $100 Principal Amount (Dollars)	Effective Cost Rate	Total Amount Outstanding at 12/31/12 ($Millions)	Total Amount Outstanding at 12/31/13 ($Millions)	Avg. Monthly Averages ($Millions)	Carrying Cost ($Millions)	Projected Average Embedded Cost Rates
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)
1	3-Jun-00	7.350%	3-Jun-30	278.4	4.5	273.9	98.4	7.49%	278.4	278.4	278.4	20.8	
2	22-Jun-01	6.930%	1-Jun-32	109.3	1.0	108.2	99.0	7.01%	109.3	109.3	109.3	7.7	
3	17-Sep-02	6.930%	1-Jun-32	58.0	(2.2)	60.2	103.7	6.64%	58.0	58.0	58.0	3.9	
4	31-Jan-03	6.350%	31-Jan-34	126.0	1.0	125.0	99.2	6.41%	126.0	126.0	126.0	8.1	
5	22-Apr-03	6.590%	22-Apr-43	145.0	1.1	143.9	99.3	6.64%	145.0	145.0	145.0	9.6	
6	25-Jun-04	6.350%	31-Jan-34	72.0	(0.2)	72.2	100.2	6.33%	72.0	72.0	72.0	4.6	
7	20-Aug-04	6.590%	22-Apr-43	39.0	(3.1)	42.1	107.9	6.06%	39.0	39.0	39.0	2.4	
8	24-Aug-04	6.350%	31-Jan-34	39.0	(1.4)	40.4	103.5	6.09%	39.0	39.0	39.0	2.4	
9	19-May-05	5.360%	20-May-36	228.9	8.7	220.2	96.2	5.62%	228.9	228.9	228.9	12.9	
10	3-Mar-06	4.640%	3-Mar-16	210.0	1.0	209.0	99.5	4.70%	210.0	210.0	210.0	9.9	
11	24-Apr-06	5.360%	20-May-36	187.5	2.5	185.0	98.7	5.45%	187.5	187.5	187.5	10.2	
12	22-Aug-06	4.640%	3-Mar-16	60.0	0.8	59.2	98.7	4.80%	60.0	60.0	60.0	2.9	
13	19-Oct-06	5.000%	19-Oct-46	30.0	0.2	29.8	99.3	5.04%	30.0	30.0	30.0	1.5	
14	13-Mar-07	4.890%	13-Mar-37	240.0	1.3	238.7	99.4	4.93%	240.0	240.0	240.0	11.8	
15	18-Oct-07	5.180%	18-Oct-17	225.0	0.8	224.2	99.6	5.23%	225.0	225.0	225.0	11.8	
16	3-Mar-08	5.180%	18-Oct-17	180.0	(3.1)	183.1	101.7	4.95%	180.0	180.0	180.0	8.9	
17	10-Nov-08	5.000%	12-Nov-13	240.0	1.1	238.9	99.5	5.11%	240.0	0.0	203.1	10.4	
18	14-Jan-09	5.000%	12-Nov-13	130.0	(3.7)	133.7	102.8	4.34%	130.0	0.0	110.0	4.8	
19	3-Mar-09	6.030%	3-Mar-39	195.0	1.2	193.8	99.4	6.07%	195.0	195.0	195.0	11.8	
20	16-Jul-09	5.490%	16-Jul-40	210.0	1.4	208.6	99.4	5.53%	210.0	210.0	210.0	11.6	
21	19-Nov-09	3.130%	19-Nov-14	175.0	0.7	174.3	99.6	3.21%	175.0	175.0	175.0	5.6	
22	15-Mar-10	5.490%	24-Jul-40	120.0	(0.7)	120.7	100.6	5.45%	120.0	120.0	120.0	6.5	
23	15-Mar-10	4.400%	4-Jun-20	180.0	0.8	179.2	99.5	4.46%	180.0	180.0	180.0	8.0	
24	13-Sep-10	2.950%	11-Sep-15	150.0	0.6	149.4	99.6	3.03%	150.0	150.0	150.0	4.5	
25	13-Sep-10	5.000%	19-Oct-46	150.0	(0.4)	150.4	100.2	4.98%	150.0	150.0	150.0	7.5	
26	26-Sep-11	4.390%	26-Sep-41	205.0	1.3	203.7	99.4	4.43%	205.0	205.0	205.0	9.1	
27	22-Dec-11	4.000%	22-Dec-51	70.0	0.4	69.6	99.5	4.03%	70.0	70.0	70.0	2.8	
28	13-Jan-12	3.200%	13-Jan-22	154.0	0.8	153.2	99.5	3.26%	154.0	154.0	154.0	5.0	
29	22-May-12	3.200%	13-Jan-22	165.0	(1.6)	166.6	101.0	3.08%	165.0	165.0	165.0	5.1	
30	22-May-12	4.000%	22-Dec-51	68.8	0.3	68.4	99.5	4.02%	68.8	68.8	68.8	2.8	
31	31-Jul-12	3.790%	31-Jul-62	52.5	0.3	52.2	99.5	3.81%	52.5	52.5	52.5	2.0	
32	16-Aug-12	3.790%	31-Jul-62	141.0	1.1	139.9	99.2	3.83%	141.0	141.0	141.0	5.4	
33	9-Oct-13	4.590%	9-Oct-43	239.3	1.4	237.9	99.4	4.63%	0.0	239.3	55.2	2.6	
34	9-Oct-13	2.780%	9-Oct-18	412.5	1.7	410.8	99.6	2.87%	0.0	412.5	95.2	2.7	
35		**Subtotal**							4634.3	4916.1	4727.8	237.5	
36		Treasury OM&A costs										1.4	
37		Other financing-related fees										3.7	
38		**Total**							4634.3	4916.1	4727.8	242.6	5.13%

HYDRO ONE NETWORKS INC.
TRANSMISSION
Cost of Long-Term Debt Capital
Historic Year (2014)
Year ending December 31

Line No.	Offering Date	Coupon Rate	Maturity Date	Principal Amount Offered ($Millions)	Premium Discount and Expenses ($Millions)	Net Capital Employed Total Amount ($Millions)	Net Capital Employed Per $100 Principal Amount (Dollars)	Effective Cost Rate	Total Amount Outstanding at 12/31/13 ($Millions)	Total Amount Outstanding at 12/31/14 ($Millions)	Avg. Monthly Averages ($Millions)	Carrying Cost ($Millions)	Projected Average Embedded Cost Rates
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)
1	3-Jun-00	7.350%	3-Jun-30	278.4	4.5	273.9	98.4	7.49%	278.4	278.4	278.4	20.8	
2	22-Jun-01	6.930%	1-Jun-32	109.3	1.3	107.9	98.8	7.03%	109.3	109.3	109.3	7.7	
3	17-Sep-02	6.930%	1-Jun-32	58.0	(2.1)	60.1	103.6	6.65%	58.0	58.0	58.0	3.9	
4	31-Jan-03	6.350%	31-Jan-34	126.0	1.0	125.0	99.2	6.41%	126.0	126.0	126.0	8.1	
5	22-Apr-03	6.590%	22-Apr-43	145.0	1.1	143.9	99.3	6.64%	145.0	145.0	145.0	9.6	
6	25-Jun-04	6.350%	31-Jan-34	72.0	(0.2)	72.2	100.2	6.33%	72.0	72.0	72.0	4.6	
7	20-Aug-04	6.590%	22-Apr-43	39.0	(3.1)	42.1	107.9	6.06%	39.0	39.0	39.0	2.4	
8	24-Aug-04	6.350%	31-Jan-34	39.0	(1.4)	40.4	103.5	6.09%	39.0	39.0	39.0	2.4	
9	19-May-05	5.360%	20-May-36	228.9	8.7	220.2	96.2	5.62%	228.9	228.9	228.9	12.9	
10	3-Mar-06	4.640%	3-Mar-16	210.0	1.0	209.0	99.5	4.70%	210.0	210.0	210.0	9.9	
11	24-Apr-06	5.360%	20-May-36	187.5	2.5	185.0	98.7	5.45%	187.5	187.5	187.5	10.2	
12	22-Aug-06	4.640%	3-Mar-16	60.0	0.8	59.2	98.7	4.80%	60.0	60.0	60.0	2.9	
13	19-Oct-06	5.000%	19-Oct-46	30.0	0.2	29.8	99.3	5.04%	30.0	30.0	30.0	1.5	
14	13-Mar-07	4.890%	13-Mar-37	240.0	1.3	238.7	99.4	4.93%	240.0	240.0	240.0	11.8	
15	18-Oct-07	5.180%	18-Oct-17	225.0	0.8	224.2	99.6	5.23%	225.0	225.0	225.0	11.8	
16	3-Mar-08	5.180%	18-Oct-17	180.0	(3.1)	183.1	101.7	4.95%	180.0	180.0	180.0	8.9	
17	3-Mar-09	6.030%	3-Mar-39	195.0	1.2	193.8	99.4	6.07%	195.0	195.0	195.0	11.8	
18	16-Jul-09	5.490%	16-Jul-40	210.0	1.4	208.6	99.4	5.53%	210.0	210.0	210.0	11.6	
19	19-Nov-09	3.130%	19-Nov-14	175.0	0.7	174.3	99.6	3.21%	175.0	0.0	148.1	4.8	
20	22-Jan-10	3.130%	20-Nov-14	150.0	(0.4)	150.4	100.2	3.08%	150.0	0.0	126.9	3.9	
21	15-Mar-10	5.490%	24-Jul-40	120.0	(0.7)	120.7	100.6	5.45%	120.0	120.0	120.0	6.5	
22	15-Mar-10	4.400%	4-Jun-20	180.0	0.8	179.2	99.5	4.46%	180.0	180.0	180.0	8.0	
23	13-Sep-10	2.950%	11-Sep-15	150.0	0.6	149.4	99.6	3.03%	150.0	150.0	150.0	4.5	
24	13-Sep-10	5.000%	19-Oct-46	150.0	(0.4)	150.4	100.2	4.98%	150.0	150.0	150.0	7.5	
25	26-Sep-11	4.390%	26-Sep-41	205.0	1.3	203.7	99.3	4.43%	205.0	205.0	205.0	9.1	
26	22-Dec-11	4.000%	22-Dec-51	70.0	0.4	69.6	99.5	4.03%	70.0	70.0	70.0	2.8	
27	13-Jan-12	3.200%	13-Jan-22	154.0	0.8	153.2	99.5	3.26%	154.0	154.0	154.0	5.0	
28	22-May-12	3.200%	13-Jan-22	165.0	(1.6)	166.6	101.0	3.08%	165.0	165.0	165.0	5.1	
29	22-May-12	4.000%	22-Dec-51	68.8	0.3	68.4	99.5	4.02%	68.8	68.8	68.8	2.8	
30	31-Jul-12	3.790%	31-Jul-62	52.5	0.3	52.2	99.5	3.81%	52.5	52.5	52.5	2.0	
31	16-Aug-12	3.790%	31-Jul-62	141.0	1.1	139.9	99.2	3.83%	141.0	141.0	141.0	5.4	
32	9-Oct-13	4.590%	9-Oct-43	239.3	1.4	237.9	99.4	4.63%	239.3	239.3	239.3	11.1	
33	9-Oct-13	2.780%	9-Oct-18	412.5	1.7	410.8	99.6	2.87%	412.5	412.5	412.5	11.8	
34	29-Jan-14	4.290%	29-Jan-64	30.0	0.2	29.8	99.4	4.32%	0.0	30.0	25.4	1.1	
35	3-Jun-14	4.170%	3-Jun-44	198.0	1.2	196.8	99.4	4.21%	0.0	198.0	106.6	4.5	
36		**Subtotal**							5066.1	4969.1	5148.1	248.6	
37		Treasury OM&A costs										1.3	
38		Other financing-related fees										3.1	
39		**Total**							5066.1	4969.1	5148.1	253.1	4.92%

HYDRO ONE NETWORKS INC.
TRANSMISSION
Cost of Long-Term Debt Capital
Historic Year (2015)
Year ending December 31

Line No.	Offering Date	Coupon Rate	Maturity Date	Principal Amount Offered ($Millions)	Premium Discount and Expenses ($Millions)	Net Capital Employed Total Amount ($Millions)	Net Capital Employed Per $100 Principal Amount (Dollars)	Effective Cost Rate	Total Amount Outstanding at 12/31/14 ($Millions)	Total Amount Outstanding at 12/31/15 ($Millions)	Avg. Monthly Averages ($Millions)	Carrying Cost ($Millions)	Projected Average Embedded Cost Rates
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)
1	3-Jun-00	7.350%	3-Jun-30	278.4	4.5	273.9	98.4	7.49%	278.4	278.4	278.4	20.8	
2	22-Jun-01	6.930%	1-Jun-32	109.3	1.3	107.9	98.8	7.03%	109.3	109.3	109.3	7.7	
3	17-Sep-02	6.930%	1-Jun-32	58.0	(2.1)	60.1	103.6	6.65%	58.0	58.0	58.0	3.9	
4	31-Jan-03	6.350%	31-Jan-34	126.0	1.0	125.0	99.2	6.41%	126.0	126.0	126.0	8.1	
5	22-Apr-03	6.590%	22-Apr-43	145.0	1.1	143.9	99.3	6.64%	145.0	145.0	145.0	9.6	
6	25-Jun-04	6.350%	31-Jan-34	72.0	(0.2)	72.2	100.2	6.33%	72.0	72.0	72.0	4.6	
7	20-Aug-04	6.590%	22-Apr-43	39.0	(3.1)	42.1	107.9	6.06%	39.0	39.0	39.0	2.4	
8	24-Aug-04	6.350%	31-Jan-34	39.0	(1.4)	40.4	103.5	6.09%	39.0	39.0	39.0	2.4	
9	19-May-05	5.360%	20-May-36	228.9	8.7	220.2	96.2	5.62%	228.9	228.9	228.9	12.9	
10	3-Mar-06	4.640%	3-Mar-16	210.0	1.0	209.0	99.5	4.70%	210.0	210.0	210.0	9.9	
11	24-Apr-06	5.360%	20-May-36	187.5	2.5	185.0	98.7	5.45%	187.5	187.5	187.5	10.2	
12	22-Aug-06	4.640%	3-Mar-16	60.0	0.8	59.2	98.7	4.80%	60.0	60.0	60.0	2.9	
13	19-Oct-06	5.000%	19-Oct-46	30.0	0.2	29.8	99.3	5.04%	30.0	30.0	30.0	1.5	
14	13-Mar-07	4.890%	13-Mar-37	240.0	1.3	238.7	99.4	4.93%	240.0	240.0	240.0	11.8	
15	18-Oct-07	5.180%	18-Oct-17	225.0	0.8	224.2	99.6	5.23%	225.0	225.0	225.0	11.8	
16	3-Mar-08	5.180%	18-Oct-17	180.0	(3.1)	183.1	101.7	4.95%	180.0	180.0	180.0	8.9	
17	3-Mar-09	6.030%	3-Mar-39	195.0	1.2	193.8	99.4	6.07%	195.0	195.0	195.0	11.8	
18	16-Jul-09	5.490%	16-Jul-40	210.0	1.4	208.6	99.4	5.53%	210.0	210.0	210.0	11.6	
19	15-Mar-10	5.490%	24-Jul-40	120.0	(0.7)	120.7	100.6	5.45%	120.0	120.0	120.0	6.5	
20	15-Mar-10	4.400%	4-Jun-20	180.0	0.8	179.2	99.5	4.46%	180.0	180.0	180.0	8.0	
21	13-Sep-10	2.950%	11-Sep-15	150.0	0.6	149.4	99.6	3.03%	150.0	0.0	103.8	3.1	
22	13-Sep-10	5.000%	19-Oct-46	150.0	(0.4)	150.4	100.2	4.98%	150.0	150.0	150.0	7.5	
23	26-Sep-11	4.390%	26-Sep-41	205.0	1.3	203.7	99.3	4.43%	205.0	205.0	205.0	9.1	
24	22-Dec-11	4.000%	22-Dec-51	70.0	0.4	69.6	99.5	4.03%	70.0	70.0	70.0	2.8	
25	13-Jan-12	3.200%	13-Jan-22	154.0	0.8	153.2	99.5	3.26%	154.0	154.0	154.0	5.0	
26	22-May-12	3.200%	13-Jan-22	165.0	(1.6)	166.6	101.0	3.08%	165.0	165.0	165.0	5.1	
27	22-May-12	4.000%	22-Dec-51	68.8	0.3	68.4	99.5	4.02%	68.8	68.8	68.8	2.8	
28	31-Jul-12	3.790%	31-Jul-62	52.5	0.3	52.2	99.5	3.81%	52.5	52.5	52.5	2.0	
29	16-Aug-12	3.790%	31-Jul-62	141.0	1.1	139.9	99.2	3.83%	141.0	141.0	141.0	5.4	
30	9-Oct-13	4.590%	9-Oct-43	239.3	1.4	237.9	99.4	4.63%	239.3	239.3	239.3	11.1	
31	9-Oct-13	2.780%	9-Oct-18	412.5	1.7	410.8	99.6	2.87%	412.5	412.5	412.5	11.8	
32	29-Jan-14	4.290%	29-Jan-64	30.0	0.2	29.8	99.4	4.32%	30.0	30.0	30.0	1.3	
33	3-Jun-14	4.170%	3-Jun-44	198.0	1.2	196.8	99.4	4.21%	198.0	198.0	198.0	8.3	
34		**Subtotal**							4999.1	4819.1	4922.9	242.6	
35		Treasury OM&A costs										1.4	
36		Other financing-related fees										3.5	
37		**Total**							4999.1	4819.1	4922.9	247.4	5.03%

HYDRO ONE NETWORKS INC.
TRANSMISSION
Cost of Long-Term Debt Capital
Bridge Year (2016)
Year ending December 31

Line No.	Offering Date	Coupon Rate	Maturity Date	Principal Amount Offered ($Millions)	Premium Discount and Expenses ($Millions)	Net Capital Employed Total Amount ($Millions)	Net Capital Employed Per $100 Principal Amount (Dollars)	Effective Cost Rate	Total Amount Outstanding at 12/31/15 ($Millions)	Total Amount Outstanding at 12/31/16 ($Millions)	Avg. Monthly Averages ($Millions)	Carrying Cost ($Millions)	Projected Average Embedded Cost Rates
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)
1	3-Jun-00	7.350%	3-Jun-30	278.4	4.5	273.9	98.4	7.49%	278.4	278.4	278.4	20.8	
2	22-Jun-01	6.930%	1-Jun-32	109.3	1.3	107.9	98.8	7.03%	109.3	109.3	109.3	7.7	
3	17-Sep-02	6.930%	1-Jun-32	58.0	(2.1)	60.1	103.6	6.65%	58.0	58.0	58.0	3.9	
4	31-Jan-03	6.350%	31-Jan-34	126.0	1.0	125.0	99.2	6.41%	126.0	126.0	126.0	8.1	
5	22-Apr-03	6.590%	22-Apr-43	145.0	1.1	143.9	99.3	6.64%	145.0	145.0	145.0	9.6	
6	25-Jun-04	6.350%	31-Jan-34	72.0	(0.2)	72.2	100.2	6.33%	72.0	72.0	72.0	4.6	
7	20-Aug-04	6.590%	22-Apr-43	39.0	(3.1)	42.1	107.9	6.06%	39.0	39.0	39.0	2.4	
8	24-Aug-04	6.350%	31-Jan-34	39.0	(1.4)	40.4	103.5	6.09%	39.0	39.0	39.0	2.4	
9	19-May-05	5.360%	20-May-36	228.9	8.7	220.2	96.2	5.62%	228.9	228.9	228.9	12.9	
10	3-Mar-06	4.640%	3-Mar-16	210.0	1.0	209.0	99.5	4.70%	210.0	0.0	48.5	2.3	
11	24-Apr-06	5.360%	20-May-36	187.5	2.5	185.0	98.7	5.45%	187.5	187.5	187.5	10.2	
12	22-Aug-06	4.640%	3-Mar-16	60.0	0.8	59.2	98.7	4.80%	60.0	0.0	13.8	0.7	
13	19-Oct-06	5.000%	19-Oct-46	30.0	0.2	29.8	99.3	5.04%	30.0	30.0	30.0	1.5	
14	13-Mar-07	4.890%	13-Mar-37	240.0	1.3	238.7	99.4	4.93%	240.0	240.0	240.0	11.8	
15	18-Oct-07	5.180%	18-Oct-17	225.0	0.8	224.2	99.6	5.23%	225.0	225.0	225.0	11.8	
16	3-Mar-08	5.180%	18-Oct-17	180.0	(3.1)	183.1	101.7	4.95%	180.0	180.0	180.0	8.9	
17	3-Mar-09	6.030%	3-Mar-39	195.0	1.2	193.8	99.4	6.07%	195.0	195.0	195.0	11.8	
18	16-Jul-09	5.490%	16-Jul-40	210.0	1.4	208.6	99.4	5.53%	210.0	210.0	210.0	11.6	
19	15-Mar-10	5.490%	24-Jul-40	120.0	(0.7)	120.7	100.6	5.45%	120.0	120.0	120.0	6.5	
20	15-Mar-10	4.400%	4-Jun-20	180.0	0.8	179.2	99.5	4.46%	180.0	180.0	180.0	8.0	
21	13-Sep-10	5.000%	19-Oct-46	150.0	(0.4)	150.4	100.2	4.98%	150.0	150.0	150.0	7.5	
22	26-Sep-11	4.390%	26-Sep-41	205.0	1.3	203.7	99.3	4.43%	205.0	205.0	205.0	9.1	
23	22-Dec-11	4.000%	22-Dec-51	70.0	0.4	69.6	99.5	4.03%	70.0	70.0	70.0	2.8	
24	13-Jan-12	3.200%	13-Jan-22	154.0	0.8	153.2	99.5	3.26%	154.0	154.0	154.0	5.0	
25	22-May-12	3.200%	13-Jan-22	165.0	(1.6)	166.6	101.0	3.08%	165.0	165.0	165.0	5.1	
26	22-May-12	4.000%	22-Dec-51	68.8	0.3	68.4	99.5	4.02%	68.8	68.8	68.8	2.8	
27	31-Jul-12	3.790%	31-Jul-62	52.5	0.3	52.2	99.5	3.81%	52.5	52.5	52.5	2.0	
28	16-Aug-12	3.790%	31-Jul-62	141.0	1.1	139.9	99.2	3.83%	141.0	141.0	141.0	5.4	
29	9-Oct-13	4.590%	9-Oct-43	239.3	1.4	237.9	99.4	4.63%	239.3	239.3	239.3	11.1	
30	9-Oct-13	2.780%	9-Oct-18	412.5	1.7	410.8	99.6	2.87%	412.5	412.5	412.5	11.8	
31	29-Jan-14	4.290%	29-Jan-64	30.0	0.2	29.8	99.4	4.32%	30.0	30.0	30.0	1.3	
32	3-Jun-14	4.170%	3-Jun-44	198.0	1.2	196.8	99.4	4.21%	198.0	198.0	198.0	8.3	
33	24-Feb-16	3.910%	23-Feb-46	175.0	1.1	173.9	99.4	3.95%	0.0	175.0	148.1	5.8	
34	24-Feb-16	2.770%	24-Feb-26	245.0	1.1	243.9	99.6	2.82%	0.0	245.0	207.3	5.8	
35	24-Feb-16	1.840%	24-Feb-21	250.0	0.9	249.1	99.6	1.92%	0.0	250.0	211.5	4.1	
36	15-Sep-16	2.922%	15-Sep-26	125.0	0.9	124.1	99.3	3.01%	0.0	125.0	38.5	1.2	
37	15-Sep-16	4.046%	15-Sep-46	305.9	1.2	304.7	99.6	4.07%	0.0	305.9	94.1	3.8	
38		**Subtotal**							4819.1	5650.0	5310.9	250.4	
39		Treasury OM&A costs										1.6	
40		Other financing-related fees										3.8	
41		**Total**							4819.1	5650.0	5310.9	255.8	4.82%

HYDRO ONE NETWORKS INC.
TRANSMISSION
Cost of Long-Term Debt Capital
Test Year (2017)
Year ending December 31

Line No.	Offering Date	Coupon Rate	Maturity Date	Principal Amount Offered ($Millions)	Premium Discount and Expenses ($Millions)	Net Capital Employed: Total Amount ($Millions)	Net Capital Employed: Per $100 Principal Amount (Dollars)	Effective Cost Rate	Total Amount Outstanding at 12/31/16 ($Millions)	Total Amount Outstanding at 12/31/17 ($Millions)	Avg. Monthly Averages ($Millions)	Carrying Cost ($Millions)	Projected Average Embedded Cost Rates
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)
1	3-Jun-00	7.350%	3-Jun-30	278.4	4.5	273.9	98.37	7.49%	278.4	278.4	278.4	20.8	
2	22-Jun-01	6.930%	1-Jun-32	109.3	1.3	107.9	98.78	7.03%	109.3	109.3	109.3	7.7	
3	17-Sep-02	6.930%	1-Jun-32	58.0	(2.1)	60.1	103.57	6.65%	58.0	58.0	58.0	3.9	
4	31-Jan-03	6.350%	31-Jan-34	126.0	1.0	125.0	99.21	6.41%	126.0	126.0	126.0	8.1	
5	22-Apr-03	6.590%	22-Apr-43	145.0	1.1	143.9	99.26	6.64%	145.0	145.0	145.0	9.6	
6	25-Jun-04	6.350%	31-Jan-34	72.0	(0.2)	72.2	100.22	6.33%	72.0	72.0	72.0	4.6	
7	20-Aug-04	6.590%	22-Apr-43	39.0	(3.1)	42.1	107.89	6.06%	39.0	39.0	39.0	2.4	
8	24-Aug-04	6.350%	31-Jan-34	39.0	(1.4)	40.4	103.48	6.09%	39.0	39.0	39.0	2.4	
9	19-May-05	5.360%	20-May-36	228.9	8.7	220.2	96.19	5.62%	228.9	228.9	228.9	12.9	
10	24-Apr-06	5.360%	20-May-36	187.5	2.5	185.0	98.68	5.45%	187.5	187.5	187.5	10.2	
11	19-Oct-06	5.000%	19-Oct-46	30.0	0.2	29.8	99.29	5.04%	30.0	30.0	30.0	1.5	
12	13-Mar-07	4.890%	13-Mar-37	240.0	1.3	238.7	99.45	4.93%	240.0	240.0	240.0	11.8	
13	18-Oct-07	5.180%	18-Oct-17	225.0	0.8	224.2	99.63	5.23%	225.0	0.0	173.1	9.0	
14	3-Mar-08	5.180%	18-Oct-17	180.0	(3.1)	183.1	101.73	4.95%	180.0	0.0	138.5	6.9	
15	3-Mar-09	6.030%	3-Mar-39	195.0	1.2	193.8	99.41	6.07%	195.0	195.0	195.0	11.8	
16	16-Jul-09	5.490%	16-Jul-40	210.0	1.4	208.6	99.36	5.53%	210.0	210.0	210.0	11.6	
17	15-Mar-10	5.490%	24-Jul-40	120.0	(0.7)	120.7	100.58	5.45%	120.0	120.0	120.0	6.5	
18	15-Mar-10	4.400%	4-Jun-20	180.0	0.8	179.2	99.55	4.46%	180.0	180.0	180.0	8.0	
19	13-Sep-10	5.000%	19-Oct-46	150.0	(0.4)	150.4	100.25	4.98%	150.0	150.0	150.0	7.5	
20	26-Sep-11	4.390%	26-Sep-41	205.0	1.3	203.7	99.35	4.43%	205.0	205.0	205.0	9.1	
21	22-Dec-11	4.000%	22-Dec-51	70.0	0.4	69.6	99.47	4.03%	70.0	70.0	70.0	2.8	
22	13-Jan-12	3.200%	13-Jan-22	154.0	0.8	153.2	99.47	3.26%	154.0	154.0	154.0	5.0	
23	22-May-12	3.200%	13-Jan-22	165.0	(1.6)	166.6	100.97	3.08%	165.0	165.0	165.0	5.1	
24	22-May-12	4.000%	22-Dec-51	68.8	0.3	68.4	99.51	4.02%	68.8	68.8	68.8	2.8	
25	31-Jul-12	3.790%	31-Jul-62	52.5	0.3	52.2	99.47	3.81%	52.5	52.5	52.5	2.0	
26	16-Aug-12	3.790%	31-Jul-62	141.0	1.1	139.9	99.20	3.83%	141.0	141.0	141.0	5.4	
27	9-Oct-13	4.590%	9-Oct-43	239.3	1.4	237.9	99.42	4.63%	239.3	239.3	239.3	11.1	
28	9-Oct-13	2.780%	9-Oct-18	412.5	1.7	410.8	99.59	2.87%	412.5	412.5	412.5	11.8	
29	29-Jan-14	4.290%	29-Jan-64	30.0	0.2	29.8	99.44	4.32%	30.0	30.0	30.0	1.3	
30	3-Jun-14	4.170%	3-Jun-44	198.0	1.2	196.8	99.40	4.21%	198.0	198.0	198.0	8.3	
31	24-Feb-16	3.910%	23-Feb-46	175.0	1.1	173.9	99.36	3.95%	175.0	175.0	175.0	6.9	
32	24-Feb-16	2.770%	24-Feb-26	245.0	1.1	243.9	99.56	2.82%	245.0	245.0	245.0	6.9	
33	24-Feb-16	1.840%	24-Feb-21	250.0	0.9	249.1	99.63	1.92%	250.0	250.0	250.0	4.8	
34	15-Sep-16	2.922%	15-Sep-26	125.0	0.9	124.1	99.26	3.01%	125.0	125.0	125.0	3.8	
35	15-Sep-16	4.046%	15-Sep-46	305.9	1.2	304.7	99.62	4.07%	305.9	305.9	305.9	12.4	
36	15-Mar-17	4.296%	15-Mar-47	219.1	1.1	218.0	99.50	4.33%	0.0	219.1	168.5	7.3	
37	15-Jun-17	3.172%	15-Jun-27	109.6	0.5	109.0	99.50	3.23%	0.0	109.6	59.0	1.9	
38	15-Jun-17	4.296%	15-Jun-47	109.6	0.5	109.0	99.50	4.33%	0.0	109.6	59.0	2.6	
39	15-Sep-17	3.172%	15-Sep-27	219.1	1.1	218.0	99.50	3.23%	0.0	219.1	67.4	2.2	
40		**Subtotal**							5650.0	5902.3	5910.4	270.7	
41		Treasury OM&A costs										1.8	
42		Other financing-related fees										4.1	
43		**Total**							5650.0	5902.3	5910.4	276.5	4.68%

HYDRO ONE NETWORKS INC.
TRANSMISSION
Cost of Long-Term Debt Capital
Test Year (2018)
Year ending December 31

Line No.	Offering Date	Coupon Rate	Maturity Date	Principal Amount Offered ($Millions)	Premium Discount and Expenses ($Millions)	Net Capital Employed Total Amount ($Millions)	Net Capital Employed Per $100 Principal Amount (Dollars)	Effective Cost Rate	Total Amount Outstanding at 12/31/17 ($Millions)	Total Amount Outstanding at 12/31/18 ($Millions)	Avg. Monthly Averages ($Millions)	Carrying Cost ($Millions)	Projected Average Embedded Cost Rates
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)
1	3-Jun-00	7.350%	3-Jun-30	278.4	4.5	273.9	98.37	7.49%	278.4	278.4	278.4	20.8	
2	22-Jun-01	6.930%	1-Jun-32	109.3	1.3	107.9	98.78	7.03%	109.3	109.3	109.3	7.7	
3	17-Sep-02	6.930%	1-Jun-32	58.0	(2.1)	60.1	103.57	6.65%	58.0	58.0	58.0	3.9	
4	31-Jan-03	6.350%	31-Jan-34	126.0	1.0	125.0	99.21	6.41%	126.0	126.0	126.0	8.1	
5	22-Apr-03	6.590%	22-Apr-43	145.0	1.1	143.9	99.26	6.64%	145.0	145.0	145.0	9.6	
6	25-Jun-04	6.350%	31-Jan-34	72.0	(0.2)	72.2	100.22	6.33%	72.0	72.0	72.0	4.6	
7	20-Aug-04	6.590%	22-Apr-43	39.0	(3.1)	42.1	107.89	6.06%	39.0	39.0	39.0	2.4	
8	24-Aug-04	6.350%	31-Jan-34	39.0	(1.4)	40.4	103.48	6.09%	39.0	39.0	39.0	2.4	
9	19-May-05	5.360%	20-May-36	228.9	8.7	220.2	96.19	5.62%	228.9	228.9	228.9	12.9	
10	24-Apr-06	5.360%	20-May-36	187.5	2.5	185.0	98.68	5.45%	187.5	187.5	187.5	10.2	
11	19-Oct-06	5.000%	19-Oct-46	30.0	0.2	29.8	99.29	5.04%	30.0	30.0	30.0	1.5	
12	13-Mar-07	4.890%	13-Mar-37	240.0	1.3	238.7	99.45	4.93%	240.0	240.0	240.0	11.8	
13	3-Mar-09	6.030%	3-Mar-39	195.0	1.2	193.8	99.41	6.07%	195.0	195.0	195.0	11.8	
14	16-Jul-09	5.490%	16-Jul-40	210.0	1.4	208.6	99.36	5.53%	210.0	210.0	210.0	11.6	
15	15-Mar-10	5.490%	24-Jul-40	120.0	(0.7)	120.7	100.58	5.45%	120.0	120.0	120.0	6.5	
16	15-Mar-10	4.400%	4-Jun-20	180.0	0.8	179.2	99.55	4.46%	180.0	180.0	180.0	8.0	
17	13-Sep-10	5.000%	19-Oct-46	150.0	(0.4)	150.4	100.25	4.98%	150.0	150.0	150.0	7.5	
18	26-Sep-11	4.390%	26-Sep-41	205.0	1.3	203.7	99.35	4.43%	205.0	205.0	205.0	9.1	
19	22-Dec-11	4.000%	22-Dec-51	70.0	0.4	69.6	99.47	4.03%	70.0	70.0	70.0	2.8	
20	13-Jan-12	3.200%	13-Jan-22	154.0	0.8	153.2	99.47	3.26%	154.0	154.0	154.0	5.0	
21	22-May-12	3.200%	13-Jan-22	165.0	(1.6)	166.6	100.97	3.08%	165.0	165.0	165.0	5.1	
22	22-May-12	4.000%	22-Dec-51	68.8	0.3	68.4	99.51	4.02%	68.8	68.8	68.8	2.8	
23	31-Jul-12	3.790%	31-Jul-62	52.5	0.3	52.2	99.47	3.81%	52.5	52.5	52.5	2.0	
24	16-Aug-12	3.790%	31-Jul-62	141.0	1.1	139.9	99.20	3.83%	141.0	141.0	141.0	5.4	
25	9-Oct-13	4.590%	9-Oct-43	239.3	1.4	237.9	99.42	4.63%	239.3	239.3	239.3	11.1	
26	9-Oct-13	2.780%	9-Oct-18	412.5	1.7	410.8	99.59	2.87%	412.5	0.0	317.3	9.1	
27	29-Jan-14	4.290%	29-Jan-64	30.0	0.2	29.8	99.44	4.32%	30.0	30.0	30.0	1.3	
28	3-Jun-14	4.170%	3-Jun-44	198.0	1.2	196.8	99.40	4.21%	198.0	198.0	198.0	8.3	
29	24-Feb-16	3.910%	23-Feb-46	175.0	1.1	173.9	99.36	3.95%	175.0	175.0	175.0	6.9	
30	24-Feb-16	2.770%	24-Feb-26	245.0	1.1	243.9	99.56	2.82%	245.0	245.0	245.0	6.9	
31	24-Feb-16	1.840%	24-Feb-21	250.0	0.9	249.1	99.63	1.92%	250.0	250.0	250.0	4.8	
32	15-Sep-16	2.922%	15-Sep-26	125.0	0.9	124.1	99.26	3.01%	125.0	125.0	125.0	3.8	
33	15-Sep-16	4.046%	15-Sep-46	305.9	1.2	304.7	99.62	4.07%	305.9	305.9	305.9	12.4	
34	15-Mar-17	4.296%	15-Mar-47	219.1	1.1	218.0	99.50	4.33%	219.1	219.1	219.1	9.5	
35	15-Jun-17	3.172%	15-Jun-27	109.6	0.5	109.0	99.50	3.23%	109.6	109.6	109.6	3.5	
36	15-Jun-17	4.296%	15-Jun-47	109.6	0.5	109.0	99.50	4.33%	109.6	109.6	109.6	4.7	
37	15-Sep-17	3.172%	15-Sep-27	219.1	1.1	218.0	99.50	3.23%	219.1	219.1	219.1	7.1	
38	15-Mar-18	5.096%	15-Mar-48	296.6	1.5	295.2	99.50	5.13%	0.0	296.6	228.2	11.7	
39	15-Jun-18	3.972%	15-Jun-28	296.6	1.5	295.2	99.50	4.03%	0.0	296.6	159.7	6.4	
40	15-Sep-18	3.217%	15-Sep-23	296.6	1.5	295.2	99.50	3.33%	0.0	296.6	91.3	3.0	
41		**Subtotal**							5902.3	6379.7	6286.3	284.1	
42		Treasury OM&A costs										2.0	
43		Other financing-related fees										4.1	
44		**Total**							5902.3	6379.7	6286.3	290.1	4.62%