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Frank D'Andrea
Vice President, Chief Regulatory Officer,
Chief Risk Officer

BY COURIER

June 7, 2018

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

Dear Ms. Walli,

EB-2017-0049 – Supplemental Interrogatory Responses, Witnesses' CVs for Oral Hearing in Hydro One Networks Inc.'s 2018-2022 Distribution Custom IR Application (the "Application")

Pursuant to Procedural Order No. 6 in the above-noted proceeding, please find enclosed written responses to the supplemental interrogatories on the November 2017 Willis Towers Watson study and updates to interrogatories resulting from the updated Mercer study. Please be advised that Hydro One has not provided written responses to the supplemental interrogatories submitted by VECC as they went beyond the scope of what the OEB ordered in Procedural Order No. 6.

Also enclosed are:

- an updated Exhibit I-46-VECC-091, which Hydro One has modified after discovering an error in its interpretation of part c) of the interrogatory; and
- the curricula vitae of the witnesses who will be appearing at the hearing of this matter.

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

Hydro One's points of contact for service of documents associated with the Application remain as listed in Exhibit A, Tab 2 Schedule 1.

Sincerely,

ORIGINAL SIGNED BY FRANK D'ANDREA

Frank D'Andrea

Encls.
cc. EB-2017-0049 parties (electronic)

School Energy Coalition Interrogatory # 102

Issue:

Issue 40: Are the proposed 2018 human resources related costs (wages, salaries, benefits, incentive payments, labour productivity and pension costs) including employee levels, appropriate (excluding executive compensation)?

Interrogatory:

With respect to the Willis Towers Watson, *Management and Non-Represented Role Benchmarking and 2018 Compensation Structure Recommendations* report:

a) [p.2] The report says, "[t]he recommendations reflect the continued transition of the management compensation program, in accordance with the principles established in 2015". Please provide a copy of these referenced principles.

b) [p.9-15] Please explain the differences in the comparator groups in the report from that of the Willis Towers Watson, *Competitive Compensation Review* (C1-2-1, Attachment 2).

c) Please provide the full terms of reference that were given to Willis Towers Watson.

d) The report provided a number of proposed changes/recommendations. For each, please explain if Hydro One has agreed to implement those changes and the status of their implementation. For those that Hydro One has decided not to implement, please explain why not.

e) Please provide the aggregate forecast annual impact on Hydro One of the proposed changes set out in the report, and the aggregate impact on the proposed changes Hydro One has agreed to implement, in full or in part.

f) Please provide similar information as part (e) for Hydro One's distribution business only.

g) Are the impacts of any proposed changes Hydro One has agreed to implement incorporated into the forecast budgets in the application?

Response:

a) The following are the key principles of Hydro One's compensation philosophy as established in 2015.

Principle	Key Philosophical Tenets & Considerations
Stakeholder interests	• Recognize our role as a significant Ontario employer and service provider with, customer, shareholder, employee and regulatory stakeholders
Performance oriented	• Reinforce a Pay-for-Performance culture • Align performance objectives to strategy and core values over the short- and long-term • Focus on sustainable organization results that support long-term value creation for shareholders
Market competitive	• Align target rewards with market median, leveraging a segmented approach • Individual rewards, actual rewards and specific reward elements can be above/below median
Risk management	• Support an appropriate level of risk taking that balances short- and long-term objectives
Affordable	• Ensure affordability and sustainability
Individual accountability	• Foster a culture of individual ownership and accountability, while encouraging effective teamwork • Create meaningful differentiation of rewards based on business-aligned individual performance results
Operational focus	• Ensure sustained development of strong core operational skills in providing for business continuity
Shared responsibility	• Support the diverse needs of employees throughout their careers • Employees will share the risks and responsibilities for their current and future needs
Simple and integrated	• Programs will be simple to understand and administer • Communicate the integrated value of monetary and non-monetary rewards

b) In both studies, benchmarking was conducted using similar segmented labour markets for talent. The 2017 study added a 3rd peer group for Executives who had a core service (i.e. not industry specific) focus (41 companies). The peer groups are relatively consistent between the two benchmarking studies. The 2015 study had 28 and 76 companies respectively for the Core Operational and Support peer groups. The 2017 study had 21 and 93 companies respectively for the Operations and Core Services (called "Support" in the 2015 study). It is typical practice to review the peer group at the outset of each study to ensure the organizations included continue to reflect the industry, geography, size and ownership makeup to remain a peer. Modest changes were made to reflect organizations that participated in the most recently salary surveys to ensure data was available for benchmarking purposes.

c) Please see Attachment 1 for the terms of reference for the study.

d) Hydro One has implemented all of the recommended changes in its operations, but has not amended this Application to reflect any changes in costs.

e)

Proposed Change	**Impact on Hydro One's Total Costs (Annual)**
Change to base salary structure (including new structure for legal and tax positions)	No financial impact
Change to LTIP Eligibility and Vehicle Mix for MCP Directors	$1.2 million
2018 Merit Pay Budget of 2.5%	$2.15 million

f) Detailed below is the impact on only the distribution business of the total $1.2 million resulting from change to LTIP Eligibility and Vehicle Mix for MCP Directors.

Distribution OM&A:	$0.3 million
Distribution Capital Expenditure:	$0.34 million
Distribution Total Impact:	$0.64 million

g) No. The accepted recommendations have not impacted the forecasted budgets in this Application.

Willis Towers Watson

September 13, 2017

Ms. Sabrin Lila
Manager Compensation and HR Systems
Hydro One Inc.
483 Bay Street
South Tower, 8th Floor
Toronto, ON M5G 2P5

STATEMENT OF WORK **– Benchmarking & Salary Structure Support (Management Group)**

Dear Sabrin,

Following up on recent discussions, Willis Towers Watson is looking forward to assisting with advisory support related to the preparation and review of benchmarking results, and salary structure recommendations for Management employees. The goal of this transition year is to ensure knowledge transfer of the methodology and approach to benchmarking established during the IPO process, including a philosophy of segmented peer groups and market positioning. As such, the level of over-the-shoulder support needed to replicate this process is anticipated to be lower in future years.

This agreement will confirm the Statement of Work (SOW) and terms of the engagement of the Willis Towers Watson entity identified below or any of its affiliates ("Willis Towers Watson," "we" or "us") with Hydro One Inc. ("Hydro One'" or "you"), whereby Willis Towers Watson will provide certain consulting services as described herein ("Services").

Scope of Services

Willis Towers Watson will provide consulting services described in Exhibit 1 of this SOW. Sandra McLellan will serve as the Engagement Lead and ensure that all work streams (job leveling, executive compensation, etc.) are aligned. Darcy Clark and Akbar Raza will provide day to day support related to benchmarking and salary structure modeling as well as use of Willis Towers Watson surveys. Other Willis Towers Watson personnel may assist with the project as needed. Timelines will be contingent on the availability of Hydro One resources and data at critical milestones. A detailed overview of proposed timing, assumptions and deliverables is provided in Exhibit 1.

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W willistowerswatson.com

Terms and Conditions of Engagement

At the date of execution of this Statement of Work, the Services shall be provided in accordance with the general terms of Contract Standard A- 29 – 2011 (October 2011, Release Date of January 15, 2014) (the "Contract"). The parties are currently negotiating a master services agreement ("Master Agreement") and upon execution of the Master Agreement, the Services shall be governed by the Master Agreement in lieu of the Contract.

Proprietary Rights

Notwithstanding anything contained in the Contract, the parties understand and acknowledge that:

The approach to benchmarking and salary structure design utilized by Willis Towers Watson as well as our proprietary salary survey database is pre-existing intellectual property of Willis Towers Watson and ownership of such materials will be retained by Willis Towers Watson.

Hydro One shall own all proprietary rights to all results of the analysis conducted and compensation programs they design as a result of using the Willis Towers Watson data and methods. Hydro One will retain ownership of the compensation programs designed by Hydro One for Hydro with over the shoulder assistance from Willis Towers Watson assistance.

Nothing herein prevents either party or its employees from using any general knowledge, skills or experience acquired or gained in the course of performing, producing or using the deliverables.

Fees and Expenses

The Services will be provided on a time and expenses basis, based on our standard hourly rates in effect at the time the Services are performed. We estimate the fees for this assignment to be approximately $[redacted] to [redacted], excluding Ontario HST and the customary technical and administrative fee of 7%. Survey access charges of $[redacted], excluding Ontario HST which provide advanced access to the Willis Towers Watson Middle Management/Professional Services and Executive Survey for the Energy and General Industry Sectors are in addition.

If this SOW accurately describes the scope of services, please have an authorized representative of Hydro One sign and return a copy of this SOW to us.

Willis Towers Watson appreciates the opportunity to be of service to Hydro One. If you have any questions now or during the course of our engagement, please contact me.

Signed by and on behalf of:
Towers Watson Canada Inc.

By: [redacted]

Print Name: [redacted]

Print Title: Director, Client Management

Date: September 13, 2017

Accepted and agreed on behalf of:
Hydro One Inc.

By: [signature]

Print Name: Sabrin Lila

Print Title: Mgr. Comp + HR Systems

Date: Sept 18, 2017

Attachment: Exhibit 1 – Scope of Services, Timeline, Assumptions and Fees

OI:SM:pf

Exhibit 1 – Scope of Services, Timeline, Assumptions and Fees

Project Step	Details	Due Date
1. Working Session to Agree on Benchmarking and Salary Structure Design Strategy	▪ WTW and Hydro One three-hour core team meeting to review: ▪ Segment definitions and principles ▪ Peer group and compensation philosophy agreed by the board ▪ Proposed peer groups for 2017 (based on survey participant list) ▪ WTW survey methodology ▪ Hydro One level to survey level alignment read-across ▪ Orientation to preliminary matches and principles for job family to survey discipline alignment ▪ Additional considerations for Executive (VP) benchmarking ▪ Use of aging factors ▪ Rules for function vs discipline data ▪ Principles for designing updated salary ranges (range width, tolerance for premium job families, etc.) ▪ Assumes WTW will prepare meeting materials, recommend updated peer groups, facilitate the session and document decisions	▪ Working Session Scheduled for September 22
2. Set up Analysis Spreadsheet and Report Out Template	▪ WTW will recommend an approach for setting up the analysis spreadsheet and summarizing findings ▪ WTW to provide a training session on using Comp Online to access desired peer group data including considerations for size adjusting executive matches ▪ Hand-over call with Hydro One ▪ Assumes Hydro One will be accountable for populating the analysis spreadsheet with employee and benchmark data ▪ WTW to provide over the shoulder support as needed	▪ October 6
3. Conduct and Refine Analysis	▪ Hydro One to pull all data for identified matches, and perform an initial round of analysis ▪ WTW to conduct a separate review of LTI trend data and provide to Hydro One for inclusion in analysis and report ▪ Call with WTW to review initial data and discuss any open cleaning/refinement issues ▪ Meeting with full core team to review finalized data and discuss implications for salary structures ▪ WTW to provide over the shoulder support as needed	▪ October 17
4. Model Structures and Conduct Impact Analysis	▪ Hydro One to model salary structures and conduct impact analysis ▪ One review call with WTW to review recommendations ▪ Assumes that Hydro One will determine an approach for maintaining employee database up to date as mapping is finalized ▪ It is recommended that Hydro One conduct a pay equity review prior to finalizing structures – pay equity support is not included in this statement of work	▪ October 24
5. Summarize Results	▪ Hydro One to summarize findings for review by internal stakeholders ▪ Assumes one review and suggested edits provided by WTW	▪ October 31

As this is an extension of the job leveling work we continue to include a 10% discount on our fees for this work. This discount has been reflected in the fee estimate below.

The table below provides a breakdown of the estimated hours by project team member for each component of the project (for simplicity we have outlined the hours at the high-end of the range).

Project Step	Sr Consultant	Consultant	Sr. Analyst	Admin	Total
Rates (with 10% discount)	[redacted]	[redacted]	[redacted]	[redacted]	N.A.
Hours and fees by project member					
1. Compensation structure update	10	20	48	2	80 [redacted]

Association of Major Power Consumers in Ontario Interrogatory #S1

Issue:

Issue 40: Are the proposed 2018 human resources related costs (wages, salaries, benefits, incentive payments, labour productivity and pension costs) including employee levels, appropriate (excluding executive compensation)?

Reference:

WTW Study Page 2

Interrogatory:

a) Please provide any updates to the compensation philosophy between 2016 and now.

b) Please provide the cost impact in each of the years 2018 to 2022 linked to the compensation structure changes to be implemented.

Response:

a) There are no updates to the approved compensation philosophy.

b) Please see Exhibit I Tab 40 Schedule Staff –S6. There is no impact on the revenue requirement in this Application.

Association of Major Power Consumers in Ontario Interrogatory #S2

Issue:

Issue 40: Are the proposed 2018 human resources related costs (wages, salaries, benefits, incentive payments, labour productivity and pension costs) including employee levels, appropriate (excluding executive compensation)?

Reference:

WTW Study Page 2

Interrogatory:

Preamble: HONI's workforce composition is provided for 2016.

a) Please provide HONI's workforce composition for 2012, 2015 and 2017.

Response:

Hydro One's workforce composition information for 2015 and 2017 has been provided and is aligned with data in Table 1 of Exhibit C1, Tab 2, Schedule 1 and the table in Attachment 6 to the same Exhibit on page 7. The 2012 workforce composition information has not been provided, as the methodology used to derive the 2015 and 2017 information was not used at that time.

Employee Group	Employee Distribution		Total 2015 Payroll Costs
	# of Employees	% of Total	
Management and Non Represented	597	7.0%	$ 142,237,587
Represented Employees (Including Casual and Hiring Hall	7480	93.0%	$ 1,076,304,579
Total	**8077**	**100.0%**	**$ 1,218,542,166**

Employee Group	Employee Distribution		Total 2017 Payroll Costs
	# of Employees	% of Total	
Management and Non Represented	679	7.9%	$ 168,062,108
Represented Employees (Including Casual and Hiring Hall	7902	92.1%	$ 1,090,442,298
Total	**8581**	**100.0%**	**$ 1,258,504,406**

Association of Major Power Consumers in Ontario Interrogatory #S3

Issue:

Issue 40: Are the proposed 2018 human resources related costs (wages, salaries, benefits, incentive payments, labour productivity and pension costs) including employee levels, appropriate (excluding executive compensation)?

Reference:

WTW Study Page 5

Interrogatory:

Preamble: The evidence details the proposed base salary structure movement for VP/SVP, Operations and Core Services.

a) Please provide the original base salary structure movement for VP and SVP, Operations and Core Services.

Response:

Executive	Base Salary		
Band	Min	Mid	Max
Band 3	$233.0	$312.0	$391.0
Band 4	$164.0	$214.0	$264.0

Core Operational	Base Salary		
Band	Min	Mid	Max
Band 5	$127.0	$165.0	$203.0
Band 6	$110.0	$138.0	$166.0
Band 7	$92.0	$115.0	$138.0

Support	Base Salary		
Band	Min	Mid	Max
Band 5	$119.2	$155.4	$191.5
Band 6	$93.7	$122.1	$150.5
Band 7	$74.2	$101.3	$128.3
Band 8	$60.0	$74.2	$88.4
Band 9	$47.5	$58.8	$70.0
Band 10	$40.2	$49.7	$59.2

Association of Major Power Consumers in Ontario Interrogatory #S4

Issue:

Issue 40: Are the proposed 2018 human resources related costs (wages, salaries, benefits, incentive payments, labour productivity and pension costs) including employee levels, appropriate (excluding executive compensation)?

Reference:

WTW Study Page 6

Interrogatory:

Preamble: The chart shows the Proposed Structure Midpoint vs. Market Median for Executives, Operations and Core Services.

a) Please provide the numerical values that correspond to the percentages under Total Direct Compensation.

Response:

Employee Group	Proposed Structure Median TDC Midpoint (000s)	Market Median TDC (000s)	Variance of Proposed TDC Structure Midpoint to Market Median
Executive (excluding ELT)	$481	$521	-8%
Operations	**$152**	**$153**	**-1%**
Core Services	$116	$107	8%

Association of Major Power Consumers in Ontario Interrogatory #S5

Issue:

Issue 40: Are the proposed 2018 human resources related costs (wages, salaries, benefits, incentive payments, labour productivity and pension costs) including employee levels, appropriate (excluding executive compensation)?

Reference:

WTW Study Page 10

Interrogatory:

Preamble: The Executive segment is titled Executive (non-ELT)*.

a) Please define ELT.

b) Please explain the asterisk.

Response:

a) Executive Leadership Team (ELT). The ELT consists of the CEO and CEO direct reports.

b) Asterisk was originally intended as a link to a footnote defining “ELT”. Footnote was not included in the report in error.

Association of Major Power Consumers in Ontario Interrogatory #S6

Issue:

Issue 40: Are the proposed 2018 human resources related costs (wages, salaries, benefits, incentive payments, labour productivity and pension costs) including employee levels, appropriate (excluding executive compensation)?

Reference:

WTW Study Page 16

Interrogatory:

a) Under the Compression Analysis for Core Services, please explain why overtime was excluded.

b) Please provide the impact for Level 4 & Level 5 if overtime is included.

Response:

a) In the "Feeder Role Avg. Total Cash Compensation" field, the values for level 4 and 5 do include overtime pay. The complete definition of what elements were included in total compensation for feeder bargaining unit roles are noted on page 15 and summarized below.

Feeder Role Bargaining Unit Compensation

- Base salary at the most prevalent step of the feeder band (typically top step)
- Average actual annualized overtime for the past two years experienced by the feeder roles
- Base salary was not adjusted to recognize transition from a 35 hour work week to a 40 hour work week for management group roles, but should be acknowledged as a consideration

b) Overtime is currently included in the primary feeder scenarios, however excluded in the feeder destination scenarios since eligibility for overtime pay would cease upon promotion to the management group.

Canadian Manufacturers & Exporters Interrogatory #S1

Issue:

Issue 40: Are the proposed 2018 human resources related costs (wages, salaries, benefits, incentive payments, labour productivity and pension costs) including employee levels, appropriate (excluding executive compensation)?

Reference:

Exhibit Number TBD, Updated Compensation Study, Willis Towers Watson "Management and Non-Represented Role Benchmarking and 2018 Compensation structure Recommendations" November 28, 2017

With respect to the Willis Towers Watson "Management and Non-Represented Role Benchmarking and 2018 Compensation Structure Recommendations" (the "WTW Report"):

Interrogatory:

a) Provide a copy of the "Hydro One 2016 Actual Payroll Summary" provided to Willis Towers Watson which is referenced on page 2 of the WTW Report.

b) Please provide a copy of any other documentation provided by Hydro One Networks Inc. to Willis Towers Watson for the purposes of the WTW Report.

c) Please advise which of the Willis Towers Watson recommendations have already been implemented for 2018 by Hydro One, if any, and the total increase in compensation costs as a result of the implemented recommendations.

d) Please advise the projected total increase in compensation costs for 2019, 2020, 2021, and 2022 based on the recommendations made in the WTW Report.

Response:

a) Hydro One provided Willis Towers Watson a detailed master data file covering 755 individual incumbents across the organization. This file was used as the basis in deriving actual payroll summary figures. The data file provided to Willis Towers Watson cannot be provided because of the personal information contained therein which includes the following relevant data fields.

Incumbent Scope Data	
Employee ID	Relief Indicator
Employee Name	Job Record (Home Base / Relief)
Job ID	Session
Job Title	Critical Role Status
Pay Scale Group	Job Family
Company/Business Unit	Job Discipline
Division	Career Stream
Department	Level
Work Location	Job Family Comments
Supervisor ID	Other Comments
Supervisor Name	HRC
ELT Status	Emp-Job
Job Entry Date	Segment
Incumbent Pay Data	
Employee Annual Salary	Salary Maximum
Salary Minimum	Short-term Incentives
Salary Midpoint	Long-term Incentives

b) Willis Towers Watson relied on the detailed master data file for the purposes of developing the report. Upon receipt of Hydro's One's complete incumbent data file, Willis Towers Watson utilized a standard process applied to all benchmarking exercises to validate and confirm individual position matches to the appropriate segment, job level and survey benchmark match. Willis Towers Watson validated any perceived inconsistencies with Hydro One throughout the process to ensure validity of all data

c) Please refer to Exhibit I Tab 40 Schedule Staff –S6.

d) Please refer to Exhibit I Tab 40 Schedule Staff –S6.

OEB Staff Interrogatory #S1

Issue:

Issue 40: Are the proposed 2018 human resources related costs (wages, salaries, benefits, incentive payments, labour productivity and pension costs) including employee levels, appropriate (excluding executive compensation)?

Interrogatory:

Please state why the WTW current study was filed with the Mercer current study and how the two studies are interrelated. Please also discuss why the WTW current study was not filed earlier in the current proceeding given that it is dated November 28, 2017.

Response:

The existence of the 2017 WTW study was discovered in April 2018 by the Hydro One team involved in this proceeding. Hydro One apologizes for any inconvenience that this may have caused.

The Willis Towers Watson (WTW) benchmarking for management and non-represented roles report was filed with the updated 2017 Mercer Total Compensation Study to provide a multi-faceted and comprehensive understanding of Hydro One's competitive market positioning. The two studies should be viewed as independent to one another. The Mercer Total Compensation Study benchmarks total remuneration across all employee groups. The WTW report provides competitive market positioning for management and non-represented jobs only, on the basis of Total Direct Compensation (base salary, + target bonus + other compensation + long-term incentives) and excludes the estimated values of pension and benefits. WTW's study also assesses competitive positioning using multiple peer groups, i.e. a segmented approach. Due to the nature and purpose of these studies, benchmarked roles and peer groups are different. Both studies show Hydro One's management and non-represented (MCP) compensation is approximately at market median and within the market competitive range.

OEB Staff Interrogatory #S2

Issue:

Issue 40: Are the proposed 2018 human resources related costs (wages, salaries, benefits, incentive payments, labour productivity and pension costs) including employee levels, appropriate (excluding executive compensation)?

Reference:

WTW Current Study, p. 2

Interrogatory:

At the above reference, it is stated that:

"Willis Towers Watson was engaged by Hydro One to benchmark salary structures including director level LTIP eligibility. The recommendations reflect the continued transition of the management compensation program, in accordance with the principles established in 2015."

a) Please state which principles established in 2015 are being referenced.

b) Please discuss how the WTW current study relates to the TW 2015 executive compensation study and TW 2015 competitive compensation review. Please include in the discussion whether the purposes and mandates of the 2015 and current reports were the same or different and, if so, how.

c) Please state whether or not the WTW current study was by the same author as the 2015 reports, or if not who the author(s) of the current report is/are and describe their qualifications.

Response:

a) Please refer to Exhibit I-40-SEC-102.

b) Hydro One initially engaged WTW in July 2015 to provide independent advisory compensation support as it relates to assessing Hydro One's current competitive positioning and alignment to market best practices. In 2015, WTW worked with Hydro One to establish a set of compensation principles that were reviewed and approved by the Human Resources and Compensation Committee of Hydro One's Board of Directors. WTW then completed

the 2015 benchmarking studies consistent with the approved compensation principles. In 2017, WTW completed the referenced benchmarking study based upon the most currently available market compensation data and the same underlying compensation principles used in the 2015 benchmarking study.

c) Ryan Resch and Sandra McLellan co-authored both reports. Willis Towers Watson services are also provided by a team of consultants with many years of content and industry expertise in both executive and broad-based compensation. To ensure continuity of services to clients, consistent team members are aligned to client accounts over time. Work is subject to professional excellence standards, including internal reviews to ensure consistency in methodology, approach and reporting. As such, reports are not considered as authored by one individual as a single point, but delivered by a consulting team subject to company standards for delivery of work product.

OEB Staff Interrogatory #S3

Issue:

Issue 40: Are the proposed 2018 human resources related costs (wages, salaries, benefits, incentive payments, labour productivity and pension costs) including employee levels, appropriate (excluding executive compensation)?

Reference:

WTW Current Study, p. 2

Interrogatory:

At the above reference, the evolution of Hydro One's compensation structure is discussed and it is stated that:

"Between 2015-2016, the following compensation structures and programs were introduced to support the transition to a new ownership structure, industry practice, and current business priorities:

- a new compensation philosophy
- an updated Short Term Incentive Plan (STIP)
- a Long Term Incentive Plan (LTIP) for executives (VP and above) and phased introduction for directors (≈50% eligibility at a value of 20% of salary)
- a more rigorous and detailed job level framework to better reflect progressive job scope and complexity
- a segmented approach to competitive benchmarking and salary structures, reflecting market differences while considering career progression of talent from bargaining unit levels."

a) For each of the compensation structures and programs listed, please state which of the referenced factors, i.e. transition to a new ownership structure, industry practice, or current business priorities was the key driver in their introduction, or if more than one was a key driver which ones, and why this was the case.

b) Please provide the implementation status of each of the structures and programs referenced above.

Response:

a)

- a new compensation philosophy – new ownership structure and future business priorities
- an updated Short Term Incentive Plan (STIP) - industry practice and current business priorities
- a Long Term Incentive Plan (LTIP) for executives (VP and above) and phased introduction for directors (~50% eligibility at a value of 20% of salary) - ownership structure, industry practice and current business priorities
- a more rigorous and detailed job level framework to better reflect progressive job scope and complexity - industry practice and current business priorities
- a segmented approach to competitive benchmarking and salary structures, reflecting market differences while considering career progression of talent from bargaining unit levels. - industry practice and current business priorities.

b) All of the above have been implemented.

OEB Staff Interrogatory #S4

Issue:

Issue 40: Are the proposed 2018 human resources related costs (wages, salaries, benefits, incentive payments, labour productivity and pension costs) including employee levels, appropriate (excluding executive compensation)?

Reference:

WTW Current Study, p. 3

Interrogatory:

At the above reference, background on the level structure and distribution of incumbents is provided and it is stated that:

"Full implementation of the segmented salary structures was not possible before aligning all jobs to the more structured and rigorous level framework. Using a consistent year-over-year sample, the distribution of incumbents by the new levels, compared to the legacy band structure is summarized below."

Two graphs are then shown, one labelled "Legacy Band Structure Distribution" and the other "Current Level Structure Distribution."

Please clarify how these graphs should be interpreted. For instance for the "Legacy Band Structure Distribution" at the EVP level, the numbers shown are 2 and 5. The "Current Level Structure Distribution" for the EVP level shows equivalent numbers of 11 and 5. Please provide an explanation of the differences between these two graphs that will make clear how these four numbers for all levels shown should be interpreted including what the significance is of the colour bars on each side of the graphs.

Response:

Hydro One continued its job levelling initiative in 2017, which involved a complete levelling review for all management and non- represented roles. The purpose of job levelling was to transition and align all jobs from the legacy band structure to the modernized job levels using a new job evaluation framework. A complete job levelling review was required in order to fully introduce and implement the segmented salary structures.

The two graphs shown on page 3 illustrate the legacy MCP Band structure and the new management and non-represented level structure. The legacy MCP bands went from MCP Band 10 (entry level) to MCP Band 1 (CEO). The new Level structure consists of 12 levels – Level 1 (entry level) to Level 12 (CEO). Legacy MCP bands 5 (Director) and 4 (VP) are now differentiated by two levels and align to variations in scopes of responsibility and provide for an additional level of granularity for each job in the levelling process. Levels 6 and 7 now align to the Director level, and Levels 8 and 9 align to the VP level.

The numbers on the right side of the legacy band structure distribution graph are intended to provide the individual incumbent distribution across each level of the MCP Bands. For instance, under the Legacy Band Structure Distribution graph, EVP – 2 and 5 refers to MCP Band 2 with five incumbents. Similarly, under Current Level Structure Distribution, EVP 11- and 5 refers to Level 11 with five incumbents. The colour bars are a visible representation of the overall distribution and number of incumbents in each level. There is no significance associated with the different shading of colour for each bar.

OEB Staff Interrogatory #S5

Issue:

Issue 40: Are the proposed 2018 human resources related costs (wages, salaries, benefits, incentive payments, labour productivity and pension costs) including employee levels, appropriate (excluding executive compensation)?

Reference:

WTW Current Study, p. 4

Interrogatory:

At the above reference, it is stated that:

"Programs must also enable attraction and retention of the talent needed to operate a regulated utility and support the growth mandate. This includes providing opportunities for career progression and supporting promotion from within, particularly within the Operations segment."

a) Please state whether or not WTW believes Hydro One's programs prior to the implementation of the programs discussed in the WTW current study, were sufficient to attract and retain talent and what the basis of this conclusion is.

b) Please discuss the indicators that demonstrate that a program of this kind is, or is not, allowing for the attraction and retention of the necessary talent and what these indicators suggest about the situation confronting Hydro One prior to and subsequent to the implementation of the WTW proposals.

Response:

a) Willis Towers Watson is not familiar with the attraction and recruitment environment prior to 2015. The programs and benchmarking approach introduced in 2015 reflect their experience working with leading organizations in managing structural costs and the ability to recruit required talent.

b) The management compensation program needs to be robust enough to attract and retain high quality talent. In particular, there have been challenges recruiting represented employees to non-represented positions mainly due to compensation related issues. Internal data analytics, similar to the compression analysis used by Willis Towers Watson on page 16 of the report,

show there is a compression issue that results in compensation challenges when recruiting into some non-represented positions. Management experience from both the hiring manager and the recruitment consultant perspective based on internal and external recruitment would also suggest that it is not always possible to attract the best applicants to certain roles. Factors such as compensation and no longer having a defined benefit pension plan have been barriers to successfully attract some candidates to non-represented positions.

OEB Staff Interrogatory #S6

Issue:

Issue 40: Are the proposed 2018 human resources related costs (wages, salaries, benefits, incentive payments, labour productivity and pension costs) including employee levels, appropriate (excluding executive compensation)?

Reference:

WTW Current Study, p. 5

Interrogatory:

At the above reference, 2018 proposed compensation structure changes are discussed including proposed base salary structure changes and proposed LTIP eligibility and vehicle mix for directors.

a) Please state whether or not these changes have been implemented and incorporated into the 2018 forecast. If some or all have not, please state which ones have not been implemented and why.

b) For each of the changes listed on this page, please provide the estimated total cost increase to Hydro One on an annual basis and how this estimate was derived.

Response:

a) All of the recommendations have been implemented by Hydro One. The accepted recommendations have not changed the forecast budgets in this Application.

b)

a. Change to base salary structure (including new structure for legal and tax positions) – no financial impact
b. Change to LTIP Eligibility and Vehicle Mix for MCP Directors $1.2 million
c. 2018 Merit Pay Budget of 2.5% - $2.3 M but no incremental increase to current forecast since Distribution planning assumption already included a 2.0% merit increase for MCP employees.

Total of $1.2M increase annually from 2018 onward resulting from change to LTIP Eligibility and Vehicle Mix for MCP Directors, based on current salaries and target award values calibrated to a percentage of salary.

Witness: MCDONELL Keith

- Distribution OM&A portion: $0.3 M
- Distribution Capital Expenditure portion: $0.3 M
- Distribution total impact: $0.6 M

OEB Staff Interrogatory #S7

Issue:

Issue 40: Are the proposed 2018 human resources related costs (wages, salaries, benefits, incentive payments, labour productivity and pension costs) including employee levels, appropriate (excluding executive compensation)?

Reference:

WTW Current Study, p. 7

Interrogatory:

At the above reference, the statement is made that: "Increased eligibility for LTI at the director levels continues the pay mix evolution in favour of shareholder alignment and retention,"

Please explain the meaning of this statement including a discussion of whether or not and how rate impacts were factored into this analysis and, if not, why not.

Response:

The statement refers to the continued focus of variable or "at risk" pay for senior leaders in the overall compensation mix. By extending LTIP eligibility to all level 6 and 7 Directors, individual retention, behaviours and outcomes will be further aligned to Hydro One's business goals and objectives. While this statement refers to LTIP and "shareholder alignment", the LTIP program is aligned with the principles of the RRF, and as such, the ratepayer will also benefit.

The forecast contained in this Application is not impacted by the extension of LTIP to all Directors.

OEB Staff Interrogatory #S8

Issue:

Issue 40: Are the proposed 2018 human resources related costs (wages, salaries, benefits, incentive payments, labour productivity and pension costs) including employee levels, appropriate (excluding executive compensation)?

Reference:

WTW Current Study, p. 8

Interrogatory:

At the above reference, the impact of salary structure changes and the proposed 2018 merit budget is discussed and it is stated that:

"With the transition from broad salary ranges for all management and non-represented employees to a segmented approach, approximately 78 Core Services employees at entry level management roles (4 and 5) will be above maximum of their respective salary range. This transition represents a potential retention risk, particularly for high performing and high potential employees identified as successors. Specific programs to manage compression will need to be targeted over time."

a) Please discuss what is meant by the transition to a segmented approach, including why Hydro One's current salary ranges would not also be considered a segmented approach.

b) Please state whether under the existing salary structure, non-management employees promoted to management positions have been above the maximum of their respective salary ranges. If this has been the case, please state how many employees were in this position for the years 2013 to 2017, how Hydro One approached this matter and to what extent there was a problem retaining such employees.

c) Please discuss any programs that WTW is aware of that have been used to deal with the compression issue by other organizations and to what extent salaries for affected employees have been positioned above market. Please discuss whether there are any characteristics of such programs other than salary levels that such programs would need to have to be successful.

Response:

a) Hydro One's previous approach to salary benchmarking and setting of ranges was to use a single peer group for all jobs, regardless of the different competitors for talent. The current approach of segmenting jobs for benchmarking purposes differentiates the comparator groups used within each segment. Roles that exist across multiple industries are benchmarked to a wider sample of companies. Industry-specific roles of a technical nature are benchmarked relative to a narrower group of energy/utility sector companies, where roles of similar skill sets will exist. Segmentation allows for more specific benchmarking and the setting of salary ranges on a job family basis. Since the former salary ranges were previously broader to accommodate all ranges of jobs, rather than more specific to segmented job families based on competitors for talent, they were not considered "segmented" as described in the report.

b)

Year	# Represented to Non-represented	# at or above Non-represented Band
2013	23	0
2014	44	2
2015	31	2
2016	29	2
2017	30	7

With the transition to a segmented salary structure in 2018, three levels had their salary range decreased. As a result, approximately 78 employees are above the maximum of their salary range. These employees have their base salary frozen but to recognize strong performance, employees who are rated as "meets" or "exceeds" performance expectation will be eligible for a lump sum payment during the merit increase process. None of these employees have terminated their employment.

c) In the experience of Willis Towers Watson, it is a common industry challenge that in transitioning employees from bargaining unit non-management roles to management positions that compression in pay exists. Compensation for bargaining unit roles are typically negotiated relative to other comparable bargaining units, while management roles are typically benchmarked more broadly in the market to represented and non-represented roles, creating additional compression since comparable non-represented roles tend to have lower pay levels. This puts upward pressure on front line manager salaries, as principles of internal

equity suggest there should be some pay difference between front line managers and their direct reports in order to encourage employees to enter into more senior roles with greater responsibility and accountability. Consistent with Hydro One, organizations with this challenge take steps to ensure that candidates for management positions also consider the value of becoming eligible to participate in an annual incentive program, as well as the longer term outlook of learning and career growth opportunities.

OEB Staff Interrogatory #S9

Issue:

Issue 40: Are the proposed 2018 human resources related costs (wages, salaries, benefits, incentive payments, labour productivity and pension costs) including employee levels, appropriate (excluding executive compensation)?

Reference:

WTW Current Study, p. 10

Interrogatory:

At the above reference, the comparator group approach and criteria are discussed for the operations, core services and executive (non-ELT) segments.

a) Please state how the different comparator group selection criteria were determined.

b) Please state what the stated "year-over-year peer group changes" are with reference to and how such changes were determined

c) Please state whether or not there are any methodological differences in the approach to determining peer groups in the current study versus the 2015 studies and if so what they are and why they were made.

Response:

a) Comparator group selection criteria are an important governance aspect of a rigorous approach to benchmarking. Hydro One follows standard benchmarking methodology in establishing criteria for benchmarking purposes. The criteria are developed based on the nature of the roles and what that means in terms of the companies/industries from which this talent is recruited. This includes the importance of industry specific skills and/or working environments such as publicly traded companies. If the range of industries in which roles may be recruited from is large, additional care is taken to ensure the influence of no single industry is over-represented in the sample.

From a governance perspective both the peer group criteria and peer groups are subject to the review and approval of the HRC Committee of the Board of Directors to ensure the

compensation programs are managed in a holistic manner across the organization while aligning with the company's strategy.

b) Based on the agreed peer group selection criteria, comparator companies are selected from Willis Towers Watson's proprietary compensation surveys. Companies agree to participate in the survey on an annual basis in order to purchase aggregated benchmark data. While the participant base is quite stable based on the quality and reputation of the survey, there are natural levels of year-over-year change (attrition and addition) in companies that participate in each year's survey. The availability of companies when developing peer groups is subject to these changes. This generally reflects less than a 15% change in companies represented across the peer groups from one study to the other. These natural changes in the peer group composition should not materially alter the results given the size of the peer group and the use of the 50th percentile.

c) The peer group selection criteria were developed in 2015 and continued to be used in 2017.

OEB Staff Interrogatory #S10

Issue:

Issue 40: Are the proposed 2018 human resources related costs (wages, salaries, benefits, incentive payments, labour productivity and pension costs) including employee levels, appropriate (excluding executive compensation)?

Reference:

WTW Current Study, p. 15

Interrogatory:

At the above reference, the compression analysis methodology is discussed and is stated as including the following:

"We have reviewed the assumed compensation of the feeder roles relative to the Total Target Cash compensation midpoint of the proposed Management Group structures to understand any potential barriers to entry

In order to ensure a holistic compensation, the following elements were considered in the compensation definition:"

a) With respect to the approach to the assumed compensation review, please elaborate on what is meant by "to understand any potential barriers to entry."

b) With respect to the second sentence above, please explain what is meant by "a holistic compensation."

Response:

a) In the case of compression, a "barrier to entry" is defined as a situation where a non-management employee would be presented with the opportunity to take on a role as a front line manager, but in analyzing the pay opportunity, assess that the additional responsibility would result in a little increase, or potentially a decrease, in compensation.

b) The cash compensation mix is different for Hydro One employees who pass from non-management to management roles. Non-management employees are eligible for base salary and overtime pay. However, they are not eligible for an annual incentive. Management

employees are eligible for base salary plus participation in an annual incentive plan. When comparing the cash compensation for an individual moving from a non-management to management role, it is important to think holistically and take into account the incentive plan opportunity, loss of over-time potential, as well as base salary to make a direct comparison of the two programs.

Power Workers' Union Interrogatory # 31

Issue:

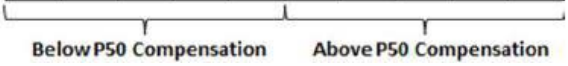
Issue 40: Are the proposed 2018 human resources related costs (wages, salaries, benefits, incentive payments, labour productivity and pension costs) including employee levels, appropriate (excluding executive compensation)?

Issue 41: Has Hydro One demonstrated improvements in presenting its compensation costs and showing efficiency and value for dollar associated with its compensation costs (excluding executive compensation)?

Reference:

C1-02-01-05 Page: 13

			Total Remuneration (Current)								
			Multiple of P50				Hydro One P50 Relative to Market P50				
	Hydro One Group	# of Hydro One Incumbents	2016	2013	2011	2008	0.50	0.75	P50 = 1	1.25	1.50
Weighted Average	Non-Represented	167	1.02	0.99	0.83	0.99					
	Professionals	612	1.11	1.09	1.05	1.05					
	Power Workers	2,212	1.16	1.12	1.18	1.21					
	Overall	*2,991*	*1.14*	*1.10*	*1.13*	*1.17*					



Witness: MERCER

Interrogatory:

a) Please provide the trend in the market median from 2013 to 2016 ***[2017 in this update]*** for both the PWU group and overall.

b) Please provide the results for 2013 and 2016 ***[2017 in this update]*** that exclude comparators that are not present in both years.

Response:

The interrogatories above relate to the 2016 Mercer Compensation Cost Benchmarking study; however, the responses below have been updated to reflect outcomes of the 2017 Mercer Compensation Cost Benchmarking study filed on April 20th, 2018.

a) The market median from 2013 to 2016 and 2016 to 2017 for the PWU group and overall (all three Hydro One groups) has increased on average. However, the increase in the market median from 2016 to 2017 was lower than that experienced from 2013 to 2016.

b) While Mercer can conduct an analysis to determine what the impact on the 2013, 2016 and 2017 results would be if comparators not included in all three years were excluded, Mercer does not believe this newly created peer group will be a relevant comparator market for Hydro One. It would be excluding organizations that have been identified as key comparators to Hydro One, thus not fully capturing Hydro One's talent market. Also, excluding these organizations will reduce the sample size and potentially result in insufficient data to report on some benchmark positions.

Power Workers' Union Interrogatory # 32

Issue:

Issue 40: Are the proposed 2018 human resources related costs (wages, salaries, benefits, incentive payments, labour productivity and pension costs) including employee levels, appropriate (excluding executive compensation)?

Issue 41: Has Hydro One demonstrated improvements in presenting its compensation costs and showing efficiency and value for dollar associated with its compensation costs (excluding executive compensation)?

Reference:

C1-02-01-05 Page: 6

Mercer selects peer organizations, for compensation benchmarking purposes, based on a stable metric that reflects the size and operating complexity of the organization (typically, this is revenue and/or total assets). Where there is a relatively small sample of relevant comparator organizations, Mercer establishes limits of 33% to 300% of the scope criteria for the organization we are analyzing.

Some organizations were included in the analysis despite falling below the 33% of revenue threshold value. These organizations were primarily Ontario based local distribution companies that are seen as important benchmarks by stakeholders.

Interrogatory:

a) Please confirm that 6 of the 17 comparators fall out of the 33% to 300% of the Hydro One revenue range.

b) Please confirm that, as 3 of the 6 comparators that fall out of the range, the out-of-range comparators are not primarily Ontario based local distribution companies. Why are these companies included?

Response:

The interrogatories above relate to the 2016 Mercer Compensation Cost Benchmarking study; however, the responses below have been updated to reflect outcomes of the 2017 Mercer Compensation Cost Benchmarking study filed April 20th, 2018.

a) Confirmed. Six of the 17 comparators in the 2016 study fall outside 33% to 300% of Hydro One's revenue range. In the 2017 study, 7 of the 19 comparators for outside 33% to 300% of Hydro One's revenue range.

b) Confirmed. In the 2016 study, three of the six comparators outside of the range mentioned in (a) are not primarily Ontario-based local distribution companies (Manitoba Hydro, New Brunswick Power, AltaLink). In the 2017 study, five of the seven comparators outside the revenue range are not primarily Ontario-based local distribution companies (EPCOR Utilities, Manitoba Hydro, New Brunswick Power, Nalcor Energy, Kinder Morgan Canada Ltd.). In addition to organization size, several factors have been used to select study comparators, including similar workforce characteristics and business closely related to Hydro One. These organizations met the later criteria and were respectively included in the 2016 and 2017 studies despite their sizes.

School Energy Coalition Interrogatory # 83

Issue:

Issue 40: Are the proposed 2018 human resources related costs (wages, salaries, benefits, incentive payments, labour productivity and pension costs) including employee levels, appropriate (excluding executive compensation)?

Reference:

C1-02-01-05
With respect to the Mercer Compensation Cost Benchmarking Study:

Interrogatory:

a) Please provide an estimate of the dollar difference between the weighted average total compensation for Hydro One's employees allocated to its distribution business and the P50 median used in the study. Please provide the amount in 2016 (the year the study was completed) ***[2017 in this update]*** and for the 2018 test year. Please provide a step-by-step explanation of how the estimate was reached.

b) Please provide a list of all types of compensation (i.e. salary, overtime, share grant, LTIP, etc.) that were paid in 2016 ***[2017 in this update]*** that: i) were included in the study, and ii) were not included in the study.

c) Are there any additional types of compensation that will be paid in 2018 that were not in 2016?

d) Did Hydro One undertake a RFP process to select Mercer to undertake Compensation Cost Benchmarking Study? If so, please provide a copy of the RFP. If not, please explain how Mercer was selected.

Response:

The interrogatories above relate to the 2016 Mercer Compensation Cost Benchmarking study; however, the responses below have been updated to reflect outcomes of the 2017 Mercer Compensation Cost Benchmarking study filed on April 20th, 2018.

a) The dollar amount over market median ($70.92 million) is provided by Mercer, using its study data. Hydro One then applies to the amount (a) the transmission-distribution ratio, and

(b) the OM&A-capital ratio determined by the Labour Content Method described in Exhibit D1, Tab 3, Schedule 1, Attachment 1.

The calculation is provided below in Table 1. As shown in Table 1, the amounts for 2017 and 2018 for the difference between the weighted average total compensation for employees allocated to the distribution business are $18.46 million and $17.48 million, respectively.

Table 1

	2017	**2018**
	Bridge	**Test**
$ Over Median	$70.92	$70.92
TDOC Splits*		
*Consistent with Labour Content Method in Exhibit D1, Tab 3, Schedule 1, Attachment 1		
Tx OMA (%)	17.6%	16.4%
Dx OMA (%)	26.0%	24.7%
Tx Cap (%)	31.0%	30.3%
Dx Cap (%)	25.3%	28.6%
Allocation of $		
Tx OMA ($)	$12.49	$11.64
Dx OMA ($)	$18.46	$17.48
Tx Cap ($)	$22.00	$21.52
Dx Cap ($)	$17.96	$20.27
Total	**$70.92**	**$70.92**

b) The compensation elements in the Mercer Study included base wages, STIP, LTIP, Share Grants, lump sum, pension and benefits. Overtime compensation was not included.

c) In 2018, MCP and Society employees were eligible to participate in the ESOP.

d) A RFP process was not undertaken for the performance of this study. Mercer was selected by using a single source authorization in accordance with Hydro One's Supply Chain Policy.

Vulnerable Energy Consumers Coalition Interrogatory # 91

Issue:

Issue 46: Is the load forecast methodology including the forecast of CDM savings appropriate?

Reference:

G1-03-01 Page: 6 Lines 16-19

Interrogatory:

a) What USoA accounts are the assets discussed at line 16-19 recorded in?

b) Please provide a schedule setting out the value of these assets (by USoA) allocated to each of the acquired rate classes in the 2021 CAM.

c) What portion of the total assets allocated to each of the acquired rate classes do the assets discussed at lines 16-19 represent?

d) Were the any of these assets attributable to the acquired rate classes and removed from the assets included in the 2018 revenue requirement and allocated to customer classes in the 2018 CAM?

   i. If not, why not?

   ii. If yes, please indicate how this was done with reference to the 2018 revenue requirement and 2018 CAM.

Response:

a) The common assets discussed at lines 16-19 refer to all assets that are not included in USofAs 1830-1860. As a part of the updates filed in Exhibit Q-01-01, the fixed assets were re-examined and USofAs 1815 and 1820 were moved from the common asset group and treated as ‘local’ assets that are subject to the acquired allocation factors.

b) The value of these common assets by USofA allocated to each of the acquired rate classes are shown in Tab O4 of the 2021 CAM filed with Exhibit Q-01-01.

c) The following table shows the portion of the total fixed assets that are considered common and discussed at lines 16-19:

Rate Class	Common Assets
AUR	15.2%
AUGe	17.0%
AUGd	27.1%
AR	14.4%
AGSe	14.7%
AGSd	19.0%

d) No

i. Please see the response to Exhibit I-46-VECC-90 part g).

ii. N/A

UNDERTAKING – JT 1.11

Undertaking

To provide the statistical certainty level on the market median estimate.

Response

The undertaking above relates to the 2016 Mercer Compensation Cost Benchmarking study; however, the response below has been updated to reflect outcomes of the 2017 Mercer Compensation Cost Benchmarking study filed on April 20th, 2018.

Hydro One asked Mercer to comment on the statistical certainty level of the market median estimate. Mercer's response is reproduced below.

> *An approach to assessing the certainty level in the data set is to determine the market percentile values at points above and below the median. This provides an indication of the spread and skewness in the data.*
>
> *On an aggregate basis (across all benchmark jobs), the 45th and 55th percentile total compensation values for the 2016 and 2017 study are -3% and +3% and -4% and 4% respectively in comparison to the market median (50th percentile). This suggests that the overall study result has a relatively low margin of error. We are confident in the findings of the 2016 and 2017 Hydro One Studies.*

CURRICULUM VITAE OF CHRISTOPHER LOPEZ

EDUCATION:

Institute of Company Directors	(2006) Graduate Diploma — Company Directors Course
Banff Centre for Management	(2000), Management and Leadership Development - Alberta, Canada.
Edith Cowan University	(1993-96) Bachelor of Business - Majors: Accounting, Finance and Taxation (Sub)
Carine College of TAFE	**(**1992- 94) Associate Diploma of Business - Major: Accounting
Carine College of TAFE	(1991), Certificate of Business - Major: Accounting

INDUSTRY EXPERIENCE:

2016 – Current	**Hydro One Limited (Canada)**
2016 – Current	Senior Vice President Finance
May 2017 – Mar 2018	Acting Chief Financial Officer
2007 - 2015	**TransAlta Corporation (Canada)**
Oct 11 - 2015	VP Corporate Planning and Mergers & Acquisition
Apr 07 - Oct 11	Director Generation Finance
1999 – 2007	**TransAlta Energy Australia Pty Ltd. (Australia)**
Jul 02 - Apr 07	Country Financial Controller (Aust, New Zealand & Barbados)
Apr 00 - Jul 02	Senior Business Analyst — Corporate
Apr 99 - Apr 00	Senior Financial Accountant — Corporate
1993 - 1999	**Hamersley Iron Pty. Limited (Pilbra Iron Pty Ltd) (Australia)**
Dec 97 - Apr 99	Financial Accountant— Corporate
Feb 97 - Dec 97	Management Accountant - Mining & Processing
Feb 96 - Feb 97	Graduate Accountant (Site)
1993-1996	**Sun-Vale Foods Pty Ltd**
Mar 93 - Feb 96	Accountant

MEMBERSHIPS

- Institute of Chartered Accountants in Australia
- Australian Institute of Company Directors
- The Executive Connection (TEC) Key 111

APPEARANCE(S) BEFORE THE ONTARIO ENERGY BOARD

EB-2017-0049: **Hydro One Networks Inc. 2018-2022 Distribution Rate Application – Executive Presentation**

CURRICULUM VITAE OF FRANK D'ANDREA

EDUCATION

University of Toronto
Toronto, ON (1986)
Bachelor of Commerce

PROFESSIONAL QUALIFICATIONS

Accredited Outsourcing Practitioner
Toronto, Ontario (2012)

Chartered Professional Accountant
Toronto, Ontario (1986)

INDUSTRY EXPERIENCE

Date Range:	**Employer:**
Sept 1986 - March 1989	PricewaterhouseCoopers
1986 – Present:	**Hydro One Networks Inc. / Ontario Hydro**
July 2017 - Present	Vice-President, Regulatory Affairs and Chief Risk Officer
April 2015 - June 2017	Vice-President and Chief Risk Officer
April 2012 - March 2014	Director, Outsourcing Services
Oct. 2007- March 2012	Director, Corporate Accounting and Reporting
Aug. 2006 - Sept. 2007	Senior Manager, Corporate Accounting and Reporting
Jan. 2005 - July 2006	Senior Manager, Corporate Accounting and Reporting
Jan. 1999 - Dec. 2004	Financial Policy Advisor
Jan. 1994 - Dec. 1998	Senior Accounting Policy & Reporting Analyst
April 1989 - Dec. 1993	Accounting Policy Analyst

APPEARANCE(S) BEFORE THE ONTARIO ENERGY BOARD

EB-2005-0378:	Hydro One Networks Inc. 2006 Distribution Rates Revenue Requirement Application

CURRICULUM VITAE OF HENRY ANDRE

EDUCATION:

University of Toronto
Toronto, Ontario (1987)
Master of Applied Science

University of Toronto
Toronto, Ontario (1985)
Bachelor of Applied Science

PROFESSIONAL QUALIFICATION(S):

Professional Engineers Ontario (1988)

INDUSTRY EXPERIENCE

April 1999 – Present: ***Hydro One Networks Inc. / Ontario Hydro Services Company***

2016 – present	Director, Pricing and Compliance, Regulatory Affairs, Corporate Finance
2010 – 2016	Manager, Transmission & Distribution Pricing, Regulatory Affairs, Corporate & Regulatory Affairs
2008 – 2010	Manager, Rate Applications, Regulatory Affairs, Corporate & Regulatory Affairs
2006 – 2008	Manager, Transmission Rates, Regulatory Affairs, Corporate & Regulatory Affairs
2004 – 2006	Senior Engineer, System Investment, Asset Management
2001 – 2004	Senior Advisor, Business Integration, Asset Management
1998 – 2000	Senior Analyst, Performance Division, Regulatory and Governmental Affairs

1986 – April 1999: ***Ontario Hydro***

1998 – 2000	Senior Analyst, Performance Division, Regulatory and Governmental Affairs
1995 - 1998	Engineer, Strategy and Regulatory Affairs, GRID System
1992 - 1995	Project Engineer, Transmission Projects, Engineering & Construction
1988 - 1991	Assistant Project Engineer, Transmission Lines Programs, Engineering & Construction
1986 - 1987	Research Engineer, Research Division

APPEARANCE(S) BEFORE THE ONTARIO ENERGY BOARD:

EB-2006-0501:	Hydro One Networks Inc. 2007-2008 Electricity Transmission Revenue Requirement Application
EB-2010-0002:	Hydro One Networks 2011–2012 Electricity Transmission Revenue Requirement Application
EB-2013-0416:	Hydro One Networks 2015–2019 Distribution Rates Application
EB-2016-0160:	Hydro One Networks 2017-2018 Transmission Application

Filed: 2018-06-07
EB-2017-0049
Exhibit A
Tab 9
Schedule 2
Page 1 of 8

STEVEN A. FENRICK

Leader, Economics & Market Research Group

SUMMARY OF EXPERIENCE AND EXPERTISE

- Leader of PSE's Economics and Market Research group which conducts research in the fields of DSM, performance benchmarking, incentive regulation, load research and forecasting, and survey design and implementation
- Manages PSE's cost, productivity, and reliability performance benchmarking practice
- Directs research on value-based reliability planning efforts for electric utilities
- Expert in performance-based ratemaking and incentive regulation
- Directs economic research on investigating the impacts and costs/benefits of DSM programs and designing statistically robust pilot designs

PROFESSIONAL EXPERIENCE

Power System Engineering, Inc.– Madison, WI (2009 to present)

Leader, Economics and Market Research

Responsible for providing consulting services to utilities and regulators in the areas of reliability and cost benchmarking, incentive regulation, value-based reliability planning, demand-side management including demand response and energy efficiency, load research, load forecasting, end-use surveys, and market research.

- Leads research, on an annual basis, with over a dozen electric utilities in evaluating cost, productivity, and reliability performance and uncovering methods to improve their operations
- Benchmarking consultant to the Ontario Energy Board regarding their 3rd Generation Incentive Regulation Plan for the last two years
- In the process of designing and analyzing DSM pilot projects at over 25 electric utilities across the country
- Testimony experience regarding performance value-based reliability planning, benchmarking and productivity analysis
- Has given several presentations on performance benchmarking and productivity analysis, costs and benefits of DSM programs, and measurement and verification (M&V) techniques.
- Key speaker at EUCI conferences regarding cost and reliability performance evaluation and productivity analysis of distribution utilities

Pacific Economics Group – Madison, WI (2001 - 2009)

Senior Economist

- Co-authored research reports submitted as testimony in numerous proceedings in several states and in international jurisdictions. Research topics included statistical benchmarking, alternative regulation, and revenue decoupling.

- Managed and supervised PEG support staff in research and marketing efforts.

EDUCATION

University of Wisconsin - Madison, WI
Bachelor of Science, Economics (Mathematical Emphasis)

University of Wisconsin - Madison, WI
Master of Science, Agriculture and Applied Economics

Publications & Papers

- "Peak-Time Rebate Programs: A Success Story", *TechSurveillance*, July 2014 (with David Williams and Chris Ivanov).
- "Demand Impact of a Critical Peak Pricing Program: Opt-In and Opt-Out Options, Green Attitudes and other Customer Characteristics:, *The Energy Journal*, January 2014. (With Lullit Getachew, Chris Ivanov, and Jeff Smith).
- "Evaluating the Cost of Reliability Improvement Programs", *The Electricity Journal*, November 2013. (With Lullit Getachew)
- "Expected Useful Life of Energy Efficiency Improvements", Cooperative Research Network, 2013 (with David Williams).
- "Cost and Reliability Comparisons of Underground and Overhead Power Lines", *Utilities Policy*, March 2012. (With Lullit Getachew).
- "Formulating Appropriate Electric Reliability Targets and Performance Evaluations, *Electricity Journal*, March 2012. (With Lullit Getachew)
- "Enabling Technologies and Energy Savings: The Case of EnergyWise Smart Meter Pilot of Connexus Energy", November 2012. (With Chris Ivanov, Lullit Getachew, and Bethany Vittetoe)
- "The Value of Improving Load Factors through Demand-Side Management Programs", Cooperative Research Network, 2012 (with David Williams and Chris Ivanov).
- "Estimation of the Effects of Price and Billing Frequency on Household Water Demand Using a Panel of Wisconsin Municipalities", *Applied Economics Letters*, 2012, 19:14, 1373-1380.
- "Altreg Rate Designs Address Declining Average Gas Use", *Natural Gas & Electricity*. April 2008. (With Mark Lowry, Lullit Getachew, and David Hovde).
- "Regulation of Gas Distributors with Declining Use per Customer", *Dialogue*. August 2006. (With Mark Lowry and Lullit Getachew).
- "Balancing Reliability with Investment Costs: Assessing the Costs and Benefits of Reliability-Driven Power Transmission Projects." April 2011. *RE Magazine*.
- "Ex-Post Cost, Productivity, and Reliability Performance Assessment Techniques for Power Distribution Utilities". Master's Thesis.
- "Demand Response: How Much Value is Really There?" *PSE whitepaper.*
- "How is My Utility Performing" *PSE whitepaper*.
- "Improving the Performance of Power Distributors by Statistical Performance Benchmarking" *PSE whitepaper*.
- "Peak Time Rebate Programs: Reducing Costs While Engaging Customers" *PSE whitepaper*.
- "Performance Based Regulation for Electric and Gas Distributors" *PSE whitepaper*.

- "Revenue Decoupling: Designing a Fair Revenue Adjustment Mechanism" *PSE whitepaper*.

Expert Witness Experience

- Docket EB-2015-0004, Hydro Ottawa, Custom Incentive Regulation Application.
- Docket 15-SPEE-357-TAR, Application for Southern Pioneer Electric Cooperative, Inc., Demand Response Peak Time Rebate Pilot Program.
- Docket EB-2014-0116, Toronto Hydro, Custom Incentive Regulation Application.
- Docket EB-2010-0379, The Coalition of Large Distributors in Ontario regarding "Defining & Measuring Performance".
- Docket No. 6690-CE-198, Wisconsin Public Service Corporation, "Application for Certificate of Authority for System Modernization and Reliability Project".
- Expert Witness presentation to Connecticut Governors "Two Storm Panel", 2012.
- Docket No. EB-2012-0064, Toronto Hydro's Incremental Capital Module (ICM) request for added capital funding.
- Docket No. 09-0306, Central Illinois Light rate case filing.
- Docket No. 09-0307, Central Illinois Public Service Company rate case filing.
- Docket No. 09-0308, Illinois Power rate case filing.

Recent Conference Presentations

- Wisconsin Manager's Meeting, "Reliability Target Setting Using Econometric Benchmarking". November 2016.
- Institute of Public Utilities Advanced Rate Conference at Michigan State University, "Performance Benchmarking". October 2016.
- Wisconsin Electric Cooperative Association (WECA) Conference, "An Introduction to Peak Time Rebates". September 2016.
- Institute of Public Utilities Advanced Rate Conference at Michigan State University, "Performance Benchmarking". October 2015.
- EUCI conference chair, 2015. "Evaluating the Performance of Gas and Electric Distribution Utilities."
- Institute of Public Utilities Advanced Rate Conference at Michigan State University, "Performance Benchmarking". October 2014.
- Cooperative Exchange Conference, Williamsburg VA. "Smart Thermostat versus AC Direct Load Control Impacts". August 2014.
- EUCI conference chair in Chicago. "The Economics of Demand Response". February 2014.
- Institute of Public Utilities Advanced Rate Conference at Michigan State University, "Performance Benchmarking". October 2013.
- EUCI conference chair in Chicago. "Evaluating the Performance of Gas and Electric Distribution Utilities." August 2013.
- Presentation to the Ontario Energy Board, "Research and Recommendations on 4th Generation Incentive Regulation".
- Presentation to the Canadian Electricity Association's best practice working group. 2013

- Conference chair for EUCI conference in March 2013 titled, "Performance Benchmarking for Electric and Gas Distribution Utilities."
- Presentation to the board of directors of Great Lakes Energy on benchmarking results, December 2012.
- Presentation on making optimal infrastructure investments and the impact on rates, Electricity Distribution Association, Toronto, Ontario. November 2012.
- Conference chair for EUCI conference in August 2012 titled, "Performance Benchmarking for Electric and Gas Distribution Utilities."
- 2012 presentation in Springfield, IL to the Midwest Energy Association titled, "Reliability Target Setting and Performance Evaluation".
- 2012 presentation in Springfield, IL to the Midwest Energy Association titled, "Making the Business Case for Reliability-Driven Investments".
- Conference chair for EUCI conference in 2012 titled, "Balancing, Measuring, and Improving the Cost and Reliability Performance of Electric Distribution Utilities". St. Louis.
- Conference chair for EUCI conference in 2012 titled, "Demand Response: The Economic and Technology Considerations from Pilot to Deployment". St. Louis.
- 2012 Presentation in the Missouri PSC Smart Grid conference entitled, "Maximizing the Value of DSM Deployments". Jefferson City.
- 2011 conference chair on a nationwide benchmarking conference for rural electrical cooperatives. Madison.
- 2011 presentation on optimizing demand response program at the CRN Summit. Cleveland.
- Conference chair for EUCI conference in 2011 titled, "Balancing, Measuring, and Improving the Cost and Reliability Performance of Electric Distribution Utilities". Denver.
- 2010 presentation on cost benchmarking techniques for REMC. Wisconsin Dells.

History of Major Research Projects

1. Washington Utilities Transportation Commission (UTC) Reliability Benchmarking and Target-Setting for 3 Washington IOUs, 2017.
2. Hydro One Networks total cost benchmarking research, 2017.
3. Hydro One Networks total factor productivity research, 2016/2017.
4. Butte Electric Peak Time Rebate full deployment, 2017.
5. Southern Pioneer Pre-pay metering cost-benefit research, 2016.
6. Sunflower Electric load forecasts, 2015-ongoing.
7. PG&E customer satisfaction benchmarking and target setting, 2016.
8. Vectren reliability benchmarking and target setting, 2016.
9. Butte Electric PTR pilot design, implementation, and M&V. 2015/2016.
10. Central Wisconsin demand response dispatch model, 2015-present.

11. Cost and reliability econometric benchmarking in Custom Incentive Regulation filing, Hydro Ottawa, 2015.
12. Long-range load forecasts for six distribution utilities and G&T, Sunflower Electric, 2015.
13. Load research study review and VEE process review, Minnesota Power, 2015.
14. Demand Side Management Business Case Guidebook, CRN, 2015/2016.
15. Prepare research, design, and application to Kansas Commission on Peak Time Rebate Pilot for Southern Pioneer Electric Cooperative, 2015.
16. Cost and reliability econometric benchmarking in Custom Incentive Regulation filing, Toronto Hydro, 2014/2015.
17. Emergency response benchmarking for gas utilities, Vectren, 2014.
18. Set-up DSM pilots and optimize portfolio, Sunflower G&T, 2014/2015.
19. Central Wisconsin Electric demand response study, 2014/2015.
20. Long range load forecasts for Wolverine, Allegheny, and Sunflower, 2014.
21. Spatial load forecast for Rochester Public Utilities, 2014.
22. Revenue requirement and cost of service study for Todd-Wadena, 2014.
23. Development of a performance based regulation plan for Toronto Hydro. 2013/2014.
24. Set internal econometric reliability targets for Great Lakes Energy, 2014.
25. Conduct research, provide recommendations, and provide expert witness testimony on the 4th Generation Incentive Regulation on behalf of the Coalition of Large Distributors, 2013.
26. Testimony for Wisconsin Public Service Corporation (WPS) regarding the cost effectiveness of their reliability-driven capital project, 2013.
27. Transmission & Distribution Cost Benchmarking for Pacific Gas & Electric, 2013.
28. Evaluation and review of business cases for reliability-driven projects, Toronto Hydro, 2012/2013.
29. Cost and reliability benchmarking research for Toronto Hydro, 2012/2013.
30. Transmission and distribution cost benchmarking research for Vectren, 2013.
31. Power plant benchmarking for coal and natural gas fired plants, Sunflower Electric, 2012.
32. Peak Time Rebate demand response calculations, Heartland Electric, 2012-present.
33. Resource planning and integration of DSM resources, Sunflower Electric, 2012.

34. Energy efficiency whitepaper on estimating Effective Useful Life, Cooperative Research Network, 2012.
35. Demand response whitepaper on the value proposition of increasing distribution load factors via demand response, Cooperative Research Network, 2012.
36. Energy efficiency rebate optimization, Corn Belt, 2012.
37. Energy efficiency and demand response customer baseline load algorithm development for an MDM system vendor, 2012.
38. Incentive Regulation Productivity and Benchmarking, Enbridge Gas Distribution, 2011/2012
39. Reliability Benchmarking and Target Setting, Vectren 2011/2012
40. DSM potential analysis, South Central Indiana, 2011/2012
41. Annual benchmarking updates of Ontario's 77 power distribution utilities, OEB 2011
42. Cost and reliability benchmarking research involving a group of 20 electric utilities, 2011
43. Energy Efficiency program design and cost effectiveness, Corn Belt 2011
44. Cost/Benefit model of direct load control, Corn Belt 2011
45. Peak time rebate demand response program design and cost effectiveness, Heartland 2011/2012
46. Value Based Reliability Planning project at New Hampshire Electric Cooperative, 2010
47. DSM research on pilots at 25 electric utilities, 2010-2014, DOE Stimulus Grant.
48. Benchmarking research involving a group of 14 electric utilities, 2010
49. M&V research of OPower energy efficiency program, 2010.
50. M&V research of Smart Thermostat demand response program, 2010.
51. Benchmarking research regarding Union Electric, 2010
52. Benchmarking research regarding the three Ameren Illinois Utilities, 2009
53. Benchmarking research for Central Vermont Public Service, 2009
54. Benchmarking research on Oklahoma Gas & Electric, 2009
55. Research North American power industry revenue forecast precedents, HECO, 2008.
56. Revenue Adjustment Mechanism for CVPS Revenue Decoupling Proposal, CVPS, 2008.
57. Productivity Research for Bundled Power Service, HECO, 2008.
58. A&G Power Benchmarking Research. 2008.
59. Productivity Research of Ontario's Power Distribution Utilities, OEB, 2008.

60. Productivity Research of U.S. Power Generation and Distribution, APS, 2007.
61. Productivity Research of Northeast Power Distribution, CMP, 2007.
62. Productivity Research of Ontario's Gas Distribution Utilities, OEB, 2007.
63. Benchmarking Research of Ontario's Power Distribution Utilities, OEB, 2007.
64. Benchmarking Research of Electric A&G Expenses, Michigan PSC, 2006.
65. Productivity Research for Gas Distribution, Sempra, 2006.
66. Productivity Research for Power Distribution, Sempra, 2006.
67. Benchmarking Research for Gas Distribution, Nstar Gas, 2006.
68. Benchmarking Research for Power Distribution, Central Vermont PSC, 2005.
69. Benchmarking Research of Nuclear Power Generation, Sempra, 2005.
70. Research on Rate Trends for Electric Power, EEI, 2005.
71. Benchmarking Research of Bundled Power Service, Florida Power, 2005.
72. Benchmarking Research of Canadian Electric Distribution, Hydro One, 2005.
73. Benchmarking Research of Gas Distribution, Bay State, 2005.
74. Benchmarking Research of Electric Distribution, Aquaelectra, 2004.
75. Benchmarking Research for the Caribbean Water Distribution Industry, Aquaelectra, 2004.
76. Compensatory Rate Trend for the U.S. Gas Industry, 2004.
77. Productivity Research for the U.S. Electrical industry, TXU, 2004.
78. Research on Productivity and Benchmarking for Queensland, Australia Electrical Companies, 2004.
79. Research on Productivity and Benchmarking for Gas and Electric Industries for Sempra, 2004.
80. Research on Productivity and Benchmarking for Jamaican Power Company. JPS, 2003-4.
81. Cost analysis research and benchmarking for the Bolivian Power regulator, 2003.
82. Research on Productivity and Benchmarking for a Canadian Power Transmission Company, 2002.
83. Research on Productivity and Benchmarking for a Natural Gas Distributor. Boston Gas, 2002-3.
84. Research on Benchmarking for Bundled Power Service. AmerenUE, 2002

85. Statistical Benchmarking for Electric Power Transmission. Transcend, 2002.
86. Statistical Benchmarking for three Australian Gas Utilities, 2001.
87. Power Distribution TFP trends for Bangor Hydro, 2001.

CURRICULUM VITAE OF SAMIR CHHELAVDA

EDUCATION

McGill University
Montreal, QC (1997)
Graduate Diploma in Public Accountancy

McGill University
Montreal, QC (1995)
Bachelor of Commerce – Accounting

PROFESSIONAL QUALIFICATION(S)

Institute of Internal Auditors (2011)
Certification in Risk Management Assurance

Institute of Internal Auditors (2006)
Certified Internal Auditor Certification

Canadian Institute of Chartered Professional Accountants (2000)
Chartered Professional Accountant

INDUSTRY EXPERIENCE

2014 – Present:	**Hydro One Networks Inc.**
	Director, Corporate Accounting and Reporting
2005-2014:	**Enbridge Gas Distribution Inc.**
2012-2014	Assistant Controller
2011-2012	Senior Manager, Strategy Execution and Performance Management
2010-2011	Chief Auditor
2005-2010	Manager, Audit Services
2003-2005:	**Duffy, Allain & Rutten, LLP**
	Senior Audit Manager
2002-2003:	**AXA Canada Inc.**
	Senior Financial Analyst

INDUSTRY EXPERIENCE – Cont.

1999-2002:	**Ernst & Young LLP**
2001-2002	Audit Manager
1999-2001	Senior Staff Accountant
1997-1999:	**Schwartz, Levitsky, Feldman LLP**
	Staff Accountant

APPEARANCE(S) BEFORE THE ONTARIO ENERGY BOARD:

EB- 2012-0459:	Enbridge Gas Distribution Inc. 2014-2018 Rate Application
EB- 2014-0140:	Hydro One Networks Inc. 2015-2017 Distribution Rate Application – Oral Hearings
EB- 2015-0040:	Consulation on the Regulatory Treatment of Pension and Other Post-Employment Benefit Costs
EB-2016-0160:	Hydro One Networks Inc. 2017-2018 Transmission Rate Application – Oral Hearings
EB-2017-0049:	Hydro One Networks Inc. 2018-2022 Distribution Rate Application – Technical Conference

CURRICULUM VITAE OF JOEL JODOIN

EDUCATION

Chartered Professional Accountant
Toronto, ON (2012)
CPA, CMA

Brock University
St. Catharines, ON (2008)
Bachelor of Business Administration, concentration in Finance

INDUSTRY EXPERIENCE

2009-Present	**Hydro One Networks Inc.**
2016-Present	Senior Financial Advisor, Business Planning
2014-2016	Senior Financial Analyst, Business Planning
2013-2014	Senior Financial Advisor, Decision Support
2009-2013	Accounting & Financial Analyst, Business Planning

APPEARANCE(S) BEFORE THE ONTARIO ENERGY BOARD

EB-2017-0049: Hydro One Networks Inc. 2018-2022 Distribution Rate Application – Technical Conference

EB-2016-0160: Hydro One Networks Inc. 2017-2018 Transmission Rate Application – Oral Hearings

EB-2016-0160: Hydro One Networks Inc. 2017-2018 Transmission Rate Application – Technical Conference

CURRICULUM VITAE OF KEITH MCDONELL

EDUCATION

Queen's University
Kingston, Ontario (1988-89)
Master of Industrial Relations

Queen's University
Kingston, Ontario (1983-87)
Bachelor of Commerce (Hons.)

INDUSTRY EXPERIENCE

1991 - Present:	**Hydro One Networks Inc. / Ontario Hydro**
2010- present	Director , Human Resources
2005- 2010	Manager, Human Resources Operations
1999- 2005	Senior Labour Relations Consultant
1991- 1999	Labour Relations Consultant and Team Lead

APPEARANCE(S) BEFORE THE ONTARIO ENERGY BOARD

EB-2008-0272:	Hydro One Networks Inc. Electricity Transmission Revenue Requirement Application
EB-2009-0096:	Hydro One Networks 2010-2011 Distribution Rates Application
EB-2016-0160:	Hydro One Networks 2017-2018 Transmission Rates Application
EB-2017-0049:	Hydro One Networks 2018-2022 Distribution Rates Application – Technical Conference

BIOGRAPHY
IAIN MORRIS

IAIN MORRIS
Partner

• ABOUT

- Iain is a Partner in Mercer's Career Business in Toronto. He advises large and complex organizations on the development and implementation of total rewards and EVP strategies and programs

• EXPERIENCE/CLIENTS

- Iain's primary areas of expertise include incentive plan design, global job levelling and EVP consulting. He also has substantial experience in rewards compliance and complex cost analyses and benchmarking to support rate cases in the energy sector
- Iain has worked with organizations across most industry sectors including: retail, consumer products, financial services, manufacturing, and professional services during his 35+ years rewards consulting career

• EDUCATION

- Iain is a graduate of Queen's University. He is frequently quoted in industry and business publications on total rewards and other human resource issues.

CURRICULUM VITAE OF FERIO PUGLIESE

EDUCATION

Western University, Ivey Business School
London, ON (2008)
IEP, Ivey Executive Program - Business

Central Michigan University
Mt. Pleasant, Michigan (1999)
Masters of Arts, Adult Education

University of Windsor
Windsor, ON (1994)
Honours Bachelor of Commerce, Business Administration

University of Windsor
Windsor, ON (1992)
Honours Bachelor of Arts, Communication Studies

INDUSTRY EXPERIENCE

2016 – Present	**Hydro One Networks Inc. / Ontario Hydro**
2016-Present	Executive Vice President, Customer Care and Corporate Affairs
2007 – 2016	**WestJet**
2012-2016	President and EVP WestJet Encore
2007-2012	Executive Vice President, People, Culture and Inflight Services
2003 – 2007	**Catalyst Paper Corporation**
2005-2007	Vice President, Human Resources
2003-2005	Director, Operational Excellence

APPEARANCE(S) BEFORE THE ONTARIO ENERGY BOARD

EB-2017-0049:	**Hydro One Networks Inc. 2018-2022 Distribution Rate Application – Executive Presentation**

CURRICULUM VITAE OF IMRAN MERALI

EDUCATION

University of Toronto
Toronto, ON (2011)
Masters of Business Administration (MBA)

University of Waterloo
Waterloo, ON (2005)
Honours Bachelor of Science and Business (BSc)

INDUSTRY EXPERIENCE

2009 – Present	**Hydro One Networks Inc. / Ontario Hydro**
2017-Present	Director, Customer Care
2015-2016	Director, Customer Program Delivery
2013-2015	Manager, Business & Strategy Planning
2009-2013	Sr. Product Coordinator

APPEARANCE(S) BEFORE THE ONTARIO ENERGY BOARD

EB-2017-0049:	**Hydro One Networks Inc. 2018-2022 Distribution Rate Application – Technical Conference**

CURRICULUM VITAE OF DEREK CHUM

EDUCATION

University of Toronto, Law School
Toronto, ON (2000)
LL.B

University of Toronto
Toronto, ON (1997)
Honours Bachelor of Arts in Political Science

INDUSTRY EXPERIENCE

2017 – Present:	**Hydro One Networks Inc.**	
	Vice President, Indigenous Relations	
2010 - 2017	**Amisk Kodim Corporation**	
	Director, President and Chief Executive Officer	
2007 - 2010	**Olthuis Kleer Townshend LLP**	
	Partner - Corporate/Commercial	

APPEARANCE(S) BEFORE THE ONTARIO ENERGY BOARD

N/A

CURRICULUM VITAE OF SANDRA GUIRY

Sandra has worked in the field of survey-based research for over 17 years. Currently she works with several ministries and agencies of the Ontario and federal governments, municipalities as well as national associations and private sector clients. She provides advice and counsel to her clients on a wide range of public affairs, reputation, and communications research as well as policy and program evaluation. She helps clients conduct and use research to gain a better understanding of their target audience and to translate this understanding into efficient and effective policies, programs, communications strategies and marketing initiatives.

Sandra is a member of the IPSOS North America Public Affairs senior leadership team with overall responsibility for the management and growth of the quantitative practice in Ontario and Quebec. She manages a team of 15 researchers. Sandra is the Ipsos account lead for all survey-based research delivered under the vendor of record agreements for the Government of Canada, Province of Ontario and the City of Toronto.

Sandra also has extensive experience in corporate reputation research and issues management. Prior to being promoted to Senior Vice President, Sandra was the Canadian head of the Ipsos Global Reputation Centre and provided strategic advice to wide variety of organizations.

Selected recent large-scale and significant research programs (primary investigator): Employment Social Development Canada – Canada Student Loan Program Core and Supplementary Research Program (2017-2018), Region of Peel Biennial Satisfaction and Confidence Research Program (2017), Toronto Community Housing Corporate Closing the Loop Research Program and Annual Tenant Survey (2017-2018), Ministry of Transportation Road Safety Research (2017), Municipal Property Assessment Corporation (various research projects 2012-2017), Hydro One Distribution-Connected Customer Engagement Consultation in conjunction with Ontario Energy Board Rate Filing Application (2016), Ontario Ministry of Finance: Ontario Retirement Pension Plan (2015-2016), Ontario Ministry of Economic Development, Employment and Innovation: Invest Ontario (2016), Institute of Citizen-Centre Service – Citizen's First 7 (2015).

Employment:	IPSOS Limited Partnership, Public Affairs
	Senior Vice President and Manager (Toronto) 2013- Present
	Vice President and Manager (Toronto) 2011-2013
	Vice-President 2007-2011
	Associate Vice-Present 2004-2007
	Senior Research Manager/Research Manager/Associate 2000-2004
Education:	Master of Arts, Political Science, Specialization Empirical Theory and Methodology, York University, Toronto, Ontario, 1999
	Bachelor of Arts (High Honours), Political Science Carleton University, Ottawa, Ontario, 1997
Memberships:	Marketing Research and Intelligence Association (MRIA) American Association of Public Opinion Research (AAPOR)
Legal Proceedings:	Qualified/testified as a survey research expert, Ontario Energy Board - EB-2016-0160 Hydro One Networks Inc. Transmission Application for electricity transmission revenue requirement and related changes to the Uniform Transmission Rates beginning January 1, 2017 and January 1, 2018
	Qualified/testified as a survey research expert, Ontario Energy Board – EB-2011-0242 Enbridge Gas Distribution Renewable Natural Gas Application, 2012.

BRAD GRIFFIN

Senior Vice President, Head of Qualitative Canada

160 Bloor St. E. Suite 300

Toronto, ON M4W 1B9

416.324.2288 brad.griffin@ipsos.com

Bio

Brad has been a researcher since 2000. Prior to joining Ipsos in 2002 Brad worked for Goldfarb Consultants. Brad leads both the qualitative and consultation teams in Canada.

Brad has conducted countless focus groups, in-depth-interviews and consultations over his career. While he works across a broad range of fields, he has a particular interest in evaluating social marketing, communications and corporate reputation strategies.

Brad is a member of the Institute of Canadian Advertising and the Marketing Research and Intelligence Association. He has completed the qualitative moderating course at RIVA in the US and holds a degree in Sociology from Queen's University in Kingston, Ontario. Prior to becoming a researcher, Brad was an advertising media buyer/planner for OMD.

Education

Media Foundations Program, OMD Canada (1998)

Introduction to Advertising, Institute of Canadian Advertising (1998)

Fundamentals of Moderating, RIVA Institute (2002)

Bachelor of Arts Degree in Sociology, Queen’s University (1998)

Professional Memberships

Marketing, Research and Intelligence Agency (Since 2000)

Professional Work Experience

Senior Vice President, Head of Qualitative Canada, Ipsos (2014 to present)

Vice President, Head of Qualitative HotHouse, Ipsos Public Affairs (2006 to 2014)

Associate Vice President, Ipsos, Public Affairs (2004 to 2006)

Senior Research Manager, Ipsos Reid, Public Affairs (2003 to 2004)

Senior Research Executive, Millward Brown Goldfarb (2000 to 2003)

Media Buyer, BBDO/OMD Advertising Agency (1998 to 2000)

Part-Owner/Operator, Griffin & Sons Landscaping (1993 to 1998)

NAVIGANT

Benjamin Grunfeld

Managing Director

Professional Summary

Benjamin Grunfeld is a Managing Director in the global Energy practice at Navigant, and the Canadian power and utilities sector leader He is a trusted advisor to electricity and natural gas utilities, independent power companies, regulators, and governments. He has considerable experience in the areas of power project development and finance, power procurement, regulatory economics, electricity market design and operations, energy policy, strategy and operations, and mergers and acquisitions. Benjamin has worked in vertically integrated and restructured markets across Canada and North America, as well as a range of developed and emerging economies around the world.

Areas of Expertise

- **Strategy**: Guides senior executives and boards to develop and implement long term strategies and strategic initiatives.
- **Operations**: Supports senior operations executives to identify fact-based opportunities for performance improvement.
- **Policy**: Advices senior policy makers on effective electricity and natural gas policy development.
- **Markets**: Analyses the performance of energy markets, advices on effective market design, and supports market entry and investment decisions.
- **Regulation**: Provides guidance to utilities and regulatory agencies on the development of efficient regulatory policies and successful regulatory strategies.

Sample Professional Experience

- **Alternative rate design for transmission.** Director-in-charge and lead expert providing a review of alternative transmission rate designs for a large transmission and distribution electric utility. The Navigant team provided an analysis of alternative rate design options and models for revenue decoupling. [Client: Confidential (Utility); Date: 2018; Location: ON, Canada]
- **Value of grid services.** Director-in-charge and lead expert providing an overview of the value of transmission and distribution grid services. [Client: Confidential (Utility); Date: 2018; Location: AB, Canada]
- **Marginal emission factors.** Benjamin was the Director-in-charge responsible for a Navigant team developing and recommending a methodology to establish default emission factors for electricity imports under Ontario's proposed Cap and Trade legislation. The framework established the default emission factors based on a forecast of the emissions intensity of marginal generation resources in neighbouring jurisdictions. [Client: Ontario Ministry of Energy; Date: 2016; Location: ON, Canada]
- **Future of microgrids in Ontario.** Benjamin was the Director-in-charge of a Navigant team examining the relevance and economic viability of four microgrid use cases, forecasting if/when they can be economically deployed under current and projected rate structures. As part of the engagement Navigant facilitated a workshop with industry stakeholders. [Client: MaRS Advanced Energy Centre; Date 2016; Location: ON, Canada]

NAVIGANT

Benjamin Grunfeld

Managing Director

- **Microgrid and virtual power plant business model development.** Benjamin was the Director-in-charge of a Navigant team evaluating the North American market for microgrids and virtual power plants and advising on the development of a business model for a utility partnership with an equipment manufacturer. The Navigant team characterised the market in North America, conducted a competitor's assessment, identified the strategic and competitive advantage of the proposed partnership; and developed a recommended business model. [Client: Confidential (Utility); Date 2016; Location: North America]
- **Competitive bid development support for distribution connected storage project**. Benjamin was the Director-in-charge of a Navigant team that supported the development of a bids into two Independent Electricity System Operator's energy storage procurements. The Navigant team provided (i) financial modelling of the distribution-connected energy storage projects, (ii) conceptual dispatch modelling for provision of regulation, capacity, and load shifting services, (iii) a review of costs and challenges associated with provision of ancillary services and (iv) an assessment of alternative technologies [Client: Confidential (Multiple Utilities); Date 2016; Location: ON, Canada]
- **Solar / storage microgrid project development and funding application support**. Director-in-charge of the Navigant team that supported a successful applicant in Ontario's Smart Grid Fund for a microgrid incorporating renewable generation and energy storage. The proposal highlighted the operational flexibility of the microgrid for the customers served and the system benefits that would accrue. The client is developing this project with ongoing technical and financial support from Navigant. [Client: Confidential (Utility); Date 2015; Location: ON, Canada]
- **Residential solar / storage market assessment and program development**. Director-in-charge of the Navigant team supporting a utility in the development of a solar + storage program for residential customers. A key component of our analysis is optimizing the allocation of the power and energy capacity of the battery between the customer and the utility. Power and energy capacity allocated to the utility can be used to earn market revenue from various sources and reduce the customer costs for the solar / storage facility. [Client: Confidential (Utility); Date 2015; Location: ON, Canada]
- **Grid parity analysis for residential and small commercial solar + storage**. Director-in-charge of a Navigant team that conducted an analysis of the potential for residential and small commercial behind the meter solar + storage to achieve grid parity in Ontario over a 25-year time horizon. [Client: Confidential (Utility); Date 2014; Location: ON, Canada]
- **Distribution line loss study and allocation methodology.** Benjamin was the project manager and testifying expert for Navigant's comprehensive assessment of the technical and non-technical losses over Hydro One Network's distribution system. Navigant utilized a combination of metered data and engineering analysis to establish the total losses as well as determine an appropriate allocation to individual customer classes. [Client: Hydro One Networks, Inc.; Date: 2013; Location: ON, Canada]
- **Business plan review for RIIO-ED1.** Benjamin led a team that reviewed a Distribution Network Operator's (DNO) business plans submitted to Ofgem's under RIIO-ED1 (Revenue set to deliver strong Incentives, Innovation and Outputs). The team reviewed the business plans and the business plan consultation documents to: identify any missed opportunities or enhancements which could be embraced; provide a qualitative assessment of which network has a higher or lower probability of being fast-tracked in the RIIO process; and identify specific actions and priorities that would improve the chances of fast-track status. [Client: Confidential (Utility); Date: 2013; Location: London, UK]

NAVIGANT

Benjamin Grunfeld

Managing Director

- **Comprehensive review of the Global Adjustment.** The Independent Electricity System Operator retained Navigant to conduct a review of the Global Adjustment (GA) mechanism and to evaluate alternative cost recovery mechanisms. Benjamin was the project manager for this engagement. The GA is the largest of three mechanisms through which the IESO recovers the direct electricity supply cost from consumers. Navigant's review had five specific objectives: (i) to advise if similar charges to the GA exist in other North American jurisdictions, and if so to describe those charges and provide guidance on the advantages and disadvantages of employing a similar approach in Ontario; (ii) to identify more efficient options for recovering the GA costs from consumers, while allowing for greater responsiveness from customers; (iii) to consider the unbundling of the GA into component parts and an appropriate allocation of the costs on this basis; (iv) to consider the development of market mechanisms for customers and others to manage GA costs; and (v) to quantify the impact of recommended options. A substantial component of this engagement was consultation and facilitation with industry and government stakeholders. Navigant and the IESO consulted with stakeholders in advance, on the scope of the review, and subsequently throughout the review process. Navigant staff was responsible for facilitating two town-hall style events and for the preparation of consultation documents. [Ontario Independent Electricity System Operator; Date: 2013; Location: ON, Canada]
- **Impact of time of use rates and design considerations.** Engaged by the Ontario Energy Board, the province's regulator and electricity price-setting agency for a two-part study to: Part 1: Estimate the impact of the transition from tiered (i.e., inclining block) to TOU rates and Part 2: Use the results of this evaluation to estimate the impact on system peak demand and a variety of other metrics of four alternative TOU structures. Benjamin was the project manager for this engagement. [Client: Ontario Energy Board; Date: 2013; Location: ON, Canada]
- **Industrial Electricity Incentive program design.** Advised both the Ontario Power Authority and the Ontario Ministry of Energy on the development of the Industrial Energy Initiative (IEI), which effectively offers new and existing industrial load in the province premium rates for electricity. Advised on a number of program design issues including: appropriate tariff levels, the impact on other customer classes, eligibility criteria, and the role of energy efficiency, among other issues. [Ontario Power Authority; Date: 2012; Location: ON, Canada]
- **Evaluation of demand-side product pricing practices.** Benjamin was part of a team that assessed alternative methods and models for evaluating the cost effectiveness of demand-side pricing and interruptible load tariffs, and estimating the costs avoided by those resources. [Client: Tennessee Valley Authority; Date: 2012; Location: Tennessee, USA]
- **Development of risk-based compliance and enforcement framework.** Benjamin led an engagement with the Ontario Energy Board (OEB) to develop a risk-based approach to compliance for the electricity retailers and gas marketers segment of the energy sector. The development of a risk-based compliance framework builds on recent changes following the passage of the Energy Consumer Protection Act, 2010, which established a new framework for the regulation of retail activities and suite metering, and reinforced and expanded the OEB's consumer protection mandate. Navigant's scope of work consisted of three main elements: a review of other regulatory entities in Ontario and other jurisdictions that have implemented risk-based compliance frameworks; the development and recommendation of a compliance program framework; and implementation support. As part of the implementation, Navigant facilitated risk assessment workshops with OEB staff. [Client: Ontario Energy Board; Date: 2012-2013; Location: ON, Canada]

NAVIGANT

Benjamin Grunfeld

Managing Director

- **Discussion paper on incentive regulation mechanisms.** Benjamin prepared a detailed discussion paper on the current efficiency target incentive regulation framework in Ontario, including its history and evolution, and its applicability to Ontario Power Generation's prescribed nuclear and hydro-electric assets. Detailed case studies of other efficiency target regulatory regimes were also developed and included in the paper. [Client: Ontario Power Generation; Date: 2012; Location: ON, Canada]
- **Customer density and cost allocation study.** Benjamin and his team were engaged by Hydro One Networks, Inc. to review the existing density-based electricity distribution rate class design and cost allocation mechanisms. The objective of the study is to establish a set of well-defined and defendable customer classes that take into account appropriate density differentiation. Benjamin led a consortium of firms providing econometric, engineering, and strategic advice to Hydro One Networks, Inc. in order to complete the study and assist with preparations for an upcoming rate application. Benjamin led two stakeholder engagement sessions. The first, to garner input into the methodology development, and the second, following the completion of the study, to present the results and findings. [Client: Hydro One Networks, Inc.; Date: 2011; Location: ON, Canada]
- **Electricity distribution tariff design.** Provided advisory support to the Electricity and Cogeneration Regulatory Authority for the Kingdom of Saudi Arabia. Benjamin assisted in the development of a long-term electricity tariff model and framework designed to achieve revenue sufficiency for the electricity sector as a whole for several regulatory periods from 2008 onwards. The tariff design embedded efficiency targets and incorporated a lifeline tariff for residential customers. [Client: Electricity and Cogeneration Regulatory Authority; Date: 2007-2008; Location: Saudi Arabia]
- **Design of standard offer/feed-in tariff program.** Advised on various issues associated with the design of its initial renewable energy standard offer program, including: rationale for a standard offer; eligibility criteria; contract term; different approaches for establishing the standard offer price; and alternative incentive mechanisms for promoting on-peak generation. [Client: Ontario Power Authority; Date: 2005-2006; Location: ON, Canada]
- **Determination of avoided cost from energy efficiency measures.** Developed an estimate of avoided costs used to value conservation and demand management initiatives in Ontario. Developed models to estimate the avoided energy, capacity and transmission costs and system losses. Prepared informal testimony and presented results to staff at the Ontario Energy Board. Analysis was approved without a formal hearing and has been used by various parties to assess the value of different investment alternatives including district energy projects. [Client: Ontario Energy Board; Date: 2006; Location: ON, Canada]

NAVIGANT

Benjamin Grunfeld

Managing Director

- **Default supply pricing mechanism design and implementation.** Part of a team that provided consultancy services throughout the design and implementation of the Regulated Price Plan for provincial electricity consumers. Implementation included: developing the requisite forecasts for the Ontario wholesale electricity market; describing the precise methodology used to blend the costs from the various streams that contribute to the Regulated Price Plan supply; deriving final prices that consumers are charged under the Regulated Price Plan; and developing the final documents available for public consumption. Benjamin developed the blended cost model, which ultimately determined the rate passed on to consumers, assessed the impact of regulatory decisions, developing the two tier rates for conventional metered facilities as well as the three tier pricing structure for time of use metered facilities. Modelled the effect of a price-tier threshold adjustment on the generated revenues, determined offsetting adjustment required to maintain revenue neutrality. Analysed the key risk factors and sources of variance associated with the generated revenues and cost of supply for the Regulated Price Plan. [Client: Ontario Energy Board; Date: 2004-2005; Location: ON, Canada]

Testimony and Expert Witness Reports

- Hydro One Networks v. Ontario Energy Board (EB-2017-0049). Distribution Unit Cost Benchmarking Study: Pole Replacement and Substation Refurbishment. 2016-10-19. For the applicant
- Hydro One Networks v. Ontario Energy Board (EB-2016-0160). Total Transmission Cost Benchmarking. 2016-05-17. For the applicant
- Hydro One Networks v. Ontario Energy Board (EB-2013-0416). Distribution Line Loss Study. 2014-1-23. For the applicant
- Hydro One Networks v. Ontario Energy Board (EB-2011-11-11). Customer Density and Distribution Service Costs. 2011-11-11. For the applicant
- TransCanada Energy Ltd. (Claimant) and Ontario Independent Electricity System Operator (Respondent). Gas Delivery and Management Services Electricity Market Expert Report. 2016-03-24. For the respondent

Work History

Associate Director and Director, Navigant
Managing Consultant, London Economics International
Senior Associate, Ampersand Energy Partners
Consultant and Senior Consultant, Navigant
Junior Engineer, Power and Electro-technology, Hatch

Education

M.Sc., Management and Economics, London School of Economics and Political Science, London, UK
B.Sc., Applied Mathematics and Electrical Engineering, Queen's University, Kingston, Canada

Ken Buckstaff
Managing Director

Professional History

- 2007…– Managing Director, First Quartile Consulting
- 2001-2007 -- Partner, PA Consulting Group
- 1998-2000 -- Senior Vice President, Hagler Bailly Consulting
- 1989-1997 -- Managing Director, Theodore Barry & Associates
- 1980-1988 -- Internal Consulting Manager, Salt River Project
- 1976-1978 – Loss Prevention Engineer, Factory Mutual

Education

- B.S. I.E., Lehigh University, 1976
- M.B.A., U.C.L.A., 1980

Introduction

Ken is a founding partner of First Quartile Consulting. He leads the Firm's efforts to help utility clients with performance improvement initiatives, through large and small-scale projects, and through leadership of industry-wide benchmarking programs. Ken is a long-term management consultant with a deep understanding of the utility industry, both in North America and abroad.

Consulting Experience

Over a twenty-five year consulting career, Ken has led and participated in dozens of projects designed to assist clients with performance improvement needs, as well as strategy development, regulatory proceeding support, and general management. He has supported these project efforts through continuing research and development in performance improvement techniques, as well as long-term operation of the premier utility benchmarking programs.

Ken helped establish an annual benchmarking program for North American utilities in 1989, covering Electric Transmission & Distribution. Following that, he added Customer Service in 1992, Gas Distribution in 1995, and Corporate & Shared Services in 1998. The programs were expanded to Latin America and later to Europe, creating a global participant base. Ken led the programs through transitions from Theodore Barry & Associates to Hagler Bailly, and later to PA Consulting, before leaving to start First Quartile Consulting, where the Firm has established itself as the industry leader in benchmarking programs.

Through his work in several different consulting firms, Ken has provided intellectual leadership in development of consulting methodologies. In particular, he developed approaches for performance improvement in utility operations, built around benchmarking and best practices, that have since been used in North America, Europe, Latin America, Africa, and Asia. He has developed and documented the methodologies, and created training modules for use both within the consulting firm and directly with clients.

Ken has supported regulatory proceedings on behalf of utilities in numerous U.S. States, Canadian Provinces, and in the U.K. He has prepared testimony for others and for himself in several of those jurisdictions, and overseen development of supporting documents, position papers, and reports for many of them. He has also worked for regulators in development of position papers for such issues as open access/customer choice and competitive metering, and for the Canadian association of regulators, he developed a benchmarking methodology for use in streamlining the ratemaking process.

A sample listing of Ken's consulting project experience is provided below:

- *Engagement Director* for a project designed to develop a storm damage model for a major west-coast electric utility. Working in concert with a team of professors from three universities, First Quartile developed and implemented a storm model designed to forecast damage to the electric system based on predicted weather, and convert the damage estimates to resource requirements, so the utility could provide the optimal response to each event. The project required cutting-edge modeling techniques for both the damage modeling and the resource modeling. Results are being used to prepare each time a major storm event approaches the utility.
- *Engagement Director* for a benchmarking program development project for the Canadian utility industry on behalf of the association of utility regulators (CAMPUT). Project was created to develop a benchmarking approach that could be used to provide uniform metrics for support of rates proceedings for distribution and transmission providers.
- *Engagement Director* for establishment of a process improvement program for a leading Canadian electric utility. Assignment involved a diagnostic analysis of the entire company to identify areas of opportunity, followed by process improvement analyses for the most promising areas. The program is permanent, rather than a one-time project effort, and is measured by success in cost reduction and other performance enhancements.
- *Engagement Director* for a benchmarking-driven evaluation of staffing levels and overall T&D operations for a major western electric utility. The study covered all aspects of the transmission and distribution business, with a special focus on staffing. The utility was in a growth stage, while trying to maintain their existing cost structure, and wanted to know how to staff and structure the organization for the greatest success. 1QC developed a staffing model based on staffing and workload levels from utilities across North America. Results of the study were used to guide the budgeting/planning process to reach the desired goals.
- *Engagement Director* for a process improvement project for the transmission operations of a southeastern G&T cooperative. This was a joint project with Navigant Consulting, with First Quartile providing both benchmarking and process improvement expertise to the project team. The outcome of the project was a series of small changes to practices in the areas of capital project management, substation maintenance, and engineering staffing.
- *Engagement Director* for a project designed to develop and implement a set of performance indicators for the Transmission & Distribution organization for a major municipal utility in the pacific northwest. The metrics were built from a combination of the key performance indicators used in the annual First Quartile T&D benchmarking study and the specific needs of the client. The resulting metrics enabled more responsive management of the T&D functions at the utility, along with a means of communicating expectations to employees, management, and city leadership.
- *Engagement Director* for a best practices analysis of Standard Offers for new service connections on behalf of a very large Canadian utility. The provincial regulator was preparing to impose some very challenging requirements for the standard offer that would be very expensive to meet. The study conducted by First Quartile was able to demonstrate the most typical practices in place across North America, as well as those most generous to customers, and help our client to get a reasonable set of requirements approved.
- *Engagement Director* for a best practices analysis for the Best Practices Working Group (BPWG) of the Canadian Electricity Association. Study was designed to augment the activities of the BPWG, comparing the results of their Transmission study of the BPWG members against the performance of the members of the 1QC T&D benchmark study. The

net result was a report detailing the relative performance of the BPWG member companies, and defining the best practices in the key operating processes for Transmission operators.

- *Engagement Director* for a Project Management analysis and improvement project for a major western transmission provider. Our client was in the process of doubling its capital budget, and needed help with assuring that the increased workload could be delivered annually. 1QC was engaged for several major tasks – analyzing the Project Management organization structure, staffing, and process, developing a short and long-term strategy for the group, and developing a "project management playbook" for use in managing al the projects. Working with several teams of employees, 1QC developed a recommended organization structure and staffing model, along with a more systematic approach for managing projects.

Regulatory Support Experience

Over the course of his consulting career, Ken has been called upon to prepare testimony for a variety of regulatory proceedings, and to participate in hearings in many of those engagements. Most of those have been built around the datasets of benchmarks and best practices developed through the annual and one-off benchmarking engagements he has participated in. A listing of examples of those projects is provided here:

1992 - NY Public Service Commission – engaged by Central Hudson Gas & Electric -- the PSC was preparing to implement customer service standards for the utilities in the state, making them the same for all utilities. Wrote testimony suggesting that there were different customer expectations in Manhattan than in other parts of the state, and the standards should therefore be different. Written reports were filed as testimony, and later met with the commission staff and commissioners, but not in a formal hearing.

1995 -- Colorado Public Service Commission -- engaged by what was then Colorado Public Service (now part of Xcel Energy) -- prepared written testimony regarding what would be a fair and reasonable standard for reliability performance across their service territory. Participated in a hearing to describe the proposed standards and explain the structure.

1998 -- Missouri Public Service Commission - engaged by Missouri Gas Energy. Provided written testimony, and participated in hearings as an expert witness. Focus was on reasonable costs and service levels for Customer Service, with a focus on billing.

2000 -- Illinois Commerce Commission – engaged by Commonwealth Edison. Provided written testimony in the rule-making surrounding the shift to open access in Illinois. Position papers on how to decide who should do the billing, and how costs should be shared.

2000 -- Illinois Commerce Commission – engaged by provided Commonwealth Edison. Provided written testimony in the rule-making surrounding the shift to open access in Illinois. Position papers on who should own and operate meters, and who has responsibility for reading them and maintaining data.

2001 – Ontario Energy Board - engaged by HydroOne -- written testimony as part of a distribution rates proceeding, focused on reasonableness of costs and electric system performance. Also provided oral testimony at the hearings.

2003 -- OFGEM (UK) – engaged by Scottish Power -- provided written testimony on the level of spending on the distribution system. Evidence showed that Scottish Power was significantly underspending in capital replacement, which would lead to deterioration of the system over time. No hearings required.

2006 -- OEB -- Transmission rates proceeding. Engaged by Hydro One to provide written testimony along with appearance at a hearing. Focus was on spending plans, and how Hydro One fit within the norms of the industry for both Capital and O&M spending.

2008 – AUC in Alberta – engaged by Direct Energy Regulated Services (DERS) – As part of a rates proceeding, provided a report on Fair Market Value (FMV) for Customer Care & Billing services, and then appeared as part of a panel with DERS staff during a hearing.

2009 -- OEB - engaged by HydroOne for Distribution rates proceeding. Wrote the testimony, but then due to an injury was incapacitated during the hearings. A business partner served as a witness in the hearings.

2011 – AUC in Alberta – engaged by DERS – In a rates proceeding, 1QC filed a written report on unit costs of customer service functions, and participated in hearings as part of a panel with DERS staff and another consulting firm.

2012 -- Maryland Department of Public Utilities – Engaged by the Maryland Department of Public Utilities -- Provided an assessment of the performance of PEPCO in a series of major storm events. Report was made public, and eventually there was a hearing at which Ken testified, and was cross-examined by the company (as an adversary), by the Commission, and by some intervenors**.**

2015 – AUC in Alberta – Engaged by DERS – Engaged to provide a "market cost" study of customer service activities as part of a rates proceeding. Project required filing a report, followed by testimony as part of a panel with another consultant who performed a parallel study of the same subject.

2016 – OEB – Engaged by Hydro One for analysis of Transmission total costs. Filed a written report as part of a Navigant team, and then participated in hearings as part of a panel with the Navigant partner.

2009, 2010, 2012, 2014, 2016 – OEB – Engaged by Great Lakes Power Transmission to support a series of rates proceedings. Each of these engagements required a benchmark cost analysis and a written report comparing GLPT against a panel of transmission operators. No hearings were required of 1QC for any of these.

STEPHEN TANKERSLEY

SUMMARY | Accomplished business consultant with expertise in asset and vegetation management for gas and electric utility industry, suppliers and contractors. Keen understanding of Utility Vegetation Management (UVM) programs with a strong business acumen focused Engineering & Construction, Project Management, Financial Management, Contract Administration and Business Systems Process Engineering. Recognized as an Expert Witness. Influential leader and communicator in developing strategic partnerships to improve system reliability, safety and financial management through groundbreaking concepts and ongoing process improvements.

EXPERIENCE |

PRINCIPAL CONSULTANT – CLEAR PATH UTILITY SOLUTIONS, LLC
OCT. 2015 TO PRESENT

Provide innovative solutions and strategic planning in asset management for clients in the gas and electric utility industry. Specialize in developing integrated technology solutions, workforce planning, contract strategy/negotiations, QA/QC, regulatory strategy, performance assessment, litigation preparation and expert witness.

PACIFIC GAS & ELECTRIC COMPANY – APRIL 1977 – SEPT. 2015

SR. MANAGER - COMPLIANCE AND RISK MANAGEMENT
MAY 1997 TO SEPT. 2015

Directed vegetation management operations covering 135,000 miles of electric transmission and distribution infrastructure in over a 70,000 sq. mile service area. Managed a work force of 2,000+ suppliers, contractors and employees. Primary responsibility was to ensure public safety, system reliability and regulatory compliance through effective utility vegetation management. Achieved industry first decile performance in virtually all aspects of the program.

SUPERVISING ANALYST – FLEET OPERATIONS
JAN. 1994 TO MAY 1997

Directed, designed and implemented a fleet pool and rental management system across 24 locations across Northern and Central California. Managed a $500-million-dollar fleet reducing costs by 20% via effective vehicle and equipment utilization.

SUPERVISIONG PM – ENGINEERING AND CONSTRUCTION FINANCIAL MANAGEMENT
MARCH 1985 TO JANUARY 1994

Job management lead and deployment project manager for a $27 million work management and financial system for the Engineering and Construction business unit. System was deployed across 270+ field locations. Supervised business process and productivity consulting team.

SUPERVISOR/PROJECT MANAGEMENT – ENGINEERING AND CONSTRUCTION
APRIL 1977 TO MARCH 1985

Various leadership roles in Engineering and Construction introducing new concepts and technologies to improve operational effectiveness.

AFFILIATIONS | NERC FAC-003-3 Standards Drafting Team Member | EEI VM Task Force

Utility Arborist Assoc. Steering Committee for BMP's related to Tree Mitigation in Large Populations

Utility Arborist Assoc. Research Committee & Endowment Fund

CURRICULUM VITAE OF DARLENE BRADLEY

EDUCATION

York University
Toronto, Ontario (1996)
Bachelor of Arts, Science, Technology & Society

INDUSTRY EXPERIENCE

1987 – Present:	**Hydro One Networks Inc./ Ontario Hydro Networks Company Inc. / Ontario Hydro**
2017 - Present	Vice President, Planning
2014 - 2016	Director, Technical Services, Stations & Operating
2011 - 2014	Director, Sustainment Investment Planning
2007 - 2011	Superintendent, Central Station Services
2006 - 2007	Planning Manager, Grid Operations
2005 - 2006	Manager, Conservation and Demand Management
2003 - 2005	Senior Adivsor, Business Planning and Approvals
2000 - 2003	Sr. Netowork Management Officer, Distribution Planning & Generation Connections
1998 - 2000	Network Management Officer, Transmission Asset Management
1988 - 1998	Regional Maintainer, Electrical

APPEARANCE(S) BEFORE THE ONTARIO ENERGY BOARD

N/A

INDUSTRY PARTICIPATION

- North American Electric Reliability Corporation, *Members Representative Committee*
- IESO Stakeholder Advisory Committee, *Representing Distributors and Transmitters*
- Energy Transformation Network of Ontario, *Member*

CURRICULUM VITAE OF BRUNO JESUS

EDUCATION

University of Toronto
Toronto, Ontario (1987)
Bachelor of Applied Science, Electrical Engineering

INDUSTRY EXPERIENCE

1987 – Present:	**Hydro One Networks Inc./ Ontario Hydro Networks Company Inc. / Ontario Hydro**
2017 - Present	Director, Strategy & Integrated Planning
2014 - 2016	Manager, Transmission Capital Investment Planning
2012 - 2014	Project Director, Asset Analytics
2008 - 2012	Manager, Asset Strategies & Standards
1999 - 2008	Senior Advisor, Network Strategies
1997 - 1999	Senior Advisor, OPEX 2000
1987 - 1997	Section Head - East, System Development

APPEARANCE(S) BEFORE THE ONTARIO ENERGY BOARD

EB-2017-0049:	Hydro One Networks Inc. 2018-2022 Distribution Rate Application – Technical Conference

CURRICULUM VITAE OF LYLA GARZOUZI

EDUCATION

University of Ottawa
Ottawa, Ontario (2004)
Bachelor of Applied Science, Electrical Engineering

INDUSTRY EXPERIENCE

2004 – Present:	**Hydro One Networks Inc.**
2017 - Present	Director, Distribution Asset Management
2015 - 2017	Manager, Distribution Technical Services
2012 - 2015	Manager, Distribution Development
2009 - 2012	Manager, Sustainment
2007 - 2009	Network Engineer, Distribution Asset Management
2005 - 2007	Assistant Network Engineer, Transmission Load Connections
2004 - 2005	Emergency Preparedness Officer, Emergency Planning

APPEARANCE(S) BEFORE THE ONTARIO ENERGY BOARD

EB-2017-0049:	Hydro One Networks Inc. 2018-2022 Distribution Rate Application – Technical Conference
EB-2013-0294:	Hydro One Networks Inc. – Smart Grid Technical Conference

CURRICULUM VITAE OF BRAD BOWNESS

EDUCATION:

Ivey Business School, University of Western Ontario
London, ON (1998)
Honors Business Administration

INDUSTRY EXPERIENCE:

2004 – Present: Hydro One Networks Inc.

2017 - Present	Vice President, Distribution
2015 - 2017	Vice President, Construction Services / Transmission and Stations
2013 - 2015	Director – Project Management, Engineering and Construction
2012 - 2013	Director – Business Information Technology
2010 - 2012	Director – Business Architecture
2008 - 2010	Senior Manager – Performance Improvement
2004 - 2008	Manager – IT Account Manager

2001 – 2004: Independent Consultant

System Integration Consultant within Utility Industry

1998 – 2001: Accenture

System Integration Consultant within Utilities Market Unit

APPEARANCE(S) BEFORE THE ONTARIO ENERGY BOARD:

EB-2016-0161: Hydro One Networks Inc. 2017-2018 Transmission Revenue Requirement Application

CURRICULUM VITAE OF ROBERT BERARDI

EDUCATION:

CPA Association
Toronto, ON (2004)
Chartered Professional Accountant, Certified Management Accountant, CPA, CMA

York University
Toronto, ON (1989)
Bachelor of Arts in Political Science

INDUSTRY EXPERIENCE:

Date Range:	**Employer**
1989 - Present:	**Hydro One Networks Inc. / Ontario Hydro**
2017-Present	Vice President, Shared Services
2014-2017	Director, Supply Chain
2009-2013	Director, Management Accounting & Reporting
2008-2009	Finance Lead for Enterprise ERP Project/Sr. Manager, Cost Accounting
2005-2007	Manager/Financial Advisor
2002-2005	Senior Controllership Advisor
2000-2002	Senior Accounting & Financial Analyst
1989-2000	Analyst & Clerical

APPEARANCE(S) BEFORE THE ONTARIO ENERGY BOARD:

EB-2013-0416:	**Hydro One Networks Inc. 2015-2019 Distribution Rate Application**

CURRICULUM VITAE OF LINCOLN FROST-HUNT

EDUCATION

University of Western Ontario
London, Ontario (2000)
B.Sc. Environmental Science

INDUSTRY EXPERIENCE

2009 – Present: Hydro One Networks Inc.

2014 - Present	Director – Enterprise IT
2012 - 2014	Director – Business Architecture
2010 - 2012	Senior Manager – Business Architecture
2009 - 2010	Manager – Enterprise Architecture

CURRICULUM VITAE OF TOM IRVINE

EDUCATION:

Various	Certified Electrical Engineering Technician (1988)

INDUSTRY EXPERIENCE:

1985 – Present:	**Hydro One Networks Inc. / Ontario Hydro**
2014-present	Director – System Control (formally called Network Operating Division)
2008-2013	Manager Grid Operations - Operating Networks
2006-2007	Manager Grid Operations - Operating Performance & Customer Support
2005 - 2006	Grid Operations Manager - Operating Networks
2000-2004	Shift Transmission Superintendent
1998-2000	Senior Technical Officer, integrated Operations
1988-1998	System Control Officer

APPEARANCE(S) BEFORE THE ONTARIO ENERGY BOARD:

EB-2013-0416:	Hydro One Networks 2015–2019 Distribution Rates Application

CURRICULUM VITAE OF BIJAN ALAGHEBAND

EDUCATION

CFA Institute
Charlottesville, Virginia (2001)
Charted Financial Analyst designation

McGill University
Montreal, Quebec (1988)
Ph.D. in Economics, with specialization in Economics, Econometrics, and Economic Development

McGill University
Montreal, Quebec (1981)
Master of Arts in Economics, major field Econometrics, minor field Economic Development

Tehran University
Tehran, Markazi (1975)
Bachelor of Arts in Economics

INDUSTRY EXPERIENCE

1999 – Present:	**Hydro One Networks Inc. / Ontario Hydro Services Company**
2016 - Present	Manager, Economics & Load Forecasting
2015 - 2016	Acting Manager, Economics & Load Forecasting
2005 - 2014	Senior Advisor, Load Forecasts
1999 - 2005	Strategic Planner, Load Forecasts
1989 – 1999:	**Ontario Hydro**
	Energy Economist, Economics & Forecasts Division
2010 – Present:	**McMaster University**
2014-Present	Lecturer, Master of Finance program
2010-2014, 2017	Lecturer, MBA program
1984 – 1988:	**McGill University**
	Consultant for applied econometric analysis and computer programming

APPEARANCE BEFORE THE ONTARIO ENERGY BOARD

EB-2016-0160:	Hydro One Networks Inc. 2017-2018 Electricity Transmission Revenue Requirement & Charge Determinants Application

CURRICULUM VITAE OF CLEMENT LI

EDUCATION

Technical University of Nova Scotia
Halifax, Nova Scotia (1991)
Master of Applied Science (Mechanical Engineering)

Technical University of Nova Scotia
Halifax, Nova Scotia (1988)
Bachelor of Applied Science (Mechanical Engineering)

INDUSTRY EXPERIENCE

1999 – Present: Hydro One Networks Inc. / Ontario Hydro Services Company

2016 - present	Manager, Transmission & Distribution Pricing
2015 - 2016	Manager, Business Development & Support
2010 - 2015	Senior Regulatory Advisor
2008 - 2010	Manager, Business & Regulatory Support
2006 - 2008	Senior Advisor, Billing & Settlement
1999 - 2006	Senior Advisor, Load Forecast & Management

1992 – 1999: Ontario Hydro

Analyst/Senior Analyst/Advisor, Load Forecast, Load Analysis, Conservation & Demand Management

APPEARANCE BEFORE THE ONTARIO ENERGY BOARD

N/A

CURRICULUM VITAE OF JOHN BOLDT

EDUCATION:

Ryerson Polytechnical Institute, Toronto, On (1985), Electrical Engineering

St. Lawrence College, Kingston, On (1986-1988), Electronic Engineering Technology

INDUSTRY EXPERIENCE:

April 1999 – Present	Hydro One Networks Inc./Ontario Hydro Networks Company Inc.
1988 – April 1999	Ontario Hydro

2017 – present	Manager – Asset Optimization (Tx Secondary Land Use & Dx Joint Use)
2013 - 2017	Manager – Program Integration, Distribution Asset Management
2006 – 2013	Commercial Agreements Manager
2005 – 2006	Technical Front Line Manager
2003 – 2005	Distribution Program Engineering Officer
2001 – 2003	Supervising Area Distribution Engineering Technician
2000 – 2001	Supervising - Customer Service Representative
1995 – 2000	Customer Service Representative "A"
1993 – 1995	Regional Maintainer – Lines - Union Trades Supervisor- Level 3
1988 – 1993	Regional Maintainer – Lines 'Journey Person"

APPEARANCE(S) AT ONTARIO ENERGY BOARD PROCEEDINGS:

EB-2015-0304	Member of the "Pole Attachment Working Group" (PAWG) established by the OEB to review wireline pole attachments and offer advice on technical aspects and related details, such as, what should be included in developing a fair and reasonable charge and what methodology should be used.
EB-2015-0141	Hydro One Network Inc.'s witness during Rogers Motion to Review HONI Dx Decision. This was a motion by several cable and telecommunications companies (the Carriers) under Rule 40.02 of the OEB's Rules of Practice and Procedure for leave to bring a motion to review and vary the OEB's March 12, 2015 decision approving distribution rates and charges for Hydro One Networks Inc. (Hydro One) for 2015 through 2017.

EB-2014-0022	Suncor Energy Products Inc. s92 - Procedural Order No. 8 (Oral Hearing for the identification of the incremental impacts that arise as a result of a direct impact on price, reliability and quality of service of Hydro One's existing distribution system
EB-2010-0228	Proposed Joint Use Rates for Generator Use of Distribution Poles and Fees for Connection Impact Assessments

PARTICIPATED IN ONTARIO ENERGY BOARD PROCEEDINGS:

RP-2003-0249	Representing Hydro One Networks Inc. working with Canadian Electrical Association (CEA) in the Canadian Cable Television Association (CCTA) rate application

MEMBERSHIPS:

2013 – Present	Chairman of the Canadian Electrical Association (CEA) Joint Use Task Group (JUTG)
2004 – 2013	Member of CEA (JUTG)