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BY COURIER, RESS AND COURIER

November 6, 2019

Ms. Christine E. Long
Board Secretary
Ontario Energy Board
Suite 2700, 2300 Yonge Street
P.O. Box 2319
Toronto, ON M4P 1E4

Dear Ms. Long,

EB-2019-0082 – Hydro One Network's 2020-2022 Transmission Rates Application – Undertaking Responses J 3.3, J 3.4, J 3.5, J 4.3, J 4.5, J 4.7, J 4.8, J 4.10, J 4.11, J 4.12, J 5.1, J 5.2, J 5.3, J 5.4 & J 5.9

Attached please find the following undertaking responses in respect of the above noted proceeding:

- J 3.3: Maintenance cycles relative to 2018 plan.
- J 3.4: EP IR 12 for 2019-2024 values for Line Clearing vs. targets in the scorecard.
- J 3.5: EP IR 12 for 2019-2024 values for Brush Control vs. targets in the scorecard.
- J 4.3: To advise if there are enhancements being made on any projects in consideration of the Dryden TS corridor.
- J 4.5: ISOC business case as approved by Hydro One's Board of Directors (filed as Attachment 1 to this response).
- J 4.7: List of material ISDs comparing forecasts relative to the 2017-2018 application.
- J 4.8: $5.5-million-dollar OM&A reduction and classify into categories.
- J 4.10: Updated employee pension contribution charts based on 31-Dec-18 valuation.
- J 4.11: Update current service cost ratio in JT2.31 with data for Society, MCP, and PWU.
- J 4.12: Provide costs per FTE for the HR department.
- J 5.1: Fleet utilization rate for 2017-2019.
- J 5.2: Recast billable ratio table in JT-2.22 to exclude overtime and provide 2019 forecast.
- J 5.3: To provide details on what's included in the response to J 5.2.
- J 5.4: Reference for forecast FTEs for 2017-2018.
- J 5.9: Review and confirm OEB Staff calculations in K5.5 and explain increases in to row 227 for transmission compensation per FTE.

This filing has been submitted electronically using the Board's Regulatory Electronic Submission System and two (2) hard copies will be sent via courier.

Sincerely,

ORIGINAL SIGNED BY FRANK D'ANDREA

Frank D'Andrea
Encls.
cc.EB-2019-0082 parties (electronic)

UNDERTAKING J3.3

Reference:

I-01-OEB-185
Oral Hearing Volume 3, Page 65, Line 14 – Page 67, Line 9

Undertaking:

With reference to IR OEB STAFF 185, to provide, if possible, a value for management of maintenance cycles related to the 2018 plan; if not possible, to explain why

Response:

As summarized in Exhibit F, Tab 1, Schedule 1 in Table 1, "Plan" totals also referred to as OEB-approved amounts reflect as-filed budgets and not revised OM&A amounts after incorporating any of the following adjustments:

- reductions that Hydro One has made throughout the proceedings (for example reductions due to updated pension valuation or adjustment to exclude certain B2M operating costs);
- settlement approved reductions; and
- OEB-directed envelope cut.

All reductions appear in the subsequent lines in the chart and are applied at the envelope level. Relative to Hydro One's actuals, it appears as though Hydro One has consistently underspent under the sustainment OM&A category in all four historical years (2015-2018). This is not in fact the case. The "Plan" or OEB-approved amounts were then reduced to accommodate the reductions discussed above. When you add the aggregate "Plan" amounts, including all reductions and compare them to the aggregate actuals, Hydro One has actually spent over 99% of the OEB-approved values on an aggregate level for the last four historical years.

Accordingly, a calculation of the impact of 'management of maintenance cycles' on 2020 revenue requirement relative to 2018 OEB approved expenditure levels is not possible nor is it a meaningful metric given that 2018 OEB approved OM&A includes several high level adjustments discussed above. From an envelope perspective, Hydro One's approved 2018 OM&A included in revenue requirement was $27M below the originally proposed amount. As category level OM&A was not restated to reflect the decision and other adjustments, the comparison would overstate the effect of management of maintenance cycles and would not reflect a reasonable comparison. As such, Hydro One

provided the impact of ‘management of maintenance cycles’ relative to 2018 actuals in response to OEB IR 185.

Furthermore, the testimony given by Mr. Jesus on Thursday October 24[1] discussing the productivity initiatives relative to 2018 plan year should be clarified to state that the impact of productivity initiatives on 2020 revenue requirement listed in OEB Staff IR 185 (including reduction in vacancies, limiting of consulting and contract engagement, sustained productivity initiatives, and Inergi renegotiations) are calculated relative to their applicable baselines as shown in JT-2.28, which range from 2015 to present, depending upon when the initiative was conceived and implemented.

[1] Oral Hearing Transcript, Day 3, October 24, 2019 page 64 line 23, page 66 line 4:

MR. SIDLOFSKY:
Now, in response to OEB Staff 185 […] in looking at the table that you provided as part of that response, first of all, I am going to ask you to confirm that that table shows the impacts on the 2020 revenue requirement versus 2018 plan, with the exception of the first item, management of maintenance cycles, which is relevant to -- which relates to 2018 actuals. Am I correct when I read this table that it's only the management of maintenance cycles item that relates to 2018 actuals, and all of those other items are related to the 2018 plan?

MR. JESUS: That's correct.

UNDERTAKING J3.4

Reference:
I-02-EP-12

Undertaking:
To reconcile line clearing costs per kilometer and brush control costs per hectare as those numbers appear in the evolved transmission scorecard targets for 2019-2024 on the one hand and in I-02-EP-12 (a) on the other.

Response:
The line clearing and brush control unit costs provided in response to I-02-EP-12 are the latest forecast of 2020-2024 unit costs, relative to the forecast provided in the scorecard at TSP 1.5, p. 5, to perform vegetation management on Hydro One's transmission system. Notwithstanding this forecast, the scorecard targets have not been updated.

Cost increases included in I-02-EP-12 reflect:

- An augmented notification system developed in 2018 and 2019 for vegetation management on urban right-of-ways ("ROW"), where greater communication with affected communities is, in the long run, a more efficient and effective way of coordinating and executing vegetation work in urban areas and prevents costly misunderstandings with adjacent landowners.
- Increased labour costs required to treat overgrowth on ROWs.

Forecast line clearing costs for 2020-2024 relative to 2018-2019 decrease slightly as a result of a reduction of urban ROWs scheduled for maintenance which require the more costly notification process.

Witness: Donna Jablonsky

UNDERTAKING J3.5

Reference:
I-02-EP-12

Undertaking:
To reconcile Brush Control Cost per Hectare and Hectares Completed Annually as those numbers appear in the evolved transmission scorecard targets for 2019-2024 on the one hand and in I-02-EP-12 (a) on the other.

Response:
The line clearing and brush control unit costs provided in response to I-02-EP-12 are the latest forecast of 2020-2024 unit costs, relative to the forecast provided in the scorecard at TSP 1.5, p. 5, to perform vegetation management on Hydro One's transmission system. Notwithstanding this forecast, the scorecard targets have not been updated.

Cost increases included in I-02-EP-12 reflect:

- An augmented notification system developed in 2018 and 2019 for vegetation management on urban right-of-ways ("ROW"), where greater communication with affected communities is, in the long run, a more efficient and effective way of coordinating and executing vegetation work in urban areas and prevents costly misunderstandings with adjacent landowners.
- Increased labour costs required to treat overgrowth on ROWs.

Forecast line clearing costs for 2020-2024 relative to 2018-2019 decrease slightly as a result of a reduction of urban ROWs scheduled for maintenance which require the more costly notification process.

Witness: Donna Jablonsky

UNDERTAKING J4.3

Reference:

SR-19 LakeheadTS & Nipigon JCT

Undertaking:

To advise if there are enhancements being made on any projects in anticipation of the potential of a corridor being built up to the Dryden TS.

Response:

There are no enhancements included in any of the System Renewal projects identified in this Transmission System Plan in anticipation of the Waasigan (Northwest Bulk) Transmission Line Project. As such, the System Renewal investments proposed on existing assets with this filing are not affecting that potential forward-looking project for which the variance account has been established.

UNDERTAKING J4.5

Reference:

GP-01

Undertaking:

To provide the approved business case for the ISOC.

Response:

Attachment 1 of this undertaking provides the business case for the ISOC, as approved by Hydro One's Board of Directors.

Integrated System Operating Centre: New Facility Development

Overview of Recommended Alternative:

Request for full approval of $154.5M to begin construction and complete the final phase of the new Integrated System Operating Centre (ISOC) in the City of Orillia. This total includes $18.5 million of expenditures previously approved for the needs assessment, engineering design, and land acquisition.

Investment Details:

In-service: Multiple I/S in 2021

The entire Hydro One transmission grid and major distribution assets are monitored and controlled 24/7 from the Ontario Grid Control Centre (OGCC) located in Barrie, Ontario with a Backup Control Center (BUCC) located within the Richview Transformer Station near Pearson International Airport. The current state of the OGCC and BUCC facilities could result in a loss of grid monitoring and controlling capability which could impact public and employee safety and cause widespread transmission grid outages impacting the whole province and neighbouring interconnected transmission systems in Canada and the United States. Prolonged unavailability of the OGCC would inhibit Hydro One's ability to deliver its T&D capital and maintenance programs and lessens the quality of customer outage communications.

In 2003, the OGCC was built to replace and centralize the thirteen (13) T&D operating centres. At the same time the BUCC was established at the Richview Transformer Station, built in 1956, to meet the minimum backup control centre requirements at that time. This investment will allow the ISOC to be the primary control centre for Hydro One and the existing OGCC will be converted into the new backup, replacing the existing Richview BUCC.

The OGCC facility has a high risk of a prolonged forced evacuation due to the following issues:

- A broken and leaking sewage pipe under the control room that requires regular vacuuming and will require an extended control room evacuation for repair.
- The data centre is approaching critical cooling limits during the summer which could trigger a shutdown.
- Cooling loop and heat rejection risks due to shared infrastructure; a single point of failure on the HVAC system requiring an extended shutdown to remediate.

The above OGCC issues will be remediated under separate investments and may only be completed once the ISOC is in serviced.

The BUCC facility also has a series of issues that prevent it from being used for a prolonged period of time if the OGCC is evacuated. The BUCC is an adaptation of rooms at a transmission station, not designed or intended for grid control use. In addition, Richview TS is a single point vulnerability for the overall Hydro One telecommunication network that is instrumental for T&D grid monitor and control. In 2013 the BUCC data centre and telecommunication network equipment rooms flooded, breaking the telecommunication link between both control facilities and grid assets, resulting in an extended outage to over 1,000,000 Hydro One and LDC customers. The current BUCC data centre facility is capacity constrained and no longer mirrors that of the OGCC data center. In the event of activation, the BUCC cannot deliver the same functionality as the OGCC. The BUCC also has office space constraint that will not be able to accommodate the required staffing level from support functions such as Operating Technology Operations, Operating Planning, and Operating Engineering in support of the real-time control room operations.

NERC Mandatory Reliability Standard for Emergency Operations Planning "Loss of Control Centre Functionality" is a set of requirements that are designed to "ensure continued reliable operations of the Bulk Electric System (BES) in the event that a control center becomes inoperable". It specifically describes the timing requirement for the full activation of the backup control center as follows: "A transition period between the loss of primary control center functionality and the time to fully implement the backup functionality that is less than or equal to two hours." This requirement is ranked as "Severe" on the NERC Violation Severity Levels scale which has a financial penalty of up to $1M per day for a non-compliance. In addition, the IESO Market Rules list the BUCC as one of the key facilities to the Ontario Basic Minimum Power System which is required to maintain minimum operating reliability of the Ontario electric grid.

Population and business growth in the area has created external factor challenges at BUCC beyond the ability of Hydro One to remediate. BUCC activation testing conducted in recent years in the early hours of a Saturday morning recorded full-activation time at just under 2 hours. In addition to the non-compliance risks there are external factors driving additional risks beyond Hydro One's ability to mitigate:

- Adjacent to the BUCC building is a multi-level self-storage facility, a situation rated as a high security risk.
- The BUCC is accessible by a single secondary street which has been in the past rendered inaccessible by emergencies in the area.
- In proximity to the BUCC is the main aviation fuel pipeline for the Pearson Airport.
- A Pearson Airport flight path goes over the property.

The Integrated Telecommunications Management Centre (ITMC), currently located in the same building as the BUCC in Richview TS, is a critical 24/7 operating center for Hydro One's telecommunication network to ensure that the telecommunication network is functioning to facilitate monitoring and control of the electric grid. The current Backup Integrated Telecommunications Management Centre (BUITMC), located in Detweiler TS and in-serviced in 1950, is a temporary single shared room, requires extensive technical setup for activation, cannot accommodate all necessary operating staff, and does not meet necessary security requirements. This adds further risk to grid monitoring and control.

Hydro One Security Operations is reliant on a single external third party for primary and backup physical security monitoring services. Having internal control of all security management software and servers, via the Security Operations Centre at ISOC, would improve security management performance and reduce the risk of NERC Critical Infrastructure Protection standards non-compliance with clearer accountability on risk assessment, operational controls and compliance management. Furthermore, recent trends indicate more stringent NERC security requirements are likely, which will result in material escalation of third party security expenditures. Consolidating the Security Operations Centre within ISOC and supplying this service in-house will allow Hydro One to better control these costs and potential cost escalation, which will partially offset the capital costs of this component allocated to the ratepayer.

In the 2018-2022 Dx Rate Filing Hydro One filed with the OEB the above operational risks and challenges. In its decision the OEB directed Hydro One to setup an asymmetric variance account to be offset by the revenue requirement at the actual cost for the ISOC. Hydro One has also filed a similar ISOC justification in the 2020-2022 transmission rate application, currently before the OEB.

This ISOC investment, as filed with the OEB, will build the Integrated System Operating Centre (ISOC), to accommodate the following functions:

- Primary Transmission and Distribution Operating Control Centre;
- Backup Integrated Telecommunication Management Centre (BUITMC);
- Security Operations Centre;
- General back office areas; and
- Integrated Data Centre to support the above functionalities.

After the 2013 GTA flood, Hydro One conducted a planning needs assessment and determined that it was prudent to replace the BUCC and build a new BUITMC. It was also determined that building a new integrated facility to house security operations and telecommunications operations would offer improved operational effectiveness and synergies for Hydro One. The location assessment was initiated and it considered various alternatives including building on a new site, leasing a suitable site, acquiring and retrofitting an existing facility, and building a new facility on an existing Hydro One owned site. The assessment concluded that no leasing site was available. Of all the viable site alternatives studied, the preferred alternative was to build a new facility at an Orillia site.

Orillia was chosen over other municipalities, because of its ideal proximity to the OGCC and accessibility via multiple highway routes and access roads. Local development fees have been waived. The land acquisition costs were materially less expensive compared to other available sites within the two (2) hour mandated full activation limit, and the site is already serviced with municipal water and other utilities.

The final phase of this investment consists of the following:

- The contract awarded for a full-service general contractor to build the ISOC, hardened to withstand EF3 Tornado wind, on the 16.57 acres Orillia site, that was acquired in the Development Phase. The ISOC will have a gross floor area of 126,200 square feet. The two-storey building will consist of control rooms, data centre space, and common office space. The ISOC office area has been designed for higher employee workspace density when compared to the OGCC setup;
- Construct new circuits to connect the ISOC to the existing Hydro One Telecommunication System, resolving the existing telecom network single point vulnerability issue;
- Construct and configure the distribution system to provide multiple redundant utility power services to the site;
- Complete the Operations Technology/Information Technology infrastructure servicing the ISOC;
- Provision of furnishing throughout the ISOC facility; and
- Facility designed for future enhancements which will provide scalability to continue expanding Hydro One's future operating capabilities in Advance Metering Infrastructure operation, Distribution Automation, grid asset condition monitoring and diagnostics to extend asset lifecycle as technology matures.

The ISOC will satisfy all safety-related and emergency preparedness requirements for both physical and cyber security. This investment is essential in maintaining adequate redundancy for operation of the T&D grid and the Telecommunication Network as mandated by NERC Emergency Operations Planning standards and Critical Infrastructure Protection standards, and the IESO Market Rules.

Architect rendering of ISOC.

Benefits:

The ISOC provides for the follow benefits:

1) **Mitigate current operation challenges:** Provide a facility capable of long-term BES operation, designed to address emergency preparedness, and technical and business continuity challenges that currently exist at the OGCC, BUCC and BUITMC. Furthermore, will allow Hydro One to address current OGCC deficiencies with minimal disruption to real-time BES operations.

2) **Improve real-time capabilities to increase reliability and efficiency:** Allows for enhanced collaboration between System Operations, telecommunication, security operations, Smart Meter Infrastructure operations, Distribution Automation, and asset condition monitoring and diagnostics, realizing real-time operational effectiveness and synergies.

3) **Compliance with Regulatory Requirements:** The new ISOC will improve Hydro One's ability to maintain compliance with existing and future IESO Market Rules requirements, NERC Reliability Standards requirements and Hydro One's Reliability Standards.

4) **Increase Physical Security Protection with cost reduction:** The Security Operations Centre at the ISOC will allow for better cost management, proactive monitoring of critical facilities and additional operational synergies from being in a single location.

Estimated Costs & In-service:

This is a multi-year project with expenditures planned to 2021. The asset will be placed in-service as each project component is completed. This Investment is included in the Board approved 2019-2024 Business Plan with total funding of $159.8M. The total cost breakdown is as follows:

Category	Cost ($M)
Total Development Phase*	$11.2
Construction Phase:	
General Contractor Construction **	$91.9
Telecommunication and Dual Power	$9.7
Data Centre and other IT equipment	$9.1
Furnishing	$3.6
Project Management and Commissioning	$1.4
Contingency	$6.7
Decommissioning of BUCC	$0.5
Interest and Overhead	$20.4
Total Project Cost	$154.5

**While $18.5M had previously been approved for the Development Phases, the actual/forecasted cost is $11.2M. This is due to the negotiated Detailed Engineering Design cost reductions and deferral to construction phase to the IT Proof of Concept work.*

***$78.5M of the General Contractor Construction category is comprised of a fixed-price contract following a competitive multi-staged procurement, based on complete and comprehensive owner's requirements, with multiple proponent submissions .*

The underlying project definition work has been completed to a Class 2 level in accordance with the Association for Advancement of Cost Engineering, and based on the work completed on this project the cost estimate has a range of outcomes between -4% and +6%, and an expected cost of $154.5M. The estimate range is based on a sensitivity analysis performed on each of the cost categories, taking into account both potential risk and saving opportunities. The contingency is based on a project risk review workshop and allocates $6.7M, 4.7% of the remaining project costs, to cover known-unknowns and allowance deviation in procurement, construction, and commissioning costs during execution from the original owner's requirements and design.

After the ISOC is commissioned, the annual OM&A cost will be $3.4M, which includes facilities, Operations Technology/Information Technology and telecommunication maintenance. For the first 18 months of ISOC operations, there would also be $6.6M incremental charges related to employee relocation of System Operations staff to the ISOC and OGCC

The OM&A savings with the ISOC in service are;

- End of Barrie external data centre lease, $700k per year.
- The following existing office space will no longer be required. These opportunities will be operationalized in the Real Estate Optimization Strategy which can be repurposed for office space;
    - Approximately 50 workstations at the leased Barrie Corporate Office (BCO).
    - 2,000 square feet of training room space at the leased BCO.
    - 8,800 square feet of space (control room + office space) at the Richview TS.

Hydro One has conducted a benchmarking cost comparison to other utilities' new control centre builds in North America. The total ISOC cost, including fitting out, is $1,224 per sq ft. This cost is in-line with other control centre build costs ranging from $783 per sq ft to $1,669 per sq ft. Costs are affected by data centre (i.e. Uptime Tier Institute level) design, building structure (based on local weather history), environmental impact considerations, site servicing needs, and employee relocation impacts. The 2003 Hydro One OGCC build cost was $2,271 per sq ft (after inflation adjustments), as poor soil quality at the site increased the foundation requirements. Leveraging the lessons learned from the OGCC, Hydro One and the engineering consultants have completed advance testing and staking work to proactively mitigate issues with the ISOC build. The Altus Group 2018 Canadian construction cost guide shows Tier 3 data centre facilities with extensive redundancies in the infrastructure to be at $1,000/square feet before fitting out.

Hydro One Telecom will lease 4% of the space in the ISOC facility to provide for a BUITMC. Hydro One Telecom will be required to pay lease payments to Hydro One Networks Inc. in accordance with the OEB's Affiliate Relationship Code. The lease payments will include a component of the required return of capital and incremental OM&A of the facility and will reduce the revenue requirement impact of the new facility to rate payers.

Other Alternatives Considered

Alternative 1: Status Quo / Use Offsite Leased Space

This alternative is to lease space for office for support staff, data centre and BUITMC, to mitigate the data centre flood risk and to accommodate space requirements for support staff but does not address any of the other identified risks. The total cost of this alternative is estimated to be $83.1M, or 54% of the requested capital while leaving numerous risks unresolved (e.g. risk to NERC mandatory reliability standards non-compliance, single point of failure of telecommunications system, single access road, hazards associated with a Transformer Station, fuel pipeline, flight path). Therefore, this alternative was rejected.

Alternative 2: Build a modified version of ISOC on the preferred Orillia Site

This alternative would build a smaller facility in Orillia excluding Backup Telecom Control Centre and/or Security Operations Centre. There are multiple build configurations which were considered as alternatives to the recommended facility:

1. Removing the Backup Telecom Control Centre (reduction of $21.1M), and/or
2. Removing the Security Operation Centre(reduction of $11M),

Depending on which scenario(s) are selected, the estimate for these alternatives ranges from $122.4M to $143.5M. These alternatives were rejected as they do not address risks identified with ITMC (equipment room flood risk and single point of failure for the telecommunication network) and BUITMC (activation concerns) and do not create the operational effectiveness and synergies with Security Operation Centre colocation.

Alternative 3: Acquire an existing facility or use Hydro One owned sites

While Hydro One considered using existing sites or leasing a facility for the ISOC, there were no feasible facilities available for lease in the geographic zone that will satisfy the NERC backup activation requirements.

Regulatory Considerations

This common capital investment was included in the 2018 to 2022 distribution rate application (EB-2017-0049) at a cost of $138.4M. The updated estimate of $154.4M was included in the 2020-2022 transmission rate application (EB-2019-0082). The new ISOC is currently scheduled for completion in 2021 which will result in an estimated total addition to rate base of $154.4M, with 50.07% being allocated to distribution rate base and 49.93% to transmission rate base.

Current estimated project costs are $154.4 million which is $16.1 million more than the total estimated cost included in the recent distribution rate application (EB-2017-0049) for the 2018 to 2022 period.

On March 7, 2019 the OEB issued its Decision on Hydro One's 2018-2022 distribution rate application and directed Hydro One to create an asymmetric variance account to track the actual cost of the distribution portion of the ISOC against the forecast total cost of $69.3 million[1]. The basis for this amount was the estimated total addition to rate base in the distribution rate

[1] As filed in I-29-Staff-173 and I-29-Staff-173, Attachment 1

application of $138.4M, with 50.07% or $69.3M allocated to distribution rate base and 49.93% or $69.1M allocated to transmission rate base. If the revenue requirement at the actual cost is lower than the revenue requirement at the forecast cost, Hydro One will be required to return the difference to its customers. Therefore, in an extraordinary scenario where Hydro One does not build the ISOC, the revenue requirement portion associated with the distribution-allocated cost of $69.3 million would have to be returned to rate payers.

As part of the Draft Rate Order filed on April 5, 2019, Hydro One was directed to file an accounting order for the variance account. The balance in the account will be considered for disposition during the next rebasing application.

If at the time that the ISOC is deemed to be in-service, the distribution portion of the total costs exceeds $69.3 million, the revenue requirement portion associated with the excess will not be immediately recoverable in rates. At rebasing, there will be an opportunity for Hydro One to request recovery of the excess amount, however any such request will be subject to a prudence review and recovery is not guaranteed.

Based on the OEB's Decision on Hydro One's 2018-2022 distribution rate application, there is a strong likelihood that Hydro One will be directed to implement a similar asymmetric variance account as part of the 2020-2022 transmission rate application (EB-2019-0082), to account for the transmission-allocated cost of the ISOC.

Due to the nature of the asymmetric variance account, any cost-savings or under-spending associated with the ISOC, as realized through value engineering or other initiatives, cannot be used in re-direction. These cost-savings or under-spending must be brought forward as cost reductions in future updates or rate applications.

Hydro One Telecom will lease the ITMC portion of the ISOC. The lease costs will be subject to an Affiliate Agreement, allocated using OEB-approved methodology and compliant with the Affiliate Relationship Code. Lease revenues will reduce the revenue requirement for the facility collected from Hydro One Transmission and Distribution ratepayers.

Risks and Mitigation

Regulatory Risks (Medium Risk) – If the ISOC is not built, the revenue requirement portion associated with the distribution-allocated cost of $69.3 million has to be returned to rate payers. In addition, the revenue requirement portion associated with the transmission-allocated cost of $79.8 million will likely also have to be returned to rate payers, assuming that the OEB institutes a similar asymmetric variance account for transmission. This risk can be mitigated by proceeding with the construction of the ISOC.

Regulatory Risk (Low Risk) - Amounts in excess of the distribution-allocated cost of $69.3 million will be subject to a prudence review and must be applied for recovery in future applications. As discussed earlier, it is likely that the OEB will create a similar account under transmission,

which would then require a similar treatment, i.e. any amounts in excess of $79.8 million would be subject to a prudence review and must be applied for recovery in future applications. This risk can be mitigated by working within the distribution and transmission-allocated rate base amounts as filed with the OEB, and noted above.

Technology Changes (Low-to-Medium Risk) – This risk is assessed as low-to-medium as there has been rapid technology advances in the Data Centre and computer industry. Design and estimates have been based on current available technology. Final device and material selection will be based on cost, performance, and lifecycles consideration. Part of the data centre technological design has been deferred to maximize flexibility and allow for best selection of technology while avoiding redesign costs.

First Nations (Low Risk) – As part of the site selection process, First Nation risks were considered. The preferred Orillia site was selected in part as there are no First Nations claims/issues anticipated.

This Approval ($M): $136.0	**Previous Approval ($M):** $18.5	**Total Approval ($M):** $154.5
Signature Block:		
Approved by: Darlene Bradley	**Title:** Acting Chief Operating Officer	**Date:** July 23, 2019
Approved by: Chris Lopez	**Title:** Chief Financial Officer	**Date:** July 23, 2019
Approved by: Mark Poweska	**Title:** President & Chief Executive Officer	**Date:** August 1, 2019
Approved by:	**Title:** Board of Directors Advice	**Date:**

Appendix: Required information for SAP data input

Yearly Expenditures ($M)	2015-2018	2019	2020	2021	Total
Capital* and MFA	11.3	57.1	64.5	21.1	154.0
Removals*	-	-	-	0.5	0.5
OM&A	-	-	-	-	-
Gross Investment Cost*	**11.3**	**57.1**	**64.5**	**21.6**	**154.5**
Recoverable	-	-	-	-	-
Net Investment Cost	**11.3**	**57.1**	**64.5**	**21.6**	**154.5**

**Includes capitalized interest and overhead at current rates*

Rate base additions ($M)	2015-2018	2019	2020	2021	Total
2018 – 2022 Dx Rate Filing	-	-	69.3	-	69.3
2020 – 2022 Tx Rate Filing	-	-	-	79.8	79.8
Total Rate Filing	**-**	**-**	**69.3**	**79.8**	**149.1**
Business Case (As Per Estimate)	-	-	-	154.0	154.0
Variance	**-**	**-**	**69.3**	**(74.2)**	**(4.9)**

Rate base additions ($M)	2015-2018	2019	2020	2021	Total
2019 – 2024 BP	-	-	-	159.8	159.8
Business Case (As Per Estimate)	-	-	-	154.0	154.0
Redirection Available	**-**	**-**	**-**	**5.8**	**5.8**

In-service Date:	Multiple I/S in 2021
Business Case Summary #:	51001897
Appropriation Request #:	23555
Subject ID #	80830
Investment Driver:	N.C.C.3.01
Investment Summary Document	GP18 and GP1
Redirection Required?	No
Supporting Documents: 1. Estimate 2. Investment Planning Scorecard 3. Risk Assessment Questionnaire	 ISOC Full Estimate
Director	Godfrey Holder
Planner	Daniel Lam

Scientific Research & Experimental Development Tax Credits (SR&ED):

- Do you anticipate that an initiative to meet the set of business requirements in this document will result in a ***Technological Advancement***? No

UNDERTAKING J4.7

Reference:

Undertaking:

To produce a list of material ISDs from the last proceeding and what the forecast was, and the new forecast for those going into service in this term.

Response:

The table below lists project ISDs from the 2017-2018 transmission application with a net project total >$20M and the subsequent values for those projects in the 2020-2024 transmission application. At an aggregate level, the net project total for projects in the 2020-2024 transmission application is 7% higher than in the 2017-2018 transmission application, which is to be expected as projects transition over time from a planning stage to an execution stage and have more refined and detailed cost estimates. Some projects in the 2017-2018 transmission application will be substantially complete and are therefore not included in the 2020-2024 transmission application; in those cases the latest cost forecast has been provided in the 2020-2024 transmission application column.

17/18 ISD	20/24 ISD	17/18 ISD Description	2017 - 2018 Filing			2020 - 2024 Filing		
			Project Phase	Net Project Total ($M)	In-Service Year	Project Phase	Net Project Total ($M)	In-Service Year
D01	N/A	Clarington TS: Build new 500/230kV Station	Execution	280.7	2018	Substantially Complete	242.3	2019
D03	SS-06	M30A/M31A Conductor Upgrade	Planning	20.0	2020	Planning	24.1	2022
D04	SS-04	East-West Tie - Station Expansion	Planning	166.1	2020	Planning	155.0	2022
D05	SS-07	Milton TS and 230kV Lines	Planning	250.1	2022	Planning	238.5	2024
D07	N/A	York Region – Increase Transmission Capability for B82V/B83V Circuits	Execution	31.8	2017	Substantially Complete	35.4	2017
D11	SS-14	Southwest GTA Transmission Reinforcement	Planning	30.0	2020	Planning	20.6	2022
D12	SS-09	Upgrade Barrie TS and Line E3/4B to 230	Planning	80.0	2020	Planning	83.2	2020
D14	N/A	Supply to Essex County Transmission Reinforcement	Planning	50.4	2018	Substantially Complete	52.0	2018
D19	N/A	Runnymede TS -115-28kV Station - plus KxW upgrades	Planning	25.2	2019	Substantially Complete	0.3	2018
O01	GP-01	Integrated System Operations Centre - New Facility	Planning	137.4	2020	Planning	159.8	2021
S01	SR-01	Air Blast Circuit Breaker Repalcement - Beck #1 SS	Planning	24.1	2019	Planning	30.7	2026
S02	SR-01	Air Blast Circuit Breaker Replacement - Beck #2 TS	Execution	90.7	2021	Execution	110.2	2022
S03	SR-01	Air Blast Circuit Breaker Replacement - Bruce A TS	Execution	104.9	2019	Execution	111.2	2020
S04	SR-01	Air Blast Circuit Breaker Replacement - Bruce B SS	Planning	65.2	2020	Planning	85.5	2024
S05	SR-01	Air Blast Circuit Breaker Repalcement - Cherrywood TS	Planning	60.6	2020	Execution	88.9	2023
S06	SR-01	Air Blast Circuit Breaker Repalcement - Lennox TS	Execution	83.7	2020	Execution	88.1	2023
S07	SR-01	Air Blast Circuit Breaker Replacement - Richview TS	Execution	95.5	2018	Execution	94.9	2020
S08	N/A	Integrated Station Component Replacements - Beach TS	Execution	76.5	2019	Execution	70.5	2019
S09	N/A	Integrated DESN Investments - Centralia TS	Execution	20.7	2018	Substantially Complete	31.7	2018
S10	N/A	Integrated Station Component Replacements - Dryden TS	Execution	31.0	2017	Substantially Complete	31.5	2018
S11	SR-02	Power Transformer Replacements	Execution	58.2	2019	Execution	68.9	2020
S12	N/A	Integrated DESN Replacement - Espanola TS	Execution	24.9	2016	Substantially Complete	28.8	2017
S13	N/A	End of Life Station Reconfiguration - Gage TS	Planning	36.0	2019	Planning	50.4	2021
S15	N/A	London Nelson TS	Execution	22.5	2019	Execution	25.0	2021
S16	N/A	Station Re-Investment - Palmerston TS	Planning	25.1	2018	Execution	30.7	2019
S17	N/A	Wanstead TS	Planning	28.5	2018	Substantially Complete	27.1	2018
S18	N/A	Station Re-Investment - Alexander SS	Planning	24.0	2018	Execution	21.2	2020
S19	N/A	Integrated Station Component Replacements - Allanburg TS	Execution	32.8	2018	Substantially Complete	50.9	2018
S20	N/A	Integrated DESN Investments - Aylmer TS	Execution	23.4	2017	Substantially Complete	23.1	2017
S22	N/A	Station Re-Investment - Birch TS	Planning	30.5	2019	Execution	32.2	2019
S23	N/A	Station Re-Investment - Bronte TS	Planning	33.1	2019	Execution	28.5	2019
S24	SR-05	Bridgman TS Reinvestment	Planning	39.9	2022	Planning	33.8	2023
S25	N/A	Buchanan TS BULK	Execution	29.7	2017	Substantially Complete	28.3	2017
S30	N/A	Station Re-Investment - Dufferin TS	Planning	21.7	2019	Execution	27.1	2019
S33	SR-02	Station Re-Investment - Hanmer TS	Execution	63.5	2019	Execution	77.4	2020
S34	SR-05	Integrated Station Component Replacements - Hawthorne TS	Execution	27.0	2019	Execution	41.2	2020
S35	N/A	Station Re-Investment - Horning TS	Planning	36.6	2018	Substantially Complete	39.2	2018
S36	N/A	Station Re-Investment - Leaside TS	Execution	31.1	2018	Execution	46.0	2019
S37	SR-06	Integrated DESN Replacement - Leaside TS	Planning	21.1	2019	Execution	35.7	2020
S38	SR-05	Station Re-Investment - Main TS	Planning	24.8	2019	Planning	29.8	2021
S40	SR-02	Station Re-Investment - Martindale TS	Planning	64.7	2020	Execution	71.8	2021
S43	N/A	Integrated DESN Replacement – National Research Council TS	Execution	30.8	2017	Execution	36.5	2019
S45	N/A	Richview TS	Execution	25.1	2017	Substantially Complete	27.2	2018
S46	SR-02	Sheppard TS	Planning	28.1	2019	Execution	40.9	2020
S47	N/A	Station Re-Investment - St. Isidore TS	Execution	26.1	2017	Execution	32.8	2019
S48	SR-05	Stanley TS; Station Centric Investment	Planning	24.5	2020	Planning	33.5	2021
S55	SR-11	SONET Systems Replacement	Planning	111.9	2024	Planning	119.3	2024
S62	N/A	Line Refurbishment - C22J/C24Z/C21J/C23Z	Execution	47.3	2018	Substantially Complete	34.4	2017
S63	N/A	Line Refurbishment - D2L - Dymond TS x Upper Notch Jct and Martin River Jct x Crystal Falls SS	Execution	31.6	2017	Substantially Complete	33.0	2019
S65	SR-19	Line Refurbishment - N21W/N22W	Planning	23.6	2019	Execution	27.7	2019
S67	SR-19	Line Refurbishment - D2L - Upper Notch Jct x Martin River Jct	Planning	43.2	2019	Execution	28.3	2019
S70	SR-19	Tx Line Refurb. A7L/R1LB & 57M1	Planning	69.1	2021	Planning	76.9	2022
S72	SR-19	Tx Line Refurb. E1C	Planning	39.2	2020	Planning	52.0	2024
S74	SR-19	Tx Line Refurb. D2H/D3H	Planning	25.9	2019	Planning	36.0	2022
S83	N/A	H7L/H11L Cable Replacement	Planning	25.3	2018	Execution	39.3	2019
				2,975.5			**3,188.9**	

Note: Cancelled projects have been excluded from the above table.

UNDERTAKING J4.8

Reference:

I-07-SEC-55
Oral Hearing Volume 4, Page 120, Line 20 – Page 2, Line 5
Oral Hearing Volume 4, Page 131, Line 2 – Page 132, Line 2

Undertaking:

On a best-efforts basis, to look at the 5.5-million-dollar OM&A reduction to classify it into categories

Response:

This undertaking was satisfied on the record. Please see below:

Oral Hearing Volume 4, Page 120, Line 20 – Page 2, Line 5

MR. DUMKA: Okay. So looking at this table, which has assorted adjustments, the pension reduction OM&A, the OPEB reduction OM&A, et cetera, where, amongst all of these values -- perhaps it is the very first one, the Mercer median TX OM&A figure -- where would the increased pension contribution cost in the rate year be reflected? Is there any specific adjustment for that?

[Witness panel confers]

MR. JODOIN: Our understanding is that would be included, correct, in the 5.5 pension reduction that you have outlined. But not only that. I know you have it on the next page, but we have actually updated that recently and have provided an updated pension reduction on, I guess, page 14 of your compendium, right at the top. So those two line items.

MR. DUMKA: Okay. So basically what you're telling me, by making these adjustments, they were not baked into the compensation cost for 2020, because you have to make these adjustments. Is that what we're seeing? Or are you saying -- maybe I have misinterpreted -- that in the 5.5 million, for example, you're saying a chunk of that is increased employee pension contributions?

[Witness panel confers]

MR. CHHELAVDA: So perhaps I can try to answer the question. I mean, there probably are multiple factors that would give rise to the reductions. So one would be -- one would be the increased employee contributions, and there would be other factors as well. It would be part of the reasons for the reduction.

Does that answer your question?

MR. DUMKA: Okay. So basically you are confirming that the increased employee pension contributions are reflected in the pension reduction OM&A figure of 5.5 million? Is that what you're saying? It is completely captured in there?

MR. CHHELAVDA: That is our understanding, yes.

MR. DUMKA: Okay. Unless you want to take an undertaking to confirm. I realize you spent a bit of time discussing it.

[Witness panel confers]

MR. CHHELAVDA: So on a best efforts basis, we will look at the 5.5 million OM&A reduction and try to classify it into categories, like what's causing the 5.5 million.

MS. DJURDJEVIC: We will make that undertaking J4.8.

UNDERTAKING NO. J4.8: ON A BEST-EFFORTS BASIS, TO LOOK AT THE 5.5-MILLION-DOLLAR OM&A REDUCTION TO CLASSIFY IT INTO CATEGORIES

<u>Oral Hearing Volume 4, Page 131, Line 2 – Page 132, Line 2</u>

MR. DUMKA: Right. So this is just like -- the 10 million is just the transmission OM&A, as opposed to the overall reductions in Hydro One compensation to bring it to market median.

So my question is, if I look at it, the $10 million reduction in OM&A takes into account that in 2017 employee pension contributions were lower.

So I just want to clarify, then, that the pension reduction that we see, I think it is -- I should open up SEC 55. I think it is about $5 million, is the first --

MR. JODOIN: 5.5 million.

MR. DUMKA: 5.5 million. So are we saying, then, that the 5.5 million reduction for pension takes into account the increased employee pension contributions? Is that what we're seeing? Is that what the inference is of that?

MR. CHHELAVDA: Yes. So it would be included in that 5.5.

MR. DUMKA: So it is definitely in there.

MR. CHHELAVDA: Yes.

MR. DUMKA: Okay, thanks.

MR. JODOIN: Does that satisfy the need and we no longer have to produce the undertaking that we agreed to? Just so that we're clear.

MR. DUMKA: Yes. If you're confident that the -- that that reduction is there or the impact of the employee pension contributions going up is reflected in the 5.5, that's fine.

MR. JODOIN: Fair enough.

MR. DUMKA: Yes, thanks.

UNDERTAKING J4.10

Reference:

F-4-1

Oral Hearing Volume 4, Page 164, Line 23 – Page 166, Line 4

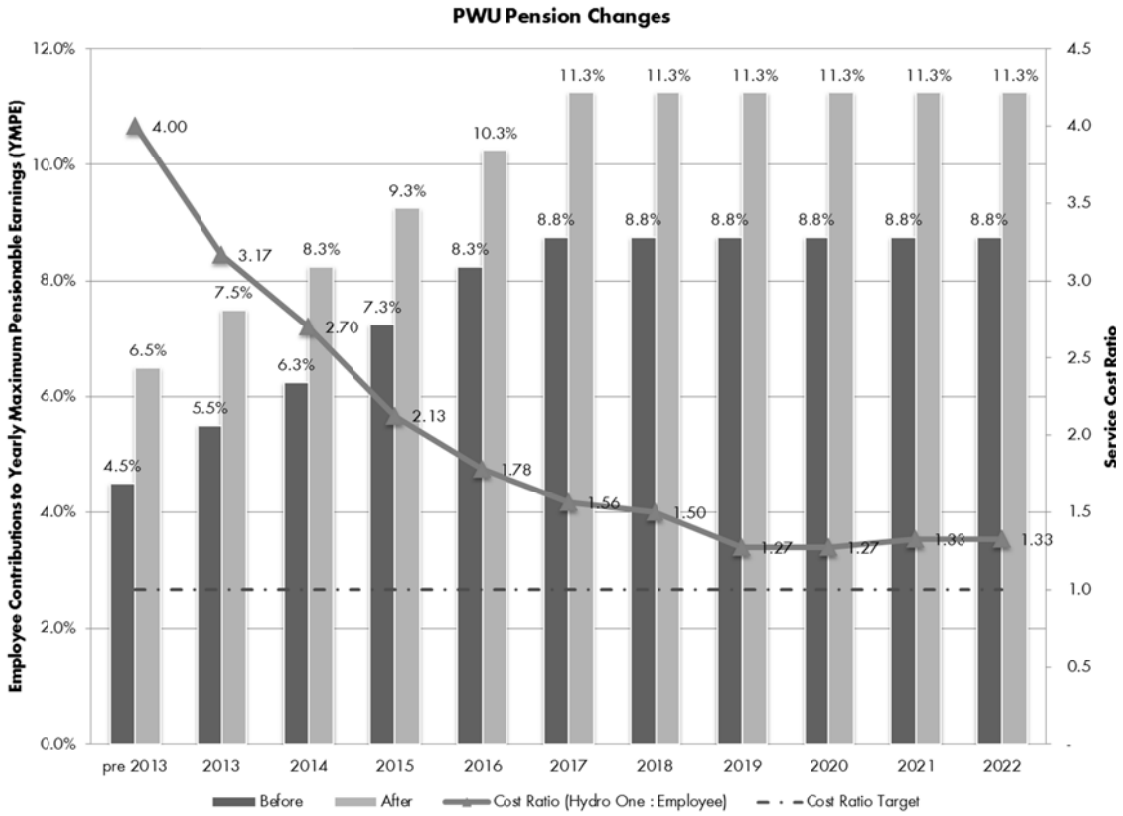
Undertaking:

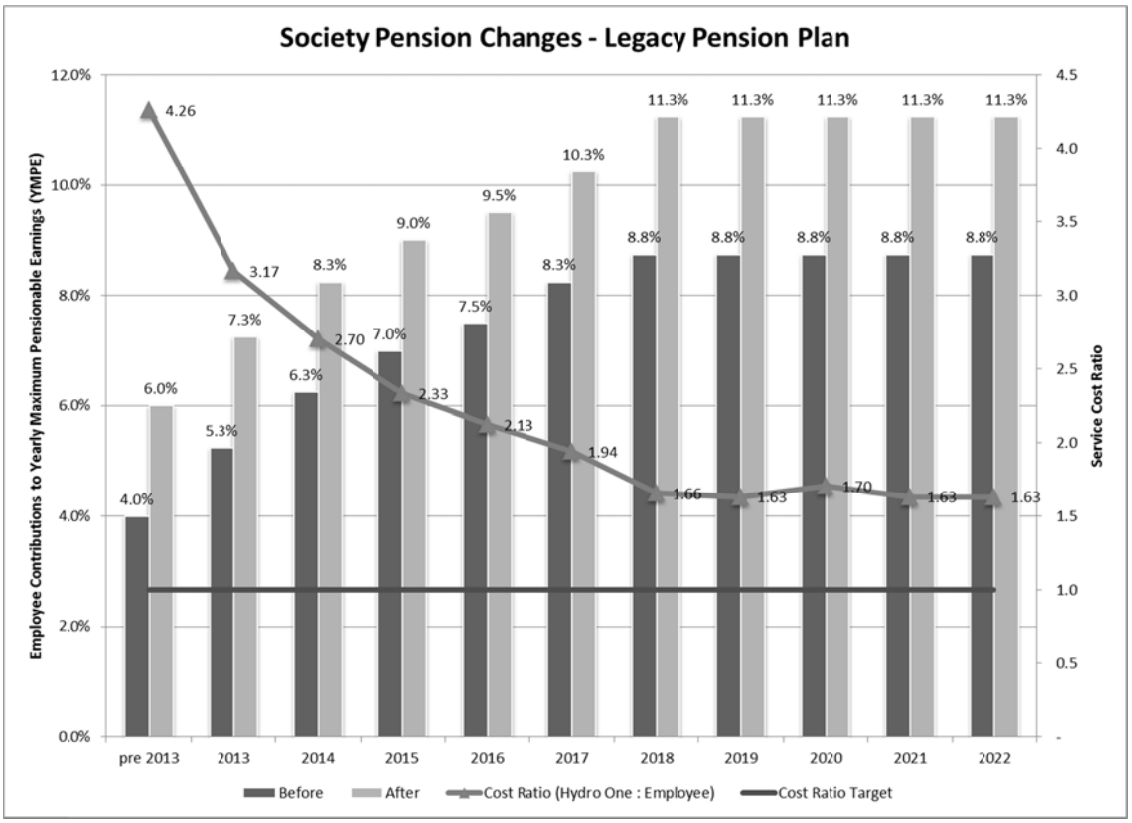
To update the employee pension contributions charts based on December 31, 2018 pension valuation.

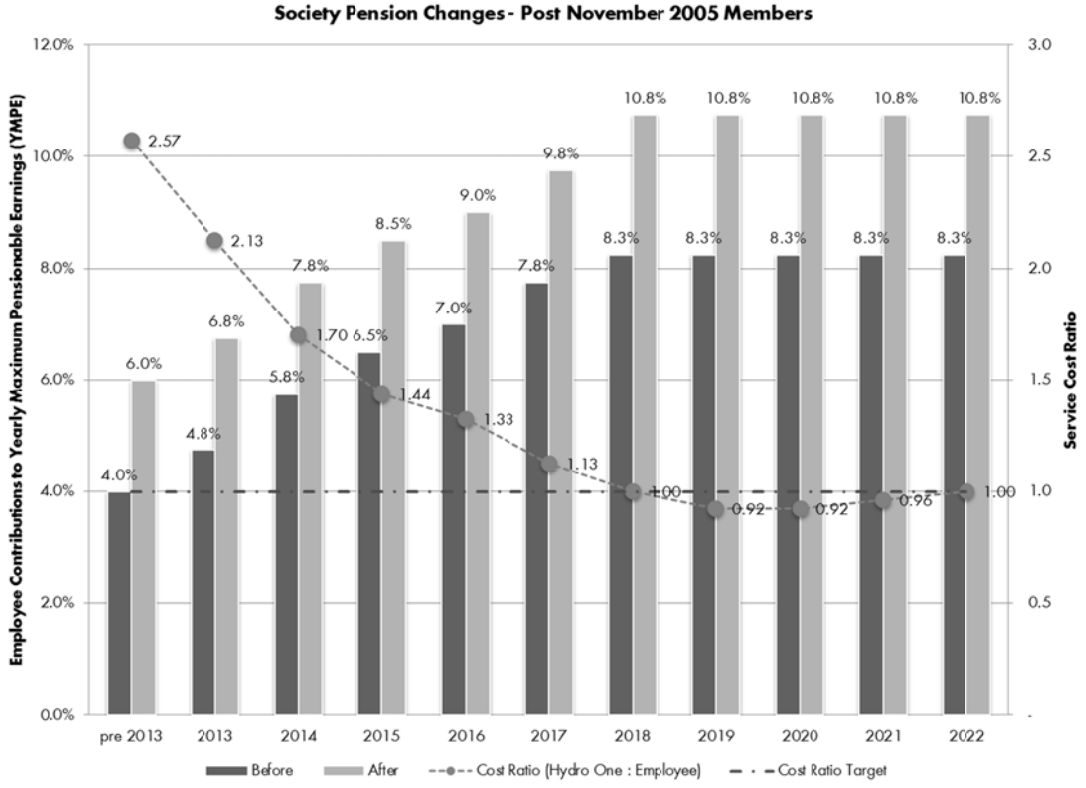
Response:

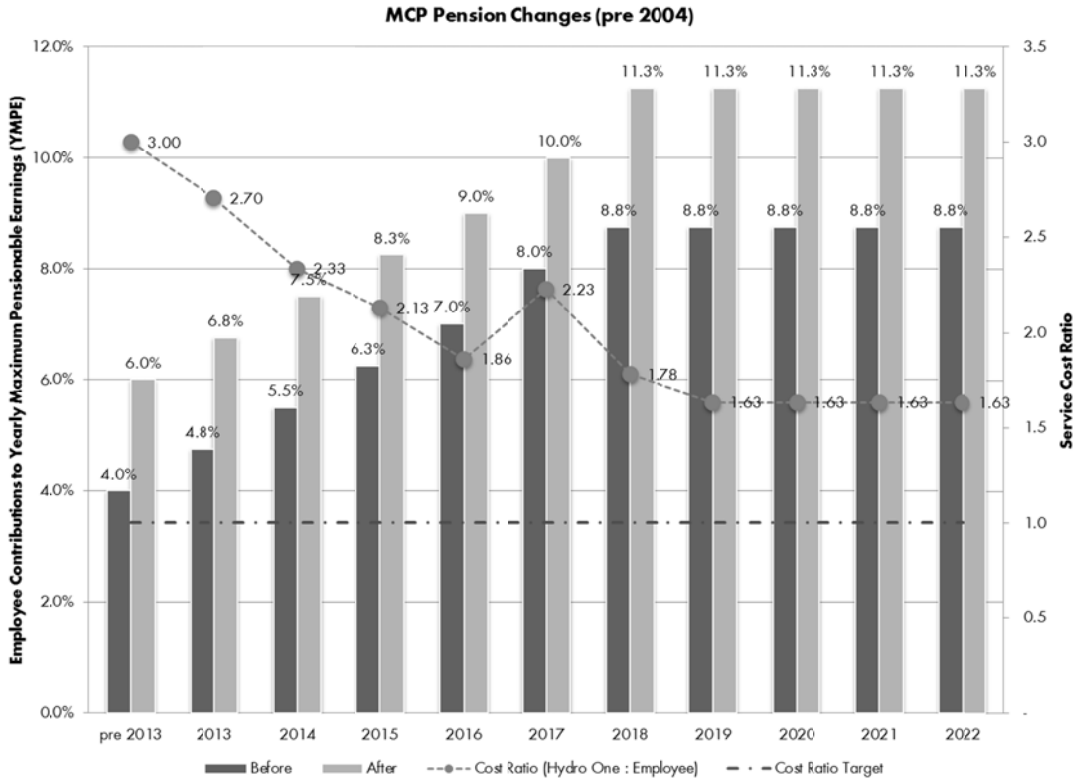
The updated pension valuation as of December 31, 2018 filed under J2.31 Attachment 1, resulted in reduced employer contributions of $12 million for 2020 test year and similar amounts for 2021 and 2022 test years. In addition, the updated pension valuation shows significant improvement in the service cost ratio for all groups, as depicted in the following charts.

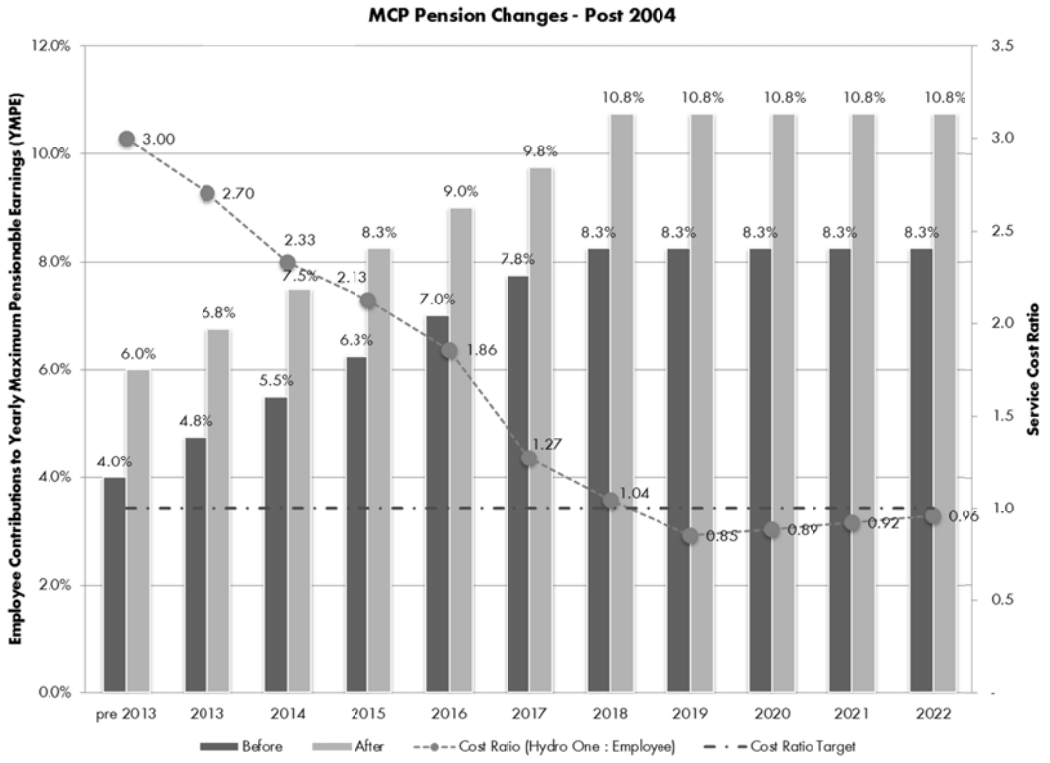
The improvements in the service costs ratios across all employee groups are a result of Hydro One's continued focus since 2013 on increasing employee pension contributions and changing the pension benefits for all groups.


PWU Pension Changes
Employee Contributions to Yearly Maximum Pensionable Earnings (YMPE)
Service Cost Ratio
12.0%
10.0%
8.0%
6.0%
4.0%
2.0%
0.0%
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
-
4.5%
6.5%
5.5%
7.5%
6.3%
8.3%
7.3%
9.3%
8.3%
10.3%
8.8%
11.3%
8.8%
11.3%
8.8%
11.3%
8.8%
11.3%
8.8%
11.3%
8.8%
11.3%
4.00
3.17
2.70
2.13
1.78
1.56
1.50
1.27
1.27
1.33
pre 2013
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
Before
After
Cost Ratio (Hydro One : Employee)
Cost Ratio Target


Society Pension Changes - Legacy Pension Plan
Employee Contributions to Yearly Maximum Pensionable Earnings (YMPE)
Service Cost Ratio
12.0%
10.0%
8.0%
6.0%
4.0%
2.0%
0.0%
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
-
4.26
3.17
2.70
2.33
2.13
1.94
1.66
1.63
1.70
1.63
1.63
6.0%
7.3%
8.3%
9.0%
9.5%
10.3%
11.3%
11.3%
11.3%
11.3%
11.3%
4.0%
5.3%
6.3%
7.0%
7.5%
8.3%
8.8%
8.8%
8.8%
8.8%
8.8%
pre 2013
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
Before
After
Cost Ratio (Hydro One : Employee)
Cost Ratio Target


Society Pension Changes - Post November 2005 Members
Employee Contributions to Yearly Maximum Pensionable Earnings (YMPE)
Service Cost Ratio
12.0%
10.0%
8.0%
6.0%
4.0%
2.0%
0.0%
3.0
2.5
2.0
1.5
1.0
0.5
-
2.57
2.13
1.70
1.44
1.33
1.13
1.00
0.92
0.92
0.96
1.00
6.0%
6.8%
7.8%
8.5%
9.0%
9.8%
10.8%
10.8%
10.8%
10.8%
10.8%
4.0%
4.8%
5.8%
6.5%
7.0%
7.8%
8.3%
8.3%
8.3%
8.3%
8.3%
pre 2013
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
Before
After
Cost Ratio (Hydro One : Employee)
Cost Ratio Target


MCP Pension Changes (pre 2004)
Employee Contributions to Yearly Maximum Pensionable Earnings (YMPE)
Service Cost Ratio
12.0%
10.0%
8.0%
6.0%
4.0%
2.0%
0.0%
3.5
3.0
2.5
2.0
1.5
1.0
0.5
-
pre 2013
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
3.00
2.70
2.33
2.13
1.86
2.23
1.78
1.63
1.63
1.63
1.63
4.0%
4.8%
5.5%
6.3%
7.0%
8.0%
8.8%
8.8%
8.8%
8.8%
8.8%
6.0%
6.8%
7.5%
8.3%
9.0%
10.0%
11.3%
11.3%
11.3%
11.3%
11.3%
Before
After
Cost Ratio (Hydro One : Employee)
Cost Ratio Target


MCP Pension Changes - Post 2004
Employee Contributions to Yearly Maximum Pensionable Earnings (YMPE)
Service Cost Ratio
12.0%
10.0%
8.0%
6.0%
4.0%
2.0%
0.0%
3.5
3.0
2.5
2.0
1.5
1.0
0.5
-
pre 2013
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
3.00
2.70
2.33
2.13
1.86
1.27
1.04
0.85
0.89
0.92
0.96
4.0%
4.8%
5.5%
6.3%
7.0%
7.8%
8.3%
8.3%
8.3%
8.3%
8.3%
6.0%
6.8%
7.5%
8.3%
9.0%
9.8%
10.8%
10.8%
10.8%
10.8%
10.8%
Before
After
Cost Ratio (Hydro One : Employee)
Cost Ratio Target

UNDERTAKING J4.11

Reference:

JT-2.31, JT-2.32

Oral Hearing Volume 4, Page 166, Line 5 – Page 167, Line 10

Undertaking:

To expand and consolidate the response to JT2.31 to include data for the Society, for MCP, and for PWU.

Response:

The following table summarizes the difference between a 1:1 service cost ratio and the current service cost ratio (as per the updated valuation as of December 31, 2018) for the period of 2020 – 2022 for all defined benefit pension plans by representation.

Hydro One has made significant strides to increase employee contribution levels since 2013. As a result, the company is saving over $22 million annually by increasing employee contribution levels from 20% to over 40% from 2013 to 2019 of total pension contributions, demonstrating meaningful movement toward 50/50 cost sharing. These significant gains in reducing pension costs are set out in Exhibit F, Tab 4, Schedule 1 pages 38 – 39 and the annual savings are provided on page 40.

Difference between 1:1 and Current Service Cost Ratio			
	2020	**2021**	**2022**
PWU	$4.70M	$ 5.05M	$ 5.00M
Society	$1.30M	$1.20M	$1.20M
Management	$0.55M	$0.55M	$0.55M
Total	$6.55M	$6.80M	$6.75M

It should be noted that Hydro One has closed the Management Defined Benefit pension plan for employees hired after September 1, 2015 in favour of a Defined Contribution pension plan. As a result, the Management line does not account for the saving associated with a Defined Contribution pension plan, which would offset the above.

Witness: Sabrin Lila

UNDERTAKING J4.12

Reference:

F-2-2, I-10-VECC-40
Oral Hearing Volume 4, Page 167, Line 11 – Page 172, Line 15

Undertaking:

With reference to Exhibit F, Tab 2, Schedule 2, page 5, to provide the costs per FTE for the Human Resources department.

Response:

Hydro One's OM&A in the test year is $374.1 million which is significantly lower than the historical actuals or OEB approved amounts between 2015 and 2018. Human Resources ("HR") is one function within OM&A.

Table 1 below summarizes the HR spend per Hydro One Networks FTE. Increasing HR spend per FTE is as a result of the following, as discussed in detail in Exhibit I, Tab 10, Schedule 40:

- a shift from transactional work to more strategic work by HR;
- a shift of internal FTEs into the HR function; and
- additional HR FTEs to strengthen change management, analytics, internal HR consulting and Talent Management programming as outlined.

The increase in HR spend per FTE is driven by internal transfers of employees into the HR function and the increasing accountabilities for the HR function over time. The metric below is not meaningful without this context.

Table 1

	2015	2016	2017	2018	2019	2020
$ HR spend per FTE	$ 1,684	$ 1,865	$ 2,197	$ 2,551	$ 2,593	$ 2,657

Witness: Sabrin Lila

UNDERTAKING J5.1

Reference:

JT-2.19

Oral Hearing Volume 5, Page 67, Line 27 – Page 69, Line 17

Undertaking:

To provide the fleet utilization rate for 2017 to 2019

Response:

The fleet utilization rates for 2017, 2018 and forecasted for 2019 are:

Year	Utilization % Rate
2017	71%
2018	77%
2019 Forecast	78%

As evident from the table above, the increase in the fleet utilization rates are due to telematics and fleet right-sizing initiatives.

UNDERTAKING J5.2

Reference:

JT-2.22

Oral Hearing Volume 5, Page 74, Line 20 – Page 77, Line 3

Undertaking:

On a best effort basis, to recast the table provided in JT-2.22 to exclude overtime and a forecast for 2019. Additionally on a best effort basis to include targets for billable hours ratio for the test period, based on wrench study productivity improvements.

Response:

The table below provides an updated billable ratio previously presented in response to JT-2.22 excluding overtime from the calculation:

(%)	2015	2016	2017	2018	2019 Forecast
Billable Hours Ratio	83	83	82	82	82
Non-Billable Hours Ratio	17	17	18	18	18
Total Hours	**100**	**100**	**100**	**100**	**100**

Target billable hours ratio for the test period based on wrench study productivity improvements is not available.

UNDERTAKING J5.3

Reference:

JT-2.22, J-5.2, C-9-2, Table 1
Oral Hearing Volume 5, Page 77, Line 4 – Page 80, Line 12

Undertaking:

When providing the billable ratio undertaking, to advise what's included and what's not included in terms of percentages.

Response:

The Billable Hours Ratio is the percentage of total hours that are charged to the work program or other recoverable work. The ratio quantifies how much of an employee's time is spent on direct work. It is used for analysis and in the development of the standard rates.

Billable Hours Ratio = Billable Hours / Total Hours (Billable Hours + Non-Billable Hours)

Billable Hours: represents the view of the timesheet hours that were charged directly to work program or other recoverable work (capital, OMA, and external)

Non Billable Hours: represents the hours that do not directly impact the work program.

The Non Billable Hours are represented in the following categories from Table 1 of the Costing of Work: Labour Rate Exhibit (C-09-02):

- Contractual time away from work (Sickness, Accidents, Vacation, Holidays, banked time)
- Time not directly benefiting a specific Project or Program (Safety Training, Meetings, etc.)

The Billable Hours Ratio is used in the development of the standard rates outlined in the Costing of Work: Labour Rate Exhibit (C-09-02).

Total payroll and expense costs, along with an assignment of support activity costs, divided by the forecast billable hours (derived using historical Billable Hour Ratio), derive the standard labour rate.

Witness: Robert Berardi, Joel Jodoin

UNDERTAKING J5.4

Reference:

F-4-1, Table 2

Oral Hearing Volume 5, Page 87, Line 15 – Page 88, Line 27

Undertaking:

To provide a reference for forecast FTEs for 2017-2018

Response:

Hydro One did not forecast FTEs in the last Transmission proceeding (EB-2016-0160). FTEs were first introduced in C1, Tab 2, Schedule 1 as part of the Distribution proceeding (EB-2017-0049).

2018 FTE forecast was provided in the current Transmission Application in Exhibit F, Tab 4, Schedule 1 submitted on March 21, 2019. The 2018 FTE forecast was updated to reflect actuals on June 19, 2019

Undertaking JT 2.08 in the current application reconciles the Distribution filing FTEs in (EB-2017-0049) with the Transmission application FTEs (EB-2019-0082).

UNDERTAKING J5.9

Reference:

K-5.5

Oral Hearing Volume 5, Page 167, Line 20 – Page 170, Line 21

Undertaking:

To review the orange highlighted parts of K5.5 to confirm staff calculations, to provide agreed-upon compensation data; with respect to row 227, to explain the increases in transmission compensation per FTE.

Response:

Hydro One has reviewed the additional calculations in Exhibit K5.5 highlighted in orange and can confirm that they are mathematically correct, however, they do not take into account increasing FTEs levels to support the growing work program. Hydro One has completed an FTE based analysis in J6.1 including detailed explanations.

With respect to row 227 (year over year increase in Total Transmission Cost per FTEs), these small increases during the test period are largely due to base escalations which subsequently result in increases in the various components that make up the labour burdens, labour burden changes, and allocation differences year over year between Transmission and Distribution.