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Joanne Richardson
Director – Major Projects and Partnerships
Regulatory Affairs

BY COURIER

March 16, 2017

Ms. Kirsten Walli
Board Secretary
Ontario Energy Board
Suite 2700, 2300 Yonge Street
Toronto, ON
M4P 1E4

Dear Ms. Walli:

EB-2016-0325 – Hydro One Networks Inc.'s Section 92 – West Toronto Transmission Enhancement Project –Interrogatory Responses and Prefiled Evidence Update

As per Procedural Order No. 1, please find attached Hydro One Networks Inc.'s ("Hydro One") responses to interrogatory questions received in regards to the above-noted proceeding.

The interrogatory responses have been organized by party as indicated below:

Tab 1	OEB Board Staff
Tab 2	City of Toronto

Additionally, at this time, Hydro One is updating 4 exhibits of the prefiled evidence. The updates are limited to (a) a revised total cost for the project, now $54.7M and (b) a change in cost classification of the lines work.

The cost has been reduced due to additional detailed engineering being completed on the Project since the time of filing. The second update is necessary for correcting the classification of the lines as dual function lines for cost classification purposes. As a result of these changes, the following exhibits have been updated:

Exhibit B – Tab 1 – Schedule 1	Application
Exhibit B – Tab 5 – Schedule 1	Cost Benefit Analysis and Options
Exhibit B – Tab 7 – Schedule 1	Apportioning Project Costs and Risks
Exhibit B – Tab 9 – Schedule 1	Transmission Rate Impact Assessment

An electronic copy of these interrogatory responses, the prefiled evidence updates, and the complete updated application has been filed using the Board's Regulatory Electronic Submission System (RESS).

Sincerely,

ORIGINAL SIGNED BY JOANNE RICHARDSON

Joanne Richardson

Attach
cc. Parties of EB-2016-0325 (electronic only)

Ontario Energy Board (Board Staff) INTERROGATORY #1

Interrogatory:

References:

Evidence, Exhibit B, Tab 3, Schedule 1, Attachment 1, Central Toronto Area Integrated Regional Resource Plan (IRRP), Appendix D: "Detailed Load Forecast and Forecast Scenarios", pages 1-3

Evidence, Exhibit B, Tab 3, Schedule 1, Attachment 2, Metro Toronto, Regional Infrastructure Plan (RIP), Appendix D: "Metro Toronto Regional Load Forecast (2015-2035) pages 53-54

Preamble:

The demand forecast evidence in the IRRP and the RIP for the Metro Toronto Region do not appear to be consistent.

In the RIP, in both the Non-Coincident and Coincident Forecast for High Demand Growth, there is no load allocated at Runnymede TS for Light Rail Transit (LRT) until 2021. The demand forecast then increases from 14 MW in 2021 to 23 MW in 2023 to 26 MW in 2027 and remains unchanged in the period from 2027 to 2035.

The IRRP states that the LRT is expected to add 18 MW of demand to Runnymede TS in the years after 2018.

a) Please confirm whether the higher demand forecast is the basis for the need, rather than a median or lower demand forecast as contemplated in the IRRP which includes the impact of the Government of Ontario's long-term Conservation targets.

b) Please account for the differences in the demand forecasted at Runnymede TS, particularly related to the LRT (18 MW in the IRRP and 14-26 MW in the RIP).

c) Given that there is no incremental LRT-related demand forecast in the RIP until 2021, please provide the need for a Project in-service date of 2018.

Response:

a) The RIP forecast data was provided by Toronto Hydro to Hydro One on October 5, 2015. Toronto Hydro provided Hydro One an updated load forecast on February 10, 2017, which reflects the best information given to Toronto Hydro including input from its customer, Metrolinx, with respect to the magnitude and timing of the LRT load. The forecast, which is incorporated in the CCRA, forms the basis of the updated evidence and aligns most closely with the forecast scenario in the IRRP.

b) The load forecast, magnitude and timing of the LRT load in each of the IRRP and RIP were based on the best available information provided by Toronto Hydro at the time those reports were prepared, including any information received from Metrolinx.

c) The updated load forecast includes a demand of 14 MVA in 2018, 9 MVA of which is attributable to the Metrolinx LRT. The Toronto Hydro customer, Metrolinx, requires Toronto Hydro to provide a dedicated supply with two feeder positions to service the LRT. The WTTE Project is needed for Toronto Hydro to satisfy the LRT's electrical requirements and connect the LRT in 2018. This Project is also needed to supply the forecast load growth in the west Toronto area, which Toronto Hydro expects to materialize over the medium to long term planning horizon as a result of the LRT.

Ontario Energy Board (Board Staff) INTERROGATORY #2

Interrogatory:

References:

Evidence, Exhibit B, Tab 3, Schedule 1, Attachment 1, Central Toronto Area IRRP, page 60-61 "Addressing Capacity Relief at Runnymede TS and Fairbanks TS"

Evidence, Exhibit B, Tab 3, Schedule 1, Attachment 2, Metro Toronto RIP, page 7

Evidence, Exhibit B, Tab 5, Schedule 1, Cost Benefit Analysis and Options, pages 2-3

Preamble:

The IRRP and RIP both state that the estimated cost of the WTTE Project would be $90 million. The Cost Benefit Analysis and Options section in the WTTE Project application states that the cost of the WTTE Project is estimated to be $59.3 million.

Questions:

a) Please explain the difference between the WTTE Project costs listed in the IRRP/RIP and the costs listed in the WTTE Project application.

b) Please discuss if any of the differences between the IRRP and RIP demand forecasts impact the need and costs of the WTTE project.

c) Please confirm that the $40 million cost for distribution feeders/service for supplying new growth as described in the IRRP is not part of the costs listed in the WTTE Project application. Will there still be a need for distribution feeder work as part of the proposed WTTE project? If so, what is the current estimate of these costs? Please explain any differences from the $40 M stated in the IRRP and RIP.

d) Given the difference in costs for the WTTE project between the IRRP/RIP and the WTTE application, as well as any potential difference in cost to the distribution work as requested in part c) above, please describe any impact on the choice of the WTTE Project as the preferred alternative. In other words, have changes to the cost between the IRRP/RIP and the application modified the relative economics of the two alternatives considered?

Response:

a) The cost estimates in the WTTE Project application were based on a more detailed review of the transmission scope of work and are therefore more accurate than the original estimates in the IRRP/RIP. As part of this submission, Hydro One has updated the total project costs to $54.7M (from $59.3M in original application) as a result of further design work on the transmission project scope. The other difference between the IRRP/RIP and the costs listed in the WTTE Project application is that the latter does not include any costs that will need to be incurred by Toronto Hydro for any distribution feeders, estimated as $40 million in the IRRP/RIP.

b) The differences between the IRRP and RIP demand forecasts do not impact the need and cost of the WTTE Project.

c) Confirmed. The $40 million cost for distribution feeders/service for supplying new growth as described in the IRRP is not part of the costs listed in the WTTE Project. The distribution feeder work will still be required by the Customer in order to utilize the transmission capacity created by the WTTE Project. Toronto Hydro has confirmed that the estimated cost of this work has not changed.

d) The WTTE Project is still the preferred alternative. Technically, both from a reliability performance perspective and power quality perspective, the WTTE Project most appropriately addresses the requirement to increase transformation capacity to accommodate the forecast THESL load growth in the west Toronto area. Moreover, based on current cost estimates, the WTTE Project remains the most cost-effective long-term solution to address these needs.

Ontario Energy Board (Board Staff) INTERROGATORY #3

Interrogatory:

References:

Evidence, Exhibit B, Tab 3, Schedule 1, Attachment 1, Central Toronto Area IRRP, "Addressing Capacity Relief at Runnymeade TS and Fairbanks TS", pages 60-61

Evidence, Exhibit B, Tab 5, Schedule 1, "Cost Benefit Analysis and Options", pages 2-3

Preamble:

Clarification is required regarding the scope and costs estimates for Alternative 1 (Distribution Feeders) in the IRRP and in the EB-2016-0325 Application.

Both the IRRP and the WTTE Project application describe a Distribution Feeders solution as an alternative that was assessed as less advantageous to the proposed WTTE Project. The Central Toronto Area IRRP states that Alternative 1 (the Distribution Feeders) is expected to cost $70 million, with additional transformation capacity required in the next ten years at a cost of about $34 million, bringing the total cost of Alternative 1 (Distribution Feeders) to $104 million. However, the WTTE Project application states that the estimated cost of Alternative 1 (the Distribution Feeders) is $70 million.

Questions:

a) Please confirm that the $70 million estimated cost for the Distribution Feeders alternative in the WTTE Project application does not include the $34 million cost for additional transformation capacity.

b) Is there still an anticipated future need for additional transformation or/and distribution capacity? If so, is a cost of $34 million still anticipated or what is the current estimated cost and scope of work?

c) Please explain why the WTTE Project is the preferred alternative as opposed to the Distribution Feeders alternative in terms of price, reliability, and quality of service. Include an assessment of the operational benefits of both the WTTE Project and the Distribution

Feeders alternative. Please provide information on any quantified operational benefits (for example, reliability).

Response:

a) Confirmed. The $70 million estimated cost for the Distribution Feeders alternative in the WTTE Project application does not include any future costs for additional transformation capacity.

b) Yes, if the Distribution Feeders solution were pursued, there would still be a need for future transformation capacity. The current estimate of providing future transformation facilities, including the necessary transmission line reinforcements, is $54.7 million.

c) As noted in the IRRP, the estimated cost of the Distribution Feeders alternative is $70 million. Pursing this alternative would only defer the need for additional transformation facilities. In 2025, the transformation facilities contemplated by this Application would be required at a cost of $54.7 million, bringing the total cost of this alternative to about $124.7 million. The estimated cost of the Distribution Feeder alternative would be subject to significant uncertainty due to the challenges anticipated in implementing and operating distribution feeders from Richview TS and Bathurst TS, and are subject to external economic conditions at that time.

The transmission reliability of supply and service quality is not significantly different for the two alternatives. The reliability of supply and service quality is primarily driven by the distribution feeders associated with each alternative (i.e., whether the distribution feeders are supplied from an expanded Runnymede TS or from Richview TS and Bathurst TS).

Supplying new and existing load from Runnymede TS, rather than from Richview TS and/or Bathurst TS, is more advantageous for a number of reasons. One is that the distribution feeders would be located much closer to the point of supply, resulting in better quality of service due to fewer line losses and less susceptibility to voltage drops. The supply from Runnymede TS would also be more reliable because it would allow for underground construction where feasible and economical, and avoid the need for several river crossings, which can affect reliability due to the operational challenges of serving assets in these locations.

Given this information, Hydro One maintains that pursing the proposed WTTE Project protects the interest of consumers with respect to price, reliability and quality of service because it is the most cost-effective alternative to satisfy the needs of the Customer and improves the reliability and quality of service needs of the Customer.

Ontario Energy Board (Board Staff) INTERROGATORY #4

Interrogatory:

References:

Evidence, Exhibit B, Tab 1, Schedule 1, Letter of Support to HONI from Toronto Hydro, dated October 28, 2016

Evidence, Exhibit B, Tab 9, Schedule 1, Transmission Rate Impact Assessment, pages 2-3

Preamble:

The application states that the total cost of work is listed as $59.3 million. The total capital contribution assigned to the customer is $61.9 million. A capital contribution is generally only required from a customer when the expected incremental revenue is insufficient to cover the infrastructure costs of a project.

The letter of support for the Project from Toronto Hydro indicates that Toronto Hydro's capital contribution was provided for in Toronto Hydro's 2015-2019 Custom IR Application (EB-2014-0116, Exhibit 2B, Section E7.9)

The application also states that the capital contribution exceeds the capital cost of the project as it includes the recovery of OM&A.

Questions:

a) Please explain how the capital contribution requirement was calculated.

b) Please discuss if there are any inconsistencies between the capital contribution amount provided in this application and in Toronto Hydro's Custom IR application (EB-2014-0116).

c) Please explain why there appears to be no expected incremental revenues associated with the project to offset the capital contribution required from the customer.

d) Please describe the nature of the incremental OM&A costs and explain why the incremental OM&A costs are included in the capital contribution.

e) Please discuss if either HONI or Toronto Hydro expect that Metrolinx (or any other large customer) triggering the need for this infrastructure reinforcement will be providing a portion of capital contribution towards the costs of this project.

Response:

a) The capital contribution was calculated using a discounted cash flow model in accordance with section 6.5 of the Transmission System Code, Appendix 5, and described in section 2.5 of Hydro One's Transmission Connection Procedures (EB-2006-0189).

b) The updated evidence illustrates that a capital contribution of $50.6M is required from Toronto Hydro. Consistent with the responses to interrogatories 1(a) and 2(a), the capital contribution is based upon the most up to date load forecast and cost estimate, and includes both the Runnymede TS upgrade and the Manby x Wiltshire line reinforcement.

   Toronto Hydro's Custom IR application included a forecast capital contribution to Hydro One of $33M (EB-2014-0116, Exhibit 2B, Section 2.9, p. 51) for the Runnymede TS upgrade. Toronto Hydro's forecast did not include a capital contribution for the Manby x Wiltshire line reinforcement because the need for this investment was solidified during the RIP process, which was still ongoing at the time that Toronto Hydro filed its application.

c) As shown in Exhibit B, Tab 9, Schedule 1 the load forecast does result in incremental revenues. However, the increase in load, and consequently revenue from this Project, is not sufficient to fully offset the capital cost of the Project thus requiring an offsetting capital contribution as per section 6.5 of the Transmission System Code for each rate pool. For the Transformation Pool, the incremental revenue is also insufficient to offset incremental OM&A.

d) The incremental OM&A costs included in the analysis are based upon on system averages in accordance with Appendix 5 of the Transmission System Code and Section 2.5 of Hydro One's Transmission Connection Procedures (EB-2006-0189). System average OM&A composes of maintenance activities and municipal tax impacts.

e) Toronto Hydro is the only transmission-connected customer for this investment and is therefore the contracting entity for the Connection and Cost Recovery Agreement with Hydro One. Any capital contribution or subsequent true up payments / refunds required to comply with section 6.5 of the Transmission System Code will be from Toronto Hydro to Hydro One not with the customer of Toronto Hydro.

Toronto Hydro confirmed that it expects Metrolinx to provide a capital contribution towards a portion of the cost of the Project.

Ontario Energy Board (Board Staff) INTERROGATORY #5

Interrogatory:

Reference:

Evidence, Exhibit B, Tab 11, Schedule 1, Project Schedule

Preamble:

The Project Schedule lists the task of preparing and signing a CCRA with a start date of October 2016 and a finish date of December 2016.

Questions:

a) Please provide an update on the status of the CCRA negotiations.

b) Please confirm that the CCRA has been signed by the customer.

c) Please provide a copy of the CCRA.

Response:

a) Hydro One and Toronto Hydro have concluded negotiations on the CCRA.

b) The CCRA has been signed by the customer.

c) Please refer to Attachment 1.

CONNECTION AND COST RECOVERY AGREEMENT (CCRA) - LOAD

between

Toronto Hydro-Electric System Limited

and

Hydro One Networks Inc.

for

Expansion of Runnymede TS and Reconductoring of 115 kV Transmission Circuits K1W, K3W, K11W and K12W

CONNECTION AND COST RECOVERY AGREEMENT (CCRA) – LOAD

Toronto Hydro-Electric System Limited (the "**Customer**") has requested and Hydro One Networks Inc. ("**Hydro One**") has agreed to expand Hydro One's existing Runnymede TS by installing two new 50/83 MVA, 115-28 kV transformers and upgrade Hydro One's existing 115 kV K1W, K3W, K11W and K13W transmission circuits (the "**KxW Transmission Corridor**") which supply Runnymede TS (the "**Project**") on the terms and conditions set forth in this Agreement dated this 2nd day of March, 2017 (the "**Agreement**") and the attached Standard Terms and Conditions for Load Customer Transmission Customer Connection Projects V5 6-2014 (the "**Standard Terms and Conditions**" or "**T&C**"). Schedules "A" and "B" attached hereto and the Standard Terms and Conditions are to be read with and form part of this Agreement.

Project Summary

The existing 115-28 kV transformation facilities supplied by the KxW Transmission Corridor consisting of Hydro One-owned Runnymede TS and Fairbank TS, have been operating at or near their capacity limit for the last five years. Furthermore, there is a need for additional capacity in the area to supply the Metrolinx Eglinton Crosstown Light Railway Transit system and longer term load growth in the West Toronto area. The Project consists of the expansion of Runnymede TS by installing two new 50/83 MVA transformers and upgrading the KxW Transmission Corridor to supply the expanded Runnymede TS and maintain the reliability of the transmission supply to the area.

Term: The term of this Agreement commences on the date first written above and terminates on the 25th anniversary of the In Service Date.

Special Circumstances

The Project is subject to Hydro One being able to obtain leave to construct from the Ontario Energy Board ("**OEB**") for the Project under Section 92 of the *Ontario Energy Board Act*. The Project schedule anticipates that the leave to construct will be issued by the OEB by May, 2017. Should the OEB refuse to grant leave to construct pursuant to Section 92 of the *Ontario Energy Board Act, 1998*, the Project will be deemed to be cancelled and Section 18 of the Standard Terms and Conditions shall apply with respect to such cancellation. For the purposes of Section 18, the cancellation will be deemed to have occurred on the date that the OEB refuses to grant leave to construct.

In addition to the circumstances described in Section 5 of the Standard Terms and Conditions, the Ready for Service Date is subject to:

(a) the Customer executing and delivering this Agreement to Hydro One by no later than the 2nd day of March, 2017 (the "**Execution Date**"); and
(b) the Customer making the required milestone payments identified in Schedule "B" of this Agreement under "Manner of Payment".

Acknowledgement re. Letter Agreement

Hydro One and the Customer acknowledge and agree that they are parties to an Amended and Restated Pre-CCRA Letter Agreement for Advance Payment of Engineering Design Work and Procurement of Certain Equipment Prior to Execution of a Connection and Cost Recovery Agreement in respect of the connection of a new Dual Element Spot Network (DESN) station to Hydro One's Transmission Station adjacent to Runnymede TS dated December 13, 2016 (the "**Letter Agreement**"):

(i) pursuant to which the Customer provided an Advance Payment of \$12,000,000.00 plus Harmonized Sales Tax ("**HST**") in the amount of \$1,560,000.00 (the "**Advance Payment**") for performance of the Pre-CCRA Work (as that term is defined in the Letter Agreement);

(ii) which required that the scope of the work and the cost estimate in this Agreement include the Pre-CCRA Work;

(iii) which required that the Advance Payment be credited against the amounts payable by the Customer under the terms of this Agreement and be subject to the same adjustment mechanism based on Actual Cost as set out in this Agreement; and

(iv) which provided that the Letter Agreement would be superseded by this Agreement.

Changes to Cost Allocation

To the extent that there is a change in Applicable Laws that applies to the allocation of costs for the Project as between the Customer and Hydro One, arising out of the OEB's Regional Planning and Cost Allocation Review (EB-2016-0003) or otherwise (a "**Regulatory Change**"), the parties shall enter into good faith negotiations to amend the Agreement to re-allocate costs in accordance with the Regulatory Change. Such amendment may be made at any time during the Term; however, the parties shall, at a minimum, mutually review the cost-allocation mechanisms set out in the Agreement for consistency with any Regulatory Change(s) at the following milestones:

a) the Ready for Service Date. Hydro One shall incorporate any mutually agreed upon amendments into the new Schedule "B" to be provided by Hydro One to Customer within 180 calendar days of the Ready for Service Date, as set out in Section 10.1.

b) 30 calendar days following the later of Hydro One or the Customer receiving from the OEB a final Decision and Rate Order in respect of its next Cost of Service or Rebasing application.

Any disagreement between Hydro One and Customer regarding the allocation of costs for the Project following the second milestone shall be dealt with in accordance with Section 21.

For greater certainty, it is understood that this section does not amend, vary or act as a waiver of Section 23 of the Standard Terms and Conditions and that any amendment made by the parties reallocating costs will be subject to the requirements of Section 23.

Amendment of Standard Terms and Conditions - Counterparts

Hydro One and the Customer agree that Section 36 of the Standard Terms and Conditions is hereby deleted and replaced with the following:

36. This Agreement may be executed in counterparts, each of which shall be deemed an original, but all of which shall together constitute one and the same agreement. Furthermore, transmission of a copy of an executed signature page of this Agreement by facsimile transmission or e-mail in pdf format by a party shall be as effective as delivery of an original manually executed counterpart hereof.

 N-S

CONNECTION AND COST RECOVERY AGREEMENT (CCRA) – LOAD

Entire Agreement

Subject to Section 31 of the Standard Terms and Conditions, this Agreement constitutes the entire agreement between the parties with respect to the subject matter of this Agreement and supersedes all prior oral or written representations and agreements concerning the subject matter of this Agreement.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by the signatures of their proper authorized signatories, as of the day and year first written above.

TORONTO HYDRO-ELECTRIC SYSTEM LIMITED

Name:
Title:

Name:
Title:
I/We have the authority to bind the Corporation

HYDRO ONE NETWORKS INC.

Name: Mike Penstone
Title: Vice President, Planning
I have the authority to bind the Corporation

CONNECTION AND COST RECOVERY AGREEMENT (CCRA) – LOAD

Schedule "A": Expansion of Runnymede TS and Reconductoring of 115 kV Transmission Circuits K1W, K3W, K11W and K12W

PROJECT SCOPE

New or Modified Connection Facilities:

Hydro One will:

i) install two new 50/83 MVA, 115kV - 28 kV transformers, ten 1200A, 28 kV feeder breakers and one 21.6 MVar capacitor bank adjacent to Runnymede TS; and
ii) upgrade the existing 115 kV K1W, K3W, K11W and K12W transmission circuits, which span approximately 9.5 kilometers each, by replacing the existing 605 kcmil ACSR circuit conductors with 1433 kcmil ACSS conductors, and performing the necessary structural reinforcements to the structures supporting these transmission circuits.

Connection Point: The new transformation facilities will be connected to the portion of the 115 kV K11W and K12W transmission circuits which pass through Runnymede TS.

Ready for Service Date: November 30, 2018

HYDRO ONE CONNECTION WORK

Hydro One will provide project management, engineering, equipment and material, construction and commissioning of the Hydro One Connection Work. The scope of the Hydro One Connection Work is based on the requirements from:

- the IESO's System Impact Assessment (SIA) Report dated November 14, 2016; and
- Hydro One's Customer Impact Assessment (CIA) Report dated November 14, 2016.

Hydro One or its agents:

(i) will supply and install all materials and equipment not specifically described herein that are required or may be necessary to complete the work for the purpose required;
(ii) shall repair any damage caused to lands, owned by Hydro One or third parties, associated with or related to the Hydro One Connection Work;
(iii) where Hydro One deems necessary, install appropriate solutions to address public safety concerns regarding the facilities being constructed by Hydro One, which may include, but is not limited to, safety enclosures and signage; and
(iv) scrap all materials and equipment removed by Hydro One, or its agents, at site unless specifically stated otherwise.

Part 1: Transformation Connection Pool Work

Hydro One will:

- Install two new 50/83 MVA, 115kV - 28 kV transformers, ten 1200A, 28 kV feeder breakers and one 21.6 MVar capacitor bank adjacent to Runnymede TS.
- Install five inch ducts from each breaker position up to one meter outside the Runnymede TS station fence.

CONNECTION AND COST RECOVERY AGREEMENT (CCRA) – LOAD

Part 2: Line Connection Pool Work

Hydro One will:

Upgrade the existing 115 kV K1W, K3W, K11W and K12W transmission circuits, which span approximately 9.5 kilometers each, by replacing the existing 605 kcmil ACSR circuit conductors with 1433 kcmil ACSS conductors, and performing the necessary structural reinforcements to the structures supporting these transmission circuits.

Part 3: Network Customer Allocated Work

Not Applicable

Part 4: Network Pool Work (Non-Recoverable from Customer)

Not Applicable

Part 5: Work Chargeable to Customer

Not Applicable

Part 6: Scope Change

For the purposes of this Part 6 of Schedule "A", the term "Non-Customer Initiated Scope Change(s)" means one or more changes that are required to be made to the Project Scope as detailed and documented in Parts 1 to 5 of this Schedule "A" such as a result of any one or more of the following:

- any environmental assessment(s);
- requirement for Hydro One to obtain approval under Section 92 (leave to construct) of the Ontario Energy Board Act if the transmission line route selected by Hydro One is greater than 2 km in length;
- Hydro One having to expropriate property under the Ontario Energy Board Act;
- conditions included by the OEB in any approval issued by the OEB under Section 92 of the Ontario Energy Board Act or any approval issued by the OEB to expropriate under the Ontario Energy Board Act; and
- any IESO requirements identified in the System Impact Assessment or any revisions thereto.

Any change in the Project Scope as detailed and documented in Parts 1 to 5 of this Schedule "A" whether they are initiated by the Customer or are Non-Customer Initiated Scope Changes, may result in a change to the Project costs estimated in Schedule "B" of this Agreement and the Project schedule, including the Ready for Service Date.

All Customer initiated scope changes to this Project must be in writing to Hydro One.

Hydro One will advise the Customer of any cost and schedule impacts of any Customer initiated scope changes. Hydro One will advise the Customer of any Material cost and/or Material schedule impacts of any Non-Customer Initiated Scope Changes.

 N.S

CONNECTION AND COST RECOVERY AGREEMENT (CCRA) – LOAD

Hydro One will not implement any Customer initiated scope changes until written approval has been received from the Customer accepting the new pricing and schedule impact.

Hydro One will implement all Non-Customer initiated scope changes until the estimate of the Engineering and Construction Cost of all of the Non-Customer initiated scope changes made by Hydro One reaches 10% of the total sum of the estimates of the Engineering and Construction Cost of:

(i) the Transformation Connection Pool Work,
(ii) the Line Connection Pool Work;
(iii) Network Pool Work;
(iv) Network Customer Allocated Work; and
(v) The Work Chargeable to Customer.

At that point, no further Non-Customer initiated scope changes may be made by Hydro One without the written consent of the Customer accepting new pricing and schedule impact. If the Customer does not accept the new pricing and schedule impact, Hydro One will not be responsible for any delay in the Ready for Service Date as a consequence thereof.

CUSTOMER CONNECTION WORK

The Customer will:
- supply and install all 28 kV distribution feeder cables in the ducts to be installed by Hydro One.

EXISTING LOAD:

	A	B
Existing Load Facility	**Existing Load (MW)[1,]**	**Normal Capacity (MW)[2]**
Fairbank TS	167.4	172.6
Runnymede TS (existing DESN)	101.8	105.4

Notes:

1. Existing Load means the Customer's Assigned Capacity at the Existing Load Facility as of the date of this Agreement (Section 3.0.3 of the Transmission System Code).

2. Any station load above the Normal Capacity of the Existing Load Facility (Overload) will be determined in accordance with Section 6.7.9 of the Transmission System Code and Hydro One's Connection Procedures. If the Overload is transferred to the New or Modified Connection Facilities, the Overload will be credited to the Line Connection Revenue, Transformation Connection Revenue or Network Revenue requirement, whichever is applicable.

3. A power factor of 0.9 is used to convert quantities in MVA to MW.

OTHER RELEVANT CONSIDERATIONS:

Not Applicable

CONNECTION AND COST RECOVERY AGREEMENT (CCRA) – LOAD

EXCEPTIONAL CIRCUMSTANCES RE. NETWORK CONSTRUCTION OR MODIFICATIONS:

None

MISCELLANEOUS

Customer Connection Risk Classification: Low Risk

True-Up Points: (a) following the fifth and tenth anniversaries of the In Service Date; and
(b) following the fifteenth anniversary of the In Service Date if the Actual Load is 20% higher or lower than the Load Forecast at the end of the tenth anniversary of the In Service Date.

Customer's HST Registration Number: 89671-8327-RT0001

Documentation Required (after In Service Date):
- As built drawings of Customer-owned feeder egresses.

Ownership: Hydro One will own all equipment provided by Hydro One as part of the Hydro One Connection Work with the exception of any distribution feeder egress cables that may be installed by Hydro One on behalf of the Customer.

Approval Date (if Section 92 required to be obtained by Hydro One): May 31, 2017

Security Requirements: Nil

Security Date: Not applicable

Easement Required from Customer: No

Easement Date: Not Applicable

Easement Lands: Not Applicable

Easement Term: Not Applicable

Revenue Metering: IESO compliant revenue metering to be provided by the Customer.

Customer Notice Info:

Toronto Hydro-Electric System Limited
14 Carlton Street
Toronto, ON M5B 1K5

Attention: General Counsel

 N.S

CONNECTION AND COST RECOVERY
AGREEMENT (CCRA) – LOAD

Schedule "B": Expansion of Runnymede TS and Reconductoring of 115 kV Transmission Circuits K1W, K3W, K11W and K12W

TRANSFORMATION CONNECTION POOL WORK

Estimate of the Engineering and Construction Cost of the Transformation Connection Pool Work: $27,648,000.00 plus HST in the amount of $3,594,240.00

Estimate of Transformation Connection Pool Work Capital Contribution: $34,301,600.00 plus HST in the amount of $4,459,200.00

Actual Engineering and Construction Cost of the Transformation Connection Pool Work: To be provided 180 days after the Ready for Service Date.

Actual Transformation Connection Pool Work Capital Contribution: To be provided 180 days after the Ready for Service Date.

LINE CONNECTION POOL WORK

Estimate of the Engineering and Construction Cost of the Line Connection Pool Work: $10,262,280.00 plus HST in the amount of $1,344,096.00

Estimate of Line Connection Pool Work Capital Contribution: $9,706,500.00 plus HST in the amount of $1,261,800.00

Actual Engineering and Construction Cost of the Line Connection Pool Work: To be provided 180 days after the Ready for Service Date.

Actual Line Connection Pool Work Capital Contribution: To be provided 180 days after the Ready for Service Date.

NETWORK CUSTOMER ALLOCATED WORK

Estimate of the Engineering and Construction Cost of the Network Customer Allocated Work:
$16,743,720.00 plus HST in the amount of $2,176,638.00

Estimate of Line Connection Pool Work Capital Contribution: $11,392,000.00 plus HST in the amount of $1,481,000.00

Actual Engineering and Construction Cost of the Line Connection Pool Work: To be provided 180 days after the Ready for Service Date.

Actual Line Connection Pool Work Capital Contribution: To be provided 180 days after the Ready for Service Date.

NETWORK POOL WORK (NON-RECOVERABLE FROM CUSTOMER):
Not Applicable

WORK CHARGEABLE TO CUSTOMER
Not Applicable

CONNECTION AND COST RECOVERY AGREEMENT (CCRA) – LOAD

MANNER OF PAYMENT OF THE ESTIMATE OF CAPITAL CONTRIBUTIONS AND WORK CHARGEABLE TO CUSTOMER

The Customer shall pay Hydro One the estimate of the Transformation Connection Pool Work Capital Contribution, the Estimate of Line Connection Pool Work Capital Contribution, the estimate of the Network Customer Allocated Work Capital Contribution and the estimate of the Engineering and Construction Cost of the Work Chargeable to Customer by making the progress payments specified below on or before the Payment Milestone Date specified below. Hydro One will invoice the Customer for each progress payment 30 days prior to the Payment Milestone Date.

Payment Milestone Date	Transformation Pool Work Capital Contribution	Line Pool Work Capital Contribution	Network Customer Allocated Work Capital Contribution	Work Chargeable To Customer	Total Payment Required
June 2015 [Connection Cost Estimate Agreement]	$75,000	0	0	0	$75,000.00 plus HST in the amount of $9,750.00
May 2016 [Amending Agreement]	$1,575,000.00	0	0	0	$1,575,000.00 plus HST in the amount of $204,750.00
August 2016 [Pre-CCRA Letter Agreement]	$9,000,000.00	0	0	0	$9,000,000.00 plus HST in the amount of $1,170,000.00
December 2016 [Amended and Restated Pre-CCRA Letter Agreement]	$2,000,000.00	$500,000.00	$500,000.00	0	$3,000,000.00 plus HST in the amount of $390,000.00
March 3, 2017	$6,500,000.00	$3,250,000.00	$3,250,000.00	0	$13,000,000.00 plus HST in the amount of $1,690,000.00
August 1, 2017	$6,500,000.00	$3,250,000.00	$3,250,000.00	0	$13,000,000.00 plus HST in the amount of $1,690,000.00
January 5, 2018	$5,000,000.00	$2,500,000.00	$2,500,000.00	0	$10,000,000.00 plus HST in the amount of $1,300,000.00
April 1, 2018	$3,651,600.00	$206,500	$1,892,000.00	0	$5,750,100.00 plus HST in the amount of $747,513.00

CONNECTION AND COST RECOVERY AGREEMENT (CCRA) – LOAD

TRANSFORMATION CONNECTION REVENUE REQUIREMENTS AND LOAD FORECAST AT THE NEW OR MODIFIED CONNECTION FACILITIES

Annual Period Ending On:	New Load** (MW)	Part of New Load Exceeding Normal Capacity of Existing Load Facilities [A] (Note 1)	Adjusted Load Forecast (MW) [B]	Transformation Connection Revenue (k$) for True-Up, based on [A] or [B], whichever is applicable
1st Anniversary of In Service Date	3.1	3.1	3.1	75.3
2nd Anniversary of In Service Date	3.8	3.8	3.8	91.7
3rd Anniversary of In Service Date	9.3	9.3	9.3	224.4
4th Anniversary of In Service Date	10.4	10.4	10.4	252.7
5th Anniversary of In Service Date	11.2	11.2	11.2	270.6
6th Anniversary of In Service Date	12.6	12.6	12.6	304.9
7th Anniversary of In Service Date	14.1	14.1	14.1	340.7
8th Anniversary of In Service Date	14.2	14.2	14.2	343.7
9th Anniversary of In Service Date	14.9	14.9	14.9	360.1
10th Anniversary of In Service Date	15.6	15.6	15.6	378
11th Anniversary of In Service Date	15.7	15.7	15.7	379.4
12th Anniversary of In Service Date	17	17	17	412.2
13th Anniversary of In Service Date	17.1	17.1	17.1	415.2
14th Anniversary of In Service Date	17.8	17.8	17.8	431.6
15th Anniversary of In Service Date	18.5	18.5	18.5	449.5
16th Anniversary of In Service Date	18.6	18.6	18.6	451
17th Anniversary of In Service Date	19.3	19.3	19.3	467.4
18th Anniversary of In Service Date	20	20	20	485.3
19th Anniversary of In Service Date	20.1	20.1	20.1	486.8
20th Anniversary of In Service Date	20.8	20.8	20.8	503.2
21st Anniversary of In Service Date	21.5	21.5	21.5	521.1
22nd Anniversary of In Service Date	22.2	22.2	22.2	539.0
23rd Anniversary of In Service Date	23	23	23	556.8
24th Anniversary of In Service Date	23.7	23.7	23.7	574.7
25th Anniversary of In Service Date	23.8	23.8	23.8	576.2

CONNECTION AND COST RECOVERY AGREEMENT (CCRA) – LOAD

LINE CONNECTION REVENUE REQUIREMENTS AND LOAD FORECAST AT THE NEW OR MODIFIED CONNECTION FACILITIES

Annual Period Ending On:	New Load** (MW)	Part of New Load Exceeding Normal Capacity of Existing Load Facilities [C]	Adjusted Load Forecast (MW) [D]	Line Connection Revenue (k$) for True-Up, Based on [C] or [D], whichever is applicable
1st Anniversary of In Service Date	3.1	3.1	3.1	31.2
2nd Anniversary of In Service Date	3.8	3.8	3.8	60.7
3rd Anniversary of In Service Date	9.3	9.3	9.3	77.4
4th Anniversary of In Service Date	10.4	10.4	10.4	99.9
5th Anniversary of In Service Date	11.2	11.2	11.2	115.9
6th Anniversary of In Service Date	12.6	12.6	12.6	138.4
7th Anniversary of In Service Date	14.1	14.1	14.1	154.4
8th Anniversary of In Service Date	14.2	14.2	14.2	162.8
9th Anniversary of In Service Date	14.9	14.9	14.9	170.5
10th Anniversary of In Service Date	15.6	15.6	15.6	178.2
11th Anniversary of In Service Date	15.7	15.7	15.7	185.9
12th Anniversary of In Service Date	17	17	17	200.7
13th Anniversary of In Service Date	17.1	17.1	17.1	209.0
14th Anniversary of In Service Date	17.8	17.8	17.8	216.7
15th Anniversary of In Service Date	18.5	18.5	18.5	224.4
16th Anniversary of In Service Date	18.6	18.6	18.6	232.1
17th Anniversary of In Service Date	19.3	19.3	19.3	239.8
18th Anniversary of In Service Date	20	20	20	247.5
19th Anniversary of In Service Date	20.1	20.1	20.1	262.3
20th Anniversary of In Service Date	20.8	20.8	20.8	270.6
21st Anniversary of In Service Date	21.5	21.5	21.5	278.4
22nd Anniversary of In Service Date	22.2	22.2	22.2	286.1
23rd Anniversary of In Service Date	23	23	23	293.8
24th Anniversary of In Service Date	23.7	23.7	23.7	301.5
25th Anniversary of In Service Date	23.8	23.8	23.8	316.2

 N.S

CONNECTION AND COST RECOVERY AGREEMENT (CCRA) – LOAD

NETWORK REVENUE REQUIREMENTS AND LOAD FORECAST AT THE NEW OR MODIFIED CONNECTION FACILITIES

Annual Period Ending On:	New Load** - (MW)	Part of New Load Exceeding Normal Capacity of Existing Load Facilities [C]	Adjusted Load Forecast (MW) [D]	Network Revenue (k$) for True-Up, Based on [C] or [D], whichever is applicable
1st Anniversary of In Service Date	3.1	3.1	3.1	136.5
2nd Anniversary of In Service Date	3.8	3.8	3.8	166.2
3rd Anniversary of In Service Date	9.3	9.3	9.3	406.6
4th Anniversary of In Service Date	10.4	10.4	10.4	457.9
5th Anniversary of In Service Date	11.2	11.2	11.2	490.3
6th Anniversary of In Service Date	12.6	12.6	12.6	552.5
7th Anniversary of In Service Date	14.1	14.1	14.1	617.3
8th Anniversary of In Service Date	14.2	14.2	14.2	622.7
9th Anniversary of In Service Date	14.9	14.9	14.9	652.4
10th Anniversary of In Service Date	15.6	15.6	15.6	684.8
11th Anniversary of In Service Date	15.7	15.7	15.7	687.5
12th Anniversary of In Service Date	17	17	17	746.9
13th Anniversary of In Service Date	17.1	17.1	17.1	752.3
14th Anniversary of In Service Date	17.8	17.8	17.8	782.1
15th Anniversary of In Service Date	18.5	18.5	18.5	814.5
16th Anniversary of In Service Date	18.6	18.6	18.6	817.2
17th Anniversary of In Service Date	19.3	19.3	19.3	846.9
18th Anniversary of In Service Date	20	20	20	879.3
19th Anniversary of In Service Date	20.1	20.1	20.1	882.0
20th Anniversary of In Service Date	20.8	20.8	20.8	911.7
21st Anniversary of In Service Date	21.5	21.5	21.5	944.1
22nd Anniversary of In Service Date	22.2	22.2	22.2	976.5
23rd Anniversary of In Service Date	23	23	23	1,008.9
24th Anniversary of In Service Date	23.7	23.7	23.7	1,041.4
25th Anniversary of In Service Date	23.8	23.8	23.8	1,044.1

** New Load based on Customer's Load Forecast which includes Part of New Load Exceeding Normal Capacity of Existing Load Facilities. "Overload" derived in accordance with Section 6.7.9 of the Transmission System Code and the OEB-Approved Connection Procedures. Any Customer load below the Normal Capacity of the Existing Load Facilities transferred to the New or Modified Facilities will not be credited towards the Transformation Connection Revenue Requirements, Line Connection Revenue Requirements or the Network Connection Revenue Requirements. The discounted cash flow calculation for Network Revenue requirements will be based on Incremental Network Load which is New Load less the amount of load, if any, that has been by-passed by the Customer at any of Hydro One's connection facilities.
A power factor of 0.9 is used to convert quantities in MVA to MW.

 N.S

THIS AMENDING AGREEMENT (the "**Amending Agreement**") is made effective as of the 16th day of March, 2017 between **HYDRO ONE NETWORKS INC.** ("**Hydro One**") and **TORONTO HYDRO-ELECTRIC SYSTEM LIMITED** ("**Toronto Hydro**").

WHEREAS:

A. Toronto Hydro and Hydro One entered into a Connection and Cost Recovery Agreement dated March 2, 2017 (the "**Agreement**") for the expansion of Hydro One's existing Runnymede TS by installing two new 50/83 MVA, 115-28 kV transformers and upgrade Hydro One's existing 115 kV K1W, K3W, K11W and K13W transmission circuits (the "**KxW Transmission Corridor**") which supply Runnymede TS (the "**Project**"); and

B. Toronto Hydro and Hydro One wish to amend the Agreement.

NOW THEREFORE, THIS AMENDING AGREEMENT WITNESSES that in consideration of the mutual covenants contained herein and for other valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Toronto Hydro and Hydro One (each, a "**Party**" and together the "**Parties**") agree as follows:

1. Any capitalized terms used but not defined herein shall be as defined in the Agreement. The recitals above are agreed by the Parties to be true and deemed to form part of this Amending Agreement as if specifically restated herein.

2. The Agreement is hereby amended by:

   (a) deleting the Existing Load Table and associated notes from Schedule "A" and replacing it with the following:

EXISTING LOAD:

	A	B
Existing Load Facility	**Existing Load (MW)[1]**	**Normal Capacity (MW)[2]**
Fairbank TS	167.4	172.6
Runnymede TS (existing DESN)	101.8	105.4
Richview TS	268.2	429.3
Duplex TS	95.3	128.2

Notes:

1. Existing Load means the Customer's Assigned Capacity at the Existing Load Facility as of the date of this Agreement (Section 3.0.3 of the Transmission System Code).

2. Any station load above the Normal Capacity of the Existing Load Facility (Overload) will be determined in accordance with Section 6.7.9 of the Transmission System Code and Hydro One's Connection Procedures. If the Overload is transferred to the New or Modified Connection Facilities, the Overload will be credited to the Line Connection Revenue, Transformation Connection Revenue or Network Revenue requirement, whichever is applicable.

N.S

3. A power factor of 0.9 is used to convert quantities in MVA to MW.

4. Richview TS and Duplex TS are identified above due to an anticipated one time load transfer from these stations to the stations supplied by the Kipling to Wiltshire 115 kV corridor. Future load transfers from Richview TS and Duplex TS into the Kipling to Wiltshire 115 kV corridor are impractical.

(b) deleting Schedule "B" and replacing it with Schedule "B" attached hereto as Appendix I to this Amending Agreement.

3. The Parties do hereby reconfirm that the terms and conditions of the Agreement as amended by this Amending Agreement shall continue to be in full force and effect.

4. This Amending Agreement, together with Appendix I and the Agreement, shall hereinafter constitute the entire agreement between the Parties with respect to the Project, and supersedes any and all other agreements, understandings, discussions, negotiations, representations and correspondence which may have been made by or between the Parties respecting the same.

5. This Amending Agreement shall be governed by and construed in accordance with the laws of the Province of Ontario and the laws of Canada applicable therein.

6. This Amending Agreement may be executed in counterparts, each of which shall be deemed an original, but all of which shall together constitute one and the same agreement. Transmission of a copy of an executed signature page of this Amending Agreement by facsimile transmission or e-mail in pdf format by a Party shall be as effective as delivery of an original manually executed counterpart hereof.

IN WITNESS WHEREOF the Parties hereto have executed this Amending Agreement as of the date first written above.

TORONTO HYDRO-ELECTRIC SYSTEM LIMITED

Name:
Title:

Name:
Title:
I/We have the authority to bind the Corporation

HYDRO ONE NETWORKS INC.

Name: D Bradley
Title: VP - Planning
I have the authority to bind the Corporation

HYDRO ONE NETWORKS INC.
March 16 2017
YEAR
SOLICITOR

N.S

Appendix 1 to the Amending Agreement (Runnymede CCRA):

Schedule "B": Expansion of Runnymede TS and Reconductoring of 115 kV Transmission Circuits K1W, K3W, K11W and K12W

TRANSFORMATION CONNECTION POOL WORK

Estimate of the Engineering and Construction Cost of the Transformation Connection Pool Work: $27,648,000.00 plus HST in the amount of $3,594,240.00

Estimate of Transformation Connection Pool Work Capital Contribution: $31,867,500.00 plus HST in the amount of $4,142,775.00

Actual Engineering and Construction Cost of the Transformation Connection Pool Work: To be provided 180 days after the Ready for Service Date.

Actual Transformation Connection Pool Work Capital Contribution: To be provided 180 days after the Ready for Service Date.

LINE CONNECTION POOL WORK

Estimate of the Engineering and Construction Cost of the Line Connection Pool Work: $10,262,280.00 plus HST in the amount of $1,344,096.00

Estimate of Line Connection Pool Work Capital Contribution: $8,815,400.00 plus HST in the amount of $1,146,000.00

Actual Engineering and Construction Cost of the Line Connection Pool Work: To be provided 180 days after the Ready for Service Date.

Actual Line Connection Pool Work Capital Contribution: To be provided 180 days after the Ready for Service Date.

NETWORK CUSTOMER ALLOCATED WORK

Estimate of the Engineering and Construction Cost of the Network Customer Allocated Work:

$16,743,720.00 plus HST in the amount of $2,176,638.00

Estimate of Line Connection Pool Work Capital Contribution: $9,938,000.00 plus HST in the amount of $1,291,900.00

Actual Engineering and Construction Cost of the Line Connection Pool Work: To be provided 180 days after the Ready for Service Date.

Actual Line Connection Pool Work Capital Contribution: To be provided 180 days after the Ready for Service Date.

NETWORK POOL WORK (NON-RECOVERABLE FROM CUSTOMER):

Not Applicable

N.S

WORK CHARGEABLE TO CUSTOMER

Not Applicable

MANNER OF PAYMENT OF THE ESTIMATE OF CAPITAL CONTRIBUTIONS AND WORK CHARGEABLE TO CUSTOMER

The Customer shall pay Hydro One the estimate of the Transformation Connection Pool Work Capital Contribution, the Estimate of Line Connection Pool Work Capital Contribution, the estimate of the Network Customer Allocated Work Capital Contribution and the estimate of the Engineering and Construction Cost of the Work Chargeable to Customer by making the progress payments specified below on or before the Payment Milestone Date specified below. Hydro One will invoice the Customer for each progress payment 30 days prior to the Payment Milestone Date.

Payment Milestone Date	Transformation Pool Work Capital Contribution	Line Pool Work Capital Contribution	Network Customer Allocated Work Capital Contribution	Work Chargeable To Customer	Total Payment Required
June 2015 [Connection Cost Estimate Agreement]	$75,000	0	0	0	$75,000.00 plus HST in the amount of $9,750.00
May 2016 [Amending Agreement]	$1,575,000.00	0	0	0	$1,575,000.00 plus HST in the amount of $204,750.00
August 2016 [Pre-CCRA Letter Agreement]	$9,000,000.00	0	0	0	$9,000,000.00 plus HST in the amount of $1,170,000.00
December 2016 [Amended and Restated Pre-CCRA Letter Agreement]	$2,000,000.00	$500,000.00	$500,000.00	0	$3,000,000.00 plus HST in the amount of $390,000.00
March 3, 2017 [CCRA Milestone Payment 1]	$6,500,000.00	$3,250,000.00	$3,250,000.00	0	$13,000,000.00 plus HST in the amount of $1,690,000.00
August 1, 2017	$6,500,000.00	$3,250,000.00	$3,250,000.00	0	$13,000,000.00 plus HST in the amount of $1,690,000.00
January 5, 2018	$5,000,000.00	$1,815,400.00	$2,500,000.00	0	$9,315,400.00 plus HST in the amount of $1,211,002.00
April 1, 2018	$1,217,500.00	$0	$1,655,500.00	0	$1,870,715.00 plus HST in the amount of $215,215.00

N.S

TRANSFORMATION CONNECTION REVENUE REQUIREMENTS AND LOAD FORECAST AT THE NEW OR MODIFIED CONNECTION FACILITIES

Annual Period Ending On:	New Load** (MW)	Part of New Load Exceeding Normal Capacity of Existing Load Facilities [A] (Note 1)	Adjusted Load Forecast (MW) [B]	Transformation Connection Revenue (k$) for True Up, based on [A] or [B] whichever is applicable
1st Anniversary of In Service Date	3.1	3.1	3.1	75.3
2nd Anniversary of In Service Date	3.8	3.8	3.8	91.7
3rd Anniversary of In Service Date	9.3	9.3	9.3	224.4
4th Anniversary of In Service Date	10.4	10.4	10.4	252.7
5th Anniversary of In Service Date	11.2	11.2	11.2	270.6
6th Anniversary of In Service Date	12.6	12.6	12.6	304.9
7th Anniversary of In Service Date	14.1	14.1	14.1	340.7
8th Anniversary of In Service Date	14.2	14.2	14.2	343.7
9th Anniversary of In Service Date	14.9	14.9	14.9	360.1
10th Anniversary of In Service Date	15.6	15.6	15.6	378
11th Anniversary of In Service Date	15.7	15.7	15.7	379.4
12th Anniversary of In Service Date	17	17	17	412.2
13th Anniversary of In Service Date	17.1	17.1	17.1	415.2
14th Anniversary of In Service Date	17.8	17.8	17.8	431.6
15th Anniversary of In Service Date	18.5	18.5	18.5	449.5
16th Anniversary of In Service Date	18.6	18.6	18.6	451
17th Anniversary of In Service Date	19.3	19.3	19.3	467.4
18th Anniversary of In Service Date	20	20	20	485.3
19th Anniversary of In Service Date	20.1	20.1	20.1	486.8
20th Anniversary of In Service Date	20.8	20.8	20.8	503.2
21st Anniversary of In Service Date	21.5	21.5	21.5	521.1
22nd Anniversary of In Service Date	22.2	22.2	22.2	539.0
23rd Anniversary of In Service Date	23	23	23	556.8
24th Anniversary of In Service Date	23.7	23.7	23.7	574.7
25th Anniversary of In Service Date	23.8	23.8	23.8	576.2

N.S

LINE CONNECTION REVENUE REQUIREMENTS
AND LOAD FORECAST AT THE NEW OR MODIFIED CONNECTION FACILITIES

Annual Period Ending On:	New Load** (MW)	Part of New Load Exceeding Normal Capacity of Existing Load Facilities [C]	Adjusted Load Forecast (MW) [D]	Line Connection Revenue (k$) for True-Up, Based on [C] or [D], whichever is applicable
1st Anniversary of In Service Date	3.1	3.1	3.1	32.4
2nd Anniversary of In Service Date	3.8	3.8	3.8	39.5
3rd Anniversary of In Service Date	9.3	9.3	9.3	96.7
4th Anniversary of In Service Date	10.4	10.4	10.4	108.9
5th Anniversary of In Service Date	11.2	11.2	11.2	116.6
6th Anniversary of In Service Date	12.6	12.6	12.6	131.3
7th Anniversary of In Service Date	14.1	14.1	14.1	146.7
8th Anniversary of In Service Date	14.2	14.2	14.2	148
9th Anniversary of In Service Date	14.9	14.9	14.9	155.1
10th Anniversary of In Service Date	15.6	15.6	15.6	162.8
11th Anniversary of In Service Date	15.7	15.7	15.7	163.4
12th Anniversary of In Service Date	17	17	17	177.6
13th Anniversary of In Service Date	17.1	17.1	17.1	178.8
14th Anniversary of In Service Date	17.8	17.8	17.8	185.9
15th Anniversary of In Service Date	18.5	18.5	18.5	193.6
16th Anniversary of In Service Date	18.6	18.6	18.6	194.2
17th Anniversary of In Service Date	19.3	19.3	19.3	201.3
18th Anniversary of In Service Date	20	20	20	209
19th Anniversary of In Service Date	20.1	20.1	20.1	209.7
20th Anniversary of In Service Date	20.8	20.8	20.8	216.7
21st Anniversary of In Service Date	21.5	21.5	21.5	224.4
22nd Anniversary of In Service Date	22.2	22.2	22.2	232.1
23rd Anniversary of In Service Date	23	23	23	239.8
24th Anniversary of In Service Date	23.7	23.7	23.7	247.5
25th Anniversary of In Service Date	23.8	23.8	23.8	248.2

N.S

NETWORK REVENUE REQUIREMENTS AND LOAD FORECAST AT THE NEW OR MODIFIED CONNECTION FACILITIES

Annual Period Ending On:	New Load** - (MW)	Part of New Load Exceeding Normal Capacity of Existing Load Facilities [C]	Adjusted Load Forecast (MW) [D]	Network Revenue (k$) for True-Up, Based on [C] or [D], whichever is applicable
1st Anniversary of In Service Date	3.1	3.1	3.1	136.5
2nd Anniversary of In Service Date	3.8	3.8	3.8	166.2
3rd Anniversary of In Service Date	9.3	9.3	9.3	406.6
4th Anniversary of In Service Date	10.4	10.4	10.4	457.9
5th Anniversary of In Service Date	11.2	11.2	11.2	490.3
6th Anniversary of In Service Date	12.6	12.6	12.6	552.5
7th Anniversary of In Service Date	14.1	14.1	14.1	617.3
8th Anniversary of In Service Date	14.2	14.2	14.2	622.7
9th Anniversary of In Service Date	14.9	14.9	14.9	652.4
10th Anniversary of In Service Date	15.6	15.6	15.6	684.8
11th Anniversary of In Service Date	15.7	15.7	15.7	687.5
12th Anniversary of In Service Date	17	17	17	746.9
13th Anniversary of In Service Date	17.1	17.1	17.1	752.3
14th Anniversary of In Service Date	17.8	17.8	17.8	782.1
15th Anniversary of In Service Date	18.5	18.5	18.5	814.5
16th Anniversary of In Service Date	18.6	18.6	18.6	817.2
17th Anniversary of In Service Date	19.3	19.3	19.3	846.9
18th Anniversary of In Service Date	20	20	20	879.3
19th Anniversary of In Service Date	20.1	20.1	20.1	882.0
20th Anniversary of In Service Date	20.8	20.8	20.8	911.7
21st Anniversary of In Service Date	21.5	21.5	21.5	944.1
22nd Anniversary of In Service Date	22.2	22.2	22.2	976.5
23rd Anniversary of In Service Date	23	23	23	1,008.9
24th Anniversary of In Service Date	23.7	23.7	23.7	1,041.4
25th Anniversary of In Service Date	23.8	23.8	23.8	1,044.1

** New Load based on Customer's Load Forecast which includes Part of New Load Exceeding Normal Capacity of Existing Load Facilities. "Overload" derived in accordance with Section 6.7.9 of the Transmission System Code and the OEB-Approved Connection Procedures. Any Customer load below the Normal Capacity of the Existing Load Facilities transferred to the New or Modified Facilities will not be credited towards the Transformation Connection Revenue Requirements, Line Connection Revenue Requirements or the Network Connection Revenue Requirements. The discounted cash flow calculation for Network Revenue requirements will be based on Incremental Network Load which is New Load less the amount of load, if any, that has been by-passed by the Customer at any of Hydro One's connection facilities.
A power factor of 0.9 is used to convert quantities in MVA to MW.

N.S

Ontario Energy Board (Board Staff) INTERROGATORY #6

Interrogatory:

References:

Evidence, Exhibit B, Tab 11, Schedule 1, Project Schedule

Evidence, Exhibit B, Tab 7 Schedule 1, Apportioning Project Costs and Risks, pages 2-3

Preamble:

The projected in-service date for this project is November 30, 2018. In the Risks and Contingencies section, the application indicates the possible risk of delays in obtaining required approvals, including the Environmental Certificate of Approval and the Environmental Screen Out/Class EA.

Questions:

a) Please list any other approvals required for this project.

b) Please provide the status of any approvals (such as environmental screening/assessment) that may impact the in-service date for this project.

Response:

a) In addition to the approvals outlined in Exhibit B, Tab 7, Schedule 1, namely, Environmental Certificates of Approval for Drainage and Noise and the Environmental Screen Out/ Class EA, other approvals that will likely be required include a building permit for the PCT building[1] as well as any necessary permits for sewage connection for washroom facilities. All SIA and CIA documentation will also need to be finalized prior to construction commencement.

b) Environmental Certificates of Approval, the Environmental Screen Out / Class EA, and this section 92 approval were all potential approvals that could have or may still impact the in-

[1] Exhibit C, Tab 1, Schedule 1 – Page 4 of 5

service date of this Project. These approvals are outlined in Exhibit B, Tab 7, Schedule 1. Since the application was filed, the Environmental Screen-Out was finalized in December. Hydro One also anticipates obtaining the Environmental Certificate of Approvals for both Drainage and Noise prior to May 1, 2017. Therefore, asides from this leave to construct approval, Hydro One does not anticipate that any outstanding approvals will delay the in-service date of the Project.

City of Toronto INTERROGATORY #1

Interrogatory:

Ref: Exhibit E, Tab 1, Schedule 1 Attachments 2 through 4.

Land Acquisition Process: Temporary Access Agreement, Construction Licence Agreement and Damage Claim Agreement

1. Will HONI confirm that it will apply for the appropriate City of Toronto permits and comply with the standard terms and conditions thereof, regarding road allowance access?

2. Will HONI confirm that, if the City of Toronto deems as unnecessary the agreements attached as Attachments 2 through 4, HONI will not require the execution of the agreements?

Response:

1. Yes, Hydro One confirms that it will apply for the appropriate City of Toronto permits where applicable and comply with the standard terms and conditions thereof, if applicable, regarding road allowance access. Any necessary modifications required to standard terms and conditions should be mutually agreed upon by both the City of Toronto and Hydro One.

2. Hydro One confirms that it will not require the execution of the agreement(s) for City of Toronto owned property impacted by the Project if the City of Toronto deems such agreements unnecessary.

City of Toronto INTERROGATORY #2

Interrogatory:

Ref: Exhibit B, Tab 3, Schedule 1 Attachment 1

Customer Consultation: Central Toronto IRRP

3. Has HONI conducted or considered undertaking a health impact assessment to evaluate options available to minimise any increase to the yearly average exposure to EMF in Toronto?

4. Has HONI conducted an EMF Management Plan that accurately assesses and defines the potential exposure to area receptors that will/may be impacted as a result of this application; and if so will it make a copy available for review?

Response:

Hydro One believes these questions are more appropriately addressed as part of Hydro One's environmental approval for this Application and are outside the purview of the Board for a leave to construct approval. Nonetheless, to assist the City of Toronto, Hydro One provides the following responses.

3. Hydro One has not conducted, nor considered, undertaking a health impact assessment to evaluate options available to minimize any increase to the yearly average exposure to EMF in Toronto. Current industry evidence does not confirm the existence of any health consequences from exposure to low level electromagnetic fields. Some of the following links listed on Hydro One's EMF website may be of assistance.

   - http://www.hydroone.com/OurCommitment/Environment/Documents/EMF/Health_Canada_Fact_Sheet_updated_November_2012.pdf

   - http://www.hydroone.com/OurCommitment/Environment/Documents/EMF/Response_Statement_to_Public_Concerns_Regarding_EMFs_from_Electrical_Power_Tx_and_Dx_Lines.pdf

   - http://www.who.int/peh-emf/en/

Information from the World Health Organization and Health Canada contain the most up-to-date and reliable information on health studies and safety issues associated with magnetic fields.

4. Hydro One has not conducted an EMF Management Plan as it is not required as part of Hydro One's environmental approval for this Project. Should an EMF Management Plan be deemed necessary by an environmental approval agency such as the Ministry of Environment then Hydro One will make a copy available for public review.

ONTARIO ENERGY BOARD

In the matter of the *Ontario Energy Board Act, 1998*;

And in the matter of an Application by Hydro One Networks Inc. for an Order or Orders granting leave to upgrade existing transmission line facilities and to expand the existing Runnymede Transformer Station ("**West Toronto Transmission Enhancement Project**" or "**WTTE Project**") in the City of Toronto.

APPLICATION

1. The Applicant is Hydro One Networks Inc. ("Hydro One"), a subsidiary of Hydro One Inc. The Applicant is an Ontario corporation with its head office in the City of Toronto. Hydro One carries on the business, among other things, of owning and operating transmission facilities within Ontario.
2. Hydro One hereby applies to the Ontario Energy Board ("the Board") pursuant to Section 92 of the *Ontario Energy Board Act, 1998* ("the Act") for an Order or Orders granting leave to upgrade approximately 10 kilometers of transmission line facilities in the City of Toronto and to expand the existing Runnymede Transformer Station ("**TS**"). These facilities are required to increase transformation capacity to accommodate the forecast Toronto Hydro Electric Systems Limited ("**Toronto Hydro**", "**the Customer**", or "**the transmission Customer**") load growth in the West Toronto area. A Toronto Hydro letter of support for the completion of the WTTE Project has been provided as **Exhibit B, Tab 1, Schedule 1, Attachment 1**.
3. The proposed WTTE Project is required to:
    a. Upgrade the 115 kV circuits (K1W/K3W/K11W/K12W) between Manby TS and Wiltshire TS; and

b. Expand the existing 115/27.6 kV Runnymede TS with two 50/83 MVA transformers that will provide an additional 102 MW of transformation capacity.

The proposed in-service date for the WTTE Project is November 30, 2018 assuming a construction commencement date of May 1, 2017. A project schedule is provided at **Exhibit B, Tab 11, Schedule 1**.

4. The Project will continue to utilize the existing corridor from Manby TS to Wiltshire TS. As a result, the transmission facilities upgrade will not require any new permanent property rights. Temporary construction rights for access or staging areas may be required for the duration of the construction period of the WTTE Project. Further information on land related matter is found at **Exhibit E, Tab 1, Schedule 1**.

5. The Independent Electricity System Operator's Central Toronto Area Integrated Regional Resource Plan ("**IRRP**") dated April 28, 2015 and the Metro Toronto Regional Infrastructure Plan ("**RIP**") dated January 12, 2016 outline the need for this WTTE Project. Jointly referred to as the **Regional Planning Need Evidence**, these documents are provided as **Exhibit B, Tab 3, Schedule 1, Attachments 1 and 2**.

6. The IESO has also provided a draft System Impact Assessment ("**SIA**") for the proposed Project facilities. The draft SIA concludes that the Project is expected to have no material adverse impact on the reliability of the integrated power system. The draft SIA is provided as **Exhibit F, Tab 1, Schedule 1** of Hydro One's prefiled evidence. Hydro One will file the final SIA once available.

7. Hydro One has completed a draft Customer Impact Assessment ("**CIA**") in accordance with Hydro One's connection procedures. The results confirm that there are no adverse results on transmission customers as a result of the WTTE Project. A copy of the draft CIA is provided as **Exhibit G, Tab 1, Schedule 1**. Hydro One will file the final CIA once available.

8. The total cost of the transmission facilities for which Hydro One is seeking approval is approximately $55 million. The details pertaining to these costs are provided at **Exhibit B, Tab 7, Schedule 1**. Project economics, as filed in **Exhibit B, Tab 9, Schedule 1**, estimate that the WTTE Project will result in no impact on the overall average Ontario consumer's electricity bill.

9. The Application is supported by written evidence which includes details of the Applicant's proposal for the transmission line and station work. The written evidence is prefiled and may be amended from time to time prior to the Board's final decision on this Application.

10. Given the information provided in the prefiled evidence, Hydro One submits that the Project is in the public interest. The Project meets the transmission Customer's need and improves the Customer's quality of service and reliability with minimal impact on price.

11. Hydro One is requesting a written hearing for this proceeding. Hydro One requests that a decision on this Application is provided by April 30, 2017 to meet the needs of Toronto Hydro.

12. Hydro One requests that a copy of all documents filed with the Board be served on the Applicant and the Applicant's counsel, as follows:

a) The Applicant:

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Sr. Regulatory Coordinator
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b) The Applicant's counsel:

Michael Engelberg
Assistant General Counsel
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Cost Benefit Analysis and Options

The Regional Planning Need Evidence (**Exhibit B, Tab 3, Schedule 1, Attachments 1 and 2**) identifies an immediate need for capacity relief at Runnymede TS and Fairbank TS. In order to meet the immediate need of the customer, only two alternatives were considered feasible. Furthermore, as documented in the Regional Planning Need Evidence, achievable conservation potential is insufficient to provide the required capacity relief at Runnymede TS and Fairbank TS. The IRRP also notes that there is no known opportunity for implementation of distributed generation to defer or avoid the need for capacity relief.

Hydro One considered the following alternatives to meet the near-term supply needs in the West Toronto area as well as the longer term load growth:

1. Construct additional distribution feeders to permanently transfer load from Runnymede and Fairbank stations to nearby transformer stations; or
2. Expand the Runnymede TS, including an upgrade of the existing K1W, K2W, K11W and K12W transmission circuits.

Both of these options were evaluated in the IRRP and RIP.

<u>Alternative 1 – Distribution Feeders Alternative – Estimated to Cost $70M</u>

Construction of additional distribution feeders would have to be undertaken by Toronto Hydro to transfer load from Fairbank TS and Runnymede TS to other stations in the area, such as Richview TS and Bathurst TS. The feeders would be 27.6 kV, which is the distribution voltage of all feeders supplied by Runnymede TS and Fairbank TS. The distance between Runnymede TS and Richview TS is 7.5 kilometers and the distance between Fairbank TS and Bathurst TS is 7 kilometers. The estimated cost of proceeding with this distribution alternative is $70 million[1]. This option was rejected because the length of the feeders would result in greater potential for reliability and power quality issues. Further, installation of additional distribution feeders would defer, rather than eliminate, the need for investment in transmission facilities by approximately 10 years, at which time transmission facilities would still be required.

The IRRP estimates the cost of constructing additional distribution feeders to be $70 million with significant degree of uncertainty.

Alternative 2 – West Toronto Transmission Enhancement Project – $54.7 million

The second alternative, known as the West Toronto Transmission Enhancement (WTTE) Project, is to expand the existing Runnymede TS, providing additional transformation capacity and relieving the existing Runnymede and Fairbank Transformer Stations. This alternative includes increasing the capacity of the four existing 115 kV transmission circuits (K1W, K3W, K11W and K12W) to meet forecast increased customer demand. Upgrading these circuits will avoid any deterioration of reliability of transmission supply to the area. The existing Runnymede TS site, owned by Hydro One, has the space required to accommodate the proposed expansion. Hydro One has completed a detailed connection cost estimate for implementing this alternative and provided this to Toronto Hydro. The estimated cost of constructing the Runnymede TS expansion is $27.6 million and the estimated cost of performing the necessary upgrades to the four 115 kV (K1W, K3W, K11W and K12W)

A detailed Hydro One cost connection estimates the total cost of this Project to be $54.7 million.

[1] The estimate is as per the IRRP (Page 60 of 97) and is subject to a significant degree of uncertainly due to the number of physical barriers, such as highways, bridges and waterways in the area.

transmission circuits is estimated to be $27.0 million. The total cost of implementing this alternative is estimated to be $54.7 million.

Analysis and Recommendation

Consistent with the recommendations of the Regional Planning Need Evidence, Alternative 2, or the Hydro One proposed WTTE Project, is the preferred alternative for the following reasons:

- Alternative 2 is more cost effective than constructing additional distribution feeders by an estimated $10 million. The estimated cost of additional distribution feeders ($70 million) exceeds the estimated cost of installing additional transmission capacity ($54.7 million).
- Alternative 2 meets the long term supply needs of the area which would not be met by Alternative 1. Alternative 1 will only defer the need for transmission investment leading to additional expenditures in the future.
- Proceeding with the WTTE Project also mitigates real estate risk as the WTTE Project does not require the acquisition of additional property.

Hydro One submits that Alternative 2, to construct an expanded Runnymede Transformer Station and upgrade four 115 kV circuits, will provide necessary relief to the existing Runnymede and Fairbank Transformer Stations, enabling connection of the Metrolinx Eglinton Crosstown Light Transit system and satisfy the long term need for capacity to supply future load growth in the area.

A table summarizing the comparison of the two viable alternatives is provided below.

Comparison Criterion	Expand Runnymede TS	Construct Additional Distribution Feeders
Cost	$54.7 million	$70 million
Uncertainty of estimated cost	Low	High
Meets long term supply needs	Yes	No
Implementation risks	Low	High
Makes use of existing rights of way and real estate	Yes	No

Apportioning Project Costs & Risks

The estimated capital cost of the WTTE, including overheads and capitalized interest is shown below:

Table 1: Cost of Line Work

	Estimated Cost ($000's)
Materials	5,369
Labour	8,106
Equipment Rental & Contractor Costs	6,802
Sundry	534
Contingencies	2,671
Overhead [1]	3,524
Allowance for Funds Used During Construction [2]	0
Total Line Work	**$27,006**

[1] Overhead costs allocated to the project are for corporate services costs. These costs are charged to capital projects through a standard overhead capitalization rate. As such they are considered "Indirect Overheads". Hydro One does not allocate any project activity to "Direct Overheads" but rather charges all other costs directly to the project.

[2] Customer will pay as per the milestone payments and in advance of actual cost occurrence, therefore there would be no interest incurred by Hydro One.

Table 1a: Cost of Station Work

	Estimated Cost ***($000's)***
Materials	9,885
Labour	8,892
Equipment Rental & Contractor Costs	2,147
Sundry	455
Contingencies	2,671
Overhead[1]	3,597
Allowance for Funds Used During Construction[2]	0
Total Station Work	**$27,647**

The cost of the line and station work provided above allows for the schedule of approval, design and construction activities provided in **Exhibit B, Tab 11, Schedule 1**.

1.0 RISKS AND CONTINGENCIES

As with most projects, there is some risk associated with estimating costs. Hydro One's cost estimate includes an allowance for contingencies in recognition of these risks.

Based on past experience, the estimate for this project work includes allowances in the contingencies to cover the following potential risks:

- Delays in obtaining required approvals including Environmental Certificate of Approval, Environmental Screen Out/Class EA, and Section 92
- Outage availability risk[3];
- Material delivery delay due to procurement or vendor issues;

[3] Summer and Winter outages may not be available since the circuit may be operating at full capacity.

- There are 4 TTC parking lots in the area, but to accommodate commuter needs, they must remain at least partly operational during the term of the Project. To mitigate the duration of any parking lot disturbance, overtime may be required;
- The project may be elevated to a higher level of environmental assessment (full Class EA) due to public concerns, including First Nations and Metis, which could result in a delay of up to six months;
- If community concerns emerge regarding Runnymede TS expansion and disruptions to parks and gardens may require mitigation landscaping and related investment after construction.

Cost contingencies that have not been included, due to the unlikelihood or uncertainty of occurrence, include:

- Labour disputes;
- Safety or environmental incidents;
- Significant changes in costs of materials since the estimate preparation;
- Any other unforeseen and potentially significant event/occurrence.

2.0 COSTS OF COMPARABLE PROJECTS

The OEB Filing Requirements for Electricity Transmission and Distribution Applications, Chapter 4, requires the Applicant to provide information about a cost comparable project constructed by the Applicant. For station cost comparisons, Table 2 below shows the cost, construction and technical comparisons of the Runnymede expansion to the recently constructed Barwick TS in Northwestern Ontario. Table 3 compares the reconductoring component of the WTTE Project to the D1A/D3A refurbishment project completed in 2013.

For the purpose of context, Barwick TS is a 115/44KV DESN (Dual Element Spot Network) station with two (2) feeders, one (1) capacitor bank, and PCT in a box relay building, which was completed and placed in-serviced in August of 2014. The station is very similar to the Runnymede TS with the exceptions that Barwick TS has a 44 kV low voltage yard, has significantly fewer feeder positions than Runnymede TS, and does not have any significant duct bank installation. This Project was chosen as a good "apples-to-apples" comparison to the Runnymede expansion Project because of its similar construction conditions and design. Key project information on the two projects is provided in Table 2 below. The main drivers of the variance in costs between the two are the greater number of feeders at the Runnymede expansion and the timing between the two project in-service dates, as the Runnymede expansion will be placed into service four years after Barwick TS.

Table 2: Costs of Comparable Station Projects

Project	**Barwick TS New Station Build (actual)**	**Runnymede TS Station Expansion (Estimate)**
Technical	115/44kV DESN Including 2x Transformers, 2x feeders, 1x cap bank, and PCT in a box	115/27.6kV DESN Including 2x Transformers, 10x feeders, 1x cap bank, and PCT in a box
Length (km)	N/A	N/A
Project Surroundings	Mostly rural	Mostly urban residential
Environmental Issues	None	None
In-Service Date	2014-08	2018-11
Total Project Cost	$22,102k	$27,647k
Less: Non-Comparable Costs		
8 Additional Feeder Positions		$6.400k[4]
Add: Non-Comparable Costs		
Escalation Adjustment (2%/year)	$1,822k	
Total Comparable Project Costs	$23,924k	$21,247k

With regards to the comparable lines project, the D1A/D3A Line Refurbishment was a line refurbishment project from structure 1 at Decew Falls SS to structure 16 at St. Johns Valley Junction. The D1A/D3A Line Refurbishment included like-for-like conductor replacement along with insulators and hardware. That project went in-service in December of 2013. The main driver of the variance in comparable costs between the two Projects is timing – the WTTE Project will go in-service approximately 5 years after the selected comparable. Additionally, the WTTE Project involves structural reinforcement work which was not required in the D1A/D3A Line Refurbishment.

[4] Rough estimate of $800k per feeder position.

Table 3: Costs of Comparable Line Projects

Project	**D1A/D3A Line Refurbishment Project (actual)**	**WTTE Project (Estimate)**
Technical	Double circuit 115kV refurbishment, like for like, 4.25km	Reconductor approximately 10 km of four 115Kv single circuits mainly on single tower, shield wire replacement and significant structural reinforcement to 70 towers
Length (circuit km)	8.5km	40km
Project Surroundings	Rural	Mostly urban residential
Environmental Issues	None	None
In-Service Date	December, 2013	November 30, 2018
Total Project Cost	$4,850k	$27,006k
Add: Non-Comparable Costs		
Escalation Adjustment (2%/year)	$505k	
Total Comparable Project Costs	$5,535k	$27,006k
Total Cost/Circuit km	$630k	$675k

Transmission Rate Impact Assessment

1.0 ECONOMIC FEASIBILITY

The proposed WTTE Project comprises both line and transformation assets and will contribute to meeting Toronto Hydro's capacity and reliability needs in the west Toronto area, including the Metrolinx Eglinton Crosstown Light Railway Transit system. The WTTE Project includes the construction of an expanded transformer station at Hydro One's Runnymede TS, as well as the upgrade of four existing 115 kV transmission circuits, K1W, K3W, K11W and K12W, to supply the expanded transformer station. Each transmission circuit is approximately 10 kilometers long. The transformer station costs will be included in the Transformation Connection pool, whereas the costs for the upgraded circuits are classified as Dual Function Lines will be included proportionately in the Line Connection pool (38%) and the Network Connection pool (62%) for cost classification purposes. All costs will be 100% customer funded as the requirement for the Project is driven entirely by Toronto Hydro's capacity and reliability needs. Hydro One is requiring the customer to pay the required capital contribution consistent with the economic evaluation requirements of Section 6.5.2 of the *Transmission System Code*.

A 25-year illustrative discounted cash flow analysis of the line work is provided in Table 1 below. The results show that based on the estimated initial cost of $10.3[1] million, plus assumed ongoing operating and maintenance costs and net of incremental revenue, the capacity enhancement project will have a negative net present value of $8.8 million. This amount will be fully recovered from the customer via capital contribution.

[1] Initial costs of $10.3 million include $9.0 million of up front capital costs plus $1.2 million cost of removals

A 25-year illustrative discounted cash flow analysis of the network pool work is provided in Table 2 below. The results show that based on the estimated initial cost of $16.7[2] million, plus assumed ongoing operating and maintenance costs and net of incremental revenue, the WTTE Project will have a negative net present value of $9.9 million. This amount will be recovered directly from the Customer via a capital contribution.

A 25-year illustrative discounted cash flow analysis of the station work is provided in Table 3 below. The results show that based on the estimated initial cost of $27.6[3] million, plus assumed ongoing operating and maintenance costs and net of incremental revenue, the capacity enhancement project will have a negative net present value of $31.9 million. This amount will be recovered directly from the customer via capital contribution.

2.0 COST RESPONSIBILITY

Line Connection and Network Pools

Further review of the Transmission System Code has confirmed that the WTTE Project transmission line work on circuits 115 kv K1W, K3W, K11W, and K12W transmission circuits will result in the functional reclassification from "Line Connection" to "Dual Function" lines. Accordingly, Hydro One has applied the cost allocation principles, as described in EB-2016-0160 Exhibit G1, Tab 2, Schedule 1, Page 6, to allocate the cost of re-conductoring these circuits between the Network and Line Connection pools. The Network pool capital contribution assigned to the customer is $9.9 million. The Line Connection pool capital contribution assigned to the customer is $8.8 million. These amounts, together with the incremental revenues, covers the initial and ongoing costs associated with re-conductoring the four existing 115 kV circuits, K1W, K3W, K11W and

[2] Initial costs of $16.7 million include $14.7 million of up front capital costs plus $2 million cost of removals
[3] Initial costs of $27.6 million include $27.5 million of up front capital costs plus $0.13 million cost of removals

K12W between Manby TS and Wiltshire TS terminal stations. This work is being done to enable the Customer to meet load demand in the West Toronto area without deteriorating reliability of supply, and as such, the cost of this work, net of forecast incremental rate revenues, has been assigned to the customer for cost responsibility purposes. The table below indicates the cost responsibility for the elements of work to be done on the project.

Transformation Pool

The capital contribution assigned to the customer is $31.9 million. This amount, together with the incremental revenues, covers the initial and ongoing costs for the expansion of the Runnymede Transformer Station consisting of two 83 MVA transformers and ten 27.6 kV feeder breakers. The additional transformation capacity is being installed to enable the customer to meet load demand in the West Toronto area, and as such, the cost of this work, net of forecast incremental rate revenues, has been assigned to the customer for cost responsibility purposes. The table below indicates the cost responsibility for the elements of work to be done on the project.

Cost Responsibility *in $ million, excluding HST*	Cost of Work (per B-7-1)	Cost Responsibility		Capital Contribution
		Customer	Pool	
Transmission Line Facilities	10.3	8.8	1.5	8.8
Transmission Network Facilities	16.7	9.9	6.8	9.9
Station Facilities	27.6	31.9	-4.3	31.9[3]
Total	54.7	50.6	4.0	50.6

[3] Capital contribution exceeds the capital cost of the Station Facilities as it includes recovery of OM&A

3.0 RATE IMPACT ASSESSMENT

The analysis of the Line and Transformation Connection pools rate impacts has been carried out on the basis of Hydro One's transmission revenue requirement for the year 2016, and the most recently approved Ontario Transmission Rate Schedules. Both the Line Connection pool and Transformation Connection pool revenue requirements would be affected by the expanded station and the upgrade to four existing circuits based on the project cost allocation to these pools.

Line Connection Pool

Based on the project's initial cost of $10.3 million and the associated line pool incremental cash flows, there will be no change in the line pool revenue requirement once the project's impacts are reflected in the transmission rate base at the projected in-service date. Over a 25-year time horizon, the line pool rate will remain unchanged from the current rate of $0.87/kW/month The detailed analysis illustrating the calculation of the incremental line connection pool revenue shortfall and rate impact is provided in Table 4.

Network Connection Pool

Based on the Project's initial costs of $16.7 million and the associated Network Connection pool incremental cash flows, there will be no change in the Network pool revenue requirement once the project's impacts are reflected in the transmission rate base at the projected in-service date of November, 2018. Over a 25-year time horizon, the Network pool rate will remain the same at $3.66/kW/month. The detailed analysis illustrating the calculation of the incremental network revenue shortfall and rate impact is provided in Table 5.

Transformation Connection Pool

Based on the project's initial cost of $27.6 million and the associated Transformation Connection pool incremental cash flows, there will be no change in the Transformation pool revenue requirement once the project's impacts are reflected in the transmission rate base at the projected in-service date of November 2018. Over a 25-year time horizon, the Transformation pool rate will remain the same at $2.02/kW/month. The detailed analysis illustrating the calculation of the incremental transmission revenue shortfall and rate impact is provided in Table 6.

Impact on Typical Residential Customer

Based on the load forecast, initial capital costs and ongoing maintenance costs,there will be no impact on rates. The table below shows this result for a typical residential customer who is under the Regulated Price Plan (RPP).

A. Typical monthly bill (Residential R1 in a high density zone at 1,000 kWh per month with winter commodity prices.)	$188.28 per month
B. Transmission component of monthly bill	$11.86 per month
C. Line Connection Pool share of Transmission component	$1.48 per month
D. Network Connection Pool share of Transmission component	$6.95 per month
E. Transformation Connection Pool share of Transmission component	$3.43 per month
F. Impact on Line Connection Pool Provincial Uniform Rates	0.00%
G. Impact on Transformation Connection Pool Provincial Uniform Rates	0.00%
H. Impact on Network Connection Pool Provincial Uniform Rates	0.00%
I. Decrease in Transmission costs for typical monthly bill (C x E)	$0.00 per month or $0.00 per year
J. Net impact on typical residential customer bill (G / A)	0.00%

Note: Values rounded to two significant digits.

Table 1 – DCF Analysis, Line Pool, page 1

Date:	9-Mar-17
Project #	

SUMMARY OF CONTRIBUTION CALCULATIONS
Line Pool - Estimated cost

Facility Name:	Runnymede TS: Build 115/27.6kV TS and Reconductor 115kV Circuits
Description:	
Customer:	Toronto Hydro

			In-Service Date	<-------		Project year ended - annualized from In-Service Date			-------->					
		Month	Nov-30	Nov-30	Nov-30	Nov-30	Nov-30	Nov-30	Nov-30	Nov-30	Nov-30	Nov-30	Nov-30	Nov-30
		Year	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**
			0	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*
Revenue & Expense Forecast														
Load Forecast (MW)				3.1	3.8	9.3	10.4	11.2	12.6	14.1	14.2	14.9	15.6	15.7
Load adjustments (MW)				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				3.1	3.8	9.3	10.4	11.2	12.6	14.1	14.2	14.9	15.6	15.7
Tariff Applied ($/kW/Month)				0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Incremental Revenue - $M				0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2
Removal Costs - $M			(1.2)											
On-going OM&A Costs - $M			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Municipal Tax - $M				(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
Net Revenue/(Costs) before taxes - $M			(1.2)	(0.0)	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Income Taxes			0.3	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Operating Cash Flow (after taxes) - $M			(0.9)	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
		Cumulative PV @ 5.78%												
PV Operating Cash Flow (after taxes) - $M	**(A)**	**1.5**	**(0.9)**	**0.1**	**0.2**	**0.2**	**0.2**	**0.2**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**
Capital Expenditures - $M														
Upfront - capital cost before overheads & AFUDC			(7.7)											
- Overheads			0.0											
- AFUDC			(1.3)											
Total upfront capital expenditures			**(9.0)**											
On-going capital expenditures				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PV On-going capital expenditures			0.0											
Total capital expenditures - $M			**(9.0)**											
Capital Expenditures - $M														
PV CCA Residual Tax Shield - $M			**0.0**											
PV Working Capital - $M			**0.0**											
PV Capital (after taxes) - $M	**(B)**	**(9.0)**	**(9.0)**											
Cumulative PV Cash Flow (after taxes) - $M	**(A) + (B)**	**(7.5)**	**(9.9)**	**(9.8)**	**(9.6)**	**(9.4)**	**(9.3)**	**(9.1)**	**(9.0)**	**(8.8)**	**(8.7)**	**(8.6)**	**(8.5)**	**(8.4)**

	Nov-30
	2030
	12
Revenue & Expense Forecast	
Load Forecast (MW)	17.0
Load adjustments (MW)	0.0
	17.0
Tariff Applied ($/kW/Month)	0.87
Incremental Revenue - $M	0.2
Removal Costs - $M	
On-going OM&A Costs - $M	0.0
Municipal Tax - $M	(0.0)
Net Revenue/(Costs) before taxes - $M	0.1
Income Taxes	0.0
Operating Cash Flow (after taxes) - $M	0.2
PV Operating Cash Flow (after taxes) - $M	**0.1**
On-going capital expenditures	0.0
Cumulative PV Cash Flow (after taxes) - $M	**(8.3)**

Discounted Cash Flow Summary

Economic Study Horizon - Years: **25**

Discount Rate - % **5.78%**

		Before Cont $M		After Cont $M	Impact $M
PV Incremental Revenue		2.0		2.0	
PV OM&A Costs		(1.2)		(1.2)	
PV Municipal Tax		(0.5)		(0.5)	
PV Income Taxes		(0.1)		(0.1)	0.0
PV CCA Tax Shield		1.4		0.0	(1.4)
PV Capital - Upfront	(9.0)		(9.0)		
Add: PV **Capital Contribution**	**0.0**	(9.0)	**8.8**	(0.2)	8.8
PV Capital - On-going		0.0		0.0	
PV Working Capital		0.0		0.0	
PV Surplus / (Shortfall)		**(7.5)**		**0.0**	**7.5**
Profitability Index*		**0.2**		**1.0**	

Notes:
*PV of total cash flow, excluding net capital expenditure & on-going capital & proceeds on disposal / PV of net capital expenditure & on-going capital & proceeds on disposal

Other Assumptions

In-Service Date:	30-Nov-18
Payback Year:	2043
No. of years required for payback:	25

Table 1 – DCF Analysis, Line Pool, page 2

Date:	9-Mar-17
Project #	

SUMMARY OF CONTRIBUTION CALCULATIONS
Line Pool - Estimated cost

Facility Name:	Runnymede TS: Build 115/27.6kV TS and Reconductor 115kV Circuits
Description:	
Customer:	Toronto Hydro

<------- Project year ended - annualized from In-Service Date -------->

		13	14	15	16	17	18	19	20	21	22	23	24	25
	Month	Nov-30	Nov-30	Nov-30	Nov-30	Nov-30	Nov-30	Nov-30	Nov-30	Nov-30	Nov-30	Nov-30	Nov-30	Nov-30
	Year	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**
Revenue & Expense Forecast														
Load Forecast (MW)		17.1	17.8	18.5	18.6	19.3	20.0	20.1	20.8	21.5	22.2	23.0	23.7	23.8
Load adjustments (MW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		17.1	17.8	18.5	18.6	19.3	20.0	20.1	20.8	21.5	22.2	23.0	23.7	23.8
Tariff Applied ($/kW/Month)		0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Incremental Revenue - $M		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Removal Costs - $M														
On-going OM&A Costs - $M		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Municipal Tax - $M		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
Net Revenue/(Costs) before taxes - $M		0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Income Taxes		0.0	0.0	0.0	0.0	0.0	0.0	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
Operating Cash Flow (after taxes) - $M		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
PV Operating Cash Flow (after taxes) - $M (A)		**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.0**	**0.0**
Capital Expenditures - $M														
Upfront - capital cost before overheads & AFUDC														
- Overheads														
- AFUDC														
Total upfront capital expenditures														
On-going capital expenditures		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PV On-going capital expenditures														
Total capital expenditures - $M														
Capital Expenditures - $M														
PV CCA Residual Tax Shield - $M														
PV Working Capital - $M														
PV Capital (after taxes) - $M (B)														
Cumulative PV Cash Flow (after taxes) - $M (A) + (B)		**(8.2)**	**(8.1)**	**(8.0)**	**(8.0)**	**(7.9)**	**(7.8)**	**(7.8)**	**(7.7)**	**(7.7)**	**(7.6)**	**(7.6)**	**(7.5)**	**(7.5)**

Table 2 – DCF Analysis, Network Pool, page 1

Date:	3-Mar-17
Project #	

SUMMARY OF CONTRIBUTION CALCULATIONS
Network Pool - Estimated cost

Facility Name:	Runnymede TS: Build 115/27.6kV TS and Reconductor 115kV Circuits
Description:	
Customer:	Toronto Hydro

			In-Service Date	<-------	Project year ended - annualized from In-Service Date			-------->							
		Month	Nov-30	Nov-30	Nov-30	Nov-30	Nov-30	Nov-30	Nov-30	Nov-30	Nov-30	Nov-30	Nov-30	Nov-30	Nov-30
		Year	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
			0	1	2	3	4	5	6	7	8	9	10	11	12
Revenue & Expense Forecast															
Load Forecast (MW)				3.1	3.8	9.3	10.4	11.2	12.6	14.1	14.2	14.9	15.6	15.7	17.0
Load adjustments (MW)				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				3.1	3.8	9.3	10.4	11.2	12.6	14.1	14.2	14.9	15.6	15.7	17.0
Tariff Applied ($/kW/Month)				3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
Incremental Revenue - $M				0.1	0.2	0.4	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.7	0.7
Removal Costs - $M			(2.0)												
On-going OM&A Costs - $M			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Municipal Tax - $M				(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)
Net Revenue/(Costs) before taxes - $M			(2.0)	0.1	0.1	0.3	0.4	0.4	0.5	0.6	0.6	0.6	0.6	0.6	0.7
Income Taxes			0.5	0.1	0.3	0.2	0.1	0.1	0.1	0.1	0.0	0.0	(0.0)	(0.0)	(0.1)
Operating Cash Flow (after taxes) - $M			(1.5)	0.2	0.4	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6
		Cumulative PV @ 5.78%													
PV Operating Cash Flow (after taxes) - $M	(A)	6.3	**(1.5)**	**0.2**	**0.3**	**0.5**	**0.4**	**0.4**	**0.4**	**0.4**	**0.4**	**0.4**	**0.4**	**0.3**	**0.3**
Capital Expenditures - $M															
Upfront - capital cost before overheads & AFUDC			(12.5)												
- Overheads			0.0												
- AFUDC			(2.2)												
Total upfront capital expenditures			**(14.7)**												
On-going capital expenditures				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PV On-going capital expenditures			0.0												
Total capital expenditures - $M			**(14.7)**												
Capital Expenditures - $M															
PV CCA Residual Tax Shield - $M			**0.1**												
PV Working Capital - $M			**0.0**												
PV Capital (after taxes) - $M	(B)	(14.7)	**(14.7)**												
Cumulative PV Cash Flow (after taxes) - $M	(A) + (B)	(8.4)	**(16.1)**	**(15.9)**	**(15.6)**	**(15.1)**	**(14.7)**	**(14.3)**	**(13.8)**	**(13.4)**	**(13.0)**	**(12.6)**	**(12.3)**	**(12.0)**	**(11.6)**

Discounted Cash Flow Summary

Economic Study Horizon - Years: 25

Discount Rate - % 5.78%

		Before Cont $M		After Cont $M	Impact $M
PV Incremental Revenue		8.4		8.4	
PV OM&A Costs		(2.0)		(2.0)	
PV Municipal Tax		(0.8)		(0.8)	
PV Income Taxes		(1.5)		(1.5)	
PV CCA Tax Shield		2.3		0.7	(1.5)
PV Capital - Upfront	(14.7)		(14.7)		
Add: PV **Capital Contribution**	**0.0**	(14.7)	**9.9**	(4.8)	9.9
PV Capital - On-going		0.0		0.0	
PV Working Capital		0.0		0.0	
PV Surplus / (Shortfall)		**(8.4)**		**(0.0)**	**8.4**
Profitability Index*		**0.4**		**1.0**	

Notes:
*PV of total cash flow, excluding net capital expenditure & on-going capital & proceeds on disposal / PV of net capital expenditure & on-going capital & proceeds on disposal

Other Assumptions

In-Service Date:	30-Nov-18
Payback Year:	2043
No. of years required for payback:	25

Table 2 – DCF Analysis, Network Pool, page 2

Date:	3-Mar-17
Project #	

SUMMARY OF CONTRIBUTION CALCULATIONS
Network Pool - Estimated cost

Facility Name:	Runnymede TS: Build 115/27.6kV TS and Reconductor 115kV Circuits
Description:	
Customer:	Toronto Hydro

<------- Project year ended - annualized from In-Service Date -------->

	Month / Year	Nov-30 2031	Nov-30 2032	Nov-30 2033	Nov-30 2034	Nov-30 2035	Nov-30 2036	Nov-30 2037	Nov-30 2038	Nov-30 2039	Nov-30 2040	Nov-30 2041	Nov-30 2042	Nov-30 2043
		13	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*
Revenue & Expense Forecast														
Load Forecast (MW)		17.1	17.8	18.5	18.6	19.3	20.0	20.1	20.8	21.5	22.2	23.0	23.7	23.8
Load adjustments (MW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		17.1	17.8	18.5	18.6	19.3	20.0	20.1	20.8	21.5	22.2	23.0	23.7	23.8
Tariff Applied ($/kW/Month)		3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
Incremental Revenue - $M		0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.0
Removal Costs - $M														
On-going OM&A Costs - $M		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Municipal Tax - $M		(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)
Net Revenue/(Costs) before taxes - $M		0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.9	1.0	1.0
Income Taxes		(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)
Operating Cash Flow (after taxes) - $M		0.6	0.6	0.7	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8
PV Operating Cash Flow (after taxes) - $M (A)		**0.3**	**0.3**	**0.3**	**0.3**	**0.3**	**0.3**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**
Capital Expenditures - $M														
Upfront - capital cost before overheads & AFUDC														
- Overheads														
- AFUDC														
Total upfront capital expenditures														
On-going capital expenditures		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PV On-going capital expenditures														
Total capital expenditures - $M														
Capital Expenditures - $M														
PV CCA Residual Tax Shield - $M														
PV Working Capital - $M														
PV Capital (after taxes) - $M (B)														
Cumulative PV Cash Flow (after taxes) - $M (A) + (B)		**(11.3)**	**(11.0)**	**(10.7)**	**(10.4)**	**(10.2)**	**(9.9)**	**(9.7)**	**(9.5)**	**(9.2)**	**(9.0)**	**(8.8)**	**(8.6)**	**(8.4)**

Table 3 – DCF Analysis, Transformation Pool, page 1

Date:	3-Mar-17
Project #	

SUMMARY OF CONTRIBUTION CALCULATIONS
Transformation Pool - Estimated cost

Facility Name:	Runnymede TS: Build 115/27.6kV TS and Reconductor 115kV Circuits
Description:	
Customer:	Toronto Hydro

	Month / Year	In-Service Date Nov-30 **2018** *0*	Nov-30 **2019** *1*	Nov-30 **2020** *2*	Nov-30 **2021** *3*	Nov-30 **2022** *4*	Nov-30 **2023** *5*	Nov-30 **2024** *6*	Nov-30 **2025** *7*	Nov-30 **2026** *8*	Nov-30 **2027** *9*	Nov-30 **2028** *10*	Nov-30 **2029** *11*	Nov-30 **2030** *12*
			<------- Project year ended - annualized from In-Service Date -------->											
Revenue & Expense Forecast														
Load Forecast (MW)			3.1	3.8	9.3	10.4	11.2	12.6	14.1	14.2	14.9	15.6	15.7	17.0
Load adjustments (MW)			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			3.1	3.8	9.3	10.4	11.2	12.6	14.1	14.2	14.9	15.6	15.7	17.0
Tariff Applied ($/kW/Month)			2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02
Incremental Revenue - $M			0.1	0.1	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4
Removal Costs - $M		(0.1)												
On-going OM&A Costs - $M		0.0	(0.3)	(0.3)	(0.3)	(0.3)	(0.3)	(0.7)	(0.7)	(0.7)	(0.7)	(0.7)	(0.7)	(0.7)
Municipal Tax - $M			(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)
Net Revenue/(Costs) before taxes - $M		(0.1)	(0.4)	(0.4)	(0.2)	(0.2)	(0.2)	(0.5)	(0.4)	(0.4)	(0.4)	(0.4)	(0.4)	(0.4)
Income Taxes		0.0	0.4	0.7	0.6	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.3
Operating Cash Flow (after taxes) - $M		(0.1)	0.0	0.3	0.4	0.3	0.3	0.1	0.1	0.0	0.0	(0.0)	(0.0)	(0.0)
	Cumulative PV @ 5.78%													
PV Operating Cash Flow (after taxes) - $M (A)	0.4	**(0.1)**	**0.0**	**0.3**	**0.3**	**0.3**	**0.2**	**0.0**	**0.0**	**0.0**	**0.0**	**(0.0)**	**(0.0)**	**(0.0)**
Capital Expenditures - $M														
Upfront - capital cost before overheads & AFUDC		(23.9)												
- Overheads		0.0												
- AFUDC		(3.6)												
Total upfront capital expenditures		**(27.5)**												
On-going capital expenditures			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PV On-going capital expenditures		0.0												
Total capital expenditures - $M		**(27.5)**												
Capital Expenditures - $M														
PV CCA Residual Tax Shield - $M		**0.1**												
PV Working Capital - $M		**0.0**												
PV Capital (after taxes) - $M (B)	**(27.4)**	**(27.4)**												
Cumulative PV Cash Flow (after taxes) - $M (A) + (B)	**(27.0)**	**(27.5)**	**(27.5)**	**(27.2)**	**(26.9)**	**(26.6)**	**(26.4)**	**(26.3)**	**(26.3)**	**(26.3)**	**(26.3)**	**(26.3)**	**(26.3)**	**(26.3)**

Discounted Cash Flow Summary

Economic Study Horizon - Years: **25**

Discount Rate - % **5.78%**

		Before Cont $M		**After Cont** $M	**Impact** $M
PV Incremental Revenue		4.6		4.6	
PV OM&A Costs		(8.1)		(8.1)	
PV Municipal Tax		(1.5)		(1.5)	
PV Income Taxes		1.3		1.3	(0.0)
PV CCA Tax Shield		4.2		(0.7)	(4.9)
PV Capital - Upfront	(27.5)		(27.5)		
Add: PV **Capital Contribution**	**0.0**	(27.5)	**31.9**	4.3	31.9
PV Capital - On-going		0.0		0.0	
PV Working Capital		0.0		0.0	
PV Surplus / (Shortfall)		**(27.0)**		**(0.0)**	**27.0**
Profitability Index*		**0.0**		**(1.0)**	

Notes:
*PV of total cash flow, excluding net capital expenditure & on-going capital & proceeds on disposal / PV of net capital expenditure & on-going capital & proceeds on disposal

Other Assumptions

In-Service Date:	30-Nov-18
Payback Year:	2043
No. of years required for payback:	25

Table 3 – DCF Analysis, Transformation Pool, page 2

Date: 3-Mar-17
Project #

SUMMARY OF CONTRIBUTION CALCULATIONS
Transformation Pool - Estimated cost

Facility Name: Runnymede TS: Build 115/27.6kV TS and Reconductor 115kV Circuits
Description:
Customer: Toronto Hydro

<------- Project year ended - annualized from In-Service Date -------->

Month	Nov-30	Nov-30	Nov-30	Nov-30	Nov-30	Nov-30	Nov-30	Nov-30	Nov-30	Nov-30	Nov-30	Nov-30	Nov-30
Year	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**
	13	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*
Revenue & Expense Forecast													
Load Forecast (MW)	17.1	17.8	18.5	18.6	19.3	20.0	20.1	20.8	21.5	22.2	23.0	23.7	23.8
Load adjustments (MW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	17.1	17.8	18.5	18.6	19.3	20.0	20.1	20.8	21.5	22.2	23.0	23.7	23.8
Tariff Applied ($/kW/Month)	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02
Incremental Revenue - $M	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6
Removal Costs - $M													
On-going OM&A Costs - $M	(0.7)	(0.7)	(0.7)	(0.8)	(0.8)	(0.8)	(0.8)	(0.8)	(0.8)	(0.8)	(0.8)	(0.8)	(0.8)
Municipal Tax - $M	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)
Net Revenue/(Costs) before taxes - $M	(0.4)	(0.3)	(0.3)	(0.5)	(0.5)	(0.5)	(0.5)	(0.4)	(0.4)	(0.4)	(0.4)	(0.4)	(0.4)
Income Taxes	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2
Operating Cash Flow (after taxes) - $M	(0.0)	(0.0)	(0.0)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)
PV Operating Cash Flow (after taxes) - $M (A)	**(0.0)**	**(0.0)**	**(0.0)**	**(0.1)**	**(0.1)**	**(0.1)**	**(0.1)**	**(0.1)**	**(0.1)**	**(0.1)**	**(0.1)**	**(0.0)**	**(0.0)**
Capital Expenditures - $M													
Upfront - capital cost before overheads & AFUDC													
- Overheads													
- AFUDC													
Total upfront capital expenditures													
On-going capital expenditures	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PV On-going capital expenditures													
Total capital expenditures - $M													
Capital Expenditures - $M													
PV CCA Residual Tax Shield - $M													
PV Working Capital - $M													
PV Capital (after taxes) - $M (B)													
Cumulative PV Cash Flow (after taxes) - $M (A) + (B)	**(26.3)**	**(26.3)**	**(26.4)**	**(26.4)**	**(26.5)**	**(26.6)**	**(26.6)**	**(26.7)**	**(26.8)**	**(26.8)**	**(26.9)**	**(26.9)**	**(27.0)**

Table 4 – Revenue Requirement and Line Pool Rate Impact, page 1

Revenue Requirement and Line Pool Rate Impact **(After Capital Contribution)**

Runnymede TS: Build 115/27.6kV TS and Reconductor 115kV Circuits		Project YE 30-Nov 2019	30-Nov 2020	30-Nov 2021	30-Nov 2022	30-Nov 2023	30-Nov 2024	30-Nov 2025	30-Nov 2026	30-Nov 2027	30-Nov 2028	30-Nov 2029	30-Nov 2030
Calculation of Incremental Revenue Requirement ($000)		1	2	3	4	5	6	7	8	9	10	11	12
In-service date	30-Nov-18												
Capital Cost	9,031												
Less: Capital Contribution Required	(8,815)												
Net Project Capital Cost	215												
Average Rate Base		106	209	205	200	196	192	187	183	179	174	170	166
Incremental OM&A Costs		0	0	0	0	0	0	0	0	0	0	0	0
Grants in Lieu of Municipal tax		38	38	38	38	38	38	38	38	38	38	38	38
Depreciation		4	4	4	4	4	4	4	4	4	4	4	4
Interest and Return on Rate Base		7	14	13	13	13	13	12	12	12	11	11	11
Income Tax Provision		(0)	(2)	(1)	(1)	(0)	(0)	0	0	1	1	1	1
REVENUE REQUIREMENT PRE-TAX		**49**	**54**	**54**	**54**	**54**	**54**	**54**	**54**	**54**	**54**	**54**	**54**
Incremental Revenue		32	40	97	109	117	131	147	148	155	163	163	178
SUFFICIENCY/(DEFICIENCY)		**(16)**	**(15)**	**42**	**55**	**62**	**77**	**92**	**94**	**101**	**108**	**109**	**123**
	Base Year												
Line Pool Revenue Requirement including sufficiency/(deficiency)	212,407	212,456	212,461	212,462	212,462	212,462	212,462	212,462	212,462	212,462	212,462	212,461	212,461
Line MW	245,299	245,337	245,345	245,411	245,425	245,433	245,450	245,468	245,470	245,478	245,487	245,487	245,504
Line Pool Rate ($/kw/month)	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Increase/(Decrease) in Line Pool Rate ($/kw/month), relative to base year		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RATE IMPACT relative to base year		**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**

Assumptions

Incremental OM&A		N.A.
Grants in Lieu of Municipal tax	0.42%	Transmission system average
Depreciation	2.00%	Reflects 50 year average service life for towers, conductors and station equipment, excluding land
Interest and Return on Rate Base	6.53%	Includes OEB-approved ROE of 9.18599047619048%, 1.65357476190476% on ST debt, and 4.98859485989344% on LT debt. 40/4/56 equity/ST debt/ LT debt split
Income Tax Provision	26.50%	2016 federal and provincial corporate income tax rate
Capital Cost Allowance	8.00%	100% Class 47 assets

Table 4 – Revenue Requirement and Line Pool Rate Impact, page 2

Revenue Requirement and Line Pool Rate Impact **(After Capital Contribution)**

Runnymede TS: Build 115/27.6kV TS and Reconductor 115kV Circuits			30-Nov 2031	30-Nov 2032	30-Nov 2033	30-Nov 2034	30-Nov 2035	30-Nov 2036	30-Nov 2037	30-Nov 2038	30-Nov 2039	30-Nov 2040	30-Nov 2041	30-Nov 2042	30-Nov 2043
Calculation of Incremental Revenue Requirement ($000)			13	14	15	16	17	18	19	20	21	22	23	24	25
In-service date	30-Nov-18														
Capital Cost	9,031														
Less: Capital Contribution Required	(8,815)														
Net Project Capital Cost	215														
Average Rate Base			161	157	153	149	144	140	136	131	127	123	118	114	110
Incremental OM&A Costs			0	0	0	0	0	0	0	0	0	0	0	0	0
Grants in Lieu of Municipal tax			38	38	38	38	38	38	38	38	38	38	38	38	38
Depreciation			4	4	4	4	4	4	4	4	4	4	4	4	4
Interest and Return on Rate Base			11	10	10	10	9	9	9	9	8	8	8	7	7
Income Tax Provision			1	1	2	2	2	2	2	2	2	2	2	2	2
REVENUE REQUIREMENT PRE-TAX			**54**	**54**	**54**	**53**	**53**	**53**	**53**	**53**	**52**	**52**	**52**	**52**	**51**
Incremental Revenue			179	186	194	194	201	209	210	217	224	232	240	248	248
SUFFICIENCY/(DEFICIENCY)			**125**	**132**	**140**	**141**	**148**	**156**	**157**	**164**	**172**	**180**	**188**	**196**	**197**
		Base Year													
Line Pool Revenue Requirement including sufficiency/(deficiency)		212,407	212,461	212,461	212,461	212,461	212,461	212,460	212,460	212,460	212,460	212,459	212,459	212,459	212,459
Line MW		245,299	245,505	245,513	245,522	245,523	245,531	245,540	245,540	245,549	245,557	245,566	245,575	245,584	245,585
Line Pool Rate ($/kw/month)		0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Increase/(Decrease) in Line Pool Rate ($/kw/month), relative to base year			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RATE IMPACT relative to base year			**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**

Table 5 – Revenue Requirement and Network Pool Rate Impact, page 1

Revenue Requirement and Network Pool Rate Impact **(After Capital Contribution)**

Runnymede TS: Build 115/27.6kV TS and Reconductor 115kV Circuits		Project YE 30-Nov 2019	30-Nov 2020	30-Nov 2021	30-Nov 2022	30-Nov 2023	30-Nov 2024	30-Nov 2025	30-Nov 2026	30-Nov 2027	30-Nov 2028	30-Nov 2029	30-Nov 2030
Calculation of Incremental Revenue Requirement ($000)		1	2	3	4	5	6	7	8	9	10	11	12
In-service date	30-Nov-18												
Capital Cost	14,734												
Less: Capital Contribution Required	(9,938)												
Net Project Capital Cost	4,796												
Average Rate Base		2,350	4,652	4,556	4,461	4,365	4,269	4,173	4,077	3,981	3,885	3,789	3,693
Incremental OM&A Costs		0	0	0	0	0	0	0	0	0	0	0	0
Grants in Lieu of Municipal tax		62	62	62	62	62	62	62	62	62	62	62	62
Depreciation		96	96	96	96	96	96	96	96	96	96	96	96
Interest and Return on Rate Base		154	304	298	291	285	279	273	266	260	254	248	241
Income Tax Provision		(3)	(37)	(27)	(19)	(11)	(4)	2	8	13	18	22	26
REVENUE REQUIREMENT PRE-TAX		**308**	**425**	**428**	**430**	**432**	**433**	**433**	**432**	**431**	**429**	**427**	**425**
Incremental Revenue		136	166	407	458	490	552	617	623	652	685	688	747
SUFFICIENCY/(DEFICIENCY)		**(171)**	**(259)**	**(21)**	**28**	**59**	**120**	**185**	**191**	**221**	**255**	**260**	**322**
	Base Year												
Network Pool Revenue Requirement including sufficiency/(deficiency)	928,814	929,122	929,239	929,242	929,245	929,246	929,247	929,247	929,246	929,245	929,244	929,241	929,239
Network MW	253,768	253,805	253,813	253,879	253,893	253,902	253,919	253,937	253,938	253,946	253,955	253,956	253,972
Network Pool Rate ($/kw/month)	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
Increase/(Decrease) in Network Pool Rate ($/kw/month), relative to base year		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RATE IMPACT relative to base year		**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**

Assumptions

Incremental OM&A		N.A.
Grants in Lieu of Municipal tax	0.42%	Transmission system average
Depreciation	2.00%	Reflects 50 year average service life for towers, conductors and station equipment, excluding land
Interest and Return on Rate Base	6.53%	Includes OEB-approved ROE of 9.18599047619048%, 1.65357476190476% on ST debt, and 4.98859485989344% on LT debt. 40/4/56 equity/ST debt/ LT debt split
Income Tax Provision	26.50%	2016 federal and provincial corporate income tax rate
Capital Cost Allowance	8.00%	100% Class 47 assets

Table 5 – Revenue Requirement and Network Pool Rate Impact, page 2

Revenue Requirement and Network Pool Rate Impact **(After Capital Contribution)**

Runnymede TS: Build 115/27.6kV TS and Reconductor 115kV Circuits		30-Nov	30-Nov	30-Nov	30-Nov	30-Nov	30-Nov	30-Nov	30-Nov	30-Nov	30-Nov	30-Nov	30-Nov	30-Nov
		2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043
Calculation of Incremental Revenue Requirement ($000)		13	14	15	16	17	18	19	20	21	22	23	24	25
In-service date	30-Nov-18													
Capital Cost	14,734													
Less: Capital Contribution Required	(9,938)													
Net Project Capital Cost	4,796													
Average Rate Base		3,597	3,501	3,405	3,309	3,214	3,118	3,022	2,926	2,830	2,734	2,638	2,542	2,446
Incremental OM&A Costs		0	0	0	0	0	0	0	0	0	0	0	0	0
Grants in Lieu of Municipal tax		62	62	62	62	62	62	62	62	62	62	62	62	62
Depreciation		96	96	96	96	96	96	96	96	96	96	96	96	96
Interest and Return on Rate Base		235	229	223	216	210	204	197	191	185	179	172	166	160
Income Tax Provision		29	32	35	37	39	41	42	44	45	46	46	47	47
REVENUE REQUIREMENT PRE-TAX		**422**	**419**	**415**	**411**	**407**	**402**	**397**	**392**	**387**	**382**	**376**	**371**	**365**
Incremental Revenue		752	782	814	817	847	879	882	912	944	977	1,009	1,041	1,044
SUFFICIENCY/(DEFICIENCY)		**331**	**364**	**400**	**406**	**440**	**477**	**485**	**519**	**557**	**595**	**633**	**671**	**679**
	Base Year													
Network Pool Revenue Requirement including sufficiency/(deficiency)	928,814	929,236	929,233	929,229	929,225	929,221	929,216	929,212	929,207	929,202	929,196	929,191	929,185	929,179
Network MW	253,768	253,973	253,982	253,990	253,991	253,999	254,008	254,009	254,017	254,026	254,035	254,044	254,052	254,053
Network Pool Rate ($/kw/month)	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
Increase/(Decrease) in Network Pool Rate ($/kw/month), relative to base year		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RATE IMPACT relative to base year		**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**

Table 6 – Revenue Requirement and Transformation Pool Rate Impact, page 1

Revenue Requirement and Transformation Pool Rate Impact **(After Capital Contribution)**

Runnymede TS: Build 115/27.6kV TS and Reconductor 115kV Circuits			Project YE 30-Nov 2019	30-Nov 2020	30-Nov 2021	30-Nov 2022	30-Nov 2023	30-Nov 2024	30-Nov 2025	30-Nov 2026	30-Nov 2027	30-Nov 2028	30-Nov 2029	30-Nov 2030
Calculation of Incremental Revenue Requirement ($000)			1	2	3	4	5	6	7	8	9	10	11	12
In-service date	30-Nov-18													
Capital Cost	27,518													
Less: Capital Contribution Required	(31,867)													
Net Project Capital Cost	(4,349)													
Average Rate Base			(2,131)	(4,219)	(4,132)	(4,045)	(3,958)	(3,871)	(3,784)	(3,697)	(3,610)	(3,523)	(3,436)	(3,349)
Incremental OM&A Costs			329	329	329	329	329	658	658	658	658	658	658	658
Grants in Lieu of Municipal tax			115	115	115	115	115	115	115	115	115	115	115	115
Depreciation			(87)	(87)	(87)	(87)	(87)	(87)	(87)	(87)	(87)	(87)	(87)	(87)
Interest and Return on Rate Base			(139)	(276)	(270)	(264)	(259)	(253)	(247)	(242)	(236)	(230)	(225)	(219)
Income Tax Provision			3	33	25	17	10	4	(2)	(7)	(12)	(16)	(20)	(23)
REVENUE REQUIREMENT PRE-TAX			**221**	**115**	**112**	**110**	**109**	**437**	**437**	**437**	**438**	**440**	**442**	**444**
Incremental Revenue			75	92	224	253	271	305	341	344	360	378	379	412
SUFFICIENCY/(DEFICIENCY)			**(146)**	**(23)**	**113**	**143**	**162**	**(132)**	**(96)**	**(94)**	**(78)**	**(62)**	**(62)**	**(32)**
		Base Year												
Transformation Pool Revenue Requirement including sufficiency/(deficiency)		422,219	422,440	422,333	422,331	422,329	422,327	422,656	422,655	422,656	422,657	422,658	422,660	422,663
Transformation MW		209,136	209,174	209,182	209,248	209,262	209,270	209,287	209,305	209,307	209,315	209,324	209,324	209,341
Transformation Pool Rate ($/kw/month)		2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02
Increase/(Decrease) in Transformation Pool Rate ($/kw/month), relative to base year			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RATE IMPACT relative to base year			**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**

Assumptions

Incremental OM&A		Years 1 to 5 $329 k each year; Years 6 to 15 $658 k each year; Years 16 to 25 $822.5 k each year.
Grants in Lieu of Municipal tax	0.42%	Transmission system average
Depreciation	2.00%	Reflects 50 year average service life for towers, conductors and station equipment, excluding land
Interest and Return on Rate Base	6.53%	Includes OEB-approved ROE of 9.18599047619048%, 1.65357476190476% on ST debt, and 4.98859485989344% on LT debt. 40/4/56 equity/ST debt/ LT debt split
Income Tax Provision	26.50%	2016 federal and provincial corporate income tax rate
Capital Cost Allowance	8.00%	100% Class 47 assets

Table 6 – Revenue Requirement and Transformation Pool Rate Impact, page 2

Revenue Requirement and Transformation Pool Rate Impact **(After Capital Contribution)**

Runnymede TS: Build 115/27.6kV TS and Reconductor 115kV Circuits		30-Nov 2031 13	30-Nov 2032 14	30-Nov 2033 15	30-Nov 2034 16	30-Nov 2035 17	30-Nov 2036 18	30-Nov 2037 19	30-Nov 2038 20	30-Nov 2039 21	30-Nov 2040 22	30-Nov 2041 23	30-Nov 2042 24	30-Nov 2043 25
Calculation of Incremental Revenue Requirement ($000)														
In-service date	30-Nov-18													
Capital Cost	27,518													
Less: Capital Contribution Required	(31,867)													
Net Project Capital Cost	(4,349)													
Average Rate Base		(3,262)	(3,175)	(3,088)	(3,001)	(2,914)	(2,827)	(2,740)	(2,653)	(2,566)	(2,479)	(2,392)	(2,305)	(2,218)
Incremental OM&A Costs		658	658	658	823	823	823	823	823	823	823	823	823	823
Grants in Lieu of Municipal tax		115	115	115	115	115	115	115	115	115	115	115	115	115
Depreciation		(87)	(87)	(87)	(87)	(87)	(87)	(87)	(87)	(87)	(87)	(87)	(87)	(87)
Interest and Return on Rate Base		(213)	(207)	(202)	(196)	(190)	(185)	(179)	(173)	(168)	(162)	(156)	(151)	(145)
Income Tax Provision		(26)	(29)	(32)	(34)	(35)	(37)	(38)	(40)	(41)	(41)	(42)	(43)	(43)
REVENUE REQUIREMENT PRE-TAX		**447**	**450**	**453**	**621**	**625**	**629**	**633**	**638**	**642**	**647**	**652**	**657**	**663**
Incremental Revenue		415	432	450	451	467	485	487	503	521	539	557	575	576
SUFFICIENCY/(DEFICIENCY)		**(31)**	**(18)**	**(3)**	**(170)**	**(157)**	**(144)**	**(146)**	**(134)**	**(121)**	**(108)**	**(95)**	**(83)**	**(86)**
	Base Year													
Transformation Pool Revenue Requirement including sufficiency/(deficiency)	422,219	422,665	422,668	422,672	422,840	422,843	422,848	422,852	422,856	422,861	422,866	422,871	422,876	422,881
Transformation MW	209,136	209,342	209,350	209,359	209,360	209,368	209,377	209,377	209,386	209,394	209,403	209,412	209,421	209,422
Transformation Pool Rate ($/kw/month)	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02	2.02
Increase/(Decrease) in Transformation Pool Rate ($/kw/month), relative to base year		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RATE IMPACT relative to base year		**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**

Table 7 – DCF Assumptions

Hydro One Networks -- Transmission Connection Economic Evaluation Model
2016 Parameters and Assumptions

Transmission rates are based on current OEB-approved uniform provincial transmission rates.

Monthly Rate ($ per kW)	
Transformation	**2.02**
Network	**3.66**
Line	**0.87**

Grants in lieu of Municipal tax (% of up-front capital expenditure, a proxy for property value):		**0.42%**	Based on Transmission system average
Income taxes:			
Basic Federal Tax Rate - % of taxable income:	2016	**15.00%**	Current rate
Ontario corporation income tax - % of taxable income:	2016	**11.50%**	Current rate
Capital Cost Allowance Rate:			
Class 47 costs	2016	**8%**	Current rate
Decision Support defined costs (1)	2016	**0%**	
Decision Support defined costs (2)	2016	**0%**	
Decision Support defined costs (3)	2016	**0%**	
After-tax Discount rate:		**5.78%**	Based on OEB-approved ROE of 9.19% on common equity and 1.65% on short-term debt, 4.99% forecast cost of long-term debt and 40/60 equity/debt split, and current enacted income tax rate of 26.5%

Other Assumptions:

Estimated Incremental OM&A: Project specific ($ k):

Dual Transformer Station	**$329**	each year for years 1 - 5
	$658	each year for years 6 - 15
	$823	each year for years 16 - 25