EB-2013-0416

IN THE MATTER OF the *Ontario Energy Board Act 1998*, S.O. 1998, c.15, (Schedule B);

AND IN THE MATTER OF an application by Hydro One Networks Inc. for an order approving just and reasonable rates and other charges for electricity distribution to be effective January 1, 2015, each year to December 31, 2019.

CANADIAN MANUFACTURERS & EXPORTERS ("CME") COMPENDIUM FOR HYDRO ONE NETWORKS INC. ("HONI") WITNESS PANELS 1 – 4

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TAB 1

MEMORANDUM OF AGREEMENT

BETWEEN

Her Majesty the Queen
in Right of the province of Ontario
as Represented by the Minister of Energy

AND

Hydro One Inc. ("HOI")

A. Purpose:

This document sets out the agreement between Hydro One Inc. ("HOI"), a corporation incorporated under the *Business Corporations Act* (Ontario) (the "OBCA") and subject to/governed by the *Electricity Act, 1998* (the "EA") and its sole shareholder, Her Majesty the Queen in Right of the Province of Ontario as represented by the Minister of Energy (the "Shareholder") on mandate, governance, responsibilities, performance expectations and executive compensation.

This Memorandum of Agreement is intended to promote a positive and co-operative working relationship between HOI and the Shareholder.

B. Mandate:

1. HOI's core mandate is the safe, reliable and cost-effective transmission and distribution of electricity to Ontario electricity users.

2. HOI will operate as a commercial enterprise with an independent Board of Directors that will, at all times, exercise its fiduciary responsibility and a duty of care to act in the best interests of HOI.

C. Governance:

The governance relationship between HOI and the Shareholder shall be founded on the following principles:

1. The Board of Directors of HOI is responsible for oversight of the management of the business and affairs of the Corporation, including the appointment of executive officers and management and the formation and operation of key committees essential to its governance structure.
2. HOI will maintain a high level of accountability and transparency as follows:
   (i) As an OBCA company, HOI is subject to all of the governance requirements associated with the OBCA, and as a reporting issuer of debt securities is subject to the governance requirements under the *Securities Act (Ontario)* and any other applicable securities regulatory requirements.
   (ii) HOI is also subject to the *Freedom of Information and Protection of Privacy Act* (Ontario), the *Public Sector Salary Disclosure Act* (Ontario) and the *Auditor General Act* (Ontario).
   (iii) As a transmitter and distributor of electricity, and as a generator for the purposes of distributing electricity to remote areas through its wholly-owned subsidiary Hydro One Remote Communities Inc., HOI is licensed by and subject to the jurisdiction of the Ontario Energy Board (the OEB) pursuant to the *Ontario Energy Board Act, 1998*, including all of the OEB's orders, codes and other regulatory requirements as are applicable.

3. The Shareholder may at times direct HOI to undertake special initiatives. Such directives will be communicated as written declarations by way of an Unanimous Shareholder Agreement or Declaration in accordance with Section 108 of the OBCA. Hydro One will disclose this direction as required under securities legislation.

D. Responsibilities – Operational:

1. HOI will operate its transmission and distribution assets as efficiently and cost-effectively as possible, within the legislative and regulatory framework of the Province of Ontario. The company will operate these assets in a manner that appropriately mitigates the Shareholder's financial and operational risk.
2. HOI will continue to operate in full compliance within the legislative and regulatory framework and using best practices with respect to employee and public safety.
3. HOI will prioritize investments in transmission and distribution capacity to support projects necessary to maintain ongoing grid security and reliability.
4. HOI will operate in Ontario in accordance with the highest corporate standards, including but not limited to the areas of corporate governance, social responsibility, environmental stewardship and corporate citizenship.

E. Responsibilities – Financial:

1. HOI will annually prepare a three to five year investment plan for new projects. Once approved by HOI's Board of Directors, the plan will be submitted to the Minister of Energy and the Minister of Finance for concurrence.
2. As an OBCA corporation and reporting issuer with a commercial mandate, HOI will operate on a financially sustainable basis and maintain or increase the value of its assets for its Shareholder.
3. HOI will obtain the approval of the Minister of Energy and Minister of Finance, in advance, with respect to:
    (i) any proposal to issue or transfer shares in the Corporation or any of its subsidiaries;
    (ii) any proposed acquisition or divestment of assets, other major transaction, proposal or action by the Corporation or any of its subsidiaries, where such acquisition or divestment, major transaction, proposal or action would potentially have a material impact on:
        - the cash flow to the Ontario Electricity Financial Corporation
        - the financial interests of the Province; or
        - the payments in lieu of taxes by the Corporation and its subsidiaries under the EA.

F. Responsibilities – Communications & Reporting:

1. The HOI Board of Directors and the Minister of Energy will meet, as needed, to enhance mutual understanding of interrelated strategic matters.
2. HOI's Chair, President and Chief Executive Officer and the Minister of Energy will meet on a regular basis.
3. HOI's Chair, President and Chief Executive Officer and the Minister of Finance will meet at the Minister's request.
4. HOI's senior management and senior officials of the Ministry of Energy and the Ministry of Finance will meet and communicate on a regular and as needed basis to discuss ongoing issues and clarify expectations or to identify and address emergent issues, including but not limited to issues that may have a material impact on the financial performance of HOI or the Shareholder. Such communication and reporting from HOI should be on an immediate or, at minimum, an expedited basis where an urgent material human safety or system reliability matter arises.

5. HOI will provide the Minister of Energy and senior officials of the Ministries of Energy and Finance its multi-year and annual business planning information, and advise on developments and issues that may materially impact the business and financial performance of HOI, and/or the financial performance and interest of the Shareholder, on a timely basis.
6. HOI will provide the Minister of Energy and senior officials of the Ministries of Energy and Finance quarterly and monthly financial reports and briefings on operational and financial performance against plan.
7. In all other respects, HOI will communicate with government ministries and agencies in a manner typical for an Ontario corporation of its size and scope.

G. *Performance Expectations:*

1. HOI will seek continuous improvement in the operational performance of its transmission and distribution assets and internal operations.
2. HOI will annually establish three to five year performance targets for operating and financial results as well as major project execution. Key measures are to be agreed upon with the Minister of Energy and the Minister of Finance. HOI will benchmark its performance on these measures against the performance of other utilities, including international utilities where information is available. On these measures, Hydro One will target performance to be in the top quartile of private and publicly-owned utilities in North America.
3. Once approved by HOI's Board of Directors, HOI's annual performance targets will be submitted to the Minister of Energy and the Minister of Finance for concurrence.
4. HOI will provide annual reports on its performance compared to targets to senior officials of the Ministry of Energy and Ministry of Finance.

H. *Executive Compensation:*

1. HOI will have regard to the recommendations of the Agency Review Panel regarding Executive and Senior Management Compensation in setting executive compensation policies, procedures and practices, including internal governance practices and procedures.

I. *Review of this Agreement:*

This agreement will be reviewed and updated as required.
This Memorandum of Agreement shall be effective as of the date hereof:

Dated the 27 day of March, 2008

On behalf of HOI:

Original Signed by:

R. Burak

Rita Burak
Chair,
Hydro One Inc. Board of Directors

On behalf of the Shareholder:

Original Signed by:

Her Majesty the Queen in Right of the Province of Ontario as represented by the Minister of Energy, Gerry Phillips

TAB 2

Case Name:

Canadian Union of Public Employees (Power Workers' Union), Local 1000 v. Ontario (Energy Board)

Between
Power Workers' Union, Canadian Union of Public Employees, Local 1000, Appellant, and
The Ontario Energy Board and Hydro One Networks Inc., Respondents

[2012] O.J. No. 863

2012 ONSC 1080

Divisional Court File No. 30/11

Ontario Superior Court of Justice
Divisional Court - Toronto, Ontario

C.D. Aitken, K.E. Swinton and A. Hoy JJ.

Heard: October 18 and 19, 2011; supplemental written submissions, January 16, 2012.
Judgment: February 14, 2012.

(60 paras.)

Natural resources law -- Public utilities -- Electricity -- Generation -- Hydro -- Rates -- Appeal by the Power Workers' Union ("PWU")from the Ontario Energy Board's decision disallowing a portion of Hydro One Network Inc.'s ("HONI") forecasted expenses, dismissed -- Reduction was made to HONI's operations, maintenance and administration expenses, which included compensation costs -- OEB expressed particular concern about HONI's compensation costs and its inability to control growth in head count and labour cost increases -- PWU argued the OEB's comments relating to compensation were unreasonable -- OEB's decision was reasonable -- OEB did not suggest that HONI could unilaterally establish compensation levels -- How reduction was ultimately allocated was left to HONI.

Appeal by the Power Workers' Union ("PWU") from the decision of the Ontario Energy Board ("OEB") regarding the rate which Hydro One Networks Inc. ("HONI") was permitted to charge for the transmission of electricity. HONI had sought the OEB's approval of rates for the transmission of electricity for 2011 and 2012. In its decision, the OEB disallowed three per cent and four percent, respectively, of HONI's forecasted operations, maintenance and administration (OM&A) expenses for 2011 and 2012. This disallowed expenses amounted to over $31 million. A substantial portion of the OM&A expenses related to compensation costs. The OEB expressed particular concern about HONI's compensation costs and its inability to control growth in head count and labour cost increases. It noted an apparent disconnect between the compensation levels as reflected in union settlements and the productivity that was achieved. The OEB further stated its expectation that HONI would revisit the

proposed increases allocated to compensation. PWU appealed the reasonableness of the OEB's comments relating to compensation and sought an order setting aside the OEB's determination of HONI's OM&A revenue requirement, or in the alternative, an order setting aside the decision in its entirety.

HELD: Appeal dismissed. The majority of the Court found the OEB's decision was reasonable. The OEB did not suggest that HONI could unilaterally establish compensation levels. It was clear that the OEB appreciated the nature of the collective bargaining process. The reduction was made to HONI's OM&A budget, and how that reduction was to be allocated was left to HONI. The OEB simply suggested how the reductions might be achieved in light of the evidence before it. Both the reasoning offered by the OEB in support of the outcome and the outcome itself met the reasonableness standard of review. The OEB's reasons permitted the Court to understand why the OEB made its decision and to determine that the OEB's conclusion fell within a range of possible, acceptable outcomes. Concurring reasons were provided by Aitken J.

Statutes, Regulations and Rules Cited:

Canadian Charter of Rights and Freedoms, 1982, R.S.C. 1985, App. II, No. 44, Schedule B, s. 2(d)

Ontario Energy Board Act, 1998, S.O. 1998, c. 15, Sched. B, s. 33(1), s. 33(2), s. 78(3), s. 78(8)

Counsel:

Richard P. Stephenson and Emily Lawrence, for the Appellant.

Michael Millar, for the Respondent, the Ontario Energy Board.

D.H. Rogers, Q.C. and Anita M. Varjacic, for the Respondent, Hydro One Networks Inc.

Robert B. Warren, for the Intervenor, the Consumers Council of Canada.

Paul J.J. Cavalluzzo and Adrienne Telford for the Intervenor, Society of Energy Professionals.

REASONS FOR DECISION

Reasons for judgment were delivered by A. Hoy J., concurred in by K.E. Swinton J. Separate concurring reasons were delivered by C.D. Aitken J.

A. HOY J.:--

OVERVIEW

1 Power Workers' Union, Canadian Union of Public Employees, Local 1000 ("PWU") appeals from the decision with reasons ("Decision") of the Ontario Energy Board (the "OEB"), dated December 23, 2010 in OEB proceeding EB-2010-0002 (the "Proceeding") regarding the rates which Hydro One Networks Inc. ("HONI") is permitted to charge for the transmission of electricity.

2 HONI, which is owned by the government of Ontario, is by far the largest electricity transmitter in Ontario. It also distributes electricity. In the Proceeding, it sought approval of rates for the transmission of electricity for 2011 and 2012 pursuant to section 78(3) of the Ontario Energy Board Act, 1998, S.O.

1998, c. 15, Sched. B (the "Act".)

3 Approximately ninety percent of HONI's workforce is unionized. PWU, which represents the majority of HONI's unionized employees, was one of twenty-seven intervenors in the Proceeding.

4 The Society of Energy Professionals (the "Society"), which represents the balance of HONI's unionized employees, also intervened in the Proceeding and supports PWU in this appeal.

5 The OEB regulates the Ontario electricity and gas sectors. Two of its principal statutory obligations are to "protect the interests of consumers with respect to prices and the adequacy, reliability and quality of electricity service" and to "promote economic efficiency and cost effectiveness in the ... transmission ... of electricity and facilitate the maintenance of a financially viable electricity industry".[1]

6 The OEB sets uniform transmission rates for all transmitters in Ontario. The transmission rate is just one aspect of a consumer's total electricity bill. Pursuant to section 78(3) of the Act, the OEB is to fix rates that are "just and reasonable."

7 In fixing the rates, the OEB considers the revenue requirements of the transmitters. Pursuant to section 78(8) of the Act, in an application for an order fixing transmission rates, the burden of proof is on the applicant.

8 HONI forecast transmission revenue requirements of $1,466 million for 2011 and $1,547 million for 2012. These forecasts included a 3% increase in compensation in each of 2011 and 2012 for PWU members, a 2.5% increase for Society members, and 0% increase for management employees. HONI's collective agreement with PWU expired March 31, 2011; only three months of the 2011-2012 test period were subject to the existing collective agreement with PWU. HONI's collective agreement with the Society covers the period from July 1, 2007 to March 31, 2013. The 2.5% increase forecast for Society members is the rate provided for in the collective agreement with the Society. The 3% forecast increase for PWU members was the rate of increase provided for by the collective agreement expiring March 31, 2011.

9 In the Decision, the OEB disallowed 3% and 4%, respectively, of HONI's forecast operations, maintenance and administration ("OM&A") expenses for 2011 and 2012 - an aggregate of $31,089,000 - for the purpose of fixing transmission rates. OM&A includes compensation costs. Among other things, the OEB expressed concern about HONI's compensation costs and stated its expectation that HONI would revisit the proposed increases allocated to compensation.

10 The new transmission rates went into effect on January 1, 2011.

11 An appeal lies to this Court only on a question of law or jurisdiction (Act, s. 33(1) and (2)). PWU and the Society seek an order setting aside the OEB's determination of HONI's OM&A revenue requirement, or in the alternative an order setting aside the Decision in its entirety, and remitting that matter to a differently constituted panel for a new hearing. Their concern is the OEB's comments relating to compensation.

12 While HUNI disagrees with the decision of the OEB to disallow a portion of its forecasted expenses, it opposes the relief sought by PWU and the Society; a new hearing, it submits, would impose an undue burden on it, and any resulting, retroactive change in rates would create administrative problems and confuse consumers. It asks that if this Court has any concerns, it simply provide guidance to the OEB for future proceedings.

13 The Consumers Council of Canada ("CCC") intervened in the Proceeding and this appeal and

supports the Decision.

14 At issue are: (1) whether the Decision was unreasonable because it disallowed over $31 million of OM&A expenses in what the PWU and the Society say is the absence of a finding that any particular costs were not prudently incurred; and (2) the adequacy of the OEB's reasons for its Decision.

THE DECISION

15 It is no secret that electricity costs are expected to significantly increase in the Province of Ontario.[2]

16 At the outset of the Decision - which is 85 pages in length, exclusive of appendices - the OEB explained that HONI's application was made in the context of cost concerns: Ontario's Minister of Energy had, by letter dated May 5, 2011, instructed HONI that, in making its application, it should focus only on those spending proposals necessary to ensure the safe and reliable operation of the system and the implementation of capital programs specifically identified by the Ontario Power Authority as required immediately.

17 HONI's forecast OM&A expenses were only one of a number of types of forecast revenue requirements and other matters considered by the OEB. In addition, the OEB considered matters such as HONI's forecast load requirements, capital expenditures, capital structure and cost of capital, and forecast revenues from exporting electricity.

18 HONI divided its forecast OM&A expenses into categories: sustaining (the cost of maintaining transmissions facilities and satisfying legislative, regulatory, environmental and safety requirements); research and development; operations; customer care; shared services and other; and tax other than income tax. HONI did not provide separate forecasts for its compensation costs. For example, its compensation costs related to "sustaining" are included in the OM&A for sustaining, and its compensation costs related to research and development are included in the OM&A for research and development. Compensation costs are generally the most significant component of OM&A.

19 At page 10, the OEB found that HONI had room for further cost reductions. At pages 10 and 11, it wrote:

> In recent decisions the Board has approved a gross amount, commonly referred to as the "envelope" to support the Company's OM&A activities. In this way, the Board provides the Company with the funding it believes has been supported by the evidence, without specifically directing the Company as to how the funds should be allocated among the various categories of OM&A spending. It is the Board's view that within the envelope the Company is far better able to make those kinds of allocations than the Board. The Board's envelope approach is also appropriate in this case because it appeared there was an apparent lack of sufficient evidence in several areas that would make it difficult for the Board to quantify disallowances in specific categories of spending.
>
> There are exceptions. For example, in this proceeding the Board will make a specific finding with respect to Compensation. Otherwise the Board's commentary on the various categories of spending should be regarded as strongly influential to the Company as it makes it spending decisions, but not directive.
>
> In this case the Board's concern about the proposed spending level relates directly to the Company's ongoing issues with productivity. The Mercer (Canada) Limited and

> Oliver Wyman Study ("Mercer Study") filed in the last transmission rates proceeding (EB-2008-0272), which is still the only empirical evidence respecting productivity before the Board, indicates that the Company is lagging behind its peers with respect to its productivity. Specifically, the Mercer study indicates that the Company is 17% above the median of its comparator.[3] It is the Board's view that the spending level approved within the envelope must reflect the Board's concern about this issue. Some aspect of this issue can be addressed directly within the Compensation category of spending. But in other areas as well, the Board is determined to ensure that the Company improves its overall performance.
>
> Accordingly, the Board will reduce the Company's OM&A envelope by 3% for 2011 and 4% for 2012 for applied-for levels. These reductions are to include the impact of the reductions in compensation as noted below and are to be calculated after the changes that the Board has ordered regarding HST impacts.
>
> The Board notes that this will leave the overall OM&A levels substantially above the minimum levels, and the envelope approach reflects the absence of precision in the application as filed.

20 The OEB went on to find HONI's approach to sustaining OM&A reasonable. It accepted HONI's budget for the development category of OM&A, although expressing concern about the lack of project by project justification and requiring HONI to provide more detail in its next transmission rate application. In the case of operations OM&A, the OEB noted, at page 15, that HONI had not provided "any specific reductions in light of the Minister's letter. Hydro One does not appear to have subjected Operations spending to the same depth of analysis as other areas of spending." With respect to shared services, it commented, at page 16, that HUNI "has not provided any explanation as to why cost reductions ought not to be enhanced in this category of spending."

21 HONI both transmits and distributes electricity. Its workforce is integrated. As the OEB noted at page 16 of its Decision, separate workforce and compensation data for the transmission business was not available; HONI provided forecast payrolls for its transmission and distribution businesses on a combined basis.

22 In the previous transmission proceeding, the OEB disallowed $4 million in compensation costs, based on the Mercer study which showed HONI's compensation costs to be approximately 17% above the median. In the previous distribution proceeding, it identified compensation costs, including head count, as an area in which HONI must take future action to control expenditure increases.

23 In the Decision, the OEB summarized the submissions of HONI, some of the intervenors and OEB staff on the subject of compensation. Increases in head counts, salary levels above industry norms based on the Mercer study and pension costs - including employee contributions less than public sector norms - were all at issue.

24 The OEB noted, at page 18, that, "Board staff relied mainly on the results of the Mercer study to advocate for a reduction in compensation costs of $6 million in 2011 and $7 million in 2012. Hydro One's evidence was that the Mercer study was still valid in this case and indicated compensation reductions of $6.2 million and $6.9 million for the two test years is comparable to the Mercer-related reductions ordered by the Board in the previous transmission rates case."[4]

25 On the same page, it calculated as $23 million per year the costs attributable to employees that the intervenor School Energy Coalition submitted were hired in excess of HONI's reasonable needs. Another intervenor, Vulnerable Energy Consumers Coalition, suggested that the primary driver of

higher 2011/2012 compensation costs is increases in head count.

26 At pages 19-20, the OEB expressed its concern about HONI's ability to control the growth in head count and labour cost increases, particularly within its collective bargaining environment. It did not accept that HONI's ability to moderate wage increases was limited in light of wage increases awarded in other electricity utilities. It was of the view that HONI's compensation levels were pushing up those of other utilities.

27 It went on to write, at page 20:

> The Board also shares intervenors' concerns that Hydro One's compensation costs are still 17% above the market median and that proposed increases in headcounts are excessive. Central to this problem is the lack of any measureable increases in productivity. In its previous decision, the Board indicated that it did not accept that the productivity portion of the Mercer study could be relied on. The Board still finds this to be so.
>
> The only reasonable conclusion that can be drawn from the evidence in the current case is that there appears to be a disconnect between the compensation levels as reflected in union settlements and the productivity being achieved by the Corporation. This must change.
>
> The Board directs Hydro One to revisit its compensation cost benchmarking study in an effort to more appropriately compare compensation costs to those of other regulated transmission and/or distribution utilities in North America. It is important that the Company be in a position to provide more robust evidence on initiatives to achieve a level of costs per employee closer to market value at its next transmission rate case. The Board will expect compensation increases to be matched with demonstrated productivity gains. Hydro One will risk not recovering all of its compensation costs if it fails to tie compensation cost increases to measureable gains in productivity.
>
> To that end, the Board directs Hydro One to consult with stakeholders about how the Mercer study should be updated and expanded to produce such analyses.
>
> While the Board has approved an overall OM&A envelope and given Hydro One the freedom to apply that spending according to its own priorities, the Board expects that Hydro One will revisit the proposed increases allocated to compensation.
>
> This should provide a signal for upcoming bargaining. With respect to pension contributions, it is the Board's view that in subsequent applications, Hydro One must demonstrate measurable progress towards having its pension contributions reflect those prevailing in the public sector generally. The evidence suggests that an employee contribution level of 50% is the norm.

28 Despite what PWU and the Society have argued on this appeal, the "directory" aspects of the compensation-related portion of the Decision are restricted to HONI revisiting its compensation benchmarking study and consulting with stakeholders regarding expanding and updating the Mercer study. On the issue of increases in compensation, the OEB has made clear its expectation that HONI will revisit the subject. As PWU and the Society submit, given the labour-relations framework, the OEB could not do more than this.

29 The OEB directed HONI to recalculate its OM&A category of "taxes other than income taxes" - essentially HST - in accordance with specific directions.

30 Intervenors argued that HONI's forecast revenue requirements should be further reduced, and its return on equity temporarily disallowed, to mitigate the expected, significant increases in electricity costs. HONI argued against arbitrary reductions, not supported by the evidence. At pages 81 and 82, the OEB rejected the argument that HONI's return on equity should be impacted and noted that it had made some reductions in the Decision, based on what it heard in evidence and arguments, that would somewhat reduce the impact on customers.

THE APPLICABLE LEGAL TEST

31 It is agreed that, applying Dunsmuir v. New Brunswick, [2008] 1 S.C.R. 190, the appropriate standard of review of the OEB's decision is reasonableness. In considering whether the Decision is reasonable, the courts must consider whether there is justification, transparency and intelligibility in the process of articulating the Decision and whether the Decision falls "within a range of possible, acceptable outcomes which are defensible in respect of the facts and the law." Dunsmuir, para. 47.

32 Following the hearing, the Supreme Court of Canada released its decision in Newfoundland and Labrador Nurse's Union v. Newfoundland (Treasury Board), 2011 SCC 62. It makes clear that where, as here, there are reasons, a decision cannot be attacked on the grounds of procedural unfairness. The adequacy of the reasons is part of the Dunsmuir reasonableness analysis and not a stand-alone basis for quashing the decision:

> Read as a whole, I do not see Dunsmuir as standing for the proposition that the "adequacy" of reasons is a stand-alone basis for quashing a decision, or as advocating that a reviewing court undertake two discrete analyses - one for the reasons and a separate one for the result (Donald J.M. Brown and John M. Evans, Judicial Review of Administrative Action in Canada (loose-leaf) at s. 12:5530 and 12:5510). It is a more organic exercise the reasons must be read together with the outcome and serve the purpose of showing whether the result falls within a range of possible outcomes.
>
> Reasons may not include all the arguments, statutory provisions, jurisprudence or other details the reviewing judge would have preferred, but that does not impugn the validity of either the reasons or the result under a reasonableness analysis. A decision-maker is not required to make an explicit finding on each constituent element, however subordinate, leading to its final conclusion (Service Employees' International Union, Local No. 333 v. Nipawin District Staff Nurses Assn., [1975] 1 S.C.R. 382, at p. 391). In other words, if the reasons allow the reviewing court to understand why the tribunal made its decision and permit it to determine whether the conclusion is within the range of acceptable outcomes, the Dunsmuir criteria are met. (Newfoundland and Labrador Nurses' Union, paras. 14 and 16)

33 In the result, the issue of the adequacy of the OEB's reasons raised by PWU and the Society is considered together with their arguments regarding the reasonableness of the outcome.

WAS THE DECISION REASONABLE?

PWU and the Society's position

34 PWU and the Society argue that the Decision fails the reasonableness inquiry mandated by

Dunsmuir.

35 PWU and the Society argue that: the OEB was required to permit HONI to recover its prudently incurred costs; HONI was entitled to a presumption that its forecast costs were prudent; and the OEB failed to apply that presumption, to identify any evidence potentially capable of establishing that the costs requested were not reasonable or prudent, and to quantify the dollar value of costs found not to meet the standard of reasonableness and prudence.

36 The Society further argues that the OEB erred in failing to: recognize what it describes as the a priori reasonableness of the collective bargaining process; appreciate that HONI cannot unilaterally establish compensation levels; and assess the prudence of the compensation levels established in the collective agreements against the background of the available alternative - a work stoppage that would be hard for HONI to sustain and the likelihood of directed interest arbitration.[5] The Society says the OEB's decision was unreasonable in the absence of evidence that lower compensation costs were reasonably achievable. The Society says the unionized employees' rights are significantly undermined by the OEB's clear signal on compensation costs.

37 PWU and the Society submit that the OEB's reasons are inadequate because they do not refer to PWU's assertions as to the reasonableness of the compensation forecasts, and do not explain why the appropriate quantum of disallowance in the circumstances was 3% for 2011 and 4% for 2012 (as compared to any greater or lesser amount.) PWU submits that shortcomings in the evidence do not excuse a tribunal from its obligations to adequately explain the basis for its decision.

38 PWU argues that OEB did what the Federal Court of Appeal held in Canadian Assn. of Broadcasters v. Society of Composers, Authors and Music Publishers of Canada, 2006 FCA 337 ("SOCAN") was insufficient, namely to effectively simply say, "We are the experts. Trust us."

Analysis

39 The scope of the "prudence test" is addressed in this Court's decision on the appeals of Ontario Power Generation, PWU and the Society of the OEB's decision with respect to rates for electricity generation in Ontario Power Generation Inc. v. Energy Board (Ontario), 2012 ONSC 729 (the "OPG Decision"), also released today. In this case, PWU and the Society advance many of the same arguments as in the OPG Decision.

40 "Prudent" means "reasonable". The OEB specifically considered whether categories of OM&A were reasonable. It found that some, for example sustaining OM&A, were.

41 The dollar value of the costs found not to meet the reasonableness standard were easily calculated, based on information in the Decision. What the OEB decided was clear.

42 The facts in this case are different from those in the OPG Decision, and even more different from those in Enbridge Distribution Inc. v. Ontario Energy Board (2005), 75 O.R. (3d) 72 (Div. Ct.); rev'd on other grounds (2006), 210 O.A.C. 4 (C.A.), which the Society cites. The collective agreements in effect at the time of the hearing in this Proceeding did not cover most of the employees, for most of the test period. In the case of the compensation costs relating to PWU members, who constitute most of the unionized employees, the costs are unquestionably largely forecast costs.

43 As noted in the OPG Decision, an employer's financial position is an economic factor in the negotiation of collective agreements. It is not static. The OEB did not suggest that HONI could unilaterally establish compensation levels. It is clear that the OEB appreciates the nature of the collective bargaining process. As to how the reductions might be achieved, some might be realized by

HONI changing its high level of new hiring. The OEB has left it to HONI to determine how the reductions are to be allocated. The evidence of HONI was that if the OEB disallowed some of its forecast compensation costs, HONI did not believe it would impact on PWU's bargaining requests, and that PWU would expect HONI to find some other means to deal with it.[6] In my view, the employees' rights were not significantly undermined by the OEB's statement as to its expectation with respect to compensation levels and such a statement does not violate the freedom of association guaranteed by section 2(d) of the Canadian Charter of Rights and Freedoms, Part 1 of the Constitution Act 1982, being Schedule B to the Canada Act, 1982 (U.K.), 1982, c. 11.[7]

44 The Minister of Energy had communicated his concerns, generally, with respect to HONI's costs. Moreover, in prior decisions the OEB had signaled its concern with respect to the prudence of HONI's compensation costs. Compensation costs have been an issue since HONI was created; it knew going into the Proceeding that its compensation costs were an issue. Relying on the Mercer study - which HONI confirmed continued to be valid with respect to compensation - intervenors again challenged HONI's compensation costs. To the extent that a presumption of prudence applied, it was displaced. The onus to establish the reasonableness of the forecast costs was on HONI.

45 As the OEB noted in its Decision, its "envelope" calculation of the amount of OM&A forecast revenues denied "reflects the absence of precision in the application as filed" and was used "because it appeared there was an apparent lack of sufficient evidence in several areas that would make it difficult for the Board to quantify disallowances in specific categories of spending."

46 The OEB's "envelope" approach was accepted by, among others, PWU in previous cases. The lack of precision in the Decision of which PWU and the Society complain is attributable to HONI; the OEB did what it could to discharge its statutory mandate, with the information provided by HONI. The reductions were its best assessment, based on the evidence that HONI chose to lead.

47 The reasonableness of the Decision must be assessed in light of HONI's onus and the lack of specificity of the information HONI put before the OEB. In my view, the basis for the OEB's decision was understandable and there was a line of analysis leading the OEB to the conclusion at which it arrived. Why the OEB made cuts, and the logic, the "why", of the OEB's approach in doing so, are clear.

48 The OEB's failure to recount PWU's arguments regarding compensation is not a basis for quashing the Decision. As CCC argues, PWU was an intervenor. Moreover, a tribunal does not need to deal with every argument made, as long as there is a line of analysis that supports its decision.

49 With respect to the "why 3% and 4% and not some other amount", as indicated above, why the OEB made cuts, and the "why" of its approach in doing so, are clear. While more precision might have been preferable, the failure of the OEB to explain "why 3% and 4% and not some other amount" is not fatal. HONI does not challenge the reasons. The Decision communicates to PWU and the Society what they need to know.

50 SOCAN predates Newfoundland and Labrador Nurses' Union. In addition, this case is different than SOCAN. In SOCAN, the Copyright Appeal Board did not explain why it concluded that the previous royalty rate underestimated by 10% to 15% the value of commercial music to radio stations. While the Federal Court of Appeal recognized that part of the Board's difficulty stemmed from inadequacies in the evidence adduced by the Canadian Association of Broadcasters, it nonetheless found the Board's reasons inadequate, stating that the Board could have asked the parties to provide evidence of the amount of the undervaluation. The OEB has pressed HONI for more precise information. It, for example, precipitated the Mercer study, and in the Decision directed HONI to revisit it. The onus was on HONI to satisfy the OEB as to the reasonableness of its forecast costs. Moreover, the OEB was grappling with thousands of cost items; the Board's focus was much narrower.

51 Both the reasoning offered by the OEB in support of the outcome and the outcome itself meet the reasonableness standard of review. The OEB's reasons have permitted this court to understand why the OEB made its Decision and to determine that the OEB's conclusion falls within a range of possible, acceptable outcomes which are defensible in respect of the facts and the law. The Dunsmuir criteria are met.

DISPOSITION AND COSTS

52 For the foregoing reasons, the appeal is dismissed. As agreed by the parties, no costs will be awarded.

A. HOY J.
K.E. SWINTON J.

53 C.D. AITKEN J. (concurring):-- Despite my dissent in Ontario Power Generation Inc. v. Energy Board (Ontario), 2012 ONSC 729, also released today, and despite some similar issues being raised by the Power Workers' Union ("PWU") and the Society of Energy Professionals ("the Society") on both appeals, I agree with my colleagues that this appeal should be dismissed. In my view, the circumstances underlying this appeal differ significantly from those underlying the appeal in Ontario Power Generation Inc.

54 In the Decision under review in Ontario Power Generation Inc. (the "OPG Decision"), the Ontario Energy Board ("OEB") dealt with nuclear compensation costs as a separate budget item and reduced the allowance for nuclear compensation costs by $55 million in 2011 and $90 million in 2012. The OEB identified six factors justifying the reduction, the majority of which arose under OPG's previously-existing collective agreements with PWU and the Society. The OEB did not conduct a two-stage prudence review in regard to those collective agreements. There was no explicit finding that the presumption of prudence had been rebutted in regard to the collective agreements or that the OPG had acted imprudently or unreasonably in entering those agreements. However, the wording in the OPG Decision leaves no doubt that the OEB considered the compensation and staffing commitments made in those agreements to have been unreasonable, and it arrived at that decision through the use of hindsight. First, the OEB highlighted the significant role played by the collective agreements in leading to unreasonably high nuclear compensation costs in 2011 and 2012 through rates of compensation and layoff restrictions contained in the agreements. Second, in concluding that OPG had acted unreasonably in agreeing to these aspects of the collective agreements, the OEB relied on benchmarking studies and analyses done after the collective agreements had been entered.

55 In the HONI Decision now under review, the OEB provided no direction to the effect that compensation costs in the proposed budget had to be reduced by a certain amount. In previous proceedings relating to HONI's OM&A budgets, the OEB had specifically disallowed some compensation costs. On this application, it chose not to do so. Instead, the OEB reduced HONI's overall OM&A budget by 3% for 2011 and 4% for 2012. Compensation costs were simply one component of the OM&A budget, albeit a significant component. The OEB reviewed many of the submissions it heard regarding HONI's compensation costs. It also noted HONI's efforts to address compensation concerns identified by the OEB in earlier proceedings. It went on to express its continued concern about HONI's ability to control the growth in head count and labour cost increases, particularly within its collective bargaining environment. After considering some comparative data, the OEB concluded that there was "a disconnect between the compensation levels as reflected in union settlements and the productivity being achieved by the Corporation." It advised HONI that this must change. However, instead of disallowing a portion of HONI's compensation costs, the OEB reduced HONI's overall OM&A budget and left it up to HONI to decide how to handle the reduction, simply indicating that it expected HONI to revisit its

proposed increases to the compensation portion of that budget. It is significant that the OEB's staff identified 2-3% that could be reduced from HONI's OM&A costs in addition to any compensation-related reductions. As well, the OEB, in the HONI Decision, identified a number of areas, not specifically relating to compensation, where reductions could be made. The only direction the OEB gave to HONI regarding compensation costs per se was that it needed to gather further and better evidence regarding compensation cost and productivity benchmarking for the purpose of future proceedings.

56 I note several things about the OEB's analysis in the HONI Decision. First, the OEB did not undertake a formal prudence review in regard to on-going commitments flowing from the collective agreements with PWU and the Society. In my view, such a review should have been undertaken, just as it should have been in the OPG Decision. That being said, the wording in the HONI Decision allows it to be interpreted in a way that does not run afoul of the substance of a prudence review. There is no explicit or implicit finding in the HONI Decision that it had been unreasonable on HONI's part to have entered the collective agreements. Furthermore, in the HONI Decision, the OEB did not use hindsight to assess the reasonableness of the collective agreements when they were entered.

57 Second, the two-year test period being considered in the OPG Decision was such that the terms of a collective agreement relating to 30% of the work force (members of the Society) were in effect for the entire period, and the terms of a collective agreement relating to 60% of the work force (member of the PWU) were in effect for all but nine months of the period, with the prospect of binding arbitration leading to an extension of terms under the collective agreement for the balance of the test period. With 90% of the work force subject to these collective agreements, both of which were entered prior to the application and test period, and both of which likely would be in effect throughout the test period, it was critical that the OEB consider the prudence of OPG entering those agreements when it did so because they presented serious constraints for OPG in managing its compensation costs during the entire test period.

58 The two-year test period being considered in the HONI Decision was such that a collective agreement with PWU relating to the majority of HONI's employees terminated after only three months of the test period. A collective agreement with the Society was in place throughout the test period; however, the Society represented a smaller, unspecified, portion of HONI's labour force. Therefore, the majority of the compensation costs buried in the overall OM&A costs being considered by the OEB were costs that were being forecast and not costs previously determined through collective agreements. Thus, at least theoretically, HONI had considerably more leeway that OPG to manage its compensation costs on a go forward basis. The OEB made no error in measuring those forecast costs against a standard of reasonableness, considering all available relevant evidence at the time of the hearing.

59 Third, HONI did not appeal the HONI Decision and took no position on the merits of PWU's appeal. Although it disagreed with the OEB's HONI Decision, it was, for understandable reasons, opposed to a new hearing as requested by PWU. In its view, the lesser of two evils was to work within the confines of the HONI Decision rather than to subject HONI, and all other parties and intervenors, to a costly rehearing of its application which, in all likelihood, would result in the same, or a very similar, decision - even if the OEB formally referred to and applied a prudence review in regard to the collective agreements. That is because the OEB did not direct HONI to cut compensation costs by a fixed amount, and the OEB identified other areas where OM&A costs could be adjusted. In Ontario Power Generation Inc., OPG was the lead appellant and was struggling with how it would be able to reduce its nuclear compensation costs to the extent mandated by the OEB in the face of its existing collective agreements.

60 These factors distinguish the HONI Decision from the OPG Decision. I agree with my colleagues that PWU's appeal, in this case, should be dismissed.

C.D. AITKEN J.

cp/s/qlacx/qljxr

1 Act, ss. 1(1)

2 The evidence before the OEB was that from August 2010 to July 2015, non-residential electricity costs would increase at an annual compound rate of 8.0 to 10.4%, and residential rates would increase at an annual compound rate of 6.7 to 8.0%. See page 76 of the Decision.

3 Based on the record, this 17% reference is in relation to compensation levels, not productivity. In response to the request of the OEB in EB 2006-0501, Hydro One Inc. retained Mercer (Canada) Limited and Oliver Wyman to prepare an assessment of the reasonableness of its total compensation levels, including pension and employer paid health and group benefits relative to HONI's productivity. Their study entitled, "Compensation Cost Benchmarking Study", Hydro One Networks Inc., 23 September 2008, addressed, separately, both HONI's total compensation costs relative to the market and the productivity of its workforce relative to the market. The objective of the study was to provide benchmarking information. With respect to compensation, the study concluded that HONI's compensation costs were approximately 17% above the median, on an overall weighted average basis. It noted that this positioning appeared to be driven by a combination of competitive base salaries, especially for the most highly skilled PWU positions, and legacy collective agreement wages, pension and benefits programs. Oliver Wyman reported that it experienced challenges in conducting its separate, productivity analysis. As noted by the OEB at page 20 its Decision, reproduced below, the OEB did not accept the productivity portion of the Mercer study.

4 HONI's evidence was that it had not updated the Mercer study, had not had any rounds of collective bargaining since and believed that its compensation costs remained 17% above the median, and that its staff levels were higher than at the time of last proceeding. See EB-2010-0002, transcript, vol. 5, p. 153, evidence of Mr. Thompson.

5 Neither collective agreement requires binding arbitration. However, the government ordered the parties to arbitration following a work-stoppage in 2005.

6 Transcript, Volume 5, September 27, 2010, 120

7 The Society advanced similar labour-focused arguments in the OPG Decision and they are addressed there. While neither of HONI's collective agreements require binding arbitration, the discussion in the OPG Decision is generally applicable.

TAB 3

KPMG

cutting through complexity

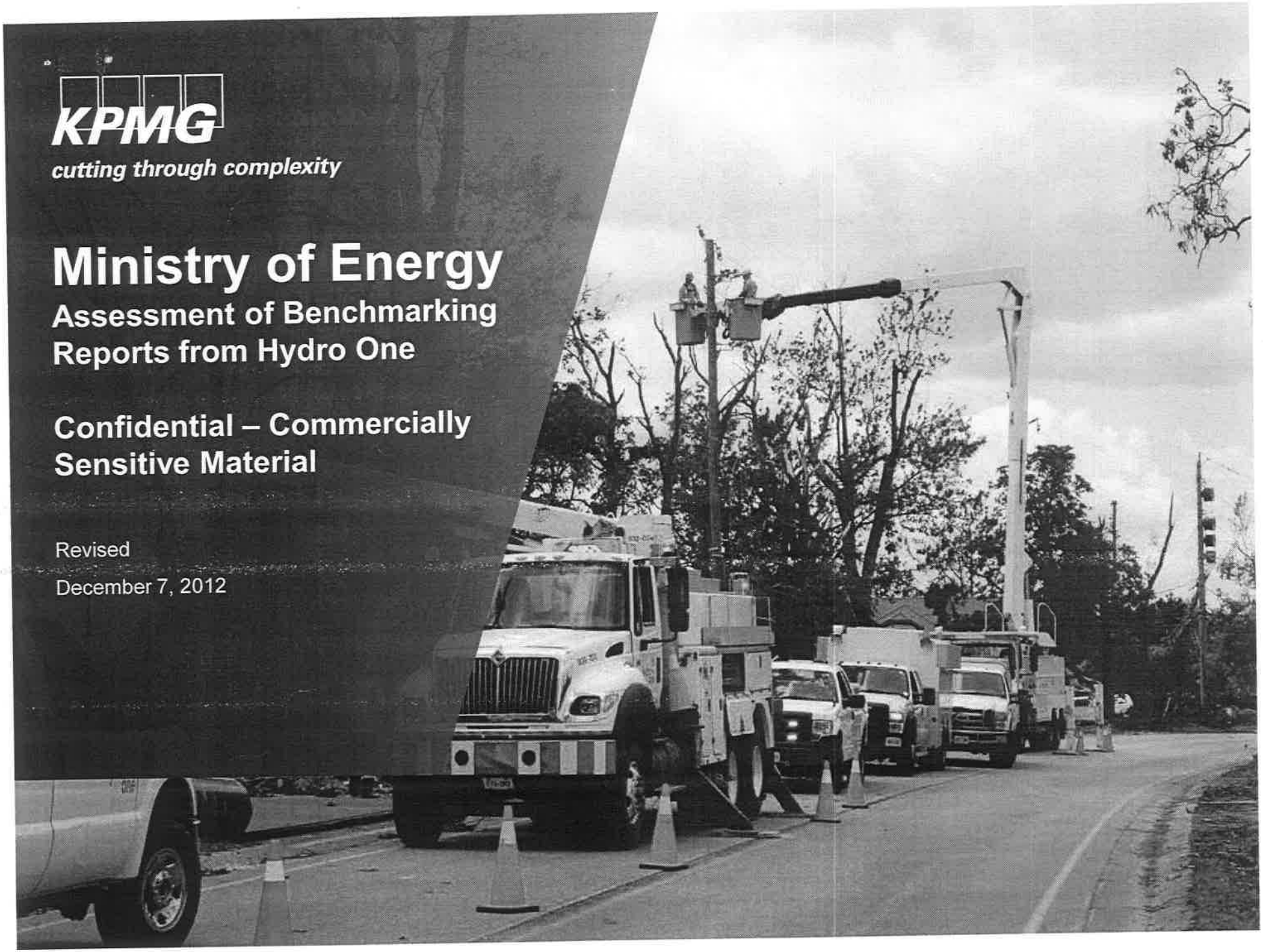
Ministry of Energy

Assessment of Benchmarking Reports from Hydro One

Confidential – Commercially Sensitive Material

Revised

December 7, 2012



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How to use this document

The Ministry of Energy engaged KPMG undertake a critical review, assessment and summary of existing compensation, efficiency and productivity benchmarking studies that have been completed on Hydro One.

Our role was to assess appropriateness of each benchmarking report, identify gaps and rank Hydro One against its relative peer group. These comments, by their nature, may be critical as they relate solely to opportunities for change or enhancement and will not address the many strong features of the OPG's current activities and undertakings.

Our procedures consisted solely of inquiry, observation, comparison and analysis of Hydro One provided information. We relied on the completeness and accuracy of the information provided. Such work does not constitute an audit. Accordingly, we have expressed no opinion on financial results, internal control or other information.

Our analysis and advice is intended solely for the Ministry's Senior Management's internal use and may not be edited, distributed, published or relied on by any other person.

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- Our approach to evaluating benchmarking reports
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Executive Summary

The Ministry of Energy engaged KPMG to assess existing benchmarking studies and to identify organizational and structural opportunities for cost savings at Hydro One and OPG.

The scope of work was to address four main objectives:

- Review and analyze existing benchmarks on compensation, productivity and efficiency
- Identify organizational and structural opportunities for efficiency improvements and Hydro One and OPG
- Prepare a high level 2-3 year plan for improving efficiency without sacrificing reliability and safety
- Develop an analysis that will identify impacts on rate-payers.

This report contains the review of existing benchmarking reports on efficiency, productivity and compensation from Hydro One. From the RFP, this report represents deliverables #1 and #2.

Of the eighteen reports provided by Hydro One, one report was used in our benchmark report evaluation covering one functional area, Compensation. Although many reports were provided by Hydro One, most could not be used in our analysis. Some reports were more than five years old and outside the review timeframe, some reports did not contain benchmarking data and some reports pertained to areas outside the scope of the study.

Of the reports provided, we found that i) reports did not exist for all business functions and therefore some business functions such as Hydro have not been reviewed in this study ii) in business functions where reports existed, some reports did not review all sub-functions and iii) some reports provided summary benchmarks at a function level while other reports provided detailed benchmarks at the function, sub-function and activity level.

Given the constraints listed above, the benchmark report evaluation does not cover all business functions and our analysis is also restricted to the level of detail provided by the reports and therefore varies significantly across each business area.

The shortage of data impacted the method in which we planned to identify potential opportunity areas. As a result, an alternate approach was taken to identifying opportunity areas which included significantly more primary data analysis and additional interviews to compare and evaluate operating models for each business function. The outputs from this approach are detailed in a supplementary report, "Assessment of Structural and Organizational Opportunities at Hydro One".

Executive Summary

Benchmarking Report Assessment - Compensation

Compensation Benchmark Report Summary			
Report	**Methodology Appropriateness**	**Metrics**	**Trend Analysis**
Compensation Cost Benchmarking Study - Mercer	▪ Methodology is appropriate ▪ Compared against 13 Canadian Utilities ▪ Comparison represents 49% of Hydro One employees	▪ Metrics used are appropriate ▪ Basis of comparison is job type ▪ Comparison by job type and level would allow for better comparison of specific roles	▪ Although the differential has declined since 2008, Hydro One employees are compensated above the median of 13 comparator companies ▪ Non-represented employees continue to be paid less than the median while represented employees continue to be paid more than the median
Labour Rates for Hydro One - Hay Group	▪ Methodology is appropriate ▪ 30 companies were included in the peer group ▪ The Hay Group uses a 50/50 blend of industry and similar sized peers ▪ Compares all bands except for CEO level	▪ Metrics used are appropriate ▪ Basis of comparison is band level ▪ Comparison by level and job type would allow for better comparison of specific roles	▪ Year over year analysis was not provided ▪ In 2011, higher band (2-4) employees are paid less than the median while lower band staff (5-11) employees are paid more than the median

Introduction

The provincial government announced plans in the 2012 Ontario Budget to move forward with a comprehensive review of the electricity sector and its various agencies. One element of the review is an independent, critical review and assessment of existing benchmarking at Hydro One and OPG in an effort to improve efficiency and find additional value for rate-payers and the Province.

The Ministry of Energy engaged KPMG to assess existing benchmarking studies and to identify organizational and structural opportunities for efficiencies at Hydro One and OPG.

The scope of work was to address four main objectives:

1. Review and analyze existing benchmarks on compensation, productivity and efficiency
   - Part of the review was to identify any material gaps in the existing benchmarking studies and provide recommendations to address these gaps
2. Identify organizational and structural opportunities for efficiency improvements and Hydro One and OPG
   - Opportunities may include but are not limited to contracting out, and operational and divisional alignments
3. Prepare a high level 2-3 year plan for improving efficiency without sacrificing reliability and safety
   - This plan would identify key steps focused on achieving improvements along key metrics and benchmarked rankings that would create efficiencies and attain greater savings
4. Develop an analysis that will identify impacts on rate-payers.

The scope of this analysis includes the following Hydro One business areas:

- Transmission
- Distribution
- IT
- HR
- Finance
- Compensation

This report contains the review of efficiency, productivity and compensation benchmarking reports from Hydro One. From the RFP, this report represents deliverables #1 and #2.

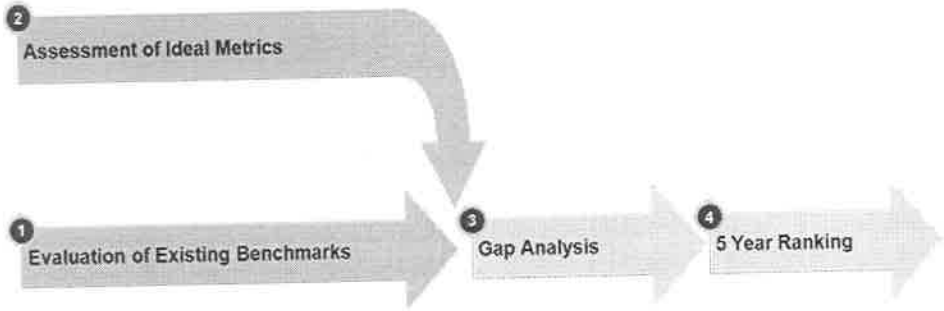
Methodology and Approach

Our approach to evaluating benchmarking reports from Hydro One

This phase of the project involved preparing an evaluation of benchmarking studies that address compensation, efficiency and productivity at Hydro One.

The evaluation involved identifying any gaps in the existing benchmarking studies, and creating a baseline understanding of Hydro One's performance which was to be used to determine structural and operational efficiency opportunities.

The diagram below illustrates the four steps of the evaluation of each report.



1. Evaluation of Existing Benchmarks

The project team reviewed and analyzed the existing benchmarking studies. This included a review of the appropriateness of the methodologies for each report and an evaluation of the quality of the metrics and benchmarks used. The following questions were asked of each report in order to determine the appropriateness of the study:

- Has the business purpose of the benchmarking exercise been clearly defined?
- Was the data collection approach appropriate and not limited by data availability, or other constraints which could limit its quality and comprehensiveness?
- Was the sample size and geographic distribution of the benchmarks appropriately thought through and accounted for?
- Has a normalization of the data, such as currency conversions and labour rate conversions, been implemented to ensure that benchmarks and metrics are as comparable as possible?
- Were there any specific constraints that could skew the interpretation of benchmark comparisons?

Our approach to evaluating benchmarking reports from Hydro One

2. Assessment of Expected Metrics

Based on the scope, purpose and level of depth of each report, the senior members of the project team and advisor group developed a preliminary opinion of the efficiency/productivity metrics and types of peers that they would expect to see. Additionally, the team identified external factors which should be accounted for to ensure a relevant comparison, including operating environments, geographical considerations and environmental issues.

3. Gap Analysis

The expected metrics for each respective benchmark report were compared against the actual benchmark report metrics and gaps were identified. The gap metrics represent either areas that are not covered or areas that are insufficiently covered by each benchmark report. Metric gaps were only identified in areas that related to efficiency, productivity or compensation.

4. 5-Year Ranking

The project team aggregated each of the key report metrics that related efficiency, productivity or compensation. This year over year analysis was used to evaluate Hydro One's performance over the last 5 years. Where year over year data was not available, key metrics were selected to illustrate in year performance.

Benchmarking Reports provided by Hydro One

18 reports were provided by Hydro One, two reports were used in our benchmark report evaluation in the subject area of compensation

Hydro One Benchmark Reports	Functional Area																			
Report Name	Company wide - Compensation	Company wide - Productivity	Transmission	Distribution	IT - Internal	IT - Outsourced	HR - Internal	HR - Outsourced	Finance - Internal	Finance - Outsourced	Administration	Customer Service	Source	Operational Focus	Within Evaluation Timeline?	Benchmarking report?	In scope?	Used?	Reason
Compensation Cost Benchmarking Study	2006, 2011												Mercer	Compensation	Yes	Yes	Yes	Yes	In-scope
2010 Comparison of Labour Rates and Overtime Policy	2010												Hay Group	Compensation	Yes	Yes	Yes	Yes	In-scope
Compensation Cost Benchmarking Study (Follow up)	2006, 2008	2008											Mercer	Compensation, Productivity/Efficiency	No	Yes	No	No	More recent report used
IT Benchmarking Report					2005								PA Consulting	Productivity/Efficiency	No	Yes	No	No	Age of Report
Distribution Benchmarking Study				2004-2006									PA Consulting	Productivity/Efficiency, Reliability, Safety	No	Yes	Yes	No	Age of Report
Hydro One Update of Transmission Benchmark Study			2004-2006										First Quartile	Productivity/Efficiency, Reliability, Safety	No	Yes	Yes	No	Age of Report
A summary of the High-level Transmission Benchmarking Study			2003-2009										PA Consulting	Productivity/Efficiency, Compensation, Reliability	No	Yes	No	No	Age of Report
Distribution Performance Benchmark Study				2005-2007									First Quartile	Mostly Reliability, Safety	No	Yes	No	No	Age of Report
Hydro One 2009 Safety Survey							2004-2009						Edison Electrical Institue	Safety	Yes	No	No	No	Out of Scope
Hydro One 2010 Safety Survey							2006-2010						Edison Electrical Institue	Safety	Yes	No	No	No	Out of Scope
2011 - Annual Service Continuity Report on Distribution System Performance in Electical Utility				2006-2010									Canadian Electricity Association	Reliability	Yes	No	No	No	Out of Scope
ERM Hydro One Inc. ERM Leading Prancticе Review													KPMG	Risk Management	Yes	No	No	No	Out of Scope
2012 SGS Transmission Reliability Benchmarking Study			2006-2011										SGS Statistical Service	Reliability, Safety	Yes	Yes	No	No	Out of Scope
Hydro One Transmission Cost Efficiency/ Productivity			2008-2012										Internal	Efficiency/Productivity	Yes	No	No	No	Benchmarks not provided
Transmission Business Performance			2002-2009										Internal	Safety, Reliability, Customer Satisfaction, Shareholder Value, Productivity	Yes	Yes	No	No	Benchmarks not provided
Measuring Productivity at Hydro One		2009-2013											Oliver Wyman	Productivity/Efficiency	Yes	No	Yes	No	Benchmarks not provided
Hydro One Inergi Price Benchmark Report (2007)						2007-2009		2007-2009		2007-2009	2007-2009	2007-2009	Compass/Utilipoint	Productivity/Efficiency	Yes	No	No	No	Benchmarks not provided
Utility Vegetation Management Benchmark & Industry Intelligence				2005-2011									CN Utility Consulting	Productivity/Efficiency, Reliability, Safety	Yes	Yes	Yes	No	H1 Performance not identified in report

Impacts on our analysis due to availability of data

Although many reports were provided by Hydro One, several could not be used in our analysis :

- **Age of Reports:** The analysis timeframe for this study, as indicted in the RFP, spanned the past 5 years. Any report that provided data older than 5 years was not used. Major changes in the company in the past 5 years would diminish any insights from the review of these benchmark reports.
- **Benchmarks not provided**: Some reports provided, although informative, did not contain comparisons of Hydro One's performance to benchmarks. Without the benchmarks and Hydro One's performance, we could not evaluate the report in light of the objective of the study.
- **Out of Scope**: The project scope was to review benchmarking reports on *productivity, efficiency and compensation*. Benchmark reports that did not provide these types of metrics were considered out of scope. For example, reports describing the level of uranium supply were provided -- these did not fall within the scope of efficiency, productivity or compensation.

Additionally, other factors limited the level of data analysis:

- **Span of Business Functions**: Reports did not exist for all business functions. Functions that did not have reports included Transmission and Distribution.
- **Coverage within Business Functions:** In business functions where reports existed, some reports did not review all sub-functions.

Implication

- Given the constraints listed above the benchmark report evaluation does not cover all business functions. In this report we reviewed the following business functions: Compensation.
- Our analysis is also restricted to the level of detail provided by the reports and therefore varies significantly across each business area
- The shortage of data also impacted the method in which we planned to identify potential opportunity areas since some functions had no benchmark reports to identify improvement areas
- This has required an alternate approach to identify opportunity areas:
  - Significantly more primary data analysis
  - Additional interviews to compare and evaluate operating models for each business function

Analysis
Compensation

Compensation - Summary

Compensation Benchmark Report Summary			
Report	**Methodology Appropriateness**	**Metrics**	**Trend Analysis**
Compensation Cost Benchmarking Study - Mercer	▪ Methodology is appropriate ▪ Compared against 13 Canadian Utilities ▪ Comparison represents 49% of Hydro One employees	▪ Metrics used are appropriate ▪ Basis of comparison is band job type ▪ Comparison by job type and level would allow for better comparison of specific roles	▪ Although the differential has declined since 2008, Hydro One employees are compensated above the median of 13 peers ▪ Non-represented employees continue to be paid less than the median while represented employees continue to be paid more than the median
Labour Rates for Hydro One - Hay Group	▪ Methodology is appropriate ▪ 30 companies were included in the peer group ▪ The Hay Group uses a 50/50 blend of industry and similar sized peers	▪ Metrics used are appropriate ▪ Basis of comparison is band level ▪ Comparison by level and job type would allow for better comparison of specific roles	▪ Year over year data was not provided ▪ In 2011, higher band (2-4) employees are paid less than the median while lower band staff (5-11) employees are paid more than the median

Compensation: Compensation Cost Benchmarking Study
Methodology Review

Report Name: Compensation Cost Benchmarking Study			
Study Author	Mercer	**Benchmark Types**	Compensation
Area of Study	Human Resources Metrics (compensation portion)	**Date Published**	December 19, 2011
Survey Period	2008-2011		

Appropriateness of Methodology	**Objective** • There is a clear objective, which is to prepare a market-based assessment of the reasonableness of H1's total compensation levels including salary, short-term incentives, long term incentives, pension and benefits relative to select peers **Data Collection Method** • The data collection is from a survey 3300 H1 employees in 32 positions (49% of Hydro One employees) **Peer Group** • 13 comparable Canadian utility companies are used • Peers are comparable in revenue and size **Constraints or Limitations** • Results are weighted and adjusted • Outlines who is included and clearly states the surveying guidelines The approach and methodology are appropriate for the purpose of the report which was to collect data and compare against industry benchmark performance.

Compensation: Compensation Cost Benchmarking Study

Metric Review

Functional Area	Metrics	Appropriateness	Evaluation of Metric
Compensation	*Total Cash By Job Type Relative to Market P50(Median)*	**Appropriate**	• Appropriate metric to evaluate how total employee compensation ranks when considering short term incentives such as bonuses
	Total Cash By Job Type Relative to Market Average	**Appropriate**	• Appropriate metric to evaluate how total employee compensation ranks when considering short term incentives such as bones
	Base Salary by Job Type Relative to Market P50(Median)	**Appropriate**	• Appropriate metric to evaluate how base compensation ranks against peers relative to the median salary
	Base Salary by Job Type Relative to Market Average	**Appropriate**	• Appropriate metric to evaluate how base compensation ranks against peers relative to the average salary
	Total Current Compensation by Job Type Relative to Market P50(Median)	**Appropriate**	• Appropriate metric for companies to evaluate base compensation plus benefit and pension eligibility • Can determine how competitive compensation is under their old pension program
	Total Current Compensation by Job Type Relative to Market Average	**Appropriate**	• Appropriate metric for companies to evaluate base compensation plus benefit and pension eligibility • Can determine how competitive compensation is under their old pension program
	Total Future Compensation by Job Type Relative to Market P50(Median)	**Appropriate**	• Appropriate metric for companies to evaluate base compensation plus benefit and pension eligibility • Can determine if the impact of a new pension program to market rates
	Total Future Compensation by Job Type Relative to Market Average	**Appropriate**	• Appropriate metric for companies to evaluate base compensation plus benefit and pension eligibility • Can determine if the impact of a new pension program to market rates

Compensation: Compensation Cost Benchmarking Study

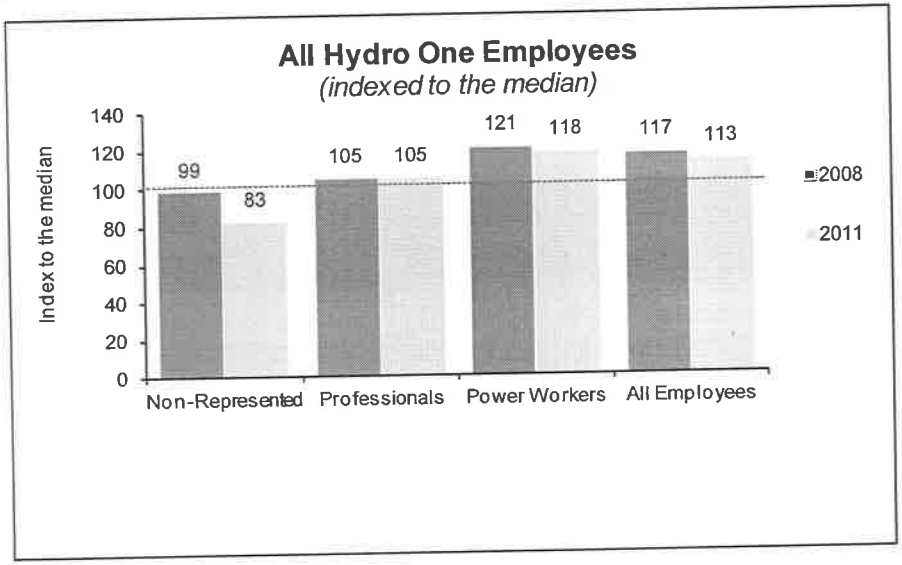
Metric Gap Analysis

Based on our review of the report, the following metric gaps were identified as an important area to consider in measuring compensation at Hydro One. The additional metrics are recommended to provide better granularity in comparing roles across the industry.

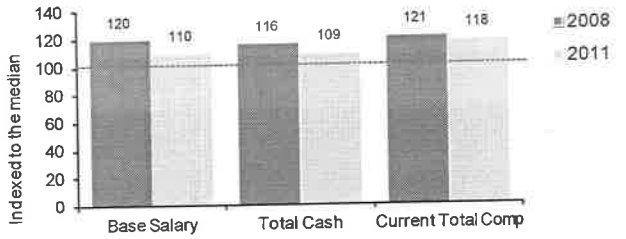
Functional Area	Metric Gap	Recommended Metric to Close Gap
Compensation	**Base salary by Level** • Important to view what you are paying different levels of employees in comparison with industry peers so to ensure you are adequately paying employees and also not overpaying certain employees	**Base Salary by Level**
	Base salary plus Bonus Target by Level • Important to view how different levels of employees are compensated in base and by bonus with industry peers so to ensure you are adequately paying employees and also not overpaying certain employees	**Target Total Cash by Level** *(Base Salary plus Bonus Target)*
	Base salary plus Bonus plus long term incentives by Level • Important to view how you are incorporating long-term benefits and incentives to retain different levels of employees and what is needed based on industry peers (also important to use peers from similar locals in terms of benefits expectations)	**Target Total Direct by Level** *(Target Total Cash plus long term incentives)*
	Total Target Remuneration by Level • Important to view the total remuneration of different types of employees with industry peers	**Target Total Remuneration by Level** *(Target Total Direct plus Non-Cash)*
	Overtime Expense • Highlights how much of the total labour expense is made up of overtime dollars	**Overtime Expense Ratio**

Compensation: Compensation Cost Benchmarking Study

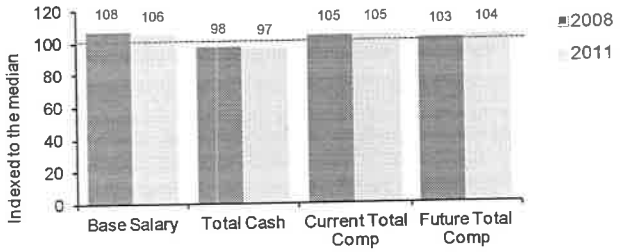
Ranking Analysis – Hydro One Employee Types Indexed to the Median



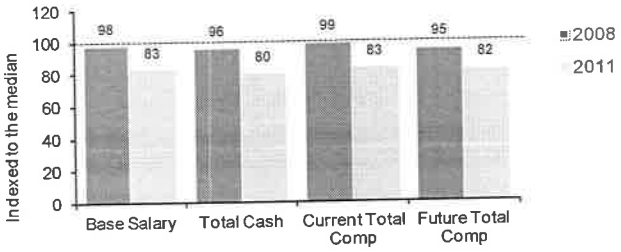
Power Workers *(indexed to the median)*



Professionals *(indexed to the median)*



Non-Represented *(indexed to the median)*



Trend Analysis

- Although the differential has declined since 2008, Hydro One employees are compensated above the median of 13 peers
- Power workers were identified as compensated the highest above the median
- Non-represented employees are paid less than the median with the gap to the median increasing between 2008 to 2011

Compensation: Labour Rates for Hydro One
Methodology Review

Report Name: Labour Rates for Hydro One			
Study Author	Hay Group	**Benchmark Types**	Compensation
Area of Study	Human Resources Metrics (compensation portion)	**Date Published**	N/A
Survey Period	2011		

Appropriateness of Methodology	**Objective** • There is a clear objective, which is to evaluate pay bands of Hydro One against its peers **Data Collection Method** • The data collection is by Hay Group for comparators through internal surveys and databases **Peer Group** • 30 companies were included in the peer group • The Hay Group uses a 50/50 blend of industry and similar sized peers **Constraints or Limitations** • No explanation in document provided regarding how roles were mapped to bands across industries The approach and methodology are appropriate for the purpose of the report which was to collect data and compare against industry benchmark performance.

Compensation: Labour Rates for Hydro One
Metric Review

Functional Area	Metrics	Appropriateness	Evaluation of Metric
Compensation	*Base Salary by Level*	**Appropriate**	• Appropriate standard compensation metric comparing base salary against the median salary
	Target Total Cash by level (Actual Base Salary plus Bonus Target)	**Appropriate**	• Appropriate standard compensation metric comparing base salary and bonus target against the median salary
	Target Total Direct by level (Target Total Cash plus long term incentives)	**Appropriate**	• Appropriate standard compensation metric comparing total direct compensation against the median salary
	Target Total Remuneration by level (Target Total Direct plus Non-Cash)	**Appropriate**	• Appropriate standard compensation metric comparing total remuneration against the median salary • Non-cash is assumed to be benefits

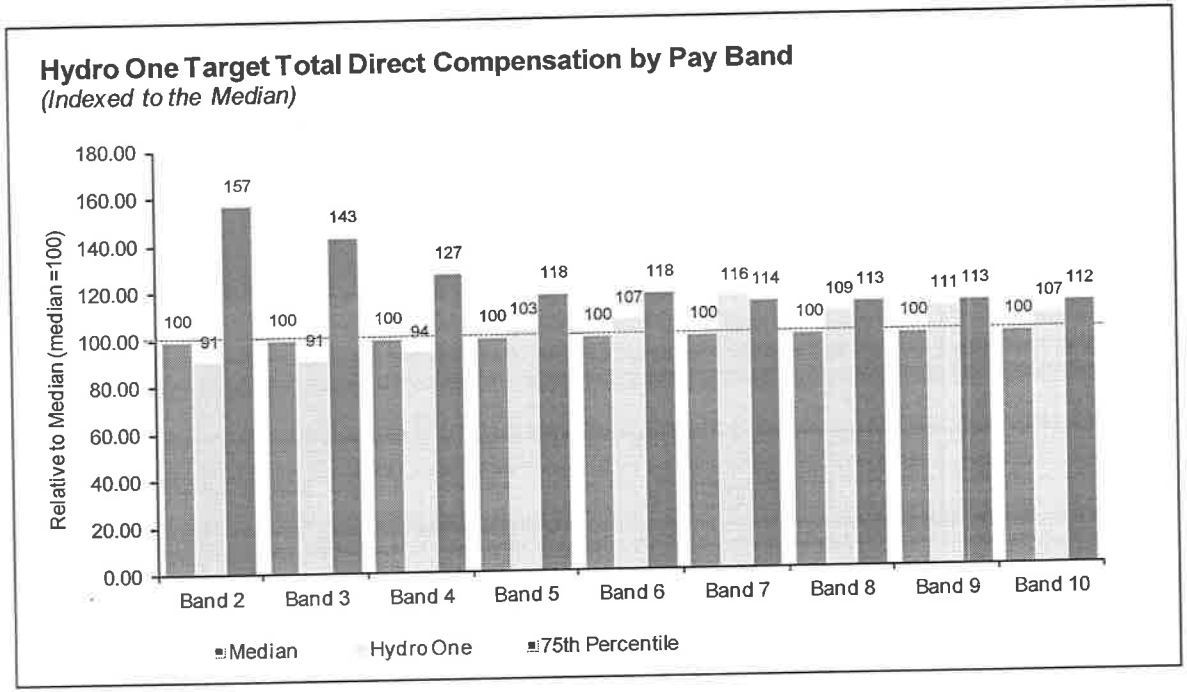
Compensation: Labour Rates for Hydro One
Metric Gap Analysis

Based on our review of the report, the following metric gaps were identified as an important area to consider in measuring compensation at Hydro One. The additional metrics are recommended to provide better granularity in comparing roles across the industry.

Functional Area	Metric Gap	Recommended Metric to Close Gap
Compensation	**Base salary by Job Type** • Important to view what you are paying different types of employees in comparison with industry peers so to ensure you are adequately paying employees and also not overpaying certain employees	**Base Salary by Job Type**
	Base salary plus Bonus Target by Job Type • Important to view how different types of employees are compensated in base and by bonus with industry peers so to ensure you are adequately paying employees and also not overpaying certain employees	**Target Total Cash by Job Type** *(Base Salary plus Bonus Target)*
	Base salary plus Bonus plus long term incentives by Job Type • Important to view how you are incorporating long-term benefits and incentives to retain different types of employees and what is needed based on industry peers (also important to use peers from similar locals in terms of benefits expectations)	**Target Total Direct by Job** *(Target Total Cash plus long term incentives)*
	Total Target Remuneration by Job Type • Important to view the total remuneration of different types of employees with industry peers	**Target Total Remuneration by Job Type** *(Target Total Direct plus Non-Cash)*
	Overtime Expense • Highlights how much of the total labour expense is made up of overtime dollars	**Overtime Expense Ratio**

Compensation: Labour Rates for Hydro One

Ranking Analysis – Hydro One Employee Types Indexed to the Median



Analysis

- Year over year data was not provided – this is an analysis of the data provided for 2011
- Hydro One's total direct compensation is below the median for bands 2,3, and 4, and above the median for all other bands
- All Hydro One's pay bands are below the top quartile, i.e. below 75th percentile, except for Band 7
- Band 1 (CEO level) was not provided

TAB 4

KPMG

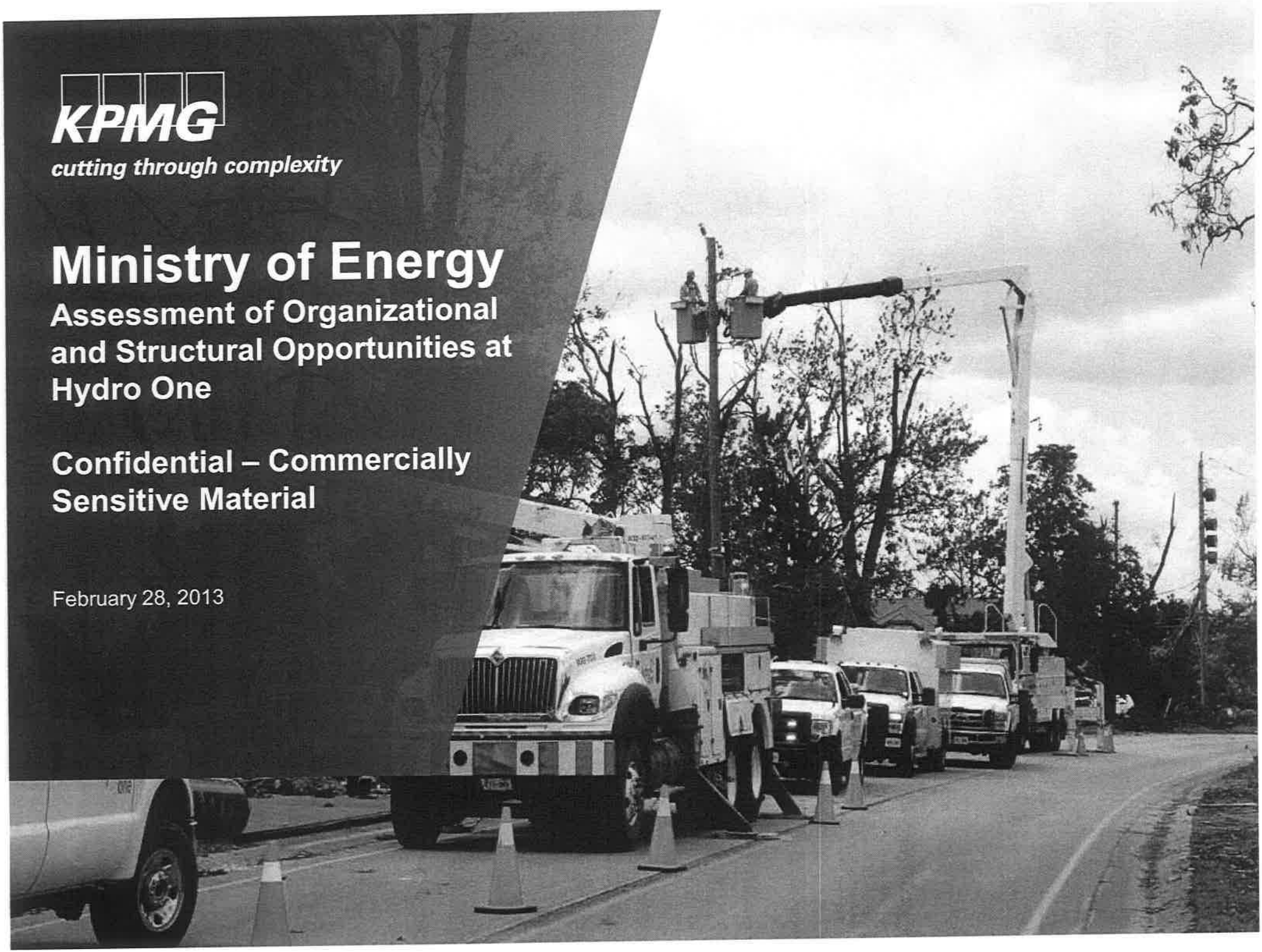
cutting through complexity

Ministry of Energy

Assessment of Organizational and Structural Opportunities at Hydro One

Confidential – Commercially Sensitive Material

February 28, 2013



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How to use this document

The Ministry of Energy engaged KPMG to assess existing benchmarking studies and to identify organizational and structural opportunities for cost savings at Hydro One.

Our role was to outline opportunities that came to our attention during our work and to offer our comments and recommendations for the Ministry's consideration. These comments, by their nature, may be critical as they relate solely to opportunities for change or enhancement and will not address all of Hydro One's current activities and undertakings.

Estimated savings in this report are based on specific assumptions and actions undertaken by Hydro One. Actual savings achieved for the period covered and the time to achieved these savings will vary from the information presented and the variations may be material.

Our procedures consisted solely of inquiry, observation, comparison and analysis of Hydro One-provided information. We relied on the completeness and accuracy of the information provided. Such work does not constitute an audit. Accordingly, we have expressed no opinion on financial results, internal controls or other information.

Our analysis and advice is intended solely for the Ministry's Senior Management's internal use and may not be edited, distributed, published or relied on by any other person.

Acronyms

Acronym	Definition
AA	Asset Analytics (SAP Module)
AIP	Asset Investment Planning (SAP Module)
ADM	Application Development and Maintenance
Bill 198	An act put into place by the Ontario Government to improve public confidence in the integrity of financial reporting of public companies.
CIS	Customer Information System
COE	Center of Excellence
Dx	Distribution
EAM	Enterprise Asset Management
EPC	Engineering, Procurement, Construction
EP&D	Engineering Projects & Delivery (a group within Hydro One)
ERP	Enterprise Resource Planning (software application)
FTE	Full-Time Equivalent
GAAP	Generally Accepted Accounting Principles
GB	Gigabyte
GIS	Geographic Information System
IFRS	International Financial Reporting Standards
OAR	Ontario Authority Register
O&M, OM&A	Operations & Maintenance; Operations, Maintenance & Administration
PO	Purchase Order
RFP	Request for Proposal
SAN	Storage Area Network
TB	Terabyte
Tx	Transmission
VDI	Virtual Desktop Infrastructure

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Methodology and Approach

Opportunity Analysis

- Operations
- Supply Chain
- Finance
- IT
- HR

Appendix

Executive Summary

The Ministry of Energy engaged KPMG to assess existing benchmarking studies and to identify organizational and structural opportunities for efficiencies at Hydro One and OPG.

The Provincial Government announced plans in the 2012 Ontario Budget to move forward with a comprehensive review of the electricity sector and its various agencies. One element of the review is an independent, critical review and assessment of existing benchmarking at Hydro One and OPG in an effort to improve efficiency and find additional value for rate-payers and the Province.

In August 2012, the Ministry of Energy engaged KPMG to perform this review. The study has four main objectives:

1. Review and analyze existing benchmarking studies on compensation, productivity and efficiency
2. Identify organizational and structural opportunities for efficiency improvements within Hydro One and OPG
3. Prepare high level plans for improving efficiency
4. Identify potential impacts on rate-payers

This report addresses objectives 2 and 3 of the project for Hydro One (Deliverables #3 and #4 from the Ministry's RFP). In this report, we identify organizational and structural opportunities for efficiency improvements within Hydro One and corresponding high level implementation plans.

Our study was focused on the review of Hydro One Networks which constitute over 95% of Hydro One Inc's cost base. In this study, we were asked to consider all opportunities including ones that Hydro One may not have been previously allowed to pursue, such as offshoring.

Approach and Methodology

The Ministry requested that structural and organizational improvement opportunities be identified based on the analysis of benchmarking reports provided by Hydro One. That is, where Hydro One's performance was materially different than an industry benchmark, we investigated the causes of the difference and determined whether an opportunity to improve productivity or efficiency existed.

Due to limitations of the benchmarking reports from both OPG and Hydro One, a revision of our initial approach was required in order to be able to identify material opportunities. Our revised approach was reviewed and approved by the Ministry prior to the commencement of this portion of the study.

Revised Approach

Our revised approach involved developing opportunity hypotheses using either benchmarking report analysis or, where benchmark analysis was not available, utility industry leading practices and our team's experience. We tested these hypotheses to determine if incremental opportunities existed and in the cases where incremental opportunities were found, we estimated the potential savings. Our savings estimates are based on preliminary analysis and require further detailed analysis of each opportunity if pursued.

Executive Summary

Hydro One Overview

In 2011, Hydro One had revenues of $5.47b, OM&A expenses of $1.09b and a capital budget of $1.45b. Hydro One had approximately 5430 staff in the same period.

Hydro One's Business Improvement/Transformation Programs

In 2008, Hydro One began the Cornerstone project which is a company-wide, multi-year project to replace several of Hydro One's key enterprise information systems as they reach their end-of-life. The Cornerstone project is also a major business process transformation initiative that provides a platform for further effectiveness and efficiency gains at Hydro One. Hydro One is now in the fourth and final phase of this project. In addition to the Cornerstone project, Hydro One has initiated several smaller projects that are expected to drive productivity and efficiency savings.

Hydro One has indicated that it has begun to realize savings from early phases of the Cornerstone project. Based on our observations, the Cornerstone project has provided Hydro One with access to a large set of comprehensive tools that enables management to implement leading industry practices and increase productivity and efficiency. Hydro One will need to focus on: integrating the new tools into business processes, fully leveraging the tools across the company, and tracking and monitoring the effective usage of the tools. These are critical steps in order to harvest all the anticipated project savings.

The opportunities that we have identified are incremental to the benefits from Cornerstone project and the additional productivity and efficiency projects underway at Hydro One.

Sources: 2011 Annual report, Hydro One internal reports, EB-2012-0031, Exhibit D1, Tab 4, Schedule 3

Executive Summary

Findings – Operations

The following table lists the hypotheses that we tested for Operations and whether an opportunity was identified.

Operations Hypotheses	Opportunity?
1) **Hydro One can reduce capital costs managed by Engineering and Project Delivery through increased use of EPC suppliers**	Incremental Opportunity
2) **Hydro One can reduce operating costs by improving Station Maintenance worker productivity**	Incremental Opportunity
3) **Hydro One can reduce Forestry costs by outsourcing vegetation management activities**	Incremental Opportunity
4) **Hydro One can reduce maintenance costs and extend the life of existing assets through rigorous asset management**	**No incremental opportunity**
5) **Hydro One can improve frontline crew productivity by using detailed metrics to track productivity performance**	**No incremental opportunity**
6) **Hydro One can reduce operating cost by improving Lines Maintenance worker productivity**	**No incremental opportunity**
7) **Hydro One can reduce costs in Engineering and Project Delivery by improving worker productivity**	**No incremental opportunity**
8) **Hydro One can reduce forestry costs by using segmented maintenance cycles for different types of vegetation**	**No incremental opportunity**

Executive Summary

Findings – Supply Chain

The following table lists the hypotheses that we tested for Supply Chain and whether an opportunity was identified.

Supply Chain Hypotheses	Opportunity?
1) **Hydro One can reduce operational costs by developing a shared service organization for procurement**	**No incremental opportunity**
2) **Hydro One can reduce operating costs by strategically sourcing products and services from suppliers**	**No incremental opportunity**
3) **Hydro One can lower operating costs by reducing inventory levels of non-critical items**	**No incremental opportunity**

Executive Summary

Findings – Information Technology

The following table lists the hypotheses that we tested for Information Technology and whether an opportunity was identified.

	Information Technology Hypotheses	Opportunity?
1)	**Hydro One can reduce application services costs by offshoring development and maintenance of non-business critical applications**	Incremental Opportunity
2)	**Hydro One can continue to reduce end user computing costs by extending the deployment of Virtual Desktop Infrastructure**	Incremental Opportunity
3)	**Hydro One can reduce storage costs by replacing the current volume-based cost model to an end-point cost model as part of the outsourcing contract renewal**	Incremental Opportunity
4)	**Hydro One can reduce computing services costs by outsourcing or offshoring the monitoring service for the power systems data centre**	**No incremental opportunity**
5)	**Hydro One can reduce computing services costs and increase efficiency by rationalizing duplicate or aging applications**	**No incremental opportunity**
6)	**Hydro One can reduce computing services costs by increasing the ratio of virtualized servers to physical servers**	**No incremental opportunity**
7)	**Hydro One can reduce computing services costs by consolidating data centre facilities**	**No incremental opportunity**
8)	**Hydro One can reduce desktop support costs by expanding self service functionality**	**No incremental opportunity**
9)	**Hydro One can reduce costs associated with IT business support function by centralizing shadow IT functions that are currently within the lines of business into the central IT function**	**No incremental opportunity**

Executive Summary

Findings - Finance

The following table lists the hypotheses that we tested for Finance and whether an opportunity was identified.

	Finance Hypotheses	Opportunity?
1)	**Hydro One can reduce Finance & Controllership costs by centralizing transactional processes such as accounts payable, accounts receivable, general ledger and financial reporting activities**	**No incremental opportunity**
2)	**Hydro One can reduce operating costs by offshoring Finance & Controllership and Assurance related activities**	**No incremental opportunity**
3)	**Hydro One can lower Finance & Controllership costs and improve efficiency through greater automation of transactional processes**	**No incremental opportunity**
4)	**Hydro One can improve Finance & Controllership productivity by reducing the number of reports that are produced and by instituting self-service portals for ad-hoc reporting**	**No incremental opportunity**
5)	**Hydro One can increase productivity by establishing Finance business partner roles to provide strategic decision level support and program and policy implementation support to business units**	**No incremental opportunity**
6)	**Hydro One can reduce assurance costs by instituting strict guidelines around materiality, rationalizing the approval process for items such as POs, invoices, cash disbursements and expenses**	**No incremental opportunity**
7)	**Hydro One can reduce assurance costs by combining all related activities under a single assurance function and by using a risk-based approach**	**No incremental opportunity**

Executive Summary

Findings – Human Resources

The following table lists the hypotheses that we tested for Human Resources and whether an opportunity was identified.

Human Resources Hypotheses	Opportunity?
1) **Hydro One can increase HR efficiency by creating Centers of Excellence for areas of specialized expertise**	**No incremental opportunity**
2) **Hydro One can reduce operating costs by outsourcing or offshoring administrative and routine HR activities**	**No incremental opportunity**
3) **Hydro One can reduce operating costs by increasing process automation and implementing the use of self service tools by managers and employees**	**No incremental opportunity**
4) **Hydro One can increase HR productivity by establishing HR business partner roles within business units**	**No incremental opportunity**

Executive Summary

Opportunity Summary

We identified efficiency and productivity improvement opportunities in two major functions : Operations and IT. These opportunities involve process improvement, alternative IT hardware management approaches, outsourcing and offshoring. Process improvement and alternative IT hardware management approaches are opportunities that involve changing current processes without large changes to the current operating model. Outsourcing and offshoring are options that require more change and have greater labour force impacts. The table below provides estimated annual savings and costs for each opportunity.

Functional Area	Incremental Opportunity	Estimated Annual Savings[1] *Base Case* ($m)	Estimated Annual Savings[1] *Stretch Case* ($m)	Estimated One-time Costs ($m)	Considerations
Operations	1) **Hydro One can reduce capital costs managed by Engineering and Project Delivery through increased use of Engineering, Procurement, and Construction suppliers**	23[2]	77	Transition : 0.2-0.4	▪ Collective agreement issues related to using external contractors ▪ Ability to ensure work programs are well defined
Operations	2) **Hydro One can reduce costs in Grid Operations by improving the productivity in Station Maintenance**	5	13	Transition : 0.3-0.5	▪ Adoption rate of new tools and processes by field staff ▪ Driving change in culture and approach
Operations	3) **Hydro One can reduce costs in Forestry through outsourcing vegetation management activities to more cost efficient suppliers**	0/15[3]	15[4]	Severance: Up to 56.6 Transition : 0.3-0.5	▪ Collective agreement issues related to using external contractors ▪ Ensuring consistent level of service
IT	4) **Hydro One can reduce application services costs by offshoring development and maintenance of non-business critical applications**	0[5]	3.5	Transition : 0.8-1.2	▪ Collective agreement issues related to using external contractors ▪ Governance structure to manage and monitor service level agreement
IT	5) **Hydro One can continue to reduce its end user computing costs by extending the deployment of its Virtual Desktop Infrastructure**	0.55	1.6	Transition : 0.5-0.8	▪ Application compatibility and responsiveness ▪ Dependable infrastructure connectivity
IT	6) **Hydro One can reduce its storage costs by replacing its current volume based cost to an end point cost model as part of its outsourcing contract renewal**	0.5	0.85	none	▪ Pricing structure for new model
	Total	**$29m/$44m**	**$111m**	**Severance: Up to $56.6m, Transition Costs: $2.1m-$3.4m**	

Notes:

1) Actual savings achieved for the period covered and the time to achieve these savings will vary from the information presented and the variations may be material.
2) A portion of the savings are dependent on collective agreement changes for engineering related work. Savings may be impacted if changes to the collective agreement cannot be achieved.
3) Significant changes to the collective agreement may be required, therefore the base case is also provided with no savings if changes to the agreement cannot be achieved.
4) Further detailed analysis of the Vegetation Management work methods and processes is required to estimate the Stretch Case savings and identify specific efficiency/productivity improvements. Base Case savings used here to estimate total savings.
5) Stretch case calculated for offshoring only as this option requires significant change to current offshoring mandate.

Project Background and Objectives

Project Background and Objectives

Background

The provincial government announced plans in the 2012 Ontario Budget to move forward with a comprehensive review of the electricity sector and its various agencies. One element of the review is an independent, critical review and assessment of existing benchmarking at Hydro One and OPG in an effort to improve efficiency and find additional value for rate-payers and the Province.

The Ministry of Energy engaged KPMG to assess existing benchmarking studies and to identify organizational and structural opportunities within Hydro One and OPG.

Objectives

This study has four main objectives:

1. Review and analyze existing benchmarking studies on compensation, productivity and efficiency
2. Identify organizational and structural opportunities for efficiency improvements within Hydro One and OPG
3. Prepare high level plans for improving efficiency
4. Identify potential impacts on rate-payers

Scope of this Report

In this report, we identify organizational and structural opportunities for efficiency improvements within Hydro One and have prepared high level plans for improving efficiency. *(Deliverables #3 and #4 from the Ministry's RFP)*

Our previous report reviewed and analyzed existing benchmarking reports from Hydro One. Where analysis was developed, we used this knowledge to identify potential areas for improvement within Hydro One and to guide our analysis of organizational and structural opportunities. In this study, we were asked to consider all opportunities including ones that Hydro One may not have been previously allowed to pursue, such as offshoring.

Our study focuses on Hydro One Networks which constitute over 95% of Hydro One Inc's cost base.

Functional Areas Reviewed

Opportunity hypotheses were developed for the following Hydro One Networks business functions:

- Operations which includes Transmission and Distribution related activities
- Supply Chain
- IT
- Finance
- HR

Methodology and Approach

Opportunity Identification Approach

Overview

In the RFP for this study, the Ministry requested that structural and organizational improvement opportunities be identified based on the analysis of benchmarking reports provided by Hydro One. That is, where Hydro One's performance was materially different than an industry benchmark, we investigated the causes of the difference and determined whether an opportunity to improve productivity or efficiency existed.

Due to limitations of the benchmarking reports, a revision of our initial approach was required in order to be able to identify material opportunities across the major areas of the business. Our revised approach was reviewed with and approved by the Ministry prior to the commencement of this portion of the study.

The revised approach augments the initial approach with hypothesis based analysis to identify specific improvement opportunities based on comparing power industry and cross-industry leading practices to Hydro One's current operating strategy within a function.

Relevance of Past Benchmarking Reports

As discussed in our Benchmarking Analysis report, although many reports were provided by Hydro One there were limitations to the reports that prohibited us from developing a view of operational performance across all areas of Hydro One. These limitations included:

- **Span of Business Functions:** Reports did not exist for all business functions. For example, there were no benchmarking reports for the procurement function and therefore no basis of comparison.
- **Coverage within Business Functions:** In business functions where reports existed, some reports did not review all sub-functions and therefore performance comparison could only be conducted for a limited set of areas.
- **Level of Detail:** Some reports provided summary benchmarks at a function level while other reports provided detailed benchmarks at the function, sub-function and activity level. Without comparisons at the sub-function and activity level, high level benchmarks are only directional and require significant analysis to determine where specific structural or organizational opportunities exist.
- **Age of Report**: In our benchmark report review, we reviewed reports that were created within the last five years. Any major change in the company in the last few years would diminish any insights developed from our review of more older benchmark reports.

Opportunity Identification Approach (cont'd)

Revised Approach

Our revised approach involved testing operating model hypotheses using the benchmarking report analysis where available and leading practices as well as our team's experience in the utility industry for areas where detailed benchmark analysis was not available. Our approach focused on identifying large structural and organizational opportunities and did not attempt to develop an extensive list of activity-level improvements. Our savings estimates are based on preliminary analysis of the opportunities and require more detailed analysis if the opportunity is pursued.

Limitations to our Hydro One Analysis

In the case of Hydro One, one relevant efficiency/productivity benchmarking report was available*. This report contained benchmark performance in the area of vegetation management. Consequently we were limited in our ability to select hypotheses based on specific areas of benchmark underperformance. In the absence of benchmarks to guide our hypothesis development, we developed hypotheses based on the following:

- A review of the current business improvement/transformation projects underway at Hydro One
- Utility industry and cross-industry leading practices
- Our experience working with Utility companies

* The companies in this report were anonymized and KPMG did not receive Hydro One's company identifier until after our benchmark report study was completed. Therefore a review of this report does not appear in the benchmark report study.

Opportunity Identification Approach (cont'd)

Methodology

Hypothesis Development

- We developed a set of hypotheses for each function. Where benchmark report analysis was available, we focussed on areas where metrics indicated that performance was lower than the industry median. We developed hypotheses as to how performance could be improved or operating costs could be reduced in these specific areas.
- Where benchmark report analysis was not developed, our functional advisors developed a set of hypotheses based on power industry and cross-industry leading practices and industry experience

Hypothesis Testing

- We then collected evidence from Hydro One to prove/disprove our hypotheses. Hypothesis testing occurred in two waves where we collected extensive organizational, financial and operational data and conducted multiple interviews within each functional area of Hydro One.
- If additional hypotheses were identified in our interviews, we added them to our on-going list and collected evidence to prove/disprove them

Opportunity Identification/Evaluation

- Where sufficient evidence existed to prove a hypothesis, we then conducted further analysis to determine the size of the opportunity by estimating the potential savings.
- After developing opportunity profiles, we validated our assumptions and inputs used in our calculations with Hydro One

Hydro One's Business Improvement/Transformation Programs

Hydro One's Business Improvement/Transformation Programs

Hydro One has several business improvement programs in place, the largest being the Cornerstone Project.

The Cornerstone Project is part of the overall information technology strategy to replace several of Hydro One's key enterprise information systems as they reach their 'end of life'. The Cornerstone Project is also a major business process transformation initiative that provides a platform for further effectiveness and efficiency gains at Hydro One. The Cornerstone Project is being carried out in four phases as summarized below*:

Phase 1 (Completed June 2008): Replaced end of life Passport application and functionality associated with work management, supply chain, procurement, accounts payable and asset registry with a modern Enterprise Asset Management ("EAM") solution using SAP.

Phase 2 (Majority Completed August 2009, minor items completed in 2010): Replaced end of life PeopleSoft application for Finance / Human Resources / Payroll processing with functionality provided by SAP. Also addressed the analytical and reporting business needs for work management, finance, investment management, HR and Pay using SAP's Business Intelligence platform.

Phase 3 (In-Service 2011-2014): Enhance integrated planning, Enterprise Asset Management / Enterprise Resource Planning / Business Intelligence systems, tools and processes by expanding Hydro One's SAP solution. This includes adding and enhancing SAP functionality for asset analytics, business planning, planning/scheduling/dispatch and supply chain optimization as well as integrating specialized software applications for asset investment planning, geo-spatial analytics and engineering & design.

Phase 4 (2011-2013): Replace end of life Customer Information System ("CIS") including customer/account services, billing, settlements, and open market systems. The CIS project is currently replacing the legacy CIS systems with a unified platform based primarily on SAP's billing application.

Hydro One also has a number of smaller operational improvement projects underway. These projects focus on productivity and efficiency improvement through further implementation of technology and process improvement.

Based on our observations, the Cornerstone project has provided Hydro One with access to a large set of comprehensive tools that positions them to implement leading industry practices and increase productivity and efficiency in several areas within the company. Hydro One has indicated that it has begun to realize the expected savings from early phases of the Cornerstone project. We expect that Hydro One will need to continue to focus not only on integrating the new tools into business processes across the company but more importantly to fully apply and leverage the tools for improving productivity by tracking and monitoring the effective usage of the tools.

The opportunities that we have identified are incremental to the benefits from Cornerstone project and the additional productivity and efficiency projects underway at Hydro One.

* Source: EB-2012-0031, Exhibit D1, Tab 4, Schedule 3

Opportunity Analysis
Operations

Operations: Overview

Scope

- Our analysis of structural and organizational opportunities for the Operations function within Hydro One includes activities related to Transmission and Distribution

Hypothesis Development

- There was one relevant external benchmarking report of Hydro One's Operations function. This report reviewed Hydro One's performance in Vegetation Management. Consequently, we developed our remaining hypotheses based on:
  - Our team's experience and knowledge of transmission and distribution leading practices
  - Analysis of organizational structure and company financial reports
  - Review of Hydro One's current business improvement projects
- Eight hypotheses were developed for Hydro One's operations function

Hydro One productivity and efficiency programs

- Phase 1,3 and 4 of the Cornerstone project focused on functions within Operations. These phases aimed to improve the following business processes: work management, asset analytics, business planning, planning/scheduling/dispatch, asset investment planning, geo-spatial analytics, engineering & design, customer/account services, billing and settlements.
- Cornerstone Phase 1 and 3 have been completed while Phase 4 is currently underway

Operations: Data Inputs

In this phase of the project, KPMG collected financial and organizational data as well as conducted interviews with Hydro One senior staff. The tables below provide a description of the type of data used and the names of individuals KPMG interviewed.

Documents	
Subhead	**Description**
Hydro One 2010-2014 Business Plan	▪ Presentation describing Hydro One's strategic objectives, planning assumptions, and risks
Hydro One Detailed Department Budgets	▪ Department level costs from 2009 to 2011
Organizational Data	▪ List of roles and associated departments/groups within the organization for full-time, part-time and temporary workers within Hydro One
Department Reporting and Dashboards	▪ Internal management reporting for the Network Operations organization within Hydro One

Interviews
Name
Peter Gregg, EVP Operations
Nairn McQueen, SVP Engineering and Construction
Wayne Smith, SVP Grid Operations
Myles D'Arcey, SVP Customer Operations
Len McMillan, VP Lines & Forestry
Rick Stevens, VP Asset Management
Mike Penstone, VP Tx Project Development

Operations: Hypotheses

KPMG Hypotheses	Rationale
1) **Hydro One can reduce Capital costs managed by Engineering and Project Delivery, through increased use of EPC suppliers**	▪ Utility industry leading practice involves using engineering, procurement and construction contracts with external suppliers to reduce overall capital costs while still maintaining quality, reliability and safety standards
2) **Hydro One can reduce operating costs by improving Station Maintenance worker productivity**	▪ Hydro One provided data that shows an increase in FTEs from 768 (2006) to 1020 (2011) ▪ If the work program has not increased by the same magnitude, there may an opportunity to realize efficiency or productivity improvements
3) **Hydro One can reduce Forestry costs by outsourcing vegetation management activities**	▪ A 2012 benchmarking report showed that Hydro One has the highest vegetation costs of any of the participating companies and that their use of contractors is significantly lower than the industry average ▪ A common practice among utilities is to outsource vegetation management to either local or North American external suppliers.
4) **Hydro One can reduce maintenance costs and extend the life of existing assets through rigorous asset management**	▪ A utility leading practice is to apply a rigorous asset management approach to extend the life of existing assets and reduce total equipment costs

Operations: Hypotheses

KPMG Hypotheses	Rationale
5) **Hydro One can improve frontline crew productivity by using detailed metrics to track productivity performance**	■ A utility industry leading practice is to use detailed productivity reporting to track and monitor frontline worker efficiency ■ Detailed productivity metrics enable management to identify areas of underperformance and focus improvement efforts on specific groups
6) **Hydro One can reduce operating cost by improving Lines Maintenance worker productivity**	■ Hydro One provided data that shows an increase in FTEs from 1958 (2006) to 2319 (2011) ■ If the work program has not increased by the same magnitude, there may an opportunity to realize efficiency or productivity improvements
7) **Hydro One can reduce costs in Engineering and Project Delivery by improving worker productivity**	■ Hydro One provided data that shows an increase in FTEs from 970 (2006) to 1754 (2011) ■ If the work program has not increased by the same magnitude, there may an opportunity to realize efficiency or productivity improvements
8) **Hydro One can reduce forestry costs by using segmented maintenance cycles for different types of vegetation**	■ Hydro One has been benchmarked as the highest cost vegetation management program relative to peers, which implies cycle times might not be optimized ■ Leading practice is to develop vegetation management programs of varying cycles depending on the nature of vegetation and the nature of the treatment as well as greater treatment segmentation

Operations H1: Hydro One can reduce Capital costs managed by Engineering and Project Delivery through increased use of EPC suppliers

Findings

- In 2011, Hydro One external Engineering, Procurement & Construction (EPC) spend was approximately $83m of a total $838m in Engineering and Project Delivery capital spend (EP&D). As a percent of EP&D capital spend, EPC grew to 10% in 2011 from approximately 3% in 2007.
- Leading practice utilities use EPC suppliers primarily to improve the speed of completion, share project risk and leverage more efficient commercial practices to reduce costs. The EPC model allows for any activity across engineering, procurement or construction to be completed by a third party for portions of, or an entire capital project.
- Savings from EPC suppliers are typically driven by more efficient business processes, procurement processes and project execution
- In a sample study, Hydro One evaluated the savings potential of using EPC contracts by comparing the costs of constructing two similar stations, one competed using internal staff and the other with an EPC supplier. Hydro One observed approximately 20% in savings using an EPC supplier.
- Management believes that more work can be completed through EPC contracts, however restrictions in the collective agreement place limitations on the overall ability to use EPC suppliers
- A review of a comparator provincial utility using EPC contracts showed that EPC use reached upwards of 60% of total capital spend and savings typically take 12-18 months to commence. Further savings were realized when the second round of contracts were negotiated.

Opportunity Assessment

- Hydro One uses EPC contracts today however at a modest level
- Based on our analysis, there is an incremental opportunity to reduce engineering and project delivery costs through increased use of EPC contracts

There is an incremental opportunity for this hypothesis

Source: Management Interviews, department budgets, internal reports, KPMG Analysis

*EPC or "Engineer, Procure, Construct" is the use of full engineering project delivery services

Operations

Opportunity #1: Increase the use of EPC suppliers in Engineering Projects & Delivery

Opp #1

Hydro One can reduce costs in EP&D by using more EPC contracts than are used currently. This will result in project delivery savings through more efficient commercial processes associated with project execution.

Summary Evidence

- As a percent of EP&D capital spend, EPC grew to 10% in 2011 from approximately 3% in 2007
- Leading practice utilities use EPC contracts for larger projects to improve the speed of completion, share project risk and reduce the need to hire additional resources
- EPC savings are driven from more efficient business processes, procurement processes and project execution relative to internal practices
- Management indicated that a test case with an EPC supplier showed 20% in savings over a similar project performed in-house
- A review of a comparator provincial utility using EPC contracts showed that EPC use reached upwards of 60% of total capital spend

Next Steps

- Perform detailed analysis of capital spend to identify candidate EPC projects
- Develop detailed business case
- Undertake Strategic Sourcing exercise to select EPC suppliers
- Redesign processes to integrate work prepared by EPC suppliers
- Develop training program for internal EPC supplier management

ESTIMATED SAVINGS POTENTIAL*

Savings Methodology

- Savings estimates are based on the Hydro One EPC test case
- EP&D addressable spend of $779m (see table on next slide)
- Base case: Use EPC suppliers for 40% of EP&D spend and achieve 10% cost savings (50% of the savings rate achieved in Hydro One test case) = $23m
- Stretch case: Use EPC suppliers for 60% of EP&D spend and achieve 20% cost savings (100% of savings rate achieved in Hydro One test case) = $77m
- No Regular FTEs will require severance due to the level of non-regular employees and the expected rate of attrition; reductions can be achieved through non-filled retirements
- Commissioning costs ($46.1m) and Hydro One contract optimization savings ($13.1m) have been subtracted from the EP&D addressable spend
- 100% of estimated savings assumed to impact the capital budget

Implementation Complexity

- Portion of savings are dependent on collective agreement changes for engineering related work
- Ensuring work programs are well defined to reduce contract overruns

*Actual savings achieved for the period covered and the time to achieve these savings will vary from the information presented and the variations may be material

Operations

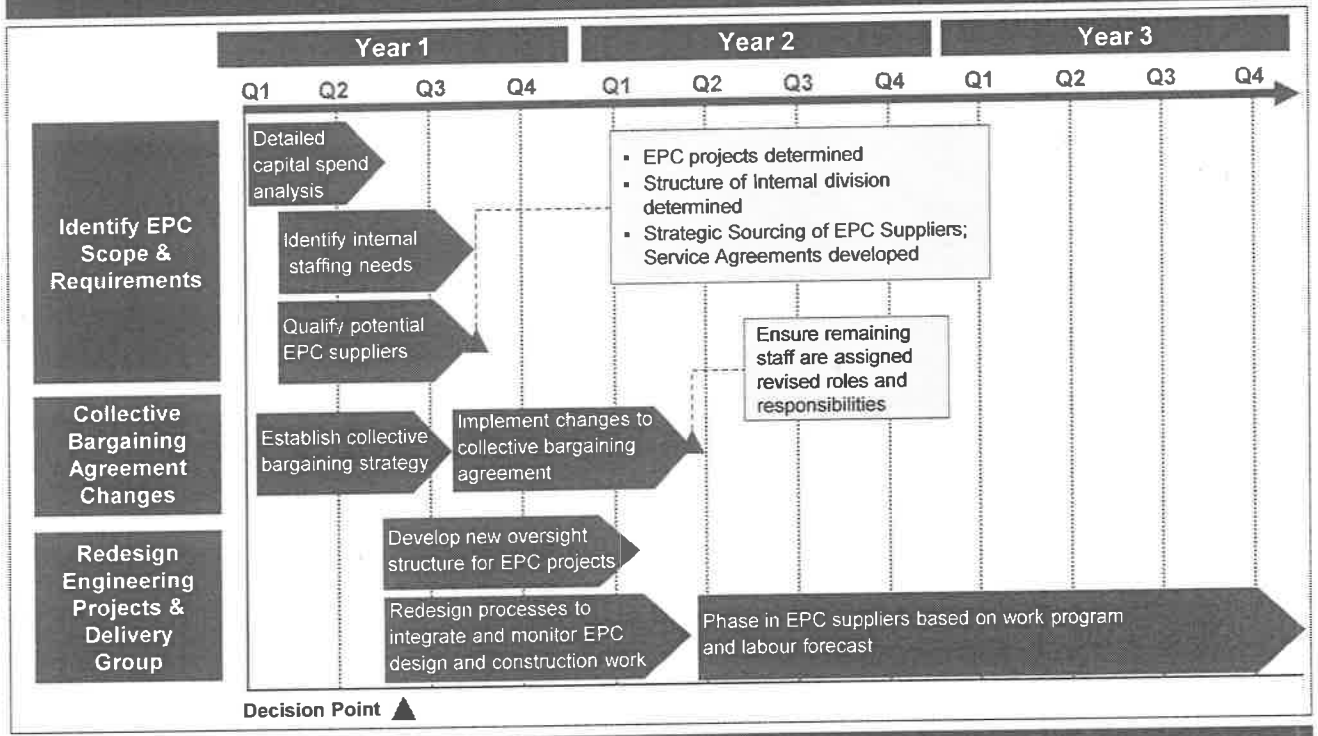
Opportunity #1: Supporting Analysis

Savings Calculation	Base	Stretch	Notes
2011 EP&D Capital Spend	$838m	$838m	Provided by Hydro One – includes commissioning
Less: Commissioning Costs	($46.1m)	($46.1m)	Provided by Hydro One
Less: Hydro One Expected Contract Optimization Savings	($13.1)	($13.1)	Hydro One expects $39.4m in savings from 2012 to 2014 from basic project contracting. $13.1 is the annual average based on the expected savings.
2011 EP&D Capital Eligible for Savings	$779m	$779m	Calculation of information above
Target EPC Spend	40%	60%	Base/Stretch
Total Target EPC Spend	$312m	$467m	Including EPC spend
2011 EPC Spend	($83m)	($83m)	Provided by Hydro One
Incremental EPC Spend	$229m	$384m	Subtract EPC spend
Expected savings using EPC	10%	20%	Base/Stretch
Expected Annual Savings	**$23m**	**$77m**	

Operations

Opportunity #1: Implementation Plan

Implementation Plan



Description

Hydro One already uses EPC contracts for approximately 10% of its EP&D spend. This plan provides a high level timeline to increase this level to 40%-60%. To achieve this reduction, Hydro One will need to perform a detailed review of its EP&D capital spend to identify target projects for EPC suppliers to execute balancing project risks with internal and external capabilities and processes. Hydro One will require a collective bargaining strategy to address union challenges and an evaluation strategy to assess potential suppliers.

Hydro One has the benefit of past experience working with EPC suppliers. This will assist in negotiating beneficial agreements that meet the anticipated savings and to ensure that the quality of work is upheld. Using EPC contracts will also help Hydro One apply leading practices from market competitive EPC suppliers to internally managed projects.

Opportunity Detail*

Estimated Base	• Annual capital savings of $23m
Estimated Stretch	• Annual capital savings of $77m
Estimated Costs	• One time cost of $0.2m-$0.4m for training internal staff in EPC supplier management

Assumptions and dependencies

- Based on 2011 levels and mix of EP&D capital spending
- Hydro One will use EPC for both new development and sustainment projects
- Quality, reliability and safety are delivered to Hydro One standards
- Savings estimates based on use of experienced EPC suppliers
- EPC supplier has more efficient commercial business processes in place
- Hydro One is able to negotiate changes to collective bargaining agreement
- Hydro One will maintain control of key engineering activities
- Hydro One has relevant engineering, procurement and construction standards documented
- Existing staff can effectively manage suppliers based on past use of EPC vendors
- Hydro One continues standardization of work programs
- Rate payer reaction to outsourcing does not negatively affect Hydro One

*Actual savings achieved for the period covered and the time to achieve these savings will vary from the information presented and the variations may be material

Operations H2: Hydro One can reduce operating costs by improving Station Maintenance worker productivity

Findings

- In 2011, there were 1168 FTEs in maintenance when adjusted for capital and commissioned work. The growth of 282 FTEs since 2006 has been driven by the Smart Meter Network Management function and increased regulatory requirements and oversight.
- Recent management reports indicate that 50% of orders are completed over the target planned labour hours range
- Reports also shows that only 1 out of 94 work centres has achieved the target ideal orders/total orders range
- Management interviews suggest that work planning could be improved as accountability is distributed across many roles and the process to prepare work for front-line workers could be more efficient. Interviews also suggest that this is contributing to an increased level of rework.
- Management has identified work planning and related productivity as next areas of focus for the organization and indicates that labour productivity has improved by 1-3% in recent years
- Station Maintenance has not fully adopted the use of new software tools to assist in work management and coordination. Other groups within Hydro One appear to have realized significant productivity increases from using these tools.

Opportunity Assessment

- Management reports show that Station Maintenance has not fully leveraged the capability of new software tools to assist in work management and coordination
- Based on our analysis, there is an incremental opportunity to reduce operating costs by improving station maintenance productivity

There is an incremental opportunity for this hypothesis

Source: Management Interviews, department budgets, internal reports, KPMG Analysis

Operations

Opportunity #2: Improve Station Maintenance Worker Productivity

Opp #2

Hydro One can reduce costs in Station Maintenance Services by using better planning and coordination of work. This will allow Hydro One to complete more work with fewer resources than planned.

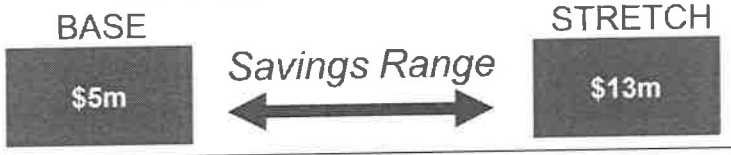
Summary Evidence

- In 2011, there were 1168 FTEs in station maintenance
- Management indicates that labour productivity improvements of 1-3% have been achieved over the past few years
- Management interviews suggest work planning requires improvement as currently accountability is distributed and the process to prepare work for front-line workers is not efficient
- Management indicated that Station Maintenance has not fully adopted use of new software tools to assist in work management and coordination
- Other groups within Hydro One, such as Provincial Lines maintenance, have realized improved productivity from using these tools

Next Steps

- Conduct detailed analysis to refine targets for process changes and improved monitoring savings
- Gather best practices from internal groups that have used SAP tools to improve reporting and work planning
- Identify SAP productivity reports and other tracking reports that can be used to monitor improvements
- Create improvement targets for group

ESTIMATED SAVINGS POTENTIAL*



Savings Methodology

- Discussion with management identified a range for potential savings through improving station maintenance work productivity
- The base case agreed upon estimate is $5m which represents an incremental 3% productivity improvement on the 2011 work program
- The stretch case agreed upon estimate is $13m which represents an incremental 8% productivity improvement on the 2011 work program
- Management discussion suggests that FTE savings can likely be driven by attrition, a reduction in non-regular workers and reduced overtime hours. Therefore no severance has been included
- Savings are 87% OM&A and 13% Capital, which are divided across Tx and Dx at different rates (57 to 43% and 47 to 53% respectively)

Implementation Complexity

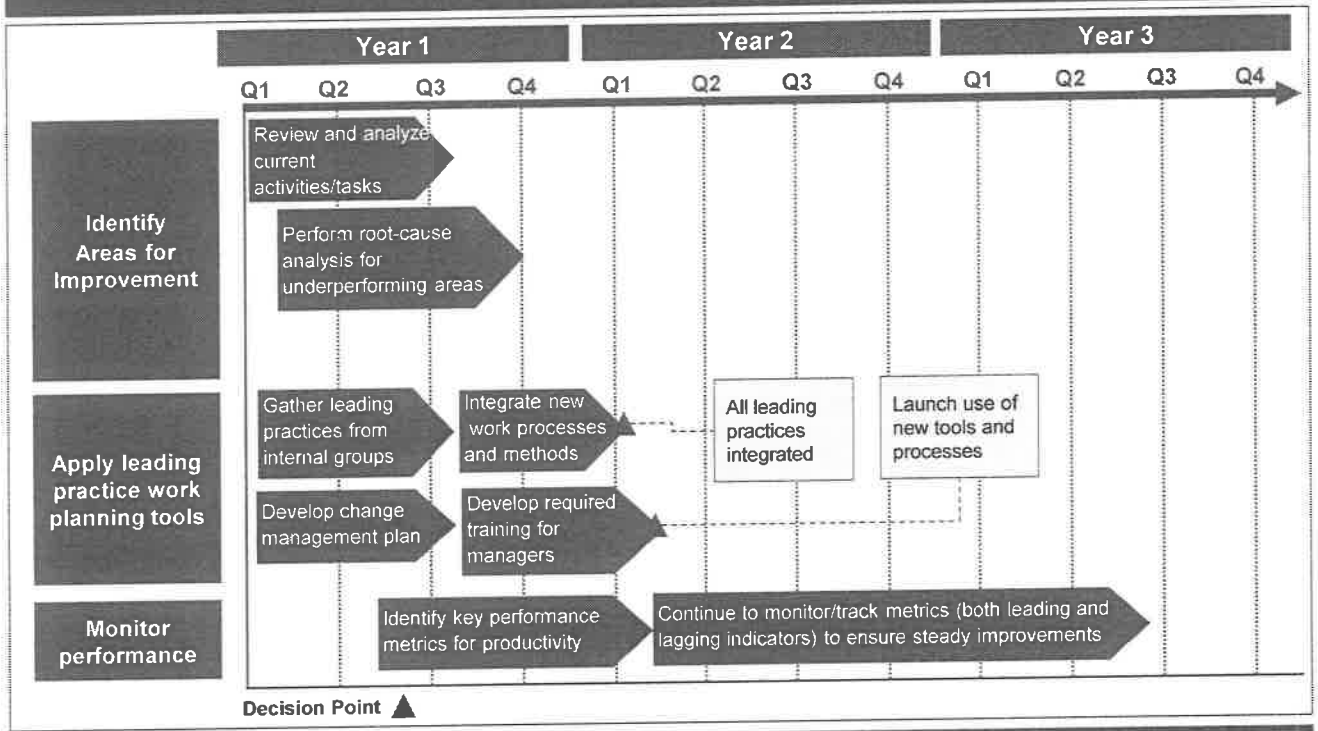
- Encouraging quick adoption of new tools and processes by field staff
- Driving change in culture and approach to how work is managed and completed

*Actual savings achieved for the period covered and the time to achieve these savings will vary from the information presented and the variations may be material

Operations

Opportunity #2: Implementation Plan

Implementation Plan



Opportunity Detail*

Estimated Base	• Annual savings of $5m
Estimated Stretch	• Annual savings of $13m
Estimated Costs	• One-time costs of $0.3m-$0.5m for change management, training, process documentation and project management • One-time severance is not included as management anticipates that savings can be achieved through a reduction in non-regular workers, reduced overtime hours and attrition

Description

The initial effort in improving station maintenance productivity will include identifying the root-causes of underperformance and identifying how leading practices can help improve work productivity. SAP work planning tools will be core to this initiative and be used to reduce the number of handoffs required to push work to the front line/downstream.

Hydro One will need to establish a change management plan in order to ensure a successful transition to the new processes. This will involve developing training material, regular communications and training delivery.

Assumptions and dependencies

- Based on 2011 budget and activity levels
- Leading practices are able to be leveraged across business units
- Hydro One workers will adapt to the change in the proposed time period
- Hydro One is able to effectively monitor productivity and identify leading and lagging indicators
- No incremental investment in technology is required and existing software and platforms can be used
- Any job/role changes can occur without requiring changes to the collective agreement

*Actual savings achieved for the period covered and the time to achieve these savings will vary from the information presented and the variations may be material

Operations H3: Hydro One can reduce Forestry costs by outsourcing vegetation management activities

Findings

- In 2011 there were 1036 Forestry operator FTEs, which has grown at an average annual rate of 3.5% since 2006. Management indicated that due to workforce demographics, some hiring occurred to address the anticipated wave of retirements.
- 2011 vegetation management costs for Hydro One were approximately $145m, this translates into a Transmission cost of approximately $304/hectare and Distribution cost of $1178/km
- Analysis of the 2012 CN Utility Benchmarking report highlights that Hydro One has higher vegetation management costs than other report participants*:
  - Hydro One's cost per tree treated is $86/tree in comparison to the average of $53/tree and the next lowest cost peer company of $73/tree
  - The cost per labour hour for distribution routine maintenance was highest of all utilities at $86/hr
  - Compared to the closest peer in the report in terms of pole miles, Hydro One's cost per pole mile is 57% higher ($2,026 to $1,290) when adjusted for overhead vs. underground miles. This analysis implies a cost difference of approximately $44m based on the total overhead pole miles for Hydro One.
  - Hydro One's cost per customer is $102, which is nearly 2.5 times greater the next lowest cost peer company of $44 and significantly higher than the median cost per customer of $16.22
  - Although Hydro One serves an expansive territory, 69% of lines are accessible by roads or passable terrain, which is equal to the average of the utilities benchmarked in the report*. This implies that the cost disadvantage is not likely a result of more difficult terrain or line locations.
- Of the participating companies, only Hydro One used internal resources in all roles such as Forepersons, Qualified Arborists and Crew Leaders. On average, utilities reported outsourcing between 74 - 85% of these positions. Savings from outsourcing vegetation work is typically generated by lower overall staff costs and more efficient commercial business processes.
- Comparator analysis of a Provincial utility with 2m customers that outsources vegetation management shows Transmission costs of $267/hectare and distribution costs are $520/km, a difference of 14% and 56% respectively. This utility serves a slightly smaller transmission area (75k ha vs. 82k ha) and 40% smaller distribution area (58k km vs. 102k km) with more demanding vegetation characteristics.

Opportunity Assessment

- Hydro One has significantly higher vegetation management costs than peer utilities. The most significant difference between peer companies is the use of outsource suppliers.
- Based on our analysis, there is an incremental opportunity to reduce forestry costs by outsourcing vegetation management

There is an incremental opportunity for this hypothesis

Source: Management Interviews, department budgets, 2012 CN Utility Benchmarking report, KPMG Analysis

*CN Utility Benchmarking 2011-2012, Figure 5, Figure 15, Figure 77, Figure 10, Figure 167

Operations

Opportunity #3: Outsource Vegetation Management Activities

Opp #3

Hydro One can reduce costs in Forestry by outsourcing Vegetation Management work to third party suppliers.

Summary Evidence

- In 2011 there were 1036 Forestry operator FTEs with an average annual growth rate of 3.5% since 2006
- The 2012 CN Utility Benchmarking report shows that Hydro One has the highest vegetation costs of any of the participating companies. Of the participating companies, Hydro One was the only utility that used solely internal resources in all roles such as Forepersons, Qualified Arborists, Crew Leaders.
- Hydro One's cost per pole mile of $2,026 is 57% is higher than its closest comparable peer in this report of $1,290 when adjusted for overhead vs. underground lines
- Comparator analysis of a Canadian provincial utility with 2m customers that outsources vegetation management shows transmission forestry costs of $267/hectare and distribution forestry costs are $520/km. This represents a difference of 14% and 56% respectively with Hydro One.

Next Steps

- Detailed analysis to estimate stretch savings. This should include a review of: vegetation program (terrain, standards, treatments), workflow and program management, potential suppliers, provincial standards, efficiency gains and labour rates.
- Develop sourcing strategy to determine areas and work type for contract units and develop detailed cost estimates

ESTIMATED SAVINGS POTENTIAL*

BASE	*Savings Range*	STRETCH
$0m/$15m	⟷	TBD

Savings Methodology

- Base case: Hydro One is able to reduce Transmission and Distribution vegetation management costs by 10% through outsourcing and implement changes to the collective agreement. Target Tx rate of $274/hectare and Dx rate of $1060/km = $15m. If no collective agreement changes can be achieved, then base case is $0m.
- *Stretch case: Further detailed analysis of work methods/processes is required to estimate the Stretch case savings and identify specific changes to improve efficiency/ productivity*
- One time severance costs could reach up to $56.6m. This assumes 5% of Regular FTEs will remain for oversight, emergency and monitoring purposes, 25% will leave through attrition and a severance of two years of salary.
- One time severance costs may be avoided by using a strategic supplier that can absorb existing workforce – similar to Inergi arrangement
- 100% of estimated savings assumed to impact OM&A costs

Implementation Complexity

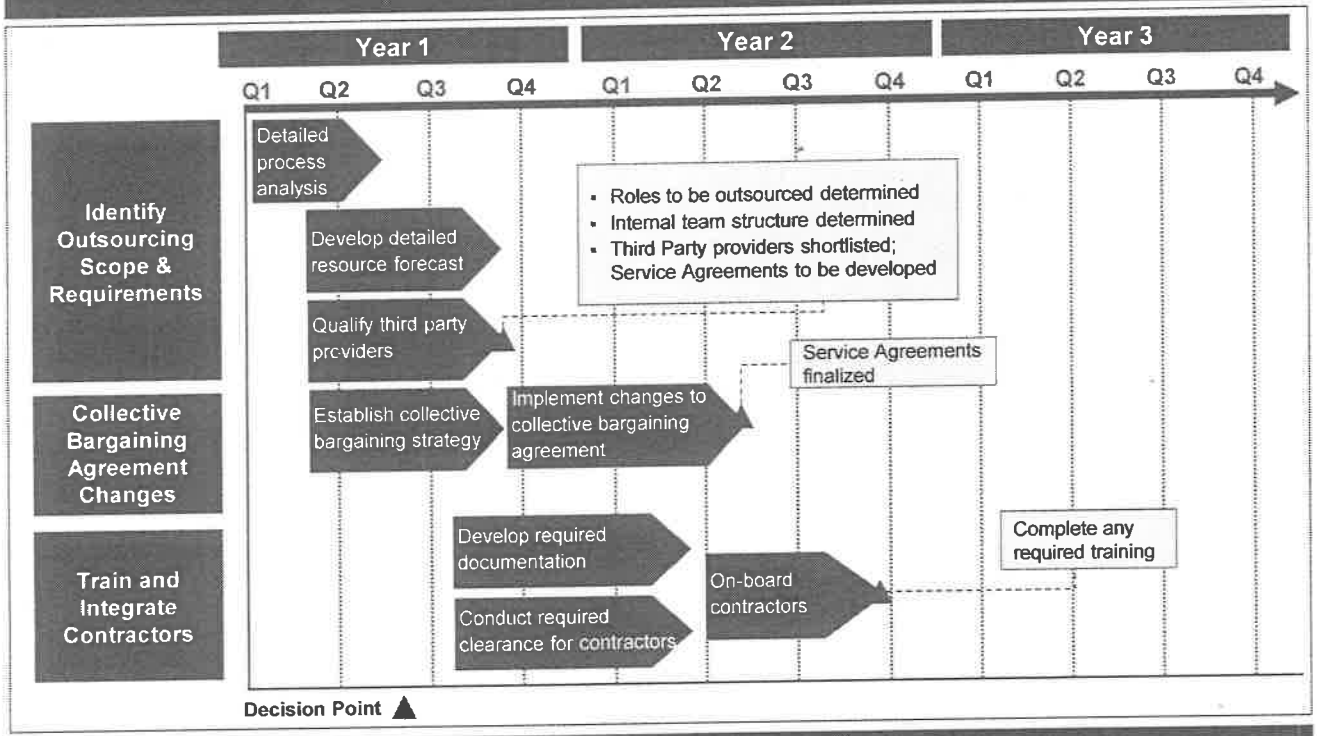
- Collective agreement issues related to using external contractors
- Ensuring consistent level of service that meets standards set by Hydro One

*Actual savings achieved for the period covered and the time to achieve these savings will vary from the information presented and the variations may be material

Operations

Opportunity #3: Implementation Plan

Implementation Plan



Description

This implementation plan involves considerations for developing a detailed organizational plan, evaluating strategic suppliers, conducting collective bargaining negotiations, and transitioning to an outsourcing supplier. An initial scoping exercise must be conducted to confirm the areas in which savings can be expected: labour, efficiency gains and program management.

The initial effort will include developing a sourcing strategy and negotiating beneficial agreements that meet the anticipated savings and to ensure that the quality of work is upheld. Hydro One will require an extensive collective bargaining strategy to address challenges from unions.

Opportunity Detail*

Estimated Base	• Annual savings of $0 - $15m
Estimated Stretch	• Requires further analysis
Estimated Costs	• One-time severance cost of $56.6m (assumes 25% natural attrition and 5% of regular staff kept on hand) • Severance assumed to be up to two-years of salary at $86,000 per FTE

Assumptions and dependencies

- Hydro One is able to identify a cost effective outsourcing supplier
- Hydro One is able to negotiate changes to collective bargaining agreement
- Outsourcing supplier has more efficient commercial business processes in place
- Safety and quality managed to Hydro One standards
- Service levels are equal or above what internal Hydro One staff deliver today
- Selected work includes: all vegetation management work activities including trimming, spraying and clearing
- Hydro One maintains an emergency team for vegetation management
- Rate payer reaction to outsourcing does not negatively affect Hydro One

*Actual savings achieved for the period covered and the time to achieve these savings will vary from the information presented and the variations may be material

Operations H4: Hydro One can reduce maintenance costs and extend the life of existing assets through rigorous asset management

Findings

- A utility industry leading practice is to employ a rigorous asset management approach to optimize the useful life of existing assets and new capital investments. This can result in a reduction of operational expenses through reduced maintenance, as well as a deferral of capital investment.
- As part of the Cornerstone project, Hydro One is implementing Asset Analytics (AA) and Asset Investment Planning (AIP) modules, which are asset management systems with the capabilities to help better manage capital investment decisions. These modules show the impact of deferring capital purchases and identify the associated risk such as potential outage or failure risk.
- Enhanced asset management is expected to deliver $15m of savings from 2013 to 2019 and rationalizing the work program is expected to deliver another $6m in savings
- There is evidence that the new asset management applications have helped to improve capital investment portfolio management. According to management, proposed capital spend has been reduced by almost $500m from $3.0b to $2.5b while still remaining within acceptable risk levels through use of the tools.

Opportunity Assessment

- Hydro One has recently implemented robust asset management tools and has adopted a rigorous asset management approach
- Based on our analysis, there is no incremental opportunity to reduce maintenance costs through asset management

This hypothesis has been addressed by Hydro One and there appears to be no incremental opportunity

Source: Management Interviews, Cornerstone project reports

Operations H5: Hydro One can improve frontline crew productivity by using detailed metrics to track productivity performance

Findings

- The Cornerstone project involves using SAP reporting and tracking capability to report on productivity internally and across business groups. Management interviews indicated that one of the goals of the implementation of the Cornerstone project was to provide better visibility into frontline productivity through improved reporting.
- Reports are now generated that provide management information on productivity metrics that focus on: unit costs, billable hours, crew-to-crew and region-to-region comparisons
- Productivity reports include budgeted labour hours and costs for each field manager and work centre, comparing these to actual results. This ensures that deviations from the budget can be traced and acted upon.
- Management indicated that they are seeing 1-3% productivity improvement each year. Frontline technology improvements and new systems have been adopted at a pace slower than expected, which has limited the benefits of these systems which are aimed at increasing tool time and reducing travel time for maintenance crews.
- Management interviews indicated that the department leads are using these reports to generate discussion on leading practices and initiatives that can help realize productivity gains

Opportunity Assessment

- Hydro One uses SAP to produce detailed reports to track frontline crew productivity
- Based on our analysis, there is no incremental opportunity to improve frontline crew productivity by using detailed metrics tracking

This hypothesis has been addressed by Hydro One and there appears to be no incremental opportunity

Source: Management Interviews, department budgets, internal reports, KPMG Analysis

Operations H6: Hydro One can reduce operating cost by improving Lines Maintenance worker productivity

Findings

- In 2011, there were 2,319 FTEs in the Provincial lines organization, an average annual growth rate of 3.5% since 2006. Management indicated that due to demographics of the workforce, some hiring of staff is required to address the significant wave of anticipated retirements.
- KPMG analysis shows that over the same time period, work program spend has increased by an average annual growth rate of 11.7% and Lines Maintenance efficiency has increased by 7.7%, in terms of program dollars per FTE
- Management indicated that the increase in efficiency in lines has been the most significant across the organization and attributes this to a concerted focus on the better planning and coordination of work and the efficiency of crews spending more of their day on tools. These improvements were supported by increased work planning capability with SAP.
- Analysis of work plan management reports shows a high level of detail and that group is tracking to their budgeted work units with only a slight variance in their actual performance. The total work units for 2012 was 3% ahead of the budgeted accomplishments for that year.
- Leading practices to improve maintenance worker productivity include using software tools to optimize workforce planning and the improved supervisory decision-making from the use of these tools

Opportunity Assessment

- Use of new tools to drive improved planning and coordination of work has driven increased efficiency within Lines Maintenance
- Based on our analysis, there is no incremental opportunity to reduce operating costs by increasing Lines Maintenance worker productivity

This hypothesis has been addressed by Hydro One and there appears to be no incremental opportunity

Source: Management Interviews, department budgets, internal reports, KPMG Analysis

Operations H7: Hydro One can reduce costs in Engineering and Project Delivery by improving worker productivity

Findings

- In 2011, Hydro One had 1718 FTEs (717 regular and 1001 non-regular) in engineering and project delivery having grown at an average annual rate of 12.7% since 2006
- Management indicates that the increase in headcount has been driven by
  - i. increases in the work program over the last few years from large portions of the asset fleet reaching end of life, new builds and managing the increasing complexities as systems are adapted to accommodate distributed generation
  - ii. new business activities driving the increase in headcount including the Green Energy Act program such as FIT and MicroFIT programs
  - iii. upwards of 100 new graduates have been hired to address the significant wave of retirements expected in technical and engineering groups
- Over the same time period, total projects spend increased by an average of 18% annually ($838m in 2011). The spend per project also increased by an average of 12.8% annually ($261k per project in 2011).
- Analysis shows that this has resulted in an average annual increase in worker productivity of 4.3% in terms of work program spend per FTE. This is a good approximation for the increase in value of work delivered per worker.

Opportunity Assessment

- Overall productivity analysis show that worker productivity has been generally improving
- Based on our analysis, there is no significant incremental opportunity to reduce Engineering and Project Delivery costs by increasing worker productivity

This hypothesis has been addressed by Hydro One and there appears to be no incremental opportunity

Source: Management Interviews, department budgets, internal reports, KPMG Analysis

Operations H8: Hydro One can reduce forestry costs by using segmented maintenance cycles for different types of vegetation

Findings

- Management indicated that the Hydro One forestry program uses a time-based cycle of 4-6 years for transmission vegetation and 6-8 years for distribution vegetation depending on the region. Actual cycles, according to management, are closer to 10 years due to budget constraints.
- Separate vegetation management standards exist for Transmission and Distribution. Hydro One has conducted a detailed preparation of Transmission forestry standards and understand the different segmentations that impact cycle time. Distribution standards are still in draft and are expected to receive final approval in the near future.
- Work is currently conducted and scoped for each segment of the transmission or distribution right of way based on: characteristics of vegetation, conditions, property owners permission and geography (north, south, east, central)
- A utility industry leading practice is to develop vegetation management programs of varying cycles depending on the nature of vegetation and the nature of the treatment as well as greater treatment segmentation, which balances larger standard clearance distances with less frequent treatment cycles and public opposition to wider cut backs
- The CN Utility benchmarking study identifies Hydro One with the lowest minimum clearance for trimming standard which implies a more frequent pruning cycle

Opportunity Assessment

- Hydro One has incorporated segmented vegetation cycles into its maintenance program
- Based on our analysis, there is no incremental opportunity to reduce forestry costs using segmented maintenance cycles

This hypothesis has been addressed by Hydro One and there appears to be no incremental opportunity

Source: Management Interviews, 2012 CN Utility Benchmarking report, KPMG Analysis

Opportunity Analysis

Supply Chain

Supply Chain: Overview

Scope

- Our analysis of structural and organizational opportunities for Supply Chain includes the procurement and inventory functions for all business units
- Our hypotheses focused on business operations and did not review specific capital projects

Hypothesis Development

- There were no relevant external benchmarking reports of Hydro One's Supply Chain function. Consequently, we developed our hypotheses based on:
  - Our team's experience and knowledge of Supply Chain leading practices in the utilities industry and other asset-intensive industries
  - Analysis of organizational structure and company financial reports
  - Review of Hydro One's current business improvement projects
- Three hypotheses were developed for Hydro One's Supply chain function

Hydro One productivity and efficiency programs

- Phase 1 and 3 of the Cornerstone project focused on functions within Supply Chain. These phases aimed to improve and optimize business processes across supply chain and procurement.
- Cornerstone Phase 1 and 3 have been completed

Source: Hydro One Business Transformation Plan, Supply Chain 2013-2015 Business Plan

Supply Chain: Data Inputs

In this phase of the project, KPMG collected financial and organizational data as well as conducted interviews with Hydro One senior staff. The tables below provide a description of the type of data used and the names of individuals KPMG interviewed.

Documents	
Subhead	**Description**
Hydro One 2010-2014 Business Plan	▪ Presentation describing Hydro One's strategic objectives, planning assumptions, and risks
Hydro One Detailed Department Budgets	▪ Department level costs from 2009 to 2011
Organizational Data	▪ List of roles and associated departments/groups within the organization for full-time, part-time and temporary workers within Hydro One
Supply Chain Department Reporting and Dashboards	▪ Internal management reporting providing descriptions and tracking of supply chain targets and actuals

Interviews
Name
George Carlton, VP Supply Chain Services

Supply Chain: KPMG Hypotheses

KPMG Hypotheses	Rationale
1) **Hydro One can reduce operational costs by developing a shared service organization for procurement**	▪ A cross-industry leading practice is to combine procurement activities across business units into one group. This drives lower operational costs by reducing duplicate activities, standardizing processes, and increasing staff utilization. ▪ It is common among utility companies to have decentralized procurement departments that are managed and operated within individual business units or individual sites
2) **Hydro One can reduce operating costs by strategically sourcing products and services from suppliers**	▪ A cross-industry leading practice is to take a strategic and proactive approach to sourcing materials and services from suppliers. Typically this proactive approach includes: ▪ Undertaking portfolio analysis to establish the best strategy for managing product categories ▪ Monitoring the market for innovations that will bring additional benefits ▪ Managing the suppliers in their categories (both those with contracts and without) to maintain and improve value ▪ Working with their internal groups to understand current and future requirements and develop plans to meet them ▪ Bringing innovations to their internal groups and encouraging them to consider new and alternative ideas ▪ Taking advantage of supplier discounts for early payments
3) **Hydro One can lower operating costs by reducing inventory levels of non-critical items**	▪ A power industry leading practice is to reduce or eliminate non-critical inventory, excluding inventory that is no longer manufactured or that is difficult to obtain ▪ Reducing or eliminating inventory can reduce labour and facilities costs ▪ Historically, utility companies store non-critical inventory in the same fashion as critical inventory

Supply Chain H1: Hydro One can reduce operational costs by developing a shared service organization for procurement

Findings

- Management interviews indicate that procurement activities are centralized and have been outsourced to Inergi
- A small procurement team resides within Hydro One; this group is responsible for managing the Inergi contract and strategically sourcing IT and consultant services
- IT and consultant services are managed in-house as Inergi is eligible to submit bids for these services
- In 2009, Hydro One hired an external outsourcing consulting company, Equaterra, to review and analyze pricing, service scope, service levels and general terms of the contract with Inergi. Equaterra determined that the outsourced services, including procurement, taken as whole were market competitive.
- Centralizing procurement activity is a cross-industry leading practice that drives lower operational costs by reducing duplicate activities, standardizing processes, and increasing staff utilization

Opportunity Assessment

- Hydro One has centralized and outsourced the majority of its procurement activities
- Based on our analysis, there is no incremental opportunity to centralize procurement activities

This hypothesis has been addressed by Hydro One and there appears to be no incremental opportunity

Source: Management Interviews

Supply Chain H2: Hydro One can reduce operating costs by strategically sourcing products and services from suppliers

Findings

- Hydro One outsourced strategic sourcing activities to Inergi. Inergi provides strategic sourcing services to cover virtually all of Hydro One's third-party spend. The only exceptions are IT and Consultant Services which are sourced and managed by the central procurement sourcing department, also managed by the Inergi contract.
- Total spend for Hydro One is estimated to be $1.1b, of which $550m is spent on projects and $500m is spent on operations
- Hydro One forecasted 2012 procurement savings of $17.3m, using 2011 costs as a baseline. Procurement tracking reports indicate that year-to-date savings are $23.2m as of October and are projected to be $25.3m by year-end.
- Hydro One actively pursues early payment discounts with vendors that offer this option. Hydro One has established a mini-team that tracks invoices that are eligible for early payment discounts to ensure that early payments discounts are realized. Early discount savings are tracked and reported in the overall Supply Chain value reports that are presented to the Executive Committee and the Board.
- The year-end savings projection represents 2.4% of the total external spend. This target is in-line with Engineering and Construction industry averages of 2 - 3% savings and therefore seem reasonable.
- Hydro One's strategic sourcing plans and reports indicate that they are planning, tracking and monitoring savings for all major categories
- Management indicated that Inergi has clear annual savings targets and monitors achievement against these targets on a monthly and year-to-date basis

Opportunity Assessment

- Hydro One strategically sources products and services, and has achieved targets comparable to industry averages
- Based on our analysis, there is no significant incremental opportunity to further strategically source products and services

This hypothesis has been addressed by Hydro One and there appears to be no incremental opportunity

Source: Management Interviews, Supply Chain Services -2012 – Value Program Report

Supply Chain H3: Hydro One can lower operating costs by reducing inventory levels of non-critical items

Findings

- Hydro One's inventory management function is separated into two organizations: (i) Strategic Inventory and (ii) Operational Inventory
- Strategic Inventory: Hydro One has an asset base in excess of $15b and some assets often have lifetimes of more than 40 – 50 years. Strategic inventory includes equipment and components required for these assets where spare parts are no longer available or lead times are excessive or items where there are only one or two suppliers in the world.
- Operational Inventory: This organization supports 80 service centres across Ontario from one central distribution centre in Barrie. Service centres do not hold operational stock but they do have 'consignment stock', which the centres hold for emergencies and urgent repairs.
- The value of operational stock held in the central distribution centre is approximately $39m and there is consignment stock of $26m across the service centres
- Stock turns are approximately 2.5 per year. Management also indicated that if 'stale and slow moving' stock are removed, the stock turns rise to approximately 5 per year. 'Stale and slow moving' stock include items that are typically held for emergency response, for example after storms.
- Compared to total assets and spend, the value of operational inventory is not high, which indicates appropriate inventory management. Management indicated that they are investigating reducing consignment stock levels as some centres located in close proximity are holding similar stock.
- The organization already operates on a centralized 'hub and spoke' model that was introduced in 2005, and which achieved a reduction in storage space and stock holding at the time of introduction

Opportunity Assessment

- Hydro One does not appear to have significant levels of inventory and has an efficient hub and spoke structure in place
- Based on our analysis, there is no significant incremental opportunity to reduce inventory levels

This hypothesis has been addressed by Hydro One and there appears to be no incremental opportunity

Source: Management Interviews, Inventory Forecast, Collaborative Planning Reports

Opportunity Analysis

Information Technology (IT)

Information Technology: Overview

Scope

- Our analysis of structural and organizational opportunities for IT includes the corporate IT function and all staff performing IT activities within each business unit
- Our hypotheses focused on business operations and did not review specific capital projects

Hypothesis Development

- There were no relevant external benchmarking reports of Hydro One's IT function. Consequently, we developed our hypotheses based on:
  - Our team's experience and knowledge of IT leading practices in the utilities industry and other asset-intensive industries
  - Analysis of organizational structure and company financial reports
  - Review of Hydro One's current business improvement projects
- Nine hypotheses were developed for Hydro One's IT function

Hydro One productivity and efficiency programs

- The Cornerstone project is an IT project that involves replacing key enterprise application systems as they reach 'end-of-life'
- The Cornerstone project is part of the overall IT strategy to drive productivity and efficiency improvements within IT
- Cornerstone Phase 1,2 and 3 have been completed while Phase 4 is currently underway

Information Technology: Data Inputs

In this phase of the project, KPMG collected financial and organizational data as well as conducted interviews with Hydro One senior staff. The tables below provide a description of the type of data used and the names of individuals KPMG interviewed.

Documents	
Subhead	**Description**
Hydro One 2010-2014 Business Plan	■ Presentation describing Hydro One's strategic objectives, planning assumptions, and risks
Hydro One Detailed Department Budgets	■ Department level costs from 2009 to 2011
Organizational Data	■ List of roles and associated departments/groups within the organization
IT Department Reports and Dashboard	■ Internal management reports that track IT projects, targets and savings

Interviews
Name
Mike Winters, Chief Information Officer
Brad Bowness, IT Director

Information Technology: KPMG Hypotheses

KPMG Hypotheses	Rationale
1) **Hydro One can reduce application services costs by offshoring development and maintenance of non-business critical applications**	▪ Offshoring of application development and maintenance function is a common practice to reduce costs ▪ Cost savings may be achieved by outsourcing or offshoring which take advantage of economies of scale and scope, as well as labour arbitrage
2) **Hydro One can continue to reduce end user computing costs by extending the deployment of Virtual Desktop Infrastructure (VDI)**	▪ Using a Virtual Desktop Infrastructure drives lower end user computing costs by replacing the higher cost desktop and laptops with lower cost virtual client devices ▪ Thin client devices used in VDI also have a longer refresh cycle than traditional laptops and desktops, which results in additional cost savings
3) **Hydro One can reduce storage costs by replacing the current volume-based cost model to an end-point cost model as part of the outsourcing contract renewal**	▪ In a volume-based pricing model based on per gigabyte storage costs, as storage volume grows so does the storage cost ▪ Storage costs can be controlled by adopting an end point model where storage costs are determined on a per device basis ▪ End-point pricing is an emerging common practice in storage pricing
4) **Hydro One can reduce computing services costs by outsourcing or offshoring the monitoring service for the power systems data centre**	▪ Off shoring of data centre monitoring, specifically the overnight shift, is a common practice to reduce costs ▪ Cost savings may be achieved by outsourcing or offshoring which take advantage of economies of scale and scope, as well as labour arbitrage

Information Technology: KPMG Hypotheses

KPMG Hypotheses	Rationale
5) **Hydro One can reduce computing services costs and increase efficiency by rationalizing duplicate or aging applications**	▪ Redundant applications that perform similar functions can be removed thereby reducing licensing, maintenance, and support costs ▪ A homogenous application portfolio can contribute to fewer interfaces that need to be managed, reduced risk for change related errors, and reduced downtime risk
6) **Hydro One can reduce computing services costs by increasing the ratio of virtualized servers to physical servers**	▪ By increasing the ratio of virtualized to physical servers, the number of physical servers that need to be procured and managed can be reduced ▪ A reduced server footprint will increase the useful life of the data-centre and therefore defer the cost of potential upgrades and expansion ▪ Reduced server footprint can also have a corresponding impact on power, heating and air conditioning consumption
7) **Hydro One can reduce computing services costs by consolidating data centre facilities**	▪ Maintaining multiple data centres can drive higher operating costs and data centre upgrade capital costs ▪ Consolidating data centres can reduce operating and capital costs and, at the same time, maintain availability and service levels
8) **Hydro One can reduce desktop support costs by expanding self service functionality**	▪ Helpdesk costs are variable and dependant on call volumes. Expansion of the self service site functionality can result in a reduction of helpdesk calls. Reduced volumes of helpdesk calls will reduce the demand for helpdesk agents
9) **Hydro One can reduce costs associated with IT business support function by centralizing shadow IT functions that are currently within the lines of business into the central IT function**	▪ The existence of a shadow organization performing IT tasks within business units which have been already outsourced can nullify efficiency gains and cost reductions achieved through outsourcing ▪ Eliminating duplicate functions can increase the benefits realized from outsourcing

Information Technology H1: Hydro One can reduce application services costs by offshoring development and maintenance of non-business critical applications

Findings

- Current application development and maintenance costs for non-critical business applications are $8.5m. The development portion (non-business critical) of the function is approximately $1.5m and the maintenance portion costing $7.0m.
- Theses activities are currently outsourced to Inergi, Hydro One's outsource service provider
- Offshoring of application development and maintenance function is a common IT practice to further reduce costs while still maintaining a consistent level of service
- IT management interviews indicated that the maintenance of specific business critical applications costing $3.1m are also candidates for offshoring
- Management indicated that offshoring roles had not been previously considered because Hydro One had been directed to maintain all roles within the Province
- KPMG research shows that cost savings of up to 30% can be achieved by offshoring application development activities. Further cost savings can be achieved by offshoring application maintenance activities.

Opportunity Assessment

- Hydro One currently does not offshore any IT activities
- There is an incremental opportunity to offshore application development and maintenance of non-business critical applications

There is an incremental opportunity for this hypothesis

Source: Management Interviews, KPMG Analysis

Information Technology

Opportunity #4: Offshoring development and maintenance of non-business critical applications

Opp #4

There may be an opportunity to reduce costs associated with application services by offshoring application development and maintenance functions.

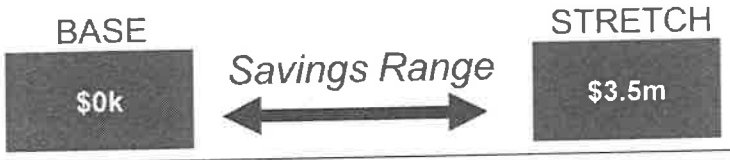
Summary Evidence

- Based on management interviews, a potential cost savings opportunity for application services exists through offshoring of the Application Development and Maintenance (ADM) function for non business critical applications that are currently provided through Inergi
- IT management interviews also revealed that the maintenance of specific business critical applications may also be offshored
- KPMG research indicates that offshoring to a low cost country may provide labour arbitrage savings of up to 30% compared with current ADM costs
- The contract with Inergi allows for a reduction of in-province staff of up to 30%. According to Hydro One, due to this allowance no severance costs would be incurred with this opportunity.

Next Steps

- Work with Government of Ontario to understand appetite for offshoring
- Determine specific scope of services for offshoring
- Identify potential union challenges and concerns
- Develop detailed implementation plan
- Evaluate if processes targeted for offshoring can be streamlined by eliminating redundant and low value added activities

ESTIMATE SAVING POTENTIAL*



Savings Methodology

- Current application maintenance costs targeted for offshoring are $7.0m for non business critical applications and $3.1m for specific business critical applications, with the development costs of non business critical applications accounting for an additional $1.5m
- Base case assumes that offshoring is still not a permitted option for Hydro One
- Stretch case assumes that both maintenance and development are offshored for a 30% cost savings, resulting in $3.5m in annual cost reductions
- There are no severance costs to Hydro One due to a contract provision allowing for a reduction of in-province staff
- One time costs also include transition costs, assumed to be $0.8m-$1.2m

Implementation Complexity

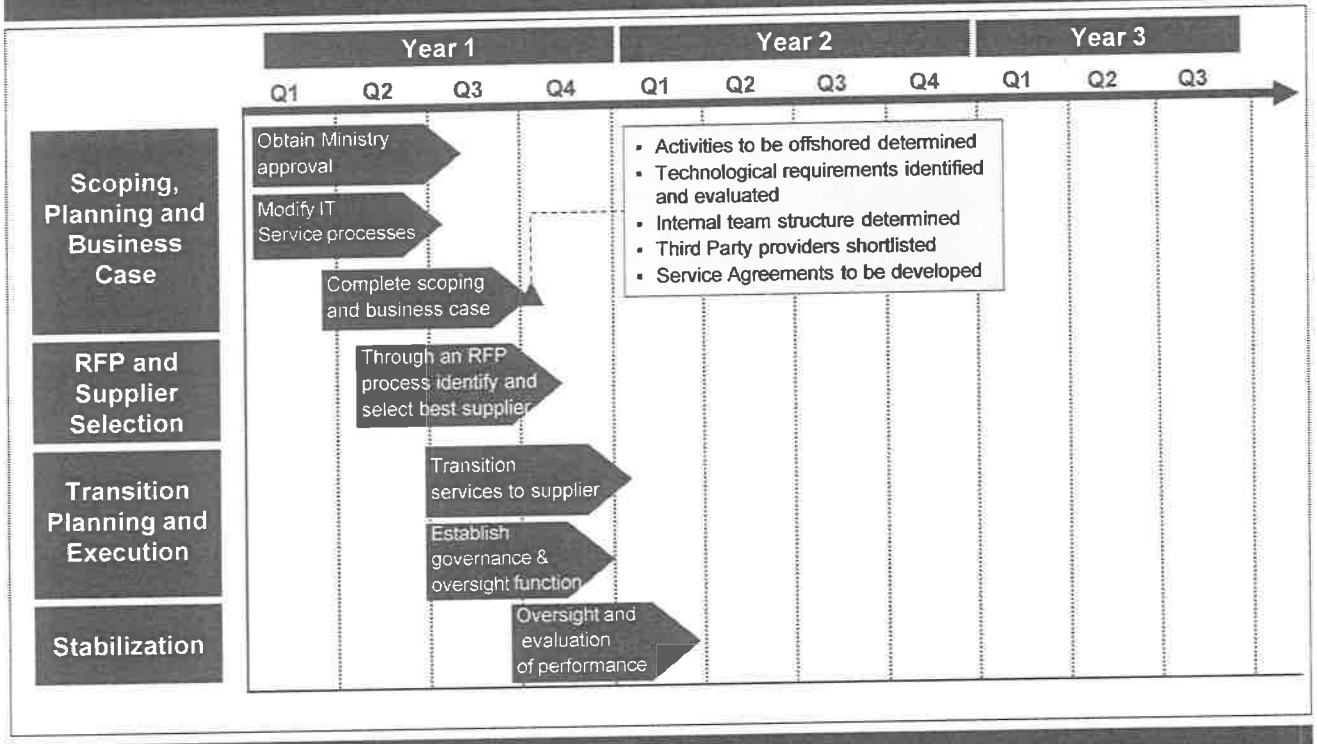
- Collective agreement issues related to using external contractors
- Ensuring proper governance in place to manage and monitor service level agreement with the outsourcing provider

*Actual savings achieved for the period covered and the time to achieve these savings will vary from the information presented and the variations may be material

Information Technology

Opportunity #4: Implementation Plan

Implementation Plan



Opportunity Detail*

Estimated Base ($m)	• $0
Estimated Stretch ($m)	• $3.5m
Estimated Costs ($m)	• Implementation Costs: $0.8m - $1.2m, one time for scoping, planning, transition activities • There are no severance costs

Description

- Hydro One should scope, plan and develop a business case for this opportunity, select a supplier through an RFP process, manage transition and execution, and conduct ongoing oversight
- To maximize the cost savings benefits, the Hydro One IT team should seek to implement this change within the current Inergi contract, as opposed to waiting for the next round of contract renewals

Assumptions and dependencies

- Hydro One is permitted to offshore roles
- Successful modification and rationalization of process activities before offshoring
- Significant changes to the collective agreements are not required
- Identification of a cost effective offshoring partner
- Transition does not require large systems changes or investments
- Ratepayer reaction to offshoring of roles does not negatively affect Hydro One

*Actual savings achieved for the period covered and the time to achieve these savings will vary from the information presented and the variations may be material

Information Technology H2: Hydro One can continue to reduce end user computing costs by extending the deployment of Virtual Desktop Infrastructure

Findings

- Virtual Desktop Infrastructure involves delivering applications housed on a remote server to users instead of installing applications on each user device
  - This approach reduces IT support costs as applications do not need to be installed and managed on each user's computer
  - VDI also reduces hardware spend in two ways. For internal staff, cheaper computers can be purchased as they do not require the same level of computing power/capacity. For external staff, contractors can use their own laptops saving the costs of procuring and deploying hardware.
- Management interviews indicated that Hydro One has begun a Virtual Desktop Infrastructure pilot program
  - In Phase I of the pilot, virtual desktop devices are being deployed to a set of contractors at a cost of $285 per VDI instance compared to the average cost of a laptop at $1,494
  - Phase II of the pilot involves expanding the program to include a set of internal employees. Virtual desktops for staff are estimated at $535 per virtual desktop device versus an average cost of $924 per desktop.
- Analysis indicates that there are approximately 2,600 desktops at Hydro One that could be replaced by VDI

Opportunity Assessment

- Hydro One has not decided whether to pursue deploying VDI
- Based on our analysis, there is an incremental opportunity to extend Virtual Desktop Infrastructure beyond the trial

There is an incremental opportunity for this hypothesis

Source: Management Interviews, KPMG Analysis

Information Technology

Opportunity #5: Extending the deployment of its Virtual Desktop Infrastructure

Opp #5

There may be an opportunity to reduce costs associated with end user computing by deploying Virtual Desktop Infrastructure.

Summary Evidence

- Using a VDI allows Hydro One to lower end user computing costs by replacing the higher cost employee desktops with lower cost virtual sessions and thin client devices
- Deploying a VDI can also result in further cost savings since thin client devices have a longer refresh cycle than desktops
- Results of VDI deployment pilot project phase one have demonstrated that cost savings can be achieved by replacing the contractor laptops with virtual desktops
- Additionally, IT management indicated that there are no incremental infrastructure costs associated with this opportunity beyond what has already been deployed

Next Steps

- Plan and identify the next VDI deployment group.
- Initiate user communications
- Perform application compatibility and responsiveness testing with the new platform
- Rollout VDI
- Evaluate and resolve issues

ESTIMATED SAVING POTENTIAL*

BASE	Savings Range	STRETCH
$550k	⟷	$1.6m

Savings Methodology

- The cost of a VDI instance with and without a thin client are $535 and $285 respectively. The cost for a laptop is $1,494, and cost per desktop is $924
- Base case assumes the implementation of VDI for all Hydro One contractors, (460) which translates in to cost savings of $550k
- Stretch case assumes VDI deployment on a company wide basis (including contractors) replacing 2,600 desktops resulting in a cost savings of $1.6m
- 4 to 6 FTEs at an average salary of $120k would be required for about 1 year to implement this cost savings plan, resulting in an implementation cost of $480k to $720k
- Hydro One indicated that VDI savings are categorized as capital savings

Implementation Complexity

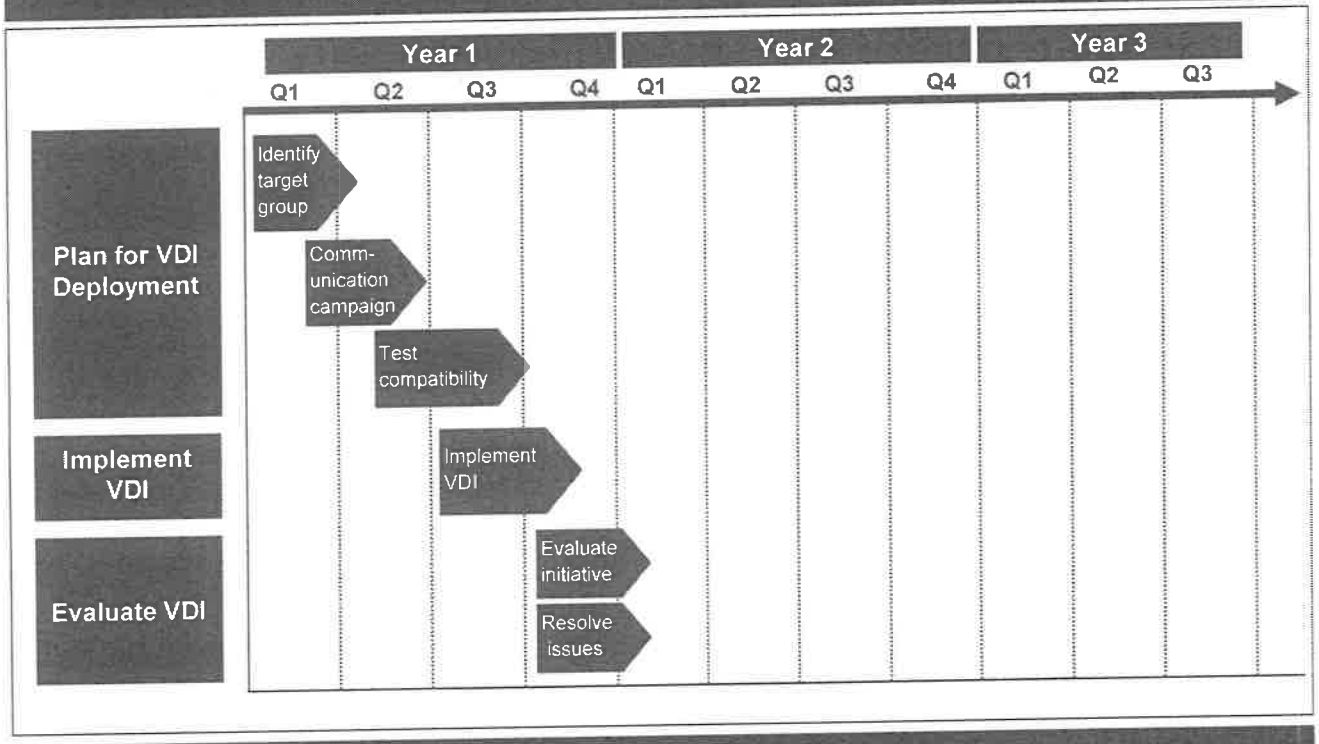
- Application compatibility and responsiveness with the new platform
- Ensuring a dependable connectivity infrastructure to access VDI

*Actual savings achieved for the period covered and the time to achieve these savings will vary from the information presented and the variations may be material

Information Technology

Opportunity #5: Implementation Plan

Implementation Plan



Opportunity Detail*

Estimated Base ($m)	• $550k
Estimated Stretch ($m)	• $1.6m
Estimated Costs ($m)	• Implementation Costs: $480k - $780k, one-time for project implementation staff

Description

- This opportunity addresses a greater scope than the pilot program. To successfully capture this opportunity KPMG suggests that Hydro One identify the next VDI deployment group, start a communication campaign to educate users, perform application compatibility and responsiveness testing with the new platform, rollout VDI, and resolve issues.

Assumptions and dependencies

- Testing of application compatibility and responsiveness
- A dependable connectivity infrastructure is needed to access VDI
- Applications that are used today can be supported or delivered in a VDI environment

*Actual savings achieved for the period covered and the time to achieve these savings will vary from the information presented and the variations may be material

Information Technology H3: Hydro One can reduce storage costs by replacing the current volume-based cost model to an end-point cost model as part of the outsourcing contract renewal

Findings

- Management interviews indicated that storage related assets have been repatriated from Inergi
- 2013 storage costs are projected to be $3.4m
- Currently, Hydro One outsources the labour component of its storage services as part of the Inergi outsourcing contract and is being charged based on a per gigabyte (GB) basis for storage volume
- Since storage demand is expected to increase at a high rate at Hydro One, a per GB cost model for storage may be suboptimal for the organization
- KPMG experience shows that moving from a per GB based cost model to an end point cost model could reduce the storage cost by up to 25%
- KPMG has found that a potential cost savings opportunity can be captured by changing the cost model for the outsourced storage services from a per GB or TB model to an end-point model, where storage costs are determined on a per device basis

Opportunity Assessment

- There is an incremental opportunity to reduce storage costs by replacing the current cost model

There is an incremental opportunity for this hypothesis

Source: Management Interviews, KPMG Analysis

Information Technology

Opportunity #6: Replacing the current volume based cost model to an end point cost model as part of the outsourcing contract renewal

Opp #6

There may be an opportunity to reduce costs associated with computing services by adopting an end point cost model for storage instead of the current resource unit cost model based on storage volume.

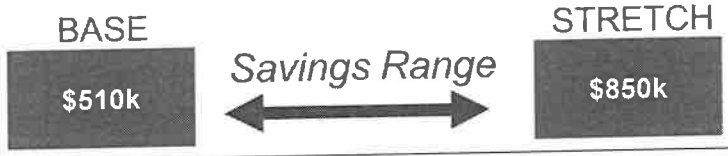
Summary Evidence

- Currently Hydro One outsources its storage service as part of the Inergi outsourcing contract and is being charged based on the storage volume (per GB)
- The current cost model will result in increased storage costs since storage volume increase results in storage cost increase
- A storage costing model based on the number of end points will help Hydro One control and slow its storage costs

Next Steps

- Plan for negotiations as part of the contract renewal
- Negotiate changing the storage cost model to an end point model
- Transition to the new storage cost model billing

ESTIMATED SAVING POTENTIAL*



Savings Methodology

- The projected cost of storage for 2013 is $3.4m
- KPMG experience has shown that moving from a volume based ($ per GB/TB) cost model to an end point cost model could reduce the storage cost by about 15% to 25%
- Base case assumes savings of 15% resulting in $510k in savings
- Stretch case assumes savings of 25% resulting in $850k in savings
- There are no incremental costs associated with capturing this opportunity

Implementation Complexity

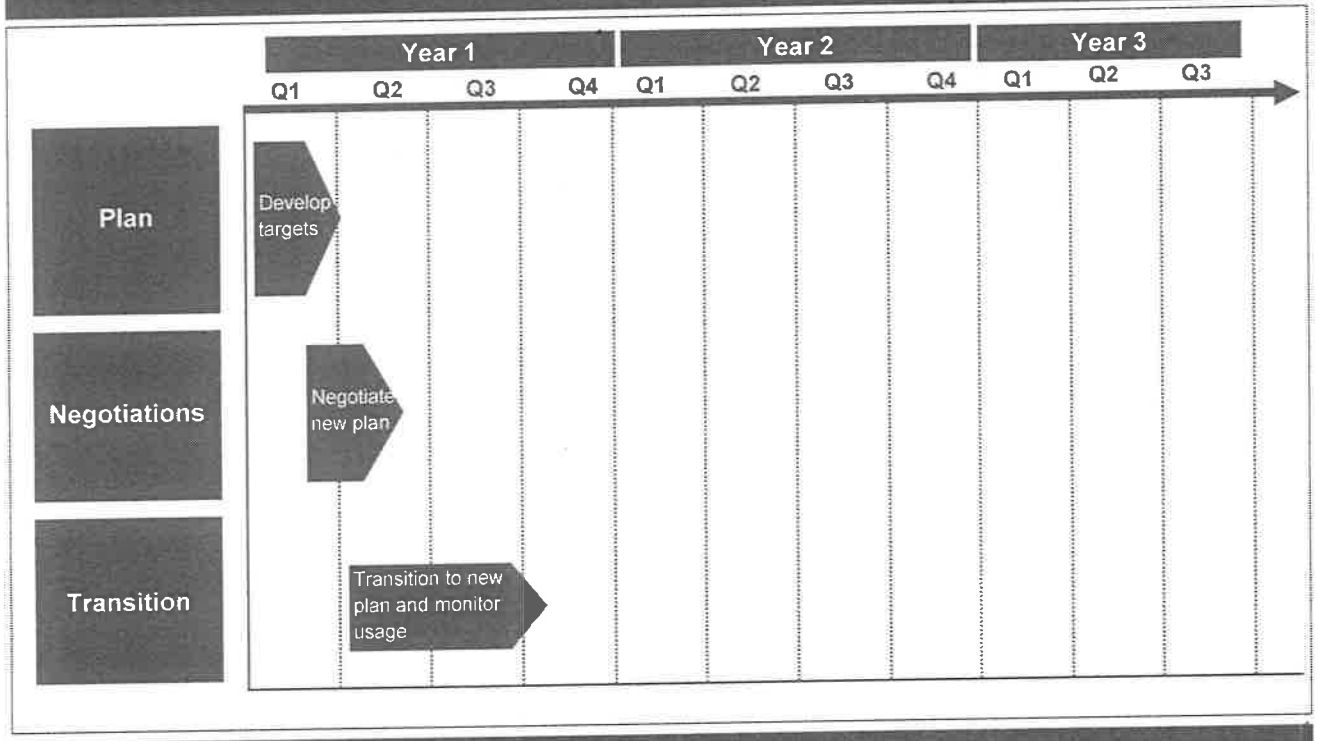
- There is no technology complexity to the implementation because it is not technology related
- Ensuring an appropriate end-point model pricing structure that is beneficial to Hydro One
- Monitoring by Hydro One to ensure that change to cost model and expected savings are being achieved

*Actual savings achieved for the period covered and the time to achieve these savings will vary from the information presented and the variations may be material

Information Technology

Opportunity #6: Implementation Plan

Implementation Plan



Opportunity Detail*

Estimated Base ($m)	• $510k
Estimated Stretch ($m)	• $850k
Estimated Costs ($m)	• No incremental costs

Description

- To successfully capture this opportunity KPMG recommends that Hydro One plan for negotiations as part of the contract renewal, negotiate changing the storage cost model to an end point model, and transition to the new storage cost model billing
- There are no incremental costs associated with this opportunity as the changes to the storage cost model will be part of the wider IT outsourcing contract renewal negotiations

Assumptions and dependencies

- No transition cost incurred by moving to a new pricing model
- Growth of end-point devices will remain at same or similar rate
- Vendor will support end-point pricing model

*Actual savings achieved for the period covered and the time to achieve these savings will vary from the information presented and the variations may be material

Information Technology H4: Hydro One can reduce computing services costs by outsourcing or offshoring the monitoring service for the power systems data centre

Findings

- Hydro One currently conducts 24/7 monitoring service of its power systems data centre using 2 FTEs
- Hydro One IT management has investigated the potential from outsourcing this activity. The 2015-2016 business plan includes a 10% reduction in infrastructure monitoring costs as a result of potentially outsourcing of this function. However, Hydro One IT management is hesitant to fully outsource this function because of reliability and security issues.
- Currently, plans for the outsourcing of the night shift portion of the power systems monitoring function are under review
- By only outsourcing the night shift portion of the monitoring service, Hydro One is attempting to balance cost savings opportunities with service reliability and security factors
- There may be little room for additional cost savings from offshoring this activity given the risks and concerns surrounding this opportunity combined with the fact that this activity only requires 2 FTEs

Opportunity Assessment

- Hydro One has identified outsourcing as an option but has also identified several reliability and security concerns
- Based on our analysis, there is no significant incremental opportunity to outsource or offshore power systems data centre monitoring

This hypothesis has been addressed by Hydro One and there appears to be no incremental opportunity

Source: Management Interviews

Information Technology H5: Hydro One can reduce computing services costs and increase efficiency by rationalizing duplicate or aging applications

Findings

- Management interviews indicated that the Hydro One IT team is currently working on initiatives to rationalize its applications portfolio
- IT reports indicated that in 2008 Hydro One's application portfolio included 1,547 unique applications
- Currently, the Hydro One IT team has been able to reduce the applications portfolio by 25% through rationalization and consolidation resulting in a reduction of applications to 1,155 applications
- Hydro One management has established plans to further reduce the number of applications to 1,086 by 2015 – a 30% decrease from 2008 levels

Opportunity Assessment

- Hydro One is currently undertaking efforts to rationalize its application portfolio
- Based on our analysis, there is no significant incremental opportunity to rationalize duplicate or aging applications

This hypothesis has been addressed by Hydro One and there appears to be no incremental opportunity

Source: Management Interviews, Hydro One IT Reports

Information Technology H6: Hydro One can reduce computing services costs by increasing the ratio of virtualized servers to physical servers

Findings

- Hydro One IT reports indicate that Hydro One has a comprehensive server virtualization program in place
- Reports indicate that currently 85% of the Wintel servers in the Power Systems IT are virtualized. The IT team is planning to maintain the same level of virtualization into 2015.
- Additionally, in 2012, 55% of Wintel servers and 95% of Unix servers in Corporate IT were virtualized
- By 2015, the IT team is planning to increase the Wintel virtualization ratio to 70% and maintain the 95% virtualization ratio for Unix servers used in Corporate IT function

Opportunity Assessment

- Hydro One is currently undertaking efforts to rationalize its application portfolio
- Based on our analysis, there is no significant incremental opportunity to rationalize duplicate or aging applications

This hypothesis has been addressed by Hydro One and there appears to be no incremental opportunity

Source: Management Interviews, Hydro One IT Reports

Information Technology H7: Hydro One can reduce computing services costs by consolidating data centre facilities

Findings

- IT management indicated that they have already consolidated Hydro One data centers
- IT management stated that there are currently 4 data centers operating at Hydro One. These 4 data centers are comprised of a primary and a backup data center for the corporate and power systems IT functions.
- Management indicated that redundancy between the primary and backup data centers is necessary and there are no further opportunities for data center consolidation, while the additional 2 data centers operate as local server rooms rather than comprehensive data centre facilities

Opportunity Assessment

- Hydro One has undertaken efforts to consolidate its data centres
- Based on our analysis, there is no significant incremental opportunity to consolidate data centre facilities

This hypothesis has been addressed by Hydro One and there appears to be no incremental opportunity

Source: Management Interviews, Hydro One IT Reports

Information Technology H8: Hydro One can reduce desktop support costs by expanding self-service functionality

Findings

- A major driver of desktop support costs are the number of help-desk calls from users
- Based on the analysis of information provided by Hydro One IT management, the volume of help desk calls were 58,166 in 2012
- Hydro One IT management team has been able to reduce the help desk calls by 5% compared to 2011 call volume of 61,053
- The reduction in help desk calls was achieved by deploying self-service applications as well as through application rationalization and greater use of off-the-shelf applications
- Hydro One's plan to rationalize more applications is expected to further reduce overall desktop support costs

Opportunity Assessment

- Hydro One has deployed self-service functionality to its desktop user base
- Based on our analysis, there is no significant incremental opportunity to reduce desktop support costs

This hypothesis has been addressed by Hydro One and there appears to be no incremental opportunity

Source: Management Interviews, Hydro One IT Reports

Information Technology H9: Hydro One can reduce costs associated with IT business support function by centralizing shadow IT functions that are currently within the lines of business into the central IT function

Findings

- Analysis of the Hydro One IT function organizational structure revealed that there are 2 groups of shadow IT operating within the Hydro One business units
- The first is the Engineering group, which provides AutoCAD and other engineering design services to the lines of business. There are 4-6 FTEs within this group.
- The second is the Geographic Information Systems (GIS) team. According to the IT management, the geographic data collected by the GIS team is critical to the company's future prospects. The current size of the GIS team is 4-6 FTEs and is projected to grow in the future.
- Hydro One IT management interviews revealed that the existence of these IT groups within the business units was intentional and there are no plans to centralize these functions
- Centralization of these functions would not result in efficiency gains or economies of scale as each group is aligned with a specific service/business unit group

Opportunity Assessment

- Although two IT groups exist outside of corporate IT, centralization of these functions would not provide efficiency gains or economies of scale
- Based on our analysis, there is no significant incremental opportunity to reduce shadow IT functions

This hypothesis has been addressed by Hydro One and there appears to be no incremental opportunity

Source: Management Interviews, Organizational Data

Opportunity Analysis

Finance

Finance: Overview

Scope

- Our analysis of structural and organizational opportunities for Finance includes the corporate Finance function and all staff performing Finance activities within each business unit
- Our hypotheses focused on business operations and did not review specific capital projects

Hypothesis Development

- There were no relevant external benchmarking reports of Hydro One's Finance function. Consequently, we developed our hypotheses based on:
  - Our team's experience and knowledge of Finance leading practices in the utilities industry and other asset-intensive industries
  - Analysis of organizational structure and company financial reports
  - Review of Hydro One's current business improvement projects
- Seven hypotheses were developed for Hydro One's Finance function

Hydro One productivity and efficiency programs

- Phase 1 and 2 of the Cornerstone project focused on functions within Finance. These phases aimed to improve and optimize business processes across the Finance function in areas including accounts payable and reporting.
- Cornerstone Phase 1 and 2 have been completed

Finance: Data Inputs

In this phase of the project, KPMG collected financial and organizational data as well as conducted interviews with Hydro One senior staff. The tables below provide a description of the type of data used and the names of individuals KPMG interviewed.

Documents	
Subhead	**Description**
Hydro One 2010-2014 Business Plan	▪ Presentation describing Hydro One's strategic objectives, planning assumptions, and risks
Hydro One Detailed Department Budgets	▪ Department level costs from 2009 to 2011
Organizational Data	▪ List of roles and associated departments/groups within the organization for full-time, part-time and temporary workers within Hydro One
Internal Hydro One Finance Performance Report	▪ Internal benchmarking report comparing Hydro One against peer companies with respect to Finance FTEs

Interviews
Name
Sandy Struthers, Chief Financial Officer

Finance: KPMG Hypotheses

KPMG Hypotheses	Rationale
1) **Hydro One can reduce Finance & Controllership costs by centralizing transactional processes such as accounts payable, accounts receivable, general ledger and financial reporting activities**	▪ A cross-industry leading practice is to employ a centralized model to reduce costs and improve the consistency and quality of the transactional processes ▪ Since these processes involve a high volume of repeatable activities, they offer the greatest opportunity to take advantage of economies of scale and workload balancing
2) **Hydro One can reduce operating costs by offshoring Finance & Controllership and Assurance related activities**	▪ Offshoring allows finance organizations to take advantage of significant labour arbitrage while maintaining the same level of service to their internal clients ▪ Offshore delivery of finance processes has reached a level of maturity that provides a wide range of established solutions at very competitive prices
3) **Hydro One can lower Finance & Controllership costs and improve efficiency through greater automation of transactional processes**	▪ Leading practice organizations are building financial systems that integrate their ERP system with business intelligence, business performance measurement and financial reporting systems to reduce the amount of manual effort with transactional processes ▪ This improves the accuracy and timeliness of financial data and greatly reduces the need for manual intervention
4) **Hydro One can improve Finance & Controllership productivity by reducing the number of reports that are produced and by instituting self-service portals for ad-hoc reporting**	▪ Many finance organizations spend a significant amount of time creating and reconciling reports that are not frequently used, contain duplicated information, and do not contain the right type of information needed. Costs can be reduced by eliminating redundant reports, and providing users with appropriate access to a central data source that allows them to analyze without involving finance staff.

Finance: KPMG Hypotheses

KPMG Hypotheses	Rationale
5) **Hydro One can increase productivity by establishing Finance business partner roles to provide strategic decision level support and program and policy implementation support to business units**	▪ This finance leading practice can enable the finance function to be more productive by working more closely with business units in the areas of strategic decision level support, and program and policy implementation
6) **Hydro One can reduce assurance costs by instituting strict guidelines around materiality, rationalizing the approval process for items such as POs, invoices, cash disbursements and expenses**	▪ Many finance organizations are able to reduce costs by eliminating non-value added activities, especially those that impact month end financial reporting ▪ Many finance teams are staffed to meet peak month-end demand, staff levels can be decreased if these non-value added activities are eliminated
7) **Hydro One can reduce assurance costs by combining all related activities under a single assurance function and by using a risk-based approach**	▪ A cross-industry leading practice is to review the entire enterprise risk management framework in order to identify opportunities to streamline the amount of time and effort spent on assurance related activities without exposing the company to any additional risk ▪ This often involves consolidating financial control activities with operational reviews to eliminate redundancies

Finance H1: Hydro One can reduce Finance & Controllership costs by centralizing transactional processes such as accounts payable, accounts receivable, general ledger and financial reporting activities

Findings

- Management interviews indicated that Hydro One has already centralized and outsourced functions in the area of Finance & Controllership
- Activities have been centralized within Hydro One's outsource service provider, Inergi. These activities include general accounting, accounts payable, accounts receivable related process reconciliation/analysis, and data management.
- In 2009, Hydro One hired an external outsourcing consulting company, Equaterra, to review and analyze pricing, service scope, service levels and general terms of the contract with Inergi. Equaterra determined that the outsourced services, including Finance, were market competitive.
- Internally performed tasks such as the production of internal and external financial statements, and government relations have also been centralized
- Management interviews indicated that Hydro One has been enabled to realize productivity and efficiency improvements as a result of economies of scale and scope from centralization, and has increased service quality, and reliability

Opportunity Assessment

- Hydro One has centralized and outsourced its transactional processes
- Based on our analysis, there does not appear to be any significant incremental opportunity associated with centralizing transactional processes

Hydro One has addressed this hypothesis and there appears to be no incremental opportunity

Source: Management Interviews, Equaterra review of Inergi Contract, Payroll/Organizational Data

Finance H2: Hydro One can reduce operating costs by offshoring Finance & Controllership and Assurance related activities

Findings

- Management interviews indicate that Hydro One has outsourced administrative and transactional tasks primarily in the areas of payroll, accounts payable, accounts receivable, general ledger outputs, inside financial reports and business analysis to Inergi
- Outsourced activities are all delivered within the province of Ontario
- Management indicated that they had previously reviewed the option to offshore outsourced roles, however, Hydro One management was directed to maintain all roles within the Province
- KPMG research has shown that typical offshoring provides a labour arbitrage savings of between 10% to 65% in comparison to current internal labour costs
- Evaluation of the current Inergi contract is out of scope for this study, therefore no incremental opportunity has been estimated. However, Hydro One should investigate the potential savings from allowing its outsource service provider to deliver services offshore.

Opportunity Assessment

- Based on our analysis, there may be an opportunity to offshore outsourced transactional and administrative finance activities
- Analysis of the outsourcing contract is not in scope of this study and therefore we have not evaluated the potential savings from this opportunity. However, Hydro One should investigate the potential benefits from offshoring these activities.

There appears to be a potential opportunity for offshoring roles. However, this opportunity falls under Hydro One's outsourcing contract, which is outside the scope of this study. Hydro One should investigate the potential savings that may be realized with offshore delivery of Finance activities.

Source: Management Interviews, KPMG Analysis

Finance H3: Hydro One can lower Finance & Controllership costs and improve efficiency through greater automation of transactional processes

Findings

- Management interviews indicate that many routine tasks and administrative activities have been automated through SAP as part of the Cornerstone project. Management indicated that Hydro One has automated process and activities in areas such as business planning, budgeting and forecasting, non-energy billing invoice requisition, Ontario Authority Register (OAR) approvals and capitalization of fixed assets, which has resulted in a reduction of 3 FTEs in Finance.
- Automation of routine tasks is a leading practice that is a key part of an efficient Finance department, as it frees Finance resources to perform other more value added tasks
- Hydro One internal benchmarking indicates that they are operating at lower staff levels than comparable peers. For example, there are 17 FTEs in the Corporate Accounting function despite complex multi-GAAP reporting requirements and the need to support an $8.7b external debt program. These staff levels are driven by a combination of outsourcing of some activities, along with increased automation of key finance processes.
- Management indicated that this automation has led to more straight-through processing of transactions, as well as more streamlined controllership and reporting that requires less manual intervention
- At 83 FTEs, the Finance department at Hydro One is small relative to the number of employees it supports. At approximately 5,700 total FTEs, the Finance span of support at Hydro One is 69 FTEs per Finance FTE. Even taking into account that many transactional activities have been outsourced, the percentage of Finance FTEs to total FTEs (1.45%) is lower than comparable industry peers.

Opportunity Assessment

- Hydro One has increased the level of automation in a large number of finance activities through the Cornerstone project
- Based on our analysis, there is no significant incremental opportunity to increase efficiency through greater automation

This hypothesis has been addressed by Hydro One and there appears to be no incremental opportunity

Source: Management Interviews, Payroll/Organizational Data, Internal Hydro One Benchmarking Report, KPMG Analysis

Finance H4: Hydro One can improve Finance & Controllership productivity by reducing the number of reports that are produced and by instituting self-service portals for ad-hoc reporting

Findings

- Management interviews indicate that prior to the implementation of SAP, Finance staff had spent a significant amount of time preparing regular and ad-hoc Finance reports
- Management indicated that the Finance team worked on eliminating a significant number redundant Finance reports in preparation for the implementation of SAP. The eliminated reports included the IFRS reports, and some internal financial reports.
- The implementation of SAP, as part of the Cornerstone project, has provided self service capabilities allowing managers to access Finance and business intelligence reports on an as needed basis
- A leading practice is to institute self-service report portals to free Finance staff to perform value added tasks while at the same time increase management access to information

Opportunity Assessment

- Hydro One has instituted self-service portals for ad-hoc management reporting and has eliminated redundant Finance reports through the Cornerstone project
- Based on our analysis, there does not appear to be any significant incremental opportunity to improve Finance reporting productivity

This hypothesis has been addressed by Hydro One and there appears to be no incremental opportunity

Source: Management Interviews

Finance H5: Hydro One can increase productivity by establishing Finance business partner roles to provide strategic decision level support and program and policy implementation support to business units

Findings

- Management interviews indicated that staff that had been performing finance activities within business units have been centralized under the corporate Finance organization. This reorganization has reduced redundant tasks performed by business unit Finance employees and standardize processes.
- Management also indicated that a significant volume of transactional, routine, and administrative tasks have been removed from Finance staff activities through outsourcing and automation and this has allowed staff to focus more on strategic and decision support analysis. This has allowed Finance staff to provide business units with more support for decision making, and policy and program implementation.
- Current hiring decisions for Finance related roles are approved by the CFO. This is aimed at preventing the reemergence of a shadow Finance function within the business units.
- Hydro One has 47 Finance FTEs in the areas of Management Accounting & Reporting and Business Planning of the Finance & Controllership function that provide support to the lines of businesses

Opportunity Assessment

- Hydro One has established business partner-like roles to support each business unit
- Based on our analysis, there is no incremental opportunity to increase productivity through establishing business partner roles

This hypothesis has been addressed by Hydro One and there appears to be no incremental opportunity

Source: Management Interviews, Payroll/Organizational Data

Finance H6: Hydro One can reduce assurance costs by instituting strict guidelines around materiality, rationalizing the approval process for items such as POs, invoices, cash disbursements and expenses

Findings

- Management interviews indicated that Finance resources are being utilized to review and approve employee travel and board spending and other expenses to ensure compliance with Government of Ontario's Business and Travel Directive
- 3 Finance FTEs are dedicated to the expense approval process that perform corporate credit card audits for all employees at least once a year, review all out of province travel spending, and review employee, management and board expenses
- Ensuring compliance with the government's directive includes: tracking, compliance testing and reporting of expenses, providing expense reports to the Integrity Commissioner and responding to inquiries, posting expenditures on the website and obtaining travel approvals
- Management explained that this allocation of Finance resources for the expense control function is necessary to comply with the Government of Ontario's Business and Travel Directive

Opportunity Assessment

- Hydro One requires the existing complement of staff to ensure compliance with provincial requirements
- Based on our analysis, there is no incremental opportunity to reduce assurance costs

This hypothesis has been addressed by Hydro One and there appears to be no incremental opportunity

Source: Management Interviews, Payroll/Organizational Data

Finance H7: Hydro One can reduce assurance costs combining all related activities under a single assurance function and by using a risk-based approach

Findings

- Currently, the Assurance function has 17 FTEs in the Internal Control and Pay Services and the Bill 198 groups. There are approximately 10 FTEs focused on purely Assurance related activities.
- Management indicated that a review of the entire enterprise risk management framework was conducted and had implemented opportunities to streamline the amount of time and effort spent on assurance related activities without exposing the company to any additional risk
- Management indicated that they have rationalized controls through increased reliance on automated controls using the new enterprise wide system as well as entity level control
- Hydro One has also consolidated redundant controls related to Bill 198 which management believes has increased efficiency and effectiveness of the certification required by the securities commissions process

Opportunity Assessment

- Hydro One has combined most assurance related activities under one function and has rationalized controls to improve efficiency and effectiveness
- Based on our analysis, there is no incremental opportunity to combine assurance activities

This hypothesis has been addressed by Hydro One and there appears to be no incremental opportunity for this hypothesis

Source: Management Interviews, Payroll/Organizational Data

Opportunity Analysis
Human Resources

Human Resources: Overview

Scope

- Our analysis of structural and organizational opportunities for Human Resources includes the corporate Human Resource function and all staff performing Human Resource activities within each business unit
- Our hypotheses focused on business operations and did not review specific capital projects

Hypothesis Development

- There were no relevant external benchmarking reports of Hydro One's Human Resources function. Consequently, we developed our hypotheses based on:
  - Our team's experience and knowledge of HR leading practices in the utilities industry and other asset-intensive industries
  - Analysis of organizational structure and company financial reports
  - Review of Hydro One's current business improvement projects
- Four hypotheses were developed for Hydro One's Human Resources function

Hydro One productivity and efficiency programs

- Phase 2 of the Cornerstone project focused on functions within Human Resources. These phases aimed to improve and optimize business processes across the Human Resources function.
- Cornerstone Phase 2 has been completed

Human Resources: Data Inputs

In this phase of the project, KPMG collected financial and organizational data as well as conducted interviews with Hydro One senior staff. The tables below provide a description of the type of data used and the names of individuals KPMG interviewed.

Documents	
Subhead	**Description**
Hydro One 2010-2014 Business Plan	▪ Presentation describing Hydro One's strategic objectives, planning assumptions, and risks
Hydro One Detailed Department Budgets	▪ Department level costs from 2009 to 2011
Organizational Data	▪ List of roles and associated departments/groups within the organization for full-time, part-time and temporary workers within Hydro One
HR Department Reporting	▪ Management documents that provide descriptions of HR strategy and departmental responsibilities

Interviews
Name
Judy McKellar, VP Human Resources
Jon Rebick, VP Labour Relations
Keith McDonell, Manager Human Resources

Human Resources: KPMG Hypotheses

KPMG Hypotheses	Rationale
1) **Hydro One can increase HR efficiency by creating Centers of Excellence for areas of specialized expertise**	▪ Leading HR practice is to create Centers of Excellence (COEs) to pool subject matter experts in each HR area resulting in reduced operating costs due to economies of scale and scope and increased quality and consistency of service for internal clients
2) **Hydro One can reduce operating costs by outsourcing or offshoring administrative and routine HR activities**	▪ Outsourcing and offshoring administrative and routine activities are leading practices that allow HR organizations to take advantage of labour arbitrage opportunities while maintaining the same level of customer service to internal clients
3) **Hydro One can reduce operating costs by increasing process automation and implementing the use of self service tools by managers and employees**	▪ Automating routine tasks and creating interfaces for self service are leading HR practices that can reduce the HR workload and free capacity to perform tasks with higher value added
4) **Hydro One can increase HR productivity by establishing HR business partner roles within business units**	▪ This HR leading practice can enable the HR function to be more productive and efficient by working more closely with business units in the areas of strategic decision level support and program and policy implementation

Human Resources H1: Hydro One can improve HR efficiency by creating Centers of Excellence for areas of specialized expertise

Findings

- Management interviews indicate that Hydro One has centralized some HR functions in COEs. These COEs have been established to perform activities related to Talent Management & Recruiting, Total Rewards, and Employee & Labour Relations.
- Hydro One has established two COEs in the area of Total Rewards
- The first is an HR transactions COE responsible for performing payroll related process reconciliation and analysis, and data management (i.e., new employee account maintenance). This COE has been outsourced to Inergi.
- The second, Compensation, is internal to HR and performs tasks such as pension/benefit administration, compensation policy and oversight, job evaluations and other policies and procedures
- Management interviews indicate that further centralization of additional administrative tasks to achieve economies of scale and reduce error rates are under consideration. For example, Hydro One has recently centralized the production of job offer letters. This has helped to free frontline managers' and supervisors' time to focus on more value added tasks.
- In the area of Labour & Employee Relations, Hydro One has established the HR Support Center COE to improve efficiency. The HR Support Center is the first point of contact for employee grievances and other labour and employee issues. The HR Support Center team performs more administrative and transactional tasks, and will escalate employee issues to the appropriate stakeholders if necessary.
- Management interviews indicate that establishing these COEs has increased managers' and supervisors' time for greater focus on more strategic HR activities

Opportunity Assessment

- Hydro One has established Centres of Excellence for Talent Management & Recruiting, Total Rewards, and Employee & Labour Relations
- Based on our analysis, there is no incremental opportunity to improve HR efficiency through establishing Centres of Excellence

This hypothesis has been addressed by Hydro One and there appears to be no incremental opportunity

Source: Management Interviews, Payroll/Organizational Data

Human Resources H2: Hydro One can reduce operating costs by outsourcing or offshoring administrative and routine HR activities

Findings

- Hydro One has outsourced administrative and transactional HR tasks related to Total Rewards, and Talent Management & Recruiting
- In the area of Talent Management & Recruitment, Hydro One partnered with Randstad, a third-party recruitment firm, to outsource a portion of the internal recruitment process. Administrative and transactional tasks such as the initial screening and filtering of candidates, conducting reference checks, performing exit interviews are performed by Randstad.
- Transactional processes including payroll process reconciliation and analysis and employee data management have been outsourced to Inergi
- In 2009, Hydro One hired an external outsourcing consulting company, Equaterra, to review and analyze pricing, service scope, service levels and general terms of the contract with Inergi. Equaterra determined that the outsourced services, including HR, taken as whole were market competitive.
- Management interviews indicated that Hydro One had previously evaluated offshoring opportunities, however, they were instructed by the Government of Ontario to maintain all roles within Provincial boundaries
- Evaluation of the current Inergi contract is out of scope for this study, therefore no incremental opportunity has been estimated

Opportunity Assessment

- Based on our analysis, there may be an opportunity to offshore transactional and administrative HR activities
- Analysis of the outsourcing contract is not in scope of this study and therefore we have not evaluated the potential savings from this opportunity. However, Hydro One should investigate the potential benefits from offshoring these activities.

There appears to be a potential opportunity for this hypothesis. However, it is not within the scope of this study to evaluate Hydro One's outsourcing contract. Hydro One should investigate the potential savings associated with offshore delivery of HR activities.

Source: Management Interviews

Human Resources H3: Hydro One can reduce operating costs by increasing process automation and implementing the use of self-service tools by managers and employees

Findings

- Automation of routine and administrative HR tasks, and implementing self service tools for management and employees are industry leading practices that typically result in increased productivity and efficiency
- Management indicated that SAP has enabled automation of many routine and administrative tasks. Examples include updating of training requirements and identifying and issuing notices to staff of required training programs
- Management indicated that the implementation of SAP included HR self service tools for Hydro One management and employees. Self-service tools included tasks such as:
  - Online training
  - Personal record updating such as address changes
  - Benefits claims transactions
  - Access to Business Intelligence reports for management

Opportunity Assessment

- Hydro One has automated several routine HR activities and instituted self-service tools for managers and employees through the Cornerstone project
- Based on our analysis, there is no incremental opportunity to reduce operating costs through increased automation or the use of self-service tools

This hypothesis has been addressed by Hydro One and there appears to be no incremental opportunity

Source: Management Interviews

Human Resources H4: Hydro One can increase HR productivity by establishing HR business partner roles within business units

Findings

- Management interviews indicate that nine HR consultants act as business partners
- These consultants are focused on providing advice, facilitating team building, and working with business unit leaders to solve HR-related business issues
- Routine, administrative activities have been centralized and outsourced allowing for greater focus on more strategic issues by the HR consultants

Opportunity Assessment

- Hydro One has HR business partner roles in place
- Based on our analysis, there is no incremental opportunity to increase HR productivity by establishing business partner roles

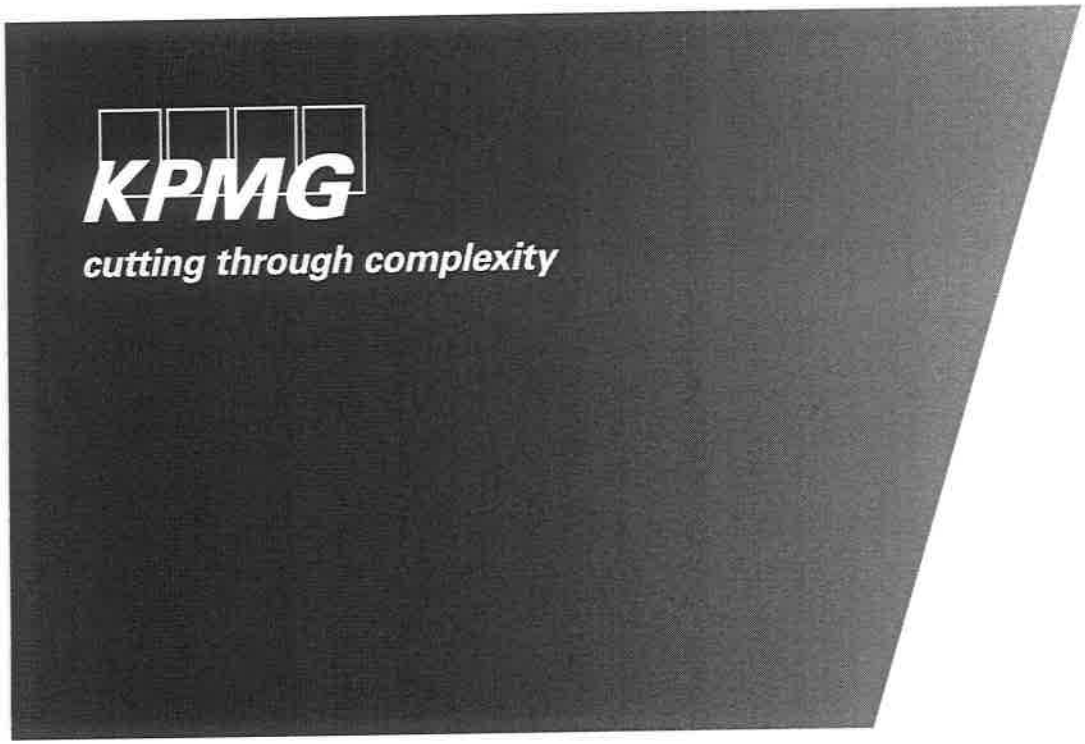
This hypothesis has been addressed by Hydro One and there appears to be no incremental opportunity

Source: Management Interviews

Appendix A: Cornerstone Project

Mapping of Cornerstone Phases to Business Function

Cornerstone Phase	Impacted Business Function
Phase 1 *Deploy a modern Enterprise Asset Management solution (SAP)*	▪ Operations ▪ Supply Chain ▪ Finance (A/P)
Phase 2 *Replace PeopleSoft with SAP*	▪ Human Resources ▪ Payroll ▪ Finance
Phase 3 *Expand SAP functionality*	▪ Operations ▪ Supply Chain
Phase 4 *Replace Customer Information System with SAP billing application*	▪ Customer Operations


KPMG
cutting through complexity

TAB 5

KPMG

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Hydro One Rate Payer Impact Analysis

Prepared for: The Ministry of Energy

As part of the Assessment of Organizational and Structural Opportunities at Hydro One study

February 28, 2013

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Use of this Information

The Ministry of Energy engaged KPMG to estimate rate payer impact based on KPMG-identified organizational and structural opportunities for cost savings at Hydro One.

Estimated savings in this report are based on specific assumptions and actions undertaken by Hydro One. Actual savings achieved for the period covered and the time to achieve these savings will vary from the information presented and the variations may be material.

Our procedures consisted solely of inquiry, observation, comparison and analysis of Hydro One-provided information. We relied on the completeness and accuracy of the information provided. Such work does not constitute an audit. Accordingly, we have expressed no opinion on financial results, internal controls or other information.

Hydro One Rate Payer Analysis

Introduction

This document illustrates the rate payer impact based on the estimated savings identified in the KPMG report titled 'The Assessment of Organizational and Structural Opportunities at Hydro One'.

The methodology used to calculate savings is primarily based on guidance provided by Hydro One. Our analysis shows the rate payer impact for a household consuming 800 KWh per month under three distinct scenarios:

- Scenario one – This scenario reflects a typical 'year one' where one-time costs are incurred and savings from OM&A and Dx capital opportunities are realized. Tx Capital savings are not included as Tx projects are assumed to require one year of development prior to being in-service.
- Scenario two – This scenario reflects a typical 'year two' where OM&A and Dx capital savings are realized as well as the first year of Tx capital savings.
- Scenario three – This scenario reflects the steady state where OM&A, Dx capital and Tx capital savings are realized.

Opportunity Savings

The table below shows the opportunity savings and related one-time costs that were identified in our Hydro One report. Each opportunity has a base and stretch case which shows the range of savings that Hydro One can expect to achieve by pursuing these opportunities. One-time costs include severance and transition costs related to each opportunity.

Opportunity Savings and One-time Costs	Base Case		Stretch Case	
	Estimated Savings	Estimated One-time Costs	Estimated Savings	Estimated One-time Costs
Opportunity #1: Increase EPC	$ 23.0	$ 0.2	$ 77.0	$ 0.4
Opportunity #2: Outsource Forestry[1]	$ 15.0	$ 56.9	$ 15.0	$ 57.1
Opportunity #3: Improve Stations Maintenance	$ 5.0	$ 0.3	$ 13.0	$ 0.5
Opportunity #4: Offshore Non-business Critical Applications	$ -	$ 0.8	$ 3.5	$ 1.2
Opportunity #5: Extend VDI Deployment	$ 0.6	$ 0.5	$ 1.6	$ 0.8
Opportunity #6: Switch To An End Point Cost Model	$ 0.5	$ -	$ 0.9	$ -

Notes:

1. In this analysis, we have used $15m for both the Base and Stretch case. In the Base case, we assume that all necessary changes to the collective bargaining agreement will be obtained and therefore outsourcing savings can be realized. As noted in our report, further analysis is required to estimate the Stretch Case savings so we have used the savings estimated for the Base case for both scenarios.

The table below shows how the identified savings and costs are distributed across OM&A and capital. The distribution for each opportunity was determined based on discussions with Hydro One and our analysis.

Distribution of Opportunity Savings	% OMA	% Capital	Rationale
Opportunity #1: Increase EPC	0%	100%	Savings are directly related to the Engineering Projects and Delivery capital spend
Opportunity #2: Outsource Forestry	100%	0%	Savings are based on operational efficiencies in the vegetation management work program
Opportunity #3: Improve Stations Maintenance	87%	13%	Savings fall under both OM&A and Capital as the group does work on both. We calculated the distribution based on how many FTE hours was spent on each.
Opportunity #4: Offshore Non-business Critical Applications	100%	0%	Savings will impact the operational costs of running IT systems which falls under OM&A
Opportunity #5: Extend VDI Deployment	100%	0%	These savings are related to minor fixed assets which fall under OM&A
Opportunity #6: Switch To An End Point Cost Model	100%	0%	Savings will impact the operational costs of running IT systems and falls under OM&A

Rate Payer Impacts

The percentage change in Consumer Bills is calculated by allocating the savings and costs for Tx and Dx based on the standard value/portion that each represents on the average consumer bill (provided by Hydro One). Capital Savings associated with the opportunities are not all passed to the rate payer directly, but rather a specific portion (provided by Hydro One) of the annual savings impact the revenue requirement, and therefore are assumed to be passed on the rate payer.

The figure below shows how opportunity savings and one-time costs impacts to the rate payer are calculated.

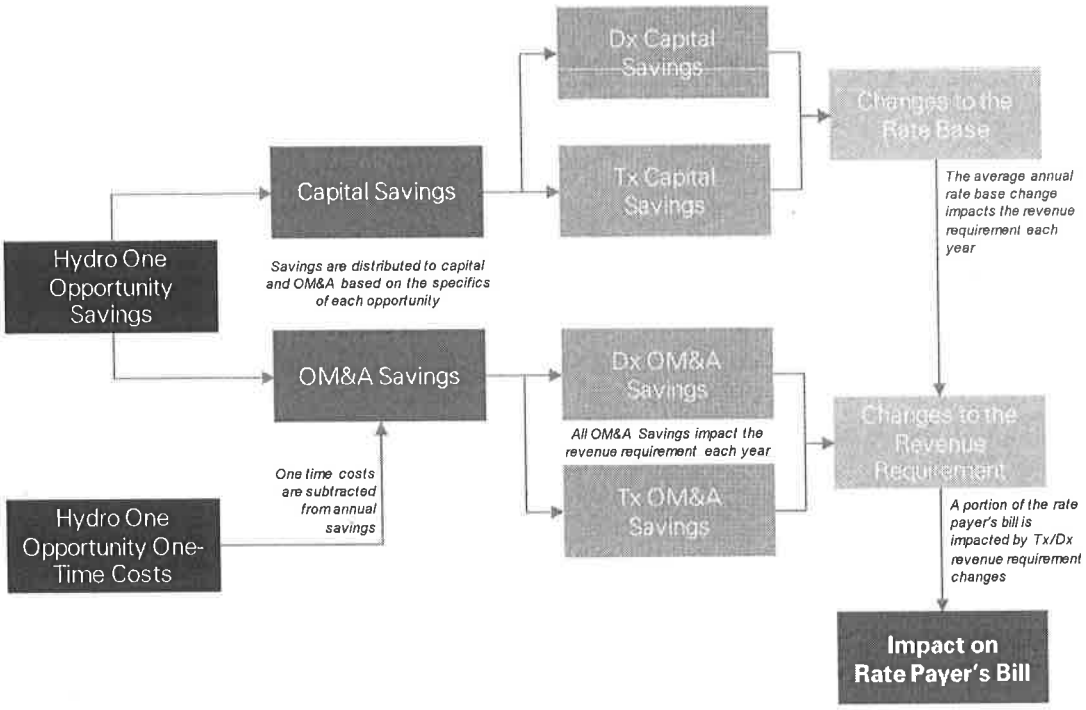

Figure 1: Rate Payer Bill Impact

We have provided rate payer impacts under three scenarios. These scenarios isolate the rate payer impact that could be expected when one-time expenses are incurred, when capital savings have reached a steady state. The following show the calculation of savings on consumer bills for each scenario.

Scenario One:

Step 1: OM&A and Capital Savings

Calculate the OM&A and Capital impact of each opportunity based on the distribution of savings in each area. Scenario 1 includes one-time costs.

Savings by OM&A and Capital	Distribution of Savings		Base Case			Stretch Case		
Key Assumptions:	% OM&A	% Capital	Net OM&A Impact[1]	Net Capital Impact	Total Impact	Net OM&A Impact[1]	Net Capital Impact	Total Impact
Opportunity #1: Increase EPC	0%	100%	$ 0.2	$ (23.0)	$ (22.8)	$ 0.4	$ (77.0)	$ (76.6)
Opportunity #2: Outsource Forestry	100%	0%	$ 41.9	$ -	$ 41.9	$ 42.1	$ -	$ 42.1
Opportunity #3: Improve Stations Maintenance	87%	13%	$ (4.1)	$ (0.7)	$ (4.7)	$ (10.8)	$ (1.7)	$ (12.5)
Opportunity #4: Offshore Non-business Critical Applications	100%	0%	$ 0.8	$ -	$ 0.8	$ (2.3)	$ -	$ (2.3)
Opportunity #5: Extend VDI Deployment	0%	100%	$ 0.5	$ (0.6)	$ (0.1)	$ 0.8	$ (1.6)	$ (0.8)
Opportunity #6: Switch To An End Point Cost Model	100%	0%	$ (0.5)	$ -	$ (0.5)	$ (0.9)	$ -	$ (0.9)
Total Savings			**$ 38.9**	**$ (24.2)**	**$ 14.7**	**$ 29.3**	**$ (80.3)**	**$ (51.0)**

Notes

1. OM&A Savings include one-time severance and transition costs

Step 2: Tx and Dx Savings

Calculate the Tx and Dx component of OM&A savings and capital savings.

Savings by Tx and Dx	Base Case			Stretch Case		
	Net Tx Impact	Net Dx Impact	Total Impact	Net Tx Impact	Net Dx Impact	Total Impact
Capital Savings[1]	$ (11.4)	$ (12.8)	$ (24.2)	$ (37.7)	$ (42.6)	$ (80.3)
OM&A Savings[2,3]	$ 5.4	$ 33.5	$ 38.9	$ (0.1)	$ 29.5	$ 29.3
Total Savings	**$ (6.0)**	**$ 20.6**	**$ 14.7**	**$ (37.9)**	**$ (13.1)**	**$ (51.0)**

Notes

1. Regular Capital Savings allocation: Tx (47%) and Dx (53%) – provided by Hydro One
2. Regular OM&A Savings allocation: Tx (57%) and Dx (43%) – provided by Hydro One
3. Opportunity#2 - Outsource Forestry allocation: Tx (17%) and Dx (83%) – KPMG Analysis

Step 3: Changes to the Revenue Requirement

Calculate the corresponding change to the Revenue Requirement based on the Tx and Dx impacts. In Scenario one, Tx Capital projects are assumed not in-service and therefore the related savings are not included.

Capital and OM&A changes to the Revenue Requirement	Base			Stretch		
	Net Tx Impact	Net Dx Impact	Total Impact	Net Tx Impact	Net Dx Impact	Total Impact
Percentage of Savings Passed through to the Rate Base[1]	0%	50%		0%	50%	
Capital Savings (Change to Rate Base)	$ -	$ (6.4)	$ (6.4)	$ -	$ (21)	$ (21.3)
Savings Portion that Impacts the Revenue Requirement[2]	13%	10%	-	13%	10%	-
Capital Changes to Revenue Requirement	**$ -**	**$ (0.6)**	**$ (0.6)**	**$ -**	**$ (2.1)**	**$ (2.1)**
OMA Savings	$ 5.4	$ 33.5	$ 38.9	$ (0.1)	$ 29.5	$ 29.3
OMA Changes to Revenue Requirement	**$ 5.4**	**$ 33.5**	**$ 38.9**	**$ (0.1)**	**$ 29.5**	**$ 29.3**
Total Changes to Revenue Requirement (Capital + OM&A)	**$ 5.4**	**$ 32.8**	**$ 38.2**	**$ (0.1)**	**$ 27.3**	**$ 27.2**

Notes

1. Based on scenario
2. Ratio provided by Hydro One

Step 4: Impact on Average Monthly Consumer Bill

Based on changes to the Revenue Requirement, calculate the impact to consumer bills. The table below shows this impact on the average monthly bill for an 800 KWh / month household.

Changes to the Average Consumer Bill	Base			Stretch		
	Net Tx Impact	Net Dx Impact	Total Impact	Net Tx Impact	Net Dx Impact	Total Impact
Average Consumer Bill[1]	$ 144	$ 144	$ 144	$ 144	$ 144	$ 144
Portion of Consumer Bill (%)[2]	7%	32%	39%	7%	32%	39%
Portion of Consumer Bill ($)	$ 10.1	$ 46.1	$ 56.2	$ 10.1	$ 46.1	$ 56.2
Impact on Portion of Monthly Bill (%)[3]	0.38%	2.74%	2.31%	-0.01%	2.28%	1.87%
Impact on Monthly Bill ($)	**$ 0.04**	**$ 1.26**	**$ 1.30**	**$ (0.00)**	**$ 1.05**	**$ 1.05**

Notes

1. Based on 800 KW usage per month for an average residential Hydro One customer
2. Ratio provided by Hydro One
3. Positive values represent an increase while negative values represent a decrease in the monthly bill

Scenario Two:

Step 1: OM&A and Capital Savings

Calculate the OM&A and Capital impact of each opportunity based on the distribution of savings in each area. Scenario 2 does not include one-time costs.

Savings by OM&A and Capital	Distribution of Savings		Base Case			Stretch Case		
Key Assumptions:	% OM&A	% Capital	Net OM&A Impact[1]	Net Capital Impact	Total Impact	Net OM&A Impact[1]	Net Capital Impact	Total Impact
Opportunity #1: Increase EPC	0%	100%	$ -	$ (23.0)	$ (23.0)	$ -	$ (77.0)	$ (77.0)
Opportunity #2: Outsource Forestry	100%	0%	$ (15.0)	$ -	$ (15.0)	$ (15.0)	$ -	$ (15.0)
Opportunity #3: Improve Stations Maintenance	87%	13%	$ (4.4)	$ (0.7)	$ (5.0)	$ (11.3)	$ (1.7)	$ (13.0)
Opportunity #4: Offshore Non-business Critical Applications	100%	0%	$ -	$ -	$ -	$ (3.5)	$ -	$ (3.5)
Opportunity #5: Extend VDI Deployment	0%	100%	$ -	$ (0.6)	$ (0.6)	$ -	$ (1.6)	$ (1.6)
Opportunity #6: Switch To An End Point Cost Model	100%	0%	$ (0.5)	$ -	$ (0.5)	$ (0.9)	$ -	$ (0.9)
Total Savings			**$ (19.9)**	**$ (24.2)**	**$ (44.1)**	**$ (30.7)**	**$ (80.3)**	**$ (111.0)**

Notes

1. OM&A Savings include one-time severance and transition costs

Step 2: Tx and Dx Savings

Calculate the Tx and Dx component of OM&A savings and capital savings.

Savings by Tx and Dx	Base Case			Stretch Case		
	Net Tx Impact	Net Dx Impact	Total Impact	Net Tx Impact	Net Dx Impact	Total Impact
Capital Savings[1]	$ (11.4)	$ (12.8)	$ (24.2)	$ (37.7)	$ (42.6)	$ (80.3)
OM&A Savings[2,3]	$ (5.3)	$ (14.5)	$ (19.9)	$ (11.5)	$ (19.2)	$ (30.7)
Total Savings	**$ (16.7)**	**$ (27.4)**	**$ (44.1)**	**$ (49.2)**	**$ (61.7)**	**$ (111.0)**

Notes

1. Regular Capital Savings allocation: Tx (47%) and Dx (53%) – provided by Hydro One
2. Regular OM&A Savings allocation: Tx (57%) and Dx (43%) – provided by Hydro One
3. Opportunity#2 - Outsource Forestry allocation: Tx (17%) and Dx (83%) – KPMG Analysis

Step 3: Changes to the Revenue Requirement

Calculate the corresponding change to the Revenue Requirement based on the Tx and Dx impacts. In Scenario two, Tx Capital projects are assumed in-service and therefore the related savings are included.

Capital and OM&A changes to the Revenue Requirement	Base			Stretch		
	Net Tx Impact	Net Dx Impact	Total Impact	Net Tx Impact	Net Dx Impact	Total Impact
Percentage of Savings Passed through to the Rate Base[1]	50%	100%		50%	100%	
Capital Savings (Change to Rate Base)	$ (5.7)	$ (12.8)	$ (18.5)	$ (19)	$ (43)	$ (61.4)
Savings Portion that Impacts the Revenue Requirement[2]	13%	10%	-	13%	10%	-
Capital Changes to Revenue Requirement	**$ (0.7)**	**$ (1.3)**	**$ (2.0)**	**$ (2.5)**	**$ (4.3)**	**$ (6.7)**
OMA Savings	$ (5.3)	$ (14.5)	$ (19.9)	$ (11.5)	$ (19.2)	$ (30.7)
OMA Changes to Revenue Requirement	**$ (5.3)**	**$ (14.5)**	**$ (19.9)**	**$ (11.5)**	**$ (19.2)**	**$ (30.7)**
Total Changes to Revenue Requirement (Capital + OM&A)	$ (6.1)	$ (15.8)	$ (21.9)	$ (13.9)	$ (23.4)	$ (37.4)

Notes

1. Based on scenario
2. Ratio provided by Hydro One

Step 4: Impact to Average Monthly Consumer Bill

Based on changes to the Revenue Requirement, calculate the impact to consumer bills. The table below shows this impact on the average monthly bill for an 800 KWh / month household.

Changes to the Average Consumer Bill	Base			Stretch		
	Net Tx Impact	Net Dx Impact	Total Impact	Net Tx Impact	Net Dx Impact	Total Impact
Average Consumer Bill[1]	$ 144	$ 144	$ 144	$ 144	$ 144	$ 144
Portion of Consumer Bill (%)[2]	7%	32%	39%	7%	32%	39%
Portion of Consumer Bill $)	$ 10.1	$ 46.1	$ 56.2	$ 10.1	$ 46.1	$ 56.2
Impact on Portion of Monthly Bill (%)[3]	-0.43%	-1.32%	-1.16%	-0.99%	-1.95%	-1.78%
Impact on Monthly Bill ($)	**$ (0.04)**	**$ (0.61)**	**$ (0.65)**	**$ (0.10)**	**$ (0.90)**	**$ (1.00)**

Notes

1. Based on 800 KW usage per month for an average residential Hydro One customer
2. Ratio provided by Hydro One
3. Positive values represent an increase while negative values represent a decrease in the monthly bill

Scenario Three:

Step 1: OM&A and Capital Savings

Calculate the OM&A and Capital impact of each opportunity based on the distribution of savings in each area.

Savings by OM&A and Capital	Distribution of Savings		Base Case			Stretch Case		
Key Assumptions:	% OM&A	% Capital	Net OM&A Impact	Net Capital Impact	Total Impact	Net OM&A Impact	Net Capital Impact	Total Impact
Opportunity #1: Increase EPC	0%	100%	$ -	$ (23.0)	$ (23.0)	$ -	$ (77.0)	$ (77.0)
Opportunity #2: Outsource Forestry	100%	0%	$ (15.0)	$ -	$ (15.0)	$ (15.0)	$ -	$ (15.0)
Opportunity #3: Improve Stations Maintenance	87%	13%	$ (4.4)	$ (0.7)	$ (5.0)	$ (11.3)	$ (1.7)	$ (13.0)
Opportunity #4: Offshore Non-business Critical Applications	100%	0%	$ -	$ -	$ -	$ (3.5)	$ -	$ (3.5)
Opportunity #5: Extend VDI Deployment	0%	100%	$ -	$ (0.6)	$ (0.6)	$ -	$ (1.6)	$ (1.6)
Opportunity #6: Switch To An End Point Cost Model	100%	0%	$ (0.5)	$ -	$ (0.5)	$ (0.9)	$ -	$ (0.9)
Total Savings			**$ (19.9)**	**$ (24.2)**	**$ (44.1)**	**$ (30.7)**	**$ (80.3)**	**$ (111.0)**

Step 2: Tx and Dx Savings

Calculate the Tx and Dx component of OM&A savings and capital savings.

Savings by Tx and Dx	Base Case			Stretch Case		
	Net Tx Impact	Net Dx Impact	Total Impact	Net Tx Impact	Net Dx Impact	Total Impact
Capital Savings[1]	$ (11.4)	$ (12.8)	$ (24.2)	$ (37.7)	$ (42.6)	$ (80.3)
OM&A Savings[2,3]	$ (5.3)	$ (14.5)	$ (19.9)	$ (11.5)	$ (19.2)	$ (30.7)
Total Savings	**$ (16.7)**	**$ (27.4)**	**$ (44.1)**	**$ (49.2)**	**$ (61.7)**	**$ (111.0)**

Notes

1. Regular Capital Savings allocation: Tx (47%) and Dx (53%) – provided by Hydro One
2. Regular OM&A Savings allocation: Tx (57%) and Dx (43%) – provided by Hydro One
3. Opportunity#2 - Outsource Forestry allocation: Tx (17%) and Dx (83%) – KPMG Analysis

Step 3: Changes to the Revenue Requirement

Calculate the corresponding change to the Revenue Requirement based on the Tx and Dx impacts. In Scenario three, Tx Capital projects are assumed in-service and therefore the related savings are included.

Capital and OM&A changes to the Revenue Requirement	Base			Stretch		
	Net Tx Impact	Net Dx Impact	Total Impact	Net Tx Impact	Net Dx Impact	Total Impact
Percentage of Savings Passed through to the Rate Base[1]	100%	100%		100%	100%	
Capital Savings (Change to Rate Base)	$ (11.4)	$ (12.8)	$ (24.2)	$ (38)	$ (43)	$ (80.3)
Savings Portion that Impacts the Revenue Requirement[2]	13%	10%	-	13%	10%	-
Capital Changes to Revenue Requirement	**$ (1.5)**	**$ (1.3)**	**$ (2.8)**	**$ (4.9)**	**$ (4.3)**	**$ (9.2)**
OMA Savings	$ (5.3)	$ (14.5)	$ (19.9)	$ (11.5)	$ (19.2)	$ (30.7)
OMA Changes to Revenue Requirement	**$ (5.3)**	**$ (14.5)**	**$ (19.9)**	**$ (11.5)**	**$ (19.2)**	**$ (30.7)**
Total Changes to Revenue Requirement (Capital + OM&A)	$ (6.8)	$ (15.8)	$ (22.6)	$ (16.4)	$ (23.4)	$ (39.8)

Notes

1. Based on scenario
2. Ratio provided by Hydro One

Step 4: Impact to Average Monthly Consumer Bill

Based on changes to the Revenue Requirement, calculate the impact to consumer bills. The table below shows this impact on the average monthly bill for an 800 KWh / month household.

Changes to the Average Consumer Bill	Base			Stretch		
	Net Tx Impact	Net Dx Impact	Total Impact	Net Tx Impact	Net Dx Impact	Total Impact
Average Consumer Bill[1]	$ 144	$ 144	$ 144	$ 144	$ 144	$ 144
Portion of Consumer Bill (%)[2]	7%	32%	39%	7%	32%	39%
Portion of Consumer Bill $)	$ 10.1	$ 46.1	$ 56.2	$ 10.1	$ 46.1	$ 56.2
Impact on Portion of Monthly Bill (%)[3]	(0.49%)	(1.32%)	(1.17%)	(1.17%)	(1.95%)	(1.81%)
Impact on Monthly Bill ($)	$ (0.05)	$ (0.61)	$ (0.66)	$ (0.12)	$ (0.90)	$ (1.02)

Notes

1. Based on 800 KW usage per month for an average residential Hydro One customer
2. Ratio provided by Hydro One
3. Positive values represent an increase while negative values represent a decrease in the monthly bill

Key Assumptions:

The primary assumptions used in this analysis are:

- Severance and transition costs are assumed to be paid in year one to affected FTE.
- OM&A savings are realized in year that opportunities are implemented
- Dx Capital savings are realized in year that opportunities are implemented
- Tx Capital savings require two years to be realized i.e. Tx projects are in-service after year one

TAB 6

MERCER

TALENT • HEALTH • RETIREMENT • INVESTMENTS

COMPENSATION COST BENCHMARKING STUDY

HYDRO ONE NETWORKS INC.

09 DECEMBER 2013

MARSH & McLENNAN COMPANIES

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1

Executive Summary

Hydro One Networks Inc. ("Hydro One") has retained Mercer to prepare an independent, testable and repeatable market-based assessment of the reasonableness of Hydro One's total compensation levels including salary, short-term incentives, long-term incentives, pension and employer paid health and group benefits relative to a select peer group. This study was conducted in 2008 and 2011, and repeated, following a similar methodology, in 2013. Year-over-year trend analysis is provided.

The preliminary results of our analysis were presented at the October 16, 2013 stakeholder session in Toronto. This document represents the results of our analysis. Specifically:

Compensation Benchmarking

Consistent with the Stakeholder feedback, the compensation benchmarking component of the study compared Hydro One with the 2011 Transmission, Distribution and Generation market peer group, supplemented with participants from the Similar Regulatory Environment group.

The study reflected approximately 3,050 Hydro One employees in 32 benchmark positions representing 57% of Hydro One's employee population (excluding non-full time employees). In total, our analysis reflected approximately 14,000 incumbents employed in the Canadian energy and/or adjacent sectors.

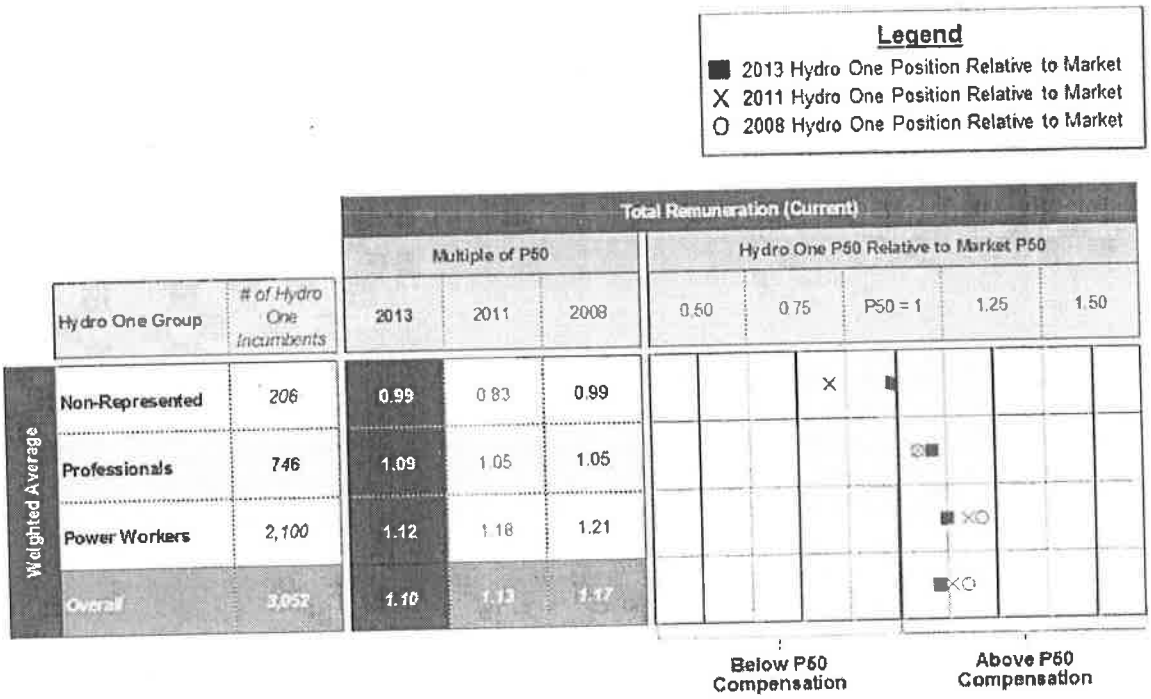
On an overall weighted average basis, for the positions we reviewed in 2013, Hydro One is positioned approximately 10% above the market 50th percentile ("P50"). In comparison to the 2011 study, Hydro One's overall weighted average positioning has decreased from 13% above the market total compensation P50.

The shift in Hydro One's competitive position towards the median is notable given that the peer group, like Hydro One, has worked to reduce labour costs as a response to both the substantial economic downturn beginning in 2008 and expectations of key stakeholders over the entire period between the 2008 and 2013 during the compensation cost benchmarking studies.

The overall Hydro One positioning is driven by a combination of competitive base salaries, especially for the most highly skilled Power Workers' Union ("PWU") positions and Professionals ("Society") members, and the high relative value of legacy, pension and benefits programs (the legacy Management pension and benefit and Professional pension plans are now closed to new members).

The table below summarizes the results of the 2013 Compensation Cost Benchmarking Study compared to the results of the 2011 and 2008 study.

Table 1



			Total Remuneration (Current)								
			Multiple of P50			Hydro One P50 Relative to Market P50					
	Hydro One Group	# of Hydro One Incumbents	2013	2011	2008	0.50	0.75	P50 = 1	1.25	1.50	
Weighted Average	Non-Represented	206	0.99	0.83	0.99			X	■		
	Professionals	746	1.09	1.05	1.05				○■		
	Power Workers	2,100	1.12	1.18	1.21				■	XO	
	Overall	3,052	1.10	1.13	1.17				■	XO	

Below P50 Compensation

Above P50 Compensation

2

Introduction

Hydro One Networks Inc. ("Hydro One") has retained Mercer to prepare an independent, testable and repeatable market-based assessment of the reasonableness of Hydro One's total compensation levels including salary, short-term incentives, long-term incentives, pension and employer paid health and group benefits relative to a select peer group. This study was conducted in 2008 and 2011, and repeated, following a similar methodology, in 2013. Year-over-year trend analysis is provided.

This report is intended to help Hydro One in preparing a two year Cost of Service application for Transmission rates (2015-2016) and a five year Custom Cost of Service Application for Distribution (2015-2019). The results of the Compensation Cost Benchmarking study will be filed as evidence for both rate setting applications.

To provide independent and reliable information on Hydro One's relative compensation costs, Mercer has undertaken a customized survey of total compensation costs in the market ("Compensation Benchmarking").

The total compensation (i.e., base salary, short-term incentives, long-term incentives, pension and benefits) benchmarking analyses focused on assessing Hydro One's overall competitiveness in the marketplace.

3

Guiding Principles

Based on our typical benchmarking approach and the benchmarking principles that guided the compensation benchmarking, as well as how Mercer applied them, these include:

1. Principle objective – to revisit the 2011 and 2008 Mercer Study to reasonably compare Hydro One compensation costs to those of regulated utilities in Canada.
   - The 2011 and 2008 Mercer Studies were revisited following the same general overall methodology to provide appropriate study-over-study comparisons.

2. Keep it simple to entice survey participants.
   - The data collection process was reviewed and streamlined, where possible, to encourage survey participants to share data. Additional follow-up was provided by Mercer to support comparator participation in the study.

3. Be independent, testable, repeatable and market-based.
   - The study was conducted in a manner that meets each of the criteria listed.

4. Provide participants with the assurance that their information could not be attributable to them.
   - All participants were assured that data would be held confidentially by Mercer and only be shared in aggregate form.

5. Be based on the groups surveyed in the 2011 Mercer Study and expanded as deemed appropriate by the consultant.
   - The 2013 study targeted the same benchmark jobs and organizations as the 2011 study. Three (3) organizations were also added to the 2011 invitation list, in addition to the organizations that were invited to participate in 2011. This resulted in a total of four (4) new participants in the 2013 study – the three (3) new organizations noted above plus one (1) organization that was invited to participate in 2011 and declined at that time.

6. Mirror the scoping in the 2011 and 2008 Mercer Studies for peer selection, job classes, etc. and changes as deemed appropriate by the consultant.
   - The same methodology used in 2011 and 2008 was followed in the 2013 Mercer Study for both peer company selection and job classes for inclusion. As noted in 5. above, four (4) additional comparator companies were added to the peer group. The selected benchmark job classes represented 57% of Hydro One's employee population (excluding non-full time employees), an increase over the 2011 study.

7. Enable reasonable comparison to the last Mercer study and provide trending analysis for Hydro One.
   - By including approximately 85% of peers and 94% of jobs from the 2011 Mercer Study, reasonable comparisons have been made and trending has been assessed.

8. Compare to market median rather than market average
   - The 2013 Mercer Study is based on a comparison of Hydro One median compensation against market median compensation. Comparison of medians is standard compensation practice; medians are representative of the middle data point in a sample and are less sensitive to outliers than the mean.
     - The 2008 and 2011 studies also compared Hydro One to the median.
   - Appendix A provides a comparison of Hydro One's total compensation median against market average. On an overall weighted average basis, there is no difference in Hydro One's median positioning relative to market median and market arithmetic mean.

9. No adjustments to reflect regional costs of living amongst the study participants.

10. Request data about pension as a percentage of total benefits, and benefits as a percentage of compensation.
    - It is standard benchmarking practice to assess benefits and pension costs as part of the total compensation value provided to employees; therefore, we have not provided the details of this analysis showing benefit and pension separately.

11. Rely on the expertise of the selected consultant to recommend appropriate changes in methodology and assumptions.
    - Hydro One relied on Mercer's expertise in conducting the study.

4

Compensation Benchmarking

Peer Groups

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.

As a result, to develop a single peer group for Hydro One, we considered all organizations, with 2011 or 2012 annual revenues or total assets between 33% and 300% of Hydro One's 2012 annual revenue or total assets, from the following areas:

1. Electric utilities, multi-utilities, generators, and gas utilities industries in Canada as classified by their Global Industry Classification Standard ("GICS")

2. 73 Local Distribution Companies ("LDCs") in Ontario

3. Other comparable regulated businesses (i.e., integrated telecommunication services, railroads, etc.)

Overall, 24 organizations were invited to participate in the study:
- All 13 organizations included in the 2011 study were invited
  - Of these organizations, 2 declined (Altalink, Canadian Utilities)
- Three new organizations were invited
  - Of these organizations, 2 agreed to participate (Enersource Corporation, Horizon Utilities Corporation)

Organizations that did not participate in the compensation benchmarking indicated that they were unable to participate due to either resource constraints or an insufficient number of relevant benchmark positions.

Following standard industry practice, comparisons were made between Hydro One's incumbents, at the 50th percentile, to the market peer group 50th percentile on base salary, total cash compensation and total compensation.

To ensure that no one organization biased the results, we have weighted our analysis by organization for each job class and not by incumbents to determine Hydro One's position relative to the market (i.e., the analysis is "Org Weighted"). To preserve the confidentiality of compensation data at both Hydro One and participating organizations, we have aggregated our results.

Market Sample

Summarized below are the participating organizations in the compensation benchmarking.

Table 2

Company Name	Revenue[1]	# of Employees[1,2]
Hydro-Québec	$12,228.0	21,000
BC Hydro Power & Authority	$4,898.0	5,862
Ontario Power Generation Inc.	$4,732.0	10,691
EPCOR Utilities Inc.*	$4,036.0	4,036
ENMAX Corporation	$3,160.1	1,840
Toronto Hydro Electric System Ltd.	$2,852.0	1,526
Enbridge Gas Distribution Inc.	$2,400.0	2,200
TransAlta Corporation	$2,262.0	3,140
Bruce Power L.P.*	$2,103.7	4,200
Manitoba Hydro	$1,902.0	6,637
SaskPower	$1,862.0	3,000
New Brunswick Power	$1,697.0	2,361
PowerStream Inc.	$1,029.0	541
Enersource Corporation*	$822.0	374
Horizon Utilities Corporation*	$570.6	404
75th %ile	$3,598.1	5,031
50th %ile	$2,262.0	3,000
25th %ile	$1,779.5	1,683
Average	$3,103.6	4,521
Hydro One	$5,728.0	5,337

[1] *Data as reported by survey participants in CAD ($MM)*

[2] *Representative of full-time employees and equivalents only*

* *New participants in 2013*

Benchmark Positions

The compensation survey was designed to benchmark compensation levels from a cross-section of Hydro One's population. To determine the roles to be included in our benchmark analysis, we reviewed positions that represented all of Hydro One's major business units and at least 50% of Hydro One's employee population.

To assist with study over study comparisons, it was determined that Hydro One should collect incumbent data using 33 of the same benchmark roles surveyed in the 2011 study. Due to limited data in the market from previous years, the following role was not surveyed in 2013:

- Tree Trimmer - Journeyman (Power Workers)

In total, 33 benchmark positions were included in the compensation benchmarking study and we were able to report data on 32 of these job. Due to limited data in the market, the following role was excluded from the final analysis:

- Regional Maintainer - Forestry

As a result, ***the 2013 Compensation Cost Benchmarking Study directly reflected approximately 3,050 Hydro One employees in 32 benchmark positions representing 57% of Hydro One's employee population (excluding non-full time employees).***

In the market, we collected approximately 14,000 individual incumbent observations across the benchmark positions (excluding the 3,050 Hydro One incumbents) ***employed in the Canadian energy and/or adjacent sectors.***

Summarized below are the benchmark positions organized by major employee group. The results in this report are summarized by the following employee groups. Specifically (sorted in descending total compensation by Group):

Table 3

Hydro One Group	Job #	Benchmark Survey Title
Non-Represented	1	Financial Director
	2	Top Rates and Regulatory Affairs Executive
	3	Senior Legal Counsel
	4	Engineer F
	5	Area Superintendent
	6	Human Resource Manager / Consultant
	7	Field Service Coordinator
	8	Administrative Assistant
Professionals	9	Engineer E
	10	Business Analyst C
	11	Engineer D
	12	Engineer C
	13	Engineer B
	14	Business Analyst A
	15	Engineer A
Power Workers	16	System Operator (Controller)
	17	Regional Maintainer - Lines (Supervisory)
	18	Protection and Control Technician
	19	Area Distribution Engineering Technician
	20	Regional Maintainer - Lines
	21	Regional Maintainer - Electrical
	22	Fleet Mechanic
	23	Lineman - Journeyman
	24	*Regional Maintainer - Forestry**
	25	Service Dispatcher
	26	Drafter II
	27	Stock Keeper
	28	Data Entry Clerk
	29	Production Field Administrator III
	30	Electrical Apprentice
	31	Lines Apprentice
	32	Meter Reader
	33	General Labourer/Roustabout

**Insufficient data to report*

"Professionals" refers to Hydro One positions represented by the Society of Energy Professionals (i.e., "Society") and "Power Workers" refers to Hydro One positions represented by the Power Workers' Union (i.e., "PWU").

See Appendix B for a summary of position descriptions.

Methodology

As outlined in Appendix B, summarized below is the methodology used to determine compensation levels. Specifically:

Base Salary/Wage – Annual base salary at July 1, 2013. If an hourly rate was reported, we annualized the value by multiplying the standard number of work hours per week by 52 weeks per year. If a weekly rate was reported, we annualized the value by multiplying by 52 weeks per year.

- Data effective July 1, 2013 captures Hydro One's most recent collective agreement terms.

Total Cash Compensation - Base salary ***plus*** most recent short-term incentive or bonus paid where applicable.

- Hydro One does not provide short-term incentive or bonus programs to Professional or Power Worker positions.

Benefits and Pensions – To value benefit and pension programs, we applied a relative value process to a set of standard employer paid cost factors, plus actuarial and demographic assumptions to measure all financially significant features of benefit and pension programs based on open and closed plans.

Total Compensation – Total cash compensation ***plus*** estimated annual value of the most recent long-term incentive grant (i.e., expected value of stock options or share awards) and pensions and benefits.

- Hydro One does not provide long-term incentive programs to any positions.

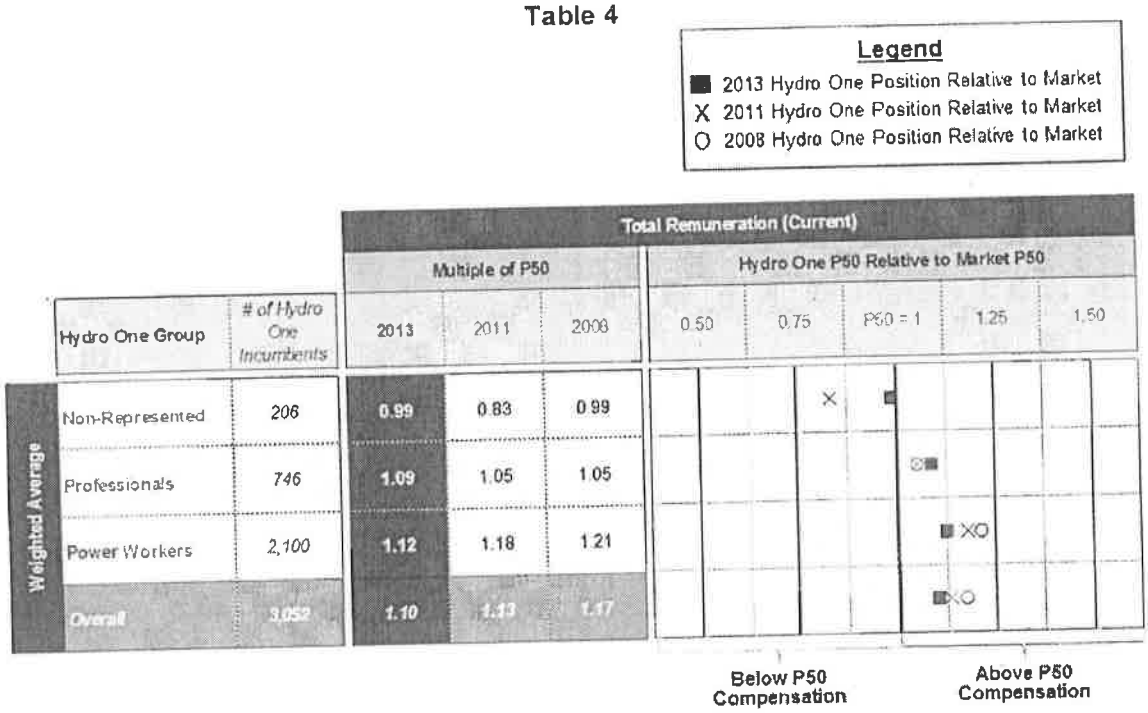
Findings

Summarized below are the results of our compensation benchmarking analysis.

Overall, **on a weighted average basis, Hydro One's total compensation cost is 10% above market median**. Hydro One's position relative to the market 50th percentile varies by employee group from a low of 1% below market P50 for the non-represented group and a high of 12% above the market P50 for the PWU.

In the 2011 study, Hydro One's overall weighted average was 13% above the market total compensation P50 – a 3% shift towards the market median has occurred since 2011.

Table 4



The results are driven by a combination of competitive base wages, especially for the most highly skilled Power Workers' Union ("PWU") positions, and the relatively high value of legacy collective agreement wages, pension and benefits programs (the legacy non-represented pension and benefit and Society pension plans are now closed to new members).

We understand that these legacy plans relate to collective agreements negotiated prior to the formation of Hydro One. All PWU employees continue to be covered by the legacy plans. Even if all Non-Represented and Professional employees were covered by the new plans, the difference in overall cost on a weighted average basis appears to be minimal as the high population Power Worker positions continue to be covered by the legacy plans; however, the use of the "hiring hall" for several of the PWU benchmarks does appear to reduce compensation costs relative to both other PWU positions and our market data.

For new employees hired into Non-Represented and Professional job classifications, the value of pensions and/or benefits, where applicable, have decreased due to recent amendments to these plans (see "Future" column on the following pages).

We note that, when measured on revenue, Hydro One is the second largest organization in the sample. Although size has a limited impact on middle management and unionized roles, size may have an impact on compensation for executive roles, as these roles tend to be larger and more complex in larger organizations.

As requested by stakeholders in 2011, in addition to comparing Hydro One P50 to market P50, a comparison was also made of Hydro One median to market average (mean). On a weighted average basis, Hydro One's total compensation cost is 10% above market average. Hydro One's position relative to market varies by employee group from a low of 3% below market average for the non-represented group and a high of 13% above the market average for the PWU. In conclusion, there is relatively little difference between the market median and market average. See Appendix A for detailed results.

Non-Represented

Summarized below are our results for the Non-Represented roles that we benchmarked at Hydro One relative to the market peer group.

In comparison to 2011, the 2013 Total Compensation (Current) results have increased from 17% below market median to 1% below market median.

Table 5

	Hydro One Group	# of Hydro One Incumbents	Hydro One P50 Relative to Market P50[1]			
			Base Salary	Total Cash[2]	Total Compensation[3]	
					Current[4]	Future[5]
Non-Represented	Financial Director	3	3%	20%	21%	21%
	Top Rates and Regulatory Affairs Executive	4	-5%	-5%	-1%	-3%
	Senior Legal Counsel	8	-7%	0%	12%	8%
	Engineer F	83	-10%	-17%	-15%	-19%
	Area Superintendent	16	-6%	-3%	0%	-2%
	Human Resource Manager / Consultant	8	-30%	-29%	-26%	-29%
	Field Service Coordinator*	76	11%	10%	14%	6%
	Administrative Assistant	8	-3%	-4%	-3%	-4%
	2013 Weighted Average Non-Represented	206	-2%	-4%	-1%	-6%
	2011 Weighted Average Non-Represented	137	-17%	-20%	-17%	-18%
	2008 Weighted Average Non-Represented	151	-2%	-4%	-1%	-5%

[1] Market results weighted by organization (i.e., for each participating organization, Mercer determined one average value per position.)

[2] Base salary plus short-term incentives granted (i.e., bonus), where applicable.

[3] Total cash compensation plus estimated long-term incentives, benefits and pension values.

[4] Based on Hydro One's employee population, assuming current pension and benefits program eligibility.

[5] Based on Hydro One's employee population, assuming all incumbents in the new pension and benefits programs. The results do not reflect a 0.75% employee pension contribution increase effective October 1st, 2013.

Professionals ("Society")

Summarized below are our results for the Professional roles that we benchmarked at Hydro One relative to the market peer group.

In comparison to 2011, the 2013 Total Compensation (Current) results have increased from 5% above market median to 9% above market median.

Table 6

	Hydro One Group	# of Hydro One Incumbents	Hydro One P50 Relative to Market P50[1]			
			Base Salary	Total Cash[2]	Total Compensation[3]	
					Current[4]	Future[5]
Professionals	Engineer E	132	-2%	-6%	-3%	-6%
	Business Analyst C	15	26%	21%	38%	32%
	Engineer D	258	4%	-1%	7%	5%
	Engineer C	18	14%	3%	19%	14%
	Engineer B	271	10%	9%	12%	12%
	Business Analyst A	11	25%	23%	30%	30%
	Engineer A	41	18%	11%	12%	12%
	2013 Weighted Average Professionals	746	7%	3%	9%	7%
	2011 Weighted Average Professionals	779	6%	3%	5%	4%
	2008 Weighted Average Professionals	576	8%	-2%	5%	3%

[1] *Market results weighted by organization (i.e., for each participating organization, Mercer determined one average value per position.)*
[2] *Base salary plus short-term incentives granted (i.e., bonus), where applicable.*
[3] *Total cash compensation plus estimated long-term incentives, benefits and pension values.*
[4] *Based on Hydro One's employee population, assuming current pension and benefits program eligibility.*
[5] *Based on Hydro One's employee population, assuming all incumbents in the new pension and benefits programs.*

Power Workers

Summarized below are our results for the Power Worker roles that we benchmarked at Hydro One relative to the market peer group.

In comparison to 2011, the 2013 Total Compensation results have improved from 18% above market median to 12% above market median.

Table 7

			Hydro One P50 Relative to Market P50[1]		
	Hydro One Group	# of Hydro One Incumbents	Base Salary	Total Cash[2]	Total Compensation[3] Current[4]
Power Workers	System Operator (Controller)	92	25%	16%	28%
	Regional Maintainer - Lines (Supervisory)	92	18%	18%	24%
	Protection and Control Technician	82	20%	16%	30%
	Area Distribution Engineering Technician	180	12%	12%	23%
	Regional Maintainer - Lines	742	7%	7%	22%
	Regional Maintainer - Electrical	238	2%	2%	17%
	Fleet Mechanic	66	8%	7%	21%
	Lineman - Journeyman	90	14%	14%	4%
	Regional Maintainer - Forestry	n/a	-	-	-
	Service Dispatcher	26	33%	29%	41%
	Drafter II	33	18%	18%	30%
	Stock Keeper	49	21%	21%	37%
	Data Entry Clerk	67	11%	9%	21%
	Production Field Administrator II	9	-38%	-38%	-31%
	Electrical Apprentice	63	-17%	-21%	-24%
	Lines Apprentice	265	-4%	-8%	-13%
	Meter Reader	10	-2%	-6%	1%
	General Labourer/Roustabout	10	-13%	-16%	-27%
	2013 Weighted Average Power Workers	[illegible]	[illegible]	[illegible]	[illegible]
	2011 Weighted Average Power Workers	[illegible]	[illegible]	[illegible]	[illegible]
	2008 Weighted Average Power Workers	[illegible]	[illegible]	[illegible]	[illegible]

[1] *Market results weighted by organization (i.e., for each participating organization, Mercer determined one average value per position.)*
[2] *Base salary plus short-term incentives granted (i.e., bonus), where applicable.*
[3] *Total cash compensation plus estimated long-term incentives, benefits and pension values.*
[4] *Based on Hydro One's employee population, assuming current pension and benefits program eligibility.*

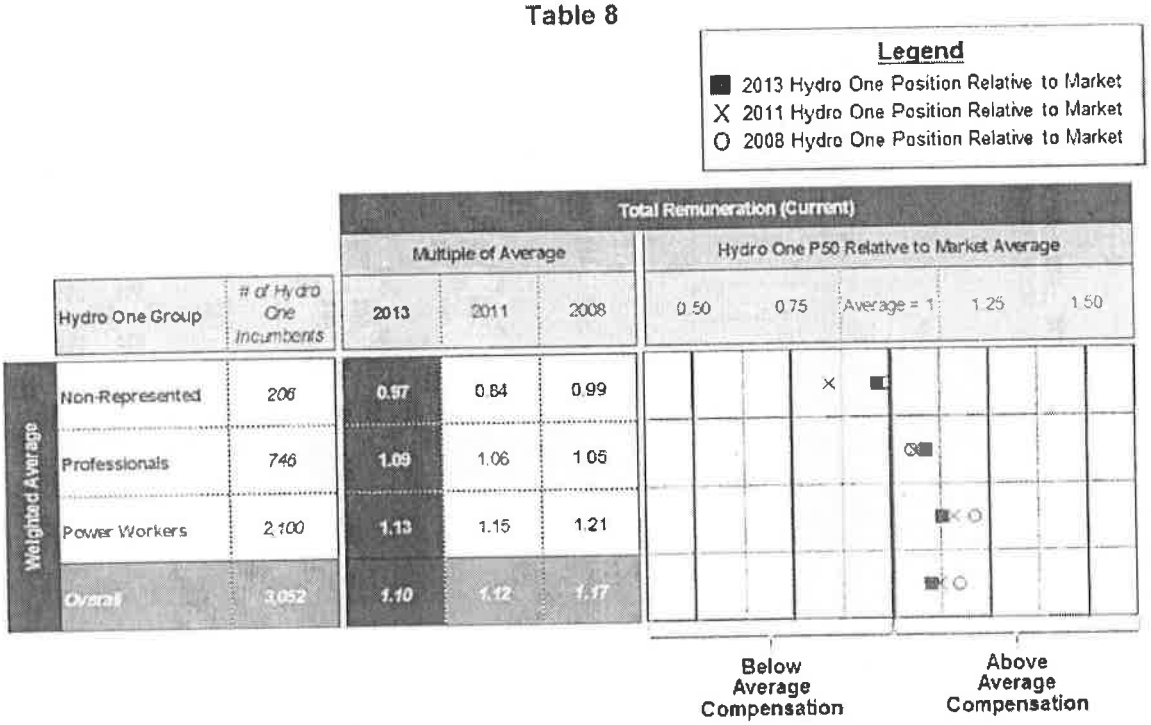
APPENDIX A

Hydro One vs. Market Average

As requested by stakeholders, summarized below are the results of our compensation benchmarking analysis comparing Hydro One median to market average.

Overall, **on a weighted average basis, Hydro One's total compensation cost is 10% above the market average (mean)**. Hydro One's position relative to market varies by employee group from a low of 3% below the market average for the non-represented group to a high of 13% above the market average for the PWU.

Table 8



Non-Represented

Summarized below are our results for the Non-Represented roles that we benchmarked at Hydro One relative to the market peer group.

Table 9

	Hydro One Group	# of Hydro One Incumbents	Hydro One P50 Relative to Market Average[1]			
			Base Salary	Total Cash[2]	Total Compensation[3]	
					Current[4]	Future[5]
Non-Represented	Financial Director	3	-1%	6%	7%	7%
	Top Rates and Regulatory Affairs Executive	4	-14%	-15%	-17%	-18%
	Senior Legal Counsel	8	-6%	-4%	3%	-2%
	Engineer F	83	-13%	-18%	-15%	-20%
	Area Superintendent	16	-7%	-8%	-8%	-9%
	Human Resource Manager / Consultant	8	-32%	-34%	-32%	-35%
	Field Service Coordinator*	76	11%	10%	14%	6%
	Administrative Assistant	8	-7%	-8%	-8%	-8%
	2013 Weighted Average Non-Represented	200	-4%	-6%	-3%	-8%
	2011 Weighted Average Non-Represented	137	-15%	-17%	-16%	-17%

[1] *Market results weighted by organization (i.e., for each participating organization, Mercer determined one average value per position.)*
[2] *Base salary plus short-term incentives granted (i.e., bonus), where applicable.*
[3] *Total cash compensation plus estimated long-term incentives, benefits and pension values.*
[4] *Based on Hydro One's employee population, assuming current pension and benefits program eligibility.*
[5] *Based on Hydro One's employee population, assuming all incumbents in the new pension and benefits programs. The results do not reflect a 0.75% employee pension contribution increase effective October 1st, 2013.*

Professionals ("Society")

Summarized below are our results for the Professional roles that we benchmarked at Hydro One relative to the market peer group.

Table 10

	Hydro One Group	# of Hydro One Incumbents	Hydro One P50 Relative to Market Average[1]			
			Base Salary	Total Cash[2]	Total Compensation[3]	
					Current[4]	Future[5]
Professionals	Engineer E	132	0%	-8%	-1%	-5%
	Business Analyst C	15	23%	18%	31%	26%
	Engineer D	258	6%	-2%	4%	3%
	Engineer C	18	13%	7%	19%	14%
	Engineer B	271	12%	5%	14%	14%
	Business Analyst A	11	16%	13%	19%	19%
	Engineer A	41	12%	6%	15%	15%
	2013 Weighted Average Professionals	746	8%	1%	9%	7%
	2011 Weighted Average Professionals	779	6%	-1%	6%	4%

[1] *Market results weighted by organization (i.e., for each participating organization, Mercer determined one average value per position.)*
[2] *Base salary plus short-term incentives granted (i.e., bonus), where applicable.*
[3] *Total cash compensation plus estimated long-term incentives, benefits and pension values.*
[4] *Based on Hydro One's employee population, assuming current pension and benefits program eligibility.*
[5] *Based on Hydro One's employee population, assuming all incumbents in the new pension and benefits programs.*

Power Workers

Summarized below are our results for the Power Worker roles that we benchmarked at Hydro One relative to the market peer group.

Table 11

			Hydro One P50 Relative to Market Average[1]		
	Hydro One Group	# of Hydro One Incumbents	Base Salary	Total Cash[2]	Total Compensation[3] Current[4]
Power Workers	System Operator (Controller)	92	17%	13%	25%
	Regional Maintainer - Lines (Supervisory)	92	14%	13%	25%
	Protection and Control Technician	82	20%	16%	28%
	Area Distribution Engineering Technician	180	11%	9%	21%
	Regional Maintainer - Lines	742	6%	6%	19%
	Regional Maintainer - Electrical	238	7%	7%	21%
	Fleet Mechanic	88	12%	10%	19%
	Lineman - Journeyman	90	13%	10%	5%
	Service Dispatcher	20	29%	26%	41%
	Drafter II	33	9%	6%	15%
	Stock Keeper	49	21%	19%	31%
	Data Entry Clerk	63	6%	5%	16%
	Production Field Administrator III	3	-37%	-37%	-32%
	Electrical Apprentice	53	-19%	-22%	-28%
	Lines Apprentice	285	3%	1%	-7%
	Meter Reader	10	0%	-3%	-8%
	General Labourer/Roustabout	10	-13%	-14%	-27%
	2013 Weighted Average Power Workers	2,130	9%	7%	17%
	2011 Weighted Average Power Workers	2,477	10%	8%	19%

[1] *Market results weighted by organization (i.e., for each participating organization, Mercer determined one average value per position.*
[2] *Base salary plus short-term incentives granted (i.e., bonus), where applicable.*
[3] *Total cash compensation plus estimated long-term incentives, benefits and pension values.*
[4] *Based on Hydro One's employee population, assuming current pension and benefits program eligibility.*

APPENDIX B

Position Descriptions

Benchmark Position	Survey Code	Generic Description
Administrative Assistant	220.108.430	Requires a general knowledge of departmental procedures, practices and office routine. Possesses good office and computer skills including word processing, spreadsheets, graphics software, dictaphone transcription, and filing. May provide assistance to a more senior Administrative Assistant in a large department.
Area Distribution Engineering Technician	999.999.001	Perform Technical support work for the Distribution Section of the area; such as monitoring the performance of the distribution system by performing various technical studies, identifying and recommending solutions to the supervisor, providing field data and preliminary analysis for engineering studies. Negotiate property settlements on distribution lines and perform joint use activities. Provide administrative support related to preparation of estimates and work orders (WO) work schedules, line layouts, joint use, provision of underground cable and fault location service. Perform staking activities and prepare design packages for new connections, service upgrades, extensions, betterments and relocations.
Area Superintendent	700.792.211	Responsible for providing construction management and supervision within the construction group. Administers construction contracts. Is accountable for construction costs, schedules, safety, product quality and environment performance. Provides input into Project Execution Plans and the associated schedules and estimates. Usual qualifications include 10 to 12 years of experience including supervisory experience. Requires experience in construction management and supervision of various trades.
Business Analyst A	320.392.360	Assists with analyzing internal metrics. Performs responsible and varied business analytical or administrative functions. Assists with preparation documents, forecast summaries, status reports, budget reports, etc. Duties may include interpreting and processing company contracts, AFEs, and government agreements. Assignments are given in terms of objectives and relative priorities. Problems may be solved by adapting standard methods or by practical applications of knowledge. Usual qualifications include a university degree.
Business Analyst C	320.392.340	Analyzes internal metrics. Performs responsible and varied business analytical or administrative functions. Prepares documents, forecast summaries, status reports, budget reports, etc. Duties may include interpreting and processing company contracts, AFEs, and government agreements. Assignments are given in terms of objectives and relative priorities. Problems may be solved by adapting standard methods or by practical applications of knowledge. Usual qualifications include a university degree with a minimum of 4 years' related experience; technical diploma with a minimum of 6 years' related experience.
Data Entry Clerk	999.999.002	Perform data processing services including inputting, updating, to various computerized databases and applications of external service providers. Perform clerical/administrative duties in support of system processes. Work with various internal and external contacts and customers in the setup, maintenance, reporting and follow up of non-electricity accounts, customer service orders, materials, corporate charge cards, time reporting, management reporting, damage claims, accounts receivable, etc. Perform administrative services for provincial client group and special projects.
Drafter II	510.656.420	Incumbent works on standard drafting assignments. Methods are detailed and standard but judgment is required in planning tasks and choice of methods. Accountable for accuracy and adequacy of work performed. May provide technical guidance to less experienced Drafters. Usual qualifications include a technical school diploma or equivalent, with a minimum of 5 years' related experience.
Electrical Apprentice	999.999.112	A five year apprenticeship leading to a Construction and Maintenance Electrician

Benchmark Position	Survey Code	Generic Description
Engineer A	510.780.360	Incumbent receives "on-the-job" training in various phases of office, plant or field engineering through assignments or, in some cases, classroom instruction. Tasks assigned are simple and routine in nature. Assists more senior engineers in the preparation of plans, calculations, reports, etc. Few technical decisions are made and these are routine, with clearly defined procedures and guidelines. Works under close supervision and work is reviewed for accuracy, adequacy and conformance with prescribed procedures. Usual qualifications include a university degree in engineering with minimal experience.
Engineer B	510.780.350	Uses a variety of standard problem solving techniques. May assist more senior engineers in carrying out technical tasks requiring computation methods. Duties are assigned with detailed oral and occasionally written instructions. Work is reviewed in detail with guidance given. May give limited technical guidance to junior professionals or technicians working on a common project. Usual qualifications include a university degree in engineering with a minimum of 2 years' related experience.
Engineer C	510.780.340	Incumbent is responsible for varied engineering assignments requiring a broad knowledge of an engineering specialty and the effect the work has upon other fields. Solves problems using a combination of standard or modified procedures. Participates in planning objectives. Performs independent studies, and analyzes, interprets and draws own conclusions; more complex work projects are referred to more senior authorities. Not supervised in detail except on more difficult assignments. May give periodic technical guidance to less experienced professionals or technicians assigned to work on a common project. Usual qualifications include a university degree in engineering with a minimum of 4 years' related experience.
Engineer D	510.780.330	This is the first level of full engineering specialization and is considered the senior level position. Alternatively may be the level at which an individual acts as group leader or work task force leader of a small group of technical personnel. Requires application of well-developed technical knowledge in planning, conducting and coordinating difficult assignments. The position requires the modification of established guidelines and initiation of new approaches. Makes independent decisions in planning, organizing and completing technical assignments. Work is reviewed for soundness of judgment but accepted technically as accurate and feasible. Work is assigned in terms of objectives and priorities but informed guidance is available. Advises on technical problems and supervision, and may plan, schedule and review work of professional engineers and technicians. May make recommendations concerning selection, training, discipline and remuneration of staff.
Engineer E	510.780.320	May have responsibility for coordinating engineering work assignments and making recommendations on technical applications developed by other professional personnel or consultants. May involve the direct supervision of a group of professionals. Provides guidance and training to less experienced staff. Checks work for accuracy and completeness. As a specialist, conducts special, complex and advanced level studies. Work is generally reviewed for results only. Makes independent decisions within broad guidelines and policies. May make recommendations concerning selection, training, discipline and remuneration of staff. May also responsible for construction.
Engineer F	510.780.310	Incumbent is considered an authority in an engineering field of specialization and acts as a technical consultant to the organization. This level is a dual-stream first level managerial position. Incumbents may be responsible for directing a staff of professional and support employees or act as a technical specialist. Responsible for planning and directing large engineering programs/projects; sets priorities and allocates resources; makes necessary decisions on all day-to-day operating matters within constraints of company policy. Receives work in terms of broad objectives.
Field Service Coordinator	700.793.240	Manage and supervise trade, technical and clerical staff. Develop work programs, organize schedules, provide instructions, guidance and checks, monitor work to ensure work quality and accuracy and in conformity to governing regulations. Ensure the administration of procedures, applicable legislation and collective agreements are met. Administer and control contract work. Review work methods, ensure appropriate training. Develops, maintains and enhance customer relationships through direct contact both internally and externally. This position is non-represented.
Financial Director	210.100.130	Responsible for providing overall direction for tax, insurance, budget, credit and treasury functions for the organization. Provide short to medium term direction for all corporate financial functions so that financial transactions, policies, and procedures meet the organization's short and medium-term business objectives and are conducted in accordance with regulations, and standards. Activities may include: credit control; cash flow; investment management; tax; insurance; treasury; internal audit; budgeting and forecasting; and foreign exchange. Lead, direct, evaluate, and develop a team of senior managers to ensure that the organization's financial strategy is implemented effectively, consistently and according to established guidelines.

Benchmark Position	Survey Code	Generic Description
Fleet Mechanic	999.999.011	Be responsible for the inspection, repair and maintenance, as well emergency repair of vehicles (e.g. bucket truck, all-terrain vehicles, go track, digger truck, ladder truck forklift, backhoe, manlift, vans/pickup trucks and the hydraulic equipment of the vehicles e.g. booms, buckets. Maintain inspection schedules and coordinate scheduling repairs to be contracted out. Work is performed in a garage or on site.
General Labourer/Roustabout	700.792.431	This is the level at which individuals with no previous experience enter into the company. Acts as a general labourer. Works under close supervision within well-defined procedures. Duties involve general field/plant maintenance or clean-up work. Minimum qualifications include a high school diploma with minimal related experience.
Human Resource Manager / Consultant	120.100.220	This position plans, designs, develops, implements and administers policies and programs through functional supervision in all or some of the following areas: employee relations, executive compensation, wage and salary administration, job evaluation, performance management, recruitment and selection and employment equity/ human rights.
Lineman - Journeyman	920.788.410	Responsible for the installation, maintenance, removal, and inspection of transmission/distribution power lines. Typically requires 4 years of experience and certification as a Power Line Technician (or equivalent).
Lines Apprentice	999.999.113	A four year apprenticeship leading to a Power Line Technician position.
Meter Reader	920.680.430	Responsible for reading electric, gas, or water meters and keeping track of their average use by recording information. Other duties would include inspecting meters for damages and defects. Entry level position which typically requires a high school education.
Production Field Administrator III	220.778.413	Works independently. Works closely with field operations. Assists in all areas of production and general accounting duties, clerical and office administration functions. Provides analysis and input of operational accounting information and codes and inputs all payables and production volumes. May assist in preparing special production reports. Requires broad knowledge of department procedures. Orders all stationery/supplies and runs office. Monitors, troubleshoots and co-ordinates with head office maintenance of existing computer systems. May check work of junior staff and provide guidance. Working with a Supervisor, assists in preparing field accruals and analyzes actual performance versus budget. Possesses a solid understanding of basic accounting principles. Requires advanced PC and database management knowledge. An accounting background or diploma with 8 years' office experience is typically required.
Protection and Control Technician	999.999.004	Perform initial inspections, conduct trouble-shooting and preventative maintenance, carry out modifications and repairs as required, on all types of protection, telecommunications, metering and control equipment which comes under Protection and Control (P&C) jurisdiction. Discuss and review results with supervisor, if the equipment is highly critical from the standpoint of system operation, before putting the equipment into service.
Regional Maintainer - Electrical	999.999.007	Responsible for the general maintenance and repair work on electrical systems and equipment at various geographical locations. Requires overhauling, maintaining and inspecting equipment such as conductors & insulators i.e. batteries, station bus, cable, compressed air systems, fire protection equipment switchgear i.e. circuit breakers, load interrupters metalclad switchgear, oil circuit breakers, SF6 breakers, air blast breakers, transformers, rotating machines, distribution stations & equipment. Has the necessary knowledge of the trade theory, operating principles, charts, tables, testing equipment and other reference works, to test, dismantle, repair, clean and assemble station electrical equipment within the required specifications. Requires certification as a construction and maintenance electrician. Also performs mechanical and protection and control work.

Benchmark Position	Survey Code	Generic Description
Regional Maintainer - Forestry	999.999.005	Perform line clearing adjacent to power lines and associated apparatus. Carries out all phases of vegetation management including the application of pesticides. Understands and operates tools associated with the trade, various types of vehicles and aerial equipment, hand or power-operated pesticide application equipment. Must provide at own expense, any tools listed for this classification if required in his/her work, in accordance with the attached tool list. In addition to the above, may have the following skills: • Lead Hand Skills (including documentation, job planning and knowledge of work management systems as required) • Work Protection Code Skills (including establishing, and holding) • Contract Monitoring Skills • Environment Skills (such as PCB management, WHMIS, waste management, etc.)
Regional Maintainer - Lines	999.999.006	Construct and maintain transmission and distribution lines and associated apparatus. Maintain power service to electrical customers. Understands and is able to operate the tools of his/her trade, and is familiar with the various instruments, i.e. voltmeters, ammeters and ohmmeters. Must be familiar with hydraulically-operated articulated or telescopic aerial devices. Must provide at own expense any tools listed for the classification if required in his/her work in accordance with the attached tool list. This classification also includes the requirement to hold a Power Line Technician certification (or equivalent).
Regional Maintainer - Lines (Supervisory)	999.999.008	This position is responsible for the safety, quality and quantity of the work performed by his/her crew. They plan work including staffing requirements, assigning work, co-ordinate work with other work groups, ensure proper work practices are followed, report on work performed and engage in good public relations. He/she performs the following physical work activities. Construct and maintain transmission and distribution lines and associated apparatus. Maintain power service to electrical customers. Also responsible for contract monitoring and lead hand responsibilities.
Senior Legal Counsel	115.100.340	Responsible for providing management and employees with advice on a broad range of moderately complex conflicting legal principles. The applicable laws and regulations are numerous and varied, and present difficult problems of interpretation. Applies independent judgment in recommending a course of action for a client department, providing input as to the ramifications of a course of action, a legal decision, or a new piece of legislation. Usual qualifications include a law degree, membership in a law society/bar association and/or other relevant jurisdiction with a minimum of 8 year's related experience.
Service Dispatcher	430.612.340	Responsible for handling incoming consumer calls to schedule and dispatch service technicians to problem areas (including high voltage switching). Maintains documentation of crew activities for continuous knowledge of line and substation work. Key coordinator during power failures provides notification to internal and external customers regarding restoration of power services.
Stock Keeper	999.999.009	Receives, receipts, stores, issues and ships materiel used in operations. Manages materiel, in accordance with established practices and regulations. Is responsible for materiel under his/her control. Performs maintenance, not requiring formal trades qualifications, and assists in tasks where unskilled or semi-skilled ability is required.
System Operator (Controller)	999.999.010	Monitor and operate the transmission/distribution system assets on a 24-hour basis. Determine condition and recommend on availability of equipment. Carry out Manual Block and Rotational Load Shedding Schedules procedures. Monitor, approve and report LV - load transfers. Direct / monitor personnel on a 24 hour basis (i.e. - switching agents, field crews) in the operation of the Transmission / Distribution network system assets. Troubleshoot & sectionalize for low voltage feeder faults.
Top Rates and Regulatory Affairs Executive	110.200.130	Executive with primary responsibility for preparing, managing, and leading company's testimony in utilities rate cases before local, regional or federal agencies. Responsibilities include development of all research associated with regulatory activities including activity across other regulatory entities and maintaining relationship with all regulators. Develops cost factors in association with utilities rate cases, may or may not, be involved in delivery of testimony. Typically reports to a Top Legal Executive, Chief Operations Officer or a Top Utilities Executive.

APPENDIX C

Detailed Compensation Benchmarking Methodology

Summarized in this appendix is supporting descriptions of how we determined values for each of the major components of compensation. Specifically:

Base Salary – Annual base salary at July 1, 2013. If an hourly rate was reported, we annualized the value by multiplying the standard number of hours per week by 52 weeks per year. If a weekly rate was reported, we annualized the value by multiplying by 52 weeks per year.

Total Cash Compensation - Base salary ***plus*** most recent short-term incentive or bonus paid.

Benefits and Pensions – To value benefit and pension programs, we applied a relative value process to a set of standard employer paid cost factors, plus actuarial and demographic assumptions to measure all financially significant features of benefit and pension programs based on open and closed plans. See detailed methodology below.

Total Compensation - Total cash compensation ***plus*** estimated annual value of the most recent long-term incentive grant (i.e., expected value of stock options or share awards) and pensions and benefits.

Detailed Benefits and Pension Methodology – Total remuneration includes the following values for benefits and pensions:

- Mercer's relative value process applies a broad set of standard cost factors, plus actuarial and demographic assumptions to measure all of the financially significant features of benefit programs on a benefit line basis.
- Effectively, this process isolates the plan design and removes variable factors such as historical experience, demographics, and utilization trends specific to each participant in the study. For example, if two survey participants have an identical benefit offering, the values will be equal regardless of the actual plan costs to each of the employers.

Aligning Values with Hydro One's Actual Costs

- For the purpose of this Total Compensation Cost Study, we adjusted the manual rates within our relative value tools so that the results by line of benefit more closely reflect Hydro One's actual benefit costs and liability figures.

Participation & Anti-Selection:

Active Flex Benefits:

- Participation: We use a standardized set of participation assumptions for all participants that vary only by the number of options that are offered under the plan. Therefore, two identical flex programs will produce similar relative Total Values.

- Anti-Selection: A unique feature of flex plans is that employees who choose richer options are likely to be higher claimers than those choosing poorer options. This is reflected within our methodology by increasing the value of the richer options and reducing the value of the poorer options. The final relative values of the flex plan are a weighted average of the values of each of the options.

- Optional plans that are fully employee-paid (such as optional life) are excluded from the review.

- Low value core plans / catastrophic core plans and spousal top-up plans are excluded from the valuation.

Projection Methodology for Pension Plans

Defined Benefit Plans

- For defined benefit plans, annual service costs were estimated for each company's plan design at various earnings levels using a common sample employee demographic (age and years of service). The annual service costs were converted into company provided values by deducting any required employee contributions under each plan. The resulting company provided values were expressed as a percentage of earnings to be applied to the earnings associated with each benchmark position.

Defined Contribution Plans

- For defined contribution benefit plans, the company provided value was set equal to the company contributions.

- Where employees are entitled to choose the level of their contributions, employees were assumed to contribute at the level that would maximize company contributions.

Projection Methodology for Post Retirement Non-Pension (PRNP)

Employee-specific factors including earnings and service are projected to each of the assumed retirement ages at which point the benefit payable is determined, actuarially valued and discounted with interest to the current age of the employee. The resulting values are split pro-rata on service into the benefit in respect of past service and the benefit in respect of future service, and the future service benefit value is converted to a level percentage of future pensionable earnings.

- The results are weighted by the assumed retirement rates and combined to produce a single value of future benefit accruals, as a percentage of future earnings, per member.
- Benefits are projected both before and after retirement based on benefit-specific (e.g. medical, dental) inflation assumptions.
- Benefits are coordinated with provincial medical and drug plans.
- Lifetime maximums are reflected where applicable.

Flex Premium Cost Sharing & Credit Allocation:

- Cost sharing is determined using each participant's actual price tag and credit formula.
- Assumptions are made as to where credits would commonly be used, unless they are allocated to specific benefits. These assumptions coordinate with the standardized participation assumptions outlined earlier.

Standard Demographic Assumptions:

- A common population reflecting the general demographics of a Canadian workforce group and adjusted to more closely mirror Hydro One's workforce is used in the analysis.
  - This population reflects a group of employees with an average age of 45, average service of 15 years, and average annual earnings of $110,000 (average earnings used for benefit purposes).
- For Pension and Post Retirement Non-Pension benefits, the above population is assumed to retiree approximately as follows:
  - 25% of the group retire at age 55
  - 60% of the group retire at age 60
  - 15% of the group retire at age 65
  - 70% of the active members are assumed to be married over their career while 90% of members are assumed to be married at the time of their retirement

Other Actuarial Assumptions:

- The following assumptions were used in the review:
  - Discount rate: 4.25% per annum
  - Inflation: 2.00% per annum
  - Salary Increase: 4.00% per annum
  - Post Retirement mortality UP 1994 generational mortality (80% male)
  - Termination rates of 2% each year prior to age 55 (for pension values)
  - Medical and Dental inflation/utilization increases

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TAB 7

Report on the Sustainability of Electricity Sector Pension Plans

to the Minister of Finance

By the Special Advisor

March 18, 2014

March 18, 2014

Hon. Charles Sousa
Minister of Finance for Ontario

Dear Minister Sousa,

I have the honour to present to you my report on the sustainability of electricity sector pension plans in Ontario.

While as the Advisor I remain solely responsible for the text of this report and its recommendations, my work greatly benefited from the information provided by officials of the Electrical Safety Authority, Hydro One, the Independent Electricity System Operator, Ontario Power Generation, Ontario Energy Board, Ontario Financing Authority and Ontario Ministry of Government Services. I also benefited from meetings and discussions with representatives of these entities as well as representatives of the Power Workers' Union and the Society of Energy Professionals. I am also very grateful for the secretariat support provided by the Ministry of Finance.

I thank the many individuals, agencies and labour unions referred to above for their willingness to meet and to address frankly, intelligently and constructively the challenging issues of electricity sector pension sustainability and affordability that fell within my mandate. And I thank you, Minister for the opportunity to serve as Special Advisor.

I wish you and your officials every success in working with all the affected parties to translate your government's commitment to sustainability into a new pension policy framework for the Ontario electricity sector.

Sincerely

Jim Leech
Special Advisor

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Chapter 1: Introduction

1.1 The Task and Process

The 2013 Budget noted that pensions are a key part of the total compensation of public-sector workers, and that many public-sector pension plans, like their private-sector counterparts, are facing sustainability challenges. In that Budget the government committed to engaging with both employer and labour representatives on the challenges facing electricity sector plans. Specifically, the government announced its intention to establish a government-led industry Working Group to address pension issues associated with the single-employer pension plans at Hydro One (H1), Ontario Power Generation (OPG), the Independent Electricity System Operator (IESO) and the Electrical Safety Authority (ESA).[1]

This Report is intended to inform and help frame the efforts of this Working Group by setting out a starting point — beginning with the current status and outlook of the plans — and providing advice on a roadmap and potential destination that is both affordable and sustainable.

The Terms of Reference for this report tasked the Special Advisor with providing advice to the government on potential changes to these plans that would result in pension plans that are affordable for employers and ratepayers, and sustainable for the members who will rely on them for their retirements. Potential changes to be examined included:

- equal cost-sharing between employers and employees for ongoing contributions;
- joint governance by employers and plan members, with joint responsibility for the sustainability of plans;
- more affordable pension benefits, such as conditional prospective benefits; and
- the potential for pooling assets of the plans.

The full text of the mandate is included as Appendix A.

The work of the Special Advisor began in January 2014 with a series of meetings and conversations with the executive leadership as well as members of the Board of Directors of the four electricity sector agencies, and elected representatives and officials of the two unions — the Power Workers Union (PWU) and the Society of Energy Professionals (Society). Both employers and employee representatives came prepared to discuss electricity sector pension policy, specific challenges facing the four pension plans and potential solutions.

[1] Other agencies, such as the Ontario Energy Board and Ontario Power Authority do not offer their own pension plan, but belong to the Public Service Pension Plan. Other employers in the sector, such as local distribution companies, generally belong to Ontario Municipal Employees Retirement System (OMERS).

Officials of the Ministry of Government Services also provided useful information on sector collective bargaining and the labour relations context. Finally, the Ontario Energy Board which is responsible for establishing "just and reasonable rates" that utilities charge ratepayers and, as part of its process, reviews compensation costs, including pension costs, provided its helpful perspective.

On behalf of the Special Advisor, the Ministry of Finance requested that OPG, H1, IESO and ESA provide baseline data on key characteristics and trends for their respective pension plans. That data helped shape the recommendations in this report. It should be acknowledged that this process was the first time there has been such a collection of data across all the companies.

In the time available for this Report, it was not possible to produce the level of detailed data analysis to permit the more extensive modelling and actuarial studies required to complete a comprehensive review of each plan.

The Report provides background on the pension landscape in Ontario, as well as in the electricity sector. The structure of the Report is as follows:

Chapter 1 briefly outlines the Special Advisor's mandate and consultation process, and reviews the current pension policy landscape in Ontario.

Chapter 2 describes the four agencies and provides information on their respective pension plans. It also identifies the pension cost impact on electricity rates and the Province's Fiscal Plan and describes the collective bargaining environment.

Chapter 3 reviews the key findings of the Special Advisor arising from consultations with affected parties and data analysis.

Chapter 4 sets out conclusions and recommendations regarding movement towards equal cost-sharing for ongoing contributions, addressing affordability of the pension plans, institutionalizing joint responsibility for the sustainability of plans through a Funding Management Policy, the potential for pooling assets of the plans and other issues.

Finally, recognizing the complexity of this undertaking, **Chapter 5** outlines a potential implementation strategy and next steps.

1.2 Pension Policy Context

Employment-based pension plans are usually established voluntarily by employers, as an employee benefit in the form of deferred wages. They are an integral component of total compensation packages and are intended to provide an important source of retirement income for employees, who are plan members, and their families. Accordingly, it is critically important that any pension plan be sustainable so that the retirement income of retirees and active members is secure.

From the perspective of employers, employment-based pensions have typically served two objectives — attracting and retaining talent and managing internal labour succession by, for example, facilitating retirement of older workers. The cost of the plans must be considered appropriate in the context of total compensation expense. It is in the interests of employers and their customers, as well as employees, that plans be affordable.

The Pension Framework in Ontario

Registered pension plans (RPPs) are a specific type of tax-assisted retirement savings arrangement. RPPs may be sponsored by employers, employer associations, or unions, to provide retirement income to employees.

Pension plans are broadly characterized as either defined benefit or defined contribution plans.

- In a defined benefit (DB) plan, the pension benefit is determined by a formula, usually based on years of service and/or earnings (e.g., a percentage of average annual salary multiplied by years of service). Under the Ontario *Pension Benefits Act* (PBA), benefits accrued under defined benefit plans cannot be reduced.
- In a defined contribution (DC) plan, the pension benefit depends on the value of accumulated contributions made by and/or on behalf of the member, the returns earned on those funds and interest rates at the time of retirement.
- There are also hybrid plans which offer elements of both defined benefit and defined contribution plans.

Plans can either be 'contributory' (both employees and employers contribute) or 'non-contributory' (only employers contribute). Most public sector plans, including those in the four agencies in the electricity sector, are contributory defined benefit plans.

The Ontario Expert Commission on Pensions in its 2008 Report to the Minister of Finance observed that it is widely accepted that DB plans deliver better financial outcomes for retirees than DC plans, though they are likely to cost sponsors more.[2] In particular, the Report indicated that:

> "Moreover, because workers can predict what a DB pension will yield with relative accuracy, they can plan for their own retirement with greater certainty that they will not experience a dramatic decline in their living standards. And because these pensions are sometimes (not always) linked with other features (more aggressive investment strategies; partial or ad hoc indexing to mitigate the effects of inflation; additional non-pension benefits, such as extended health care coverage), DB plans have tended to be especially popular with workers. Finally, several types of DB plans, such as multi-employer plans and jointly sponsored plans, offer members and their union or other association a role in plan governance."

Pension plans in Ontario can be classified either as single-employer or multi-employer.

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2 Inherently, a DB plan is the more cost effective pension model as it provides the opportunity to pool investment and longevity risks. However, employers and employees can underestimate the cost of the benefits promised which leads to large unforeseen cost increases.

Single-Employer Pension Plans (SEPPs):

SEPPs are composed of members that work for the same employer or group of affiliated employers. These plans can be defined benefit or defined contribution, or a combination of both.

- While these plans can be either contributory or non-contributory, the employer is typically the sole sponsor. With respect to DB plans, employers as sole sponsor are responsible for financing any funding shortfall, as required by the PBA.
- All plans within the four electricity agencies are SEPPs. While employees contribute to their pension, the employers are responsible for ensuring that the plans are fully funded, and bear all funding risks.

Multi-Employer Pension Plans (MEPPs):

MEPPs are composed of members that work for any of two or more non-affiliated employers. These plans can be DB, DC or a combination of both.

- These plans are most commonly established by trade unions, and provide pension mobility for employees who change employers within the same industry (e.g., in the construction trades).
- MEPPs may be "target benefit" plans: Where employer contributions are not enough to cover pension benefits, the PBA allows that accrued benefits as well as future benefits may be reduced, if the terms of the plan permit.

The 2013 Ontario Budget confirmed that the government will be moving ahead on regulatory changes to formalize the PBA framework pertaining to target benefits in MEPPs and announced the intention to develop a framework for single-employer target benefit plans.

MEPPs may have a single-sponsor (a group of employers) or be jointly sponsored.

Jointly Sponsored Pension Plans (JSPPs):

JSPPs are DB plans that may be SEPPs or MEPPs. The governance structure of JSPPs is fundamentally different from single-sponsor plans:

- Decision making on plan administration is shared and any plan changes must be agreed by the sponsors jointly.
- Contributions are shared by plan members and their employers, making the plans "cost-shared".
- Funding shortfalls are a joint obligation of both employees and employers, making the plans "risk-shared".

In addition, these plans allow for the reduction of accrued benefits in the event of the wind-up of a plan.

Some PWU and Society-represented employees at certain local distribution companies in the electricity sector are members of Ontario Municipal Employees Retirement System (OMERS), which is a JSPP.

Funding Issues for Ontario's Public Sector Pension Plans

Both employer sponsored and jointly sponsored public sector pension plans, like their private-sector counterparts, are facing sustainability and affordability challenges.

The Commission on the Reform of Ontario's Public Services highlighted the fiscal pressures arising from public sector pension expense and recommended measures to contain costs and improve the sustainability of public-sector SEPPs.

The government has responded to these issues by addressing funding pressure in JSPPs and SEPPs.

Funding Overview

The financial health of a DB pension plan is determined by funding valuations governed by the PBA. Pension plans are required by the PBA to set aside sufficient funds to finance the benefits that will be paid out in the future. There are two types of funding valuations for defined benefit plans used to determine if a pension plan is funded sufficiently: the going concern valuation and the solvency valuation. These tests compare assets to liabilities:

- The solvency valuation assumes the plan winds up, with deficiencies paid back over five years.
- Going concern valuation assumes the plan continues indefinitely, with deficiencies paid back over 15 years.

Investment returns and long-term interest rates are the major drivers of a plan's funded status. Persistently low long-term interest rates have created pressure to increase contributions — lower rates increase the present value of future pension obligations and reduce the funded status of the plan.

JSPP Plan Changes

Most of Ontario's largest public-sector plans are JSPPs, four of which are consolidated in the Province's financial statements: Colleges of Applied Arts and Technology Pension Plan, Healthcare of Ontario Pension Plan, Ontario Public Service Employees Union Pension Plan, and Ontario Teachers' Pension Plan.

The 2012 Budget noted that contribution rates for many JSPPs had risen significantly as a result of funding challenges such as market volatility and continued low interest rates. After extensive engagement, the government reached agreements with the sponsors of the four consolidated JSPPs to freeze employer contribution rates for a period of five years in order to provide funding stability. For example, the sponsors of the Teachers' plan agreed to cap contributions at a maximum of 13.1 per cent and the sponsors of the Colleges plan agreed to a cap of 14.8 per cent. With contribution caps in place, should a funding shortfall occur during the freeze period (December 31, 2012 to December 30, 2017), the plan sponsors (which includes employees), agreed to reduce future pension benefits, to a limit.

Solvency Funding Relief for Public Sector SEPPs

Since May 2011, the government has made temporary relief from solvency funding requirements available to eligible public sector SEPPs. In exchange for relief, these SEPPs are expected to negotiate plan changes with employees that improve sustainability and affordability over the long term.

The government's temporary solvency funding relief regime for public-sector SEPPs has been successful. Since the announcement of the program in 2010, a total of 25 plans have been accepted for stage 1 relief (19 are in the university sector); this has reduced the solvency payment requirements of these plans by a total of more than $700 million as of the end of 2013, thereby protecting jobs and programs. Almost all university pension plans registered in the program have negotiated increases in member contribution rates and/or reductions in future benefits; at least 12 are now either at or close to 50/50 cost sharing for ongoing contributions between employees and employers.

The ESA, IESO and OPG each applied to the government for relief through the public sector temporary solvency funding relief program. While each of these plans met the eligibility criteria, the government deferred the decision on their applications, pending the outcome of the Working Group announced in the 2013 Budget, and the parties' progress in advancing a sustainable framework. The appointment of a Special Advisor is an important first step in this change process; recommendations regarding the public sector temporary solvency funding relief program and its application to the three electricity sector plans are further discussed later in this Report.

Removing Barriers to Creating JSPPs in the Electricity Sector

The government took an important step as part of its commitment to addressing challenges with respect to electricity sector pension through Bill 65, the *Prosperous and Fair Ontario Act (Budget Measures) 2013*. The legislation amended the *Electricity Act* to remove a number of statutory barriers to the possible future merger of the electricity sector pension plans and to the creation of JSPPs in the sector. Bill 65 received Royal Assent on June 13th, 2013. The provisions have not yet been proclaimed in force.

The amendments will enable the parties to form a JSPP if they jointly agree to do so.

Chapter 2: Electricity Sector Plans and Context

2.1 Agencies' Corporate Profiles and Pension Information

The four pension plans that are the subject of this report were initially formed as part of the former Ontario Hydro pension plan and were constituted as separate plans as of 2000. Since that time, the successor plans have changed and each now has different contribution rates and benefits. Examined together, as of 2012, the four successor plans have about 18,000 active members combined and about 19,000 retired and deferred members combined (See Table 1 in Appendix B for additional demographic details). Overall, this represents a mature and maturing pension plan; however, there are significant demographic differences among the individual plans.

Similar to other pension plans, these plans have experienced significant market volatility since 2008. All four plans have had going concern funding deficits recently and have been required to make substantial special payments toward these deficiencies.

In 2012, total contributions from all sources to the four plans were approximately $585 million.[3] Table 2 in Appendix B sets out the various types of payments flowing into the plans. Of the $585 million, just over $100 million was contributed from employees. The approximately $480 million in funding from the companies consisted of current pension expense payments ($365 million), and special payments required under the *Pension Benefits Act* (PBA) for deficits ($115 million).

All elements of the sector pension plans, including employee contribution rates and benefit levels, are negotiated through collective bargaining. Through this process, relatively generous pension benefits have been negotiated. The plans' benefit provisions include:

- unreduced early retirement (as low as factor 82)[4] with bridge benefits;[5]
- the maximum survivor benefits permitted under the *Income Tax Act*; and
- a rich benefit formula based on average salary recognition using an employee's best three years plus, in some cases, bonuses up to a certain percentage.

Chart 1 breaks down the costs of the benefits under the OPG pension plan — the other three plans have a similar cost distribution. It shows the costs for the different pension plan benefits, as a proportion of pensionable salary but does not include the cost of funding any plan deficit through special or voluntary payments. The chart clearly demonstrates that ancillary benefits (indexation, bridge benefits and early retirement subsidy) are a significant portion of the overall pension cost — in fact the base pension represents less than 52 per cent of the total pension cost.

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3 Excludes voluntary employer contributions.

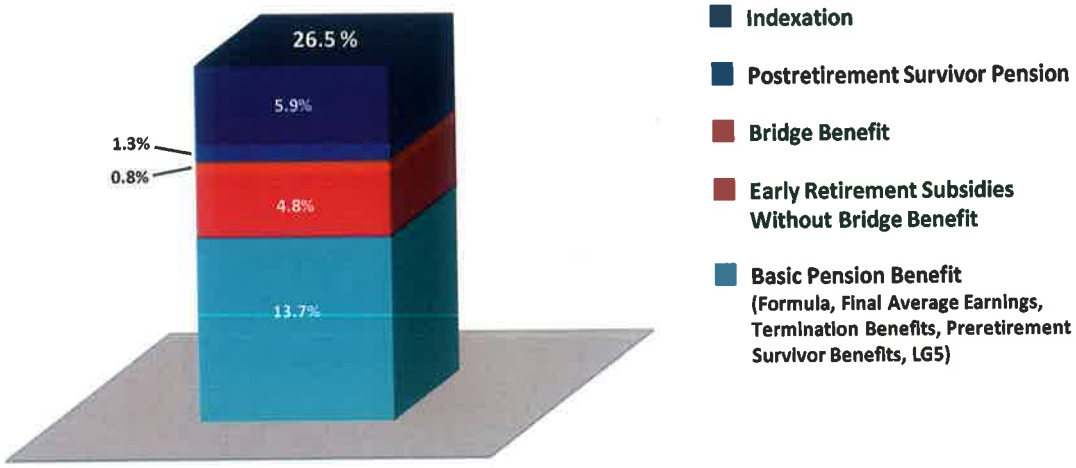
4 The retirement factor for any given pension plan is the total of the plan member's age and years of service. In this case, when the total is 82 or more, the person is eligible for an unreduced pension.

5 A bridge benefit provides additional pension income until age 65, when CPP and OAS payments begin.

Breakdown of Total Current Service Cost
as of January 1, 2013 by Benefit Component

Chart 1

Percentage of Pensionable Salary



Note: Actuarial assumptions provided in document summarizing January 1, 2013 valuation results.

Table 3 in Appendix B compares these benefits with other public sector plans and other energy companies. Compared to other public-sector pension plans, the DB plans in the electricity agencies are generous, expensive and inflexible.[6] They generally require lower contributions from employees, while providing substantial benefits. Furthermore, electricity sector employers are responsible for a larger share of pension contributions compared to most other public-sector employers. In addition, as single-employer pension plans (SEPPs), the employers bear all risks, such as investment performance, interest rate changes and increased longevity. These risks increase both the amount and the volatility of pension costs, which is ultimately borne by ratepayers, customers and the shareholder.

In addition to the registered pension plans, the four companies provide Supplementary Pension Plans (SPP), which provide additional benefits to employees whose income exceeds federal *Income Tax Act* limits for pension contributions. These plans are non-contributory, and not pre-funded (i.e., benefits are paid from the individual company's general revenue, including regulated revenues). In 2013, the cumulative unfunded SPP liability on the balance sheets of the four agencies was approximately $490 million.

6 In recent years, several public sector pension plans have introduced flexibility by adjusting benefits to control costs. For instance, both the Ontario Teachers' Pension Plan and the Healthcare of Ontario Pension Plan have adopted variations of conditional inflation protection for future service.

Individual Agency Summaries

1. The Electrical Safety Authority (ESA)

The ESA began operations in 1999 with the mandate to enhance public electrical safety in Ontario. It is an administrative authority acting on behalf of the Government of Ontario with specific responsibilities for electrical safety. The agency operates as a stand-alone, financially self-sustaining not-for-profit corporation accountable to a Board of Directors and operating as an Administrative Authority under the Electricity Act 1998 and under an Administrative Agreement with the Ministry of Consumer Services.

Consistent with its mandate, ESA administers regulation in four areas: the Ontario Electrical Safety Code; licensing of electrical contractors and master electricians; electricity distribution system safety; and electrical product safety.

Unlike the other three agencies, ESA costs are not passed on to ratepayers directly. Its costs are included in fees charged to contractors requiring electrical inspections, or when license fees are imposed on customers of local distributors or contractors.

Funding for the ESA comes from fees paid for safety oversight, safety services, and licensing. The ESA has revenues of approximately $100 million. The vast amount of this revenue is recovered as fees for its services as an inspector and licensing agent.

As a not-for-profit, this revenue must match its expenses. In fiscal year 2013, total accounting pension expense for the ESA was over 10 per cent of total revenue. Due primarily to the low interest rate environment and the increasing longevity of its pension beneficiaries, the ESA has absorbed a 155 per cent increase in annual pension costs into its operating budgets over the last three years.

Due to the relatively large pension expenses, as a proportion of revenue, small swings in pension assumptions can have significant effects on the bottom line of the agency. Unlike the other three companies, this volatility is difficult to manage because there is no ability to reconcile actual pension expense against expected expenses when billing customers.

The ESA pension assets have a value of approximately $200 million. It has about 450 active members in the plan and about 260 retirees. The demographic profile of the pension plan is expected to remain relatively stable in the future. Given the pension plan's small size, it cannot achieve efficient asset management.

The PWU represents most ESA employees, including its inspection force. While it offers generous early retirement options, most employees start work at the ESA later in their careers, meaning that retirement is often delayed beyond the age of initial eligibility.

2. Hydro One (H1)

H1 is the largest electricity transmission and distribution company in Ontario, with assets of $21.6 billion. It owns and operates 97 per cent of Ontario's electricity transmission system as well as many rural and small town distribution systems in Ontario. All electricity ratepayers contribute to the cost of H1 pension contributions through transmission rates. Its distribution customers also pay an additional amount representing the cost of H1 pensions attributable to distribution workers.

H1 is wholly owned by the Province of Ontario, and its transmission and distribution businesses are regulated by the Ontario Energy Board (OEB). It operates as a commercial enterprise with an independent Board of Directors.

Its pension plan has approximately $5 billion of assets. H1 has the oldest demographic profile in the sector: 5,600 active members compared to 7,000 retired members, or 1.25 retirees for every employee. However, many of H1 retirees were originally retirees of the former Ontario Hydro. As such, it is expected that the H1 plan will move to a more balanced ratio between active members and retirees in the future.

Of all the plans, H1 is in the best financial condition. It was able to generate significant returns in 2013. However, it should be noted that it continues to face funding pressure from continued low interest rates. In addition, due to updated actuarial standards, changes will be required to the mortality assumptions underlying the plan which will contribute to further funding pressures.

3. The Independent Electricity System Operator (IESO)

IESO balances the supply and demand for electricity in Ontario and then directs its flow across the province's transmission lines.

IESO connects all participants — generators that produce electricity, transmitters that send it across the province, retailers that buy and sell it, industries and businesses that use it in large quantities and local distribution companies that deliver it to people's homes.

The IESO is a not-for-profit corporate entity established in 1998 by the Electricity Act of Ontario. It is governed by an independent Board, whose Chair and Directors are appointed by the Government of Ontario. Its fees are set by the Ontario Energy Board and are passed on to ratepayers through regulatory charges.

The IESO pension plan has approximately $300 million in assets, with about 440 active members and about 290 retirees. It has a relatively stable demographic profile. The majority of its employees are represented by the Society. As a small plan, it too cannot achieve efficient asset management.

4. Ontario Power Generation (OPG)

OPG is an electricity generation company whose principal business is the generation and sale of electricity in Ontario. Its focus is on the efficient generation and sale of electricity from its generating assets. OPG was established under the *Business Corporations Act* (Ontario) and is wholly owned by the Province of Ontario which appoints its independent Board of Directors. OPG provides a large portion of base-load electricity generation in Ontario through its nuclear and large hydroelectric generation assets; the price of electricity generated by those assets is regulated by the Ontario Energy Board. As such, all ratepayers are responsible for OPG's pension contributions.

Its pension plan has approximately $10.3 billion of assets. The pension plan currently has approximately 11,200 active members and 10,300 retirees.

OPG is a mature company operating mature assets. Over the last decade, its share of the market has declined as new sources of electricity have been developed. As a result, OPG has been shrinking its workforce through attrition. According to Ontario's 2013 Long Term Energy Plan, OPG's market share will continue to decrease, as the Plan includes the closure of the Pickering station, and defers the building of any new nuclear generating facilities. If this continues to be the case, OPG will see further dramatic shifts in its work force and, consequently, changes to the pension plan.

According to 2013 Annual Report by the Auditor General on Ontario:

> "...the number of staff needed to operate, maintain and support its business activities is expected to drop significantly from 2013 to 2025—by close to 50%. As a result, OPG will need only about 5,400–7,000 staff by 2025."

It should also be noted that OPG sets aside and invests funds specifically for discharging its nuclear waste management liabilities. In accordance with the Ontario Nuclear Funds Agreement between OPG and the Province, OPG established and jointly oversees the investment management of two Nuclear Funds with the Province — a Decommissioning Segregated Fund and a Used Fuel Segregated Fund. Although these Nuclear Funds are not related to the OPG pension plan and thus not the subject of this Report, if they were pooled with the OPG pension assets, the total market value of investments under administration would be approximately $23 billion (based on estimates as of December 31, 2012). This represents a potential opportunity for greater efficiency of asset management.

2.2 Pension Cost Impact

This section describes electricity rate setting process and identifies the impact of pension costs on electricity rates and Ontario's Fiscal Plan.

Electricity Rate Setting Process

Rates for transmission, distribution and OPG's regulated generation assets are set by the Ontario Energy Board (OEB).

One of the OEB's principal functions is to set "just and reasonable rates" that utilities may collect from ratepayers for utility services. The Board sets rates using a quasi-judicial process that requires utilities to present evidence to justify any proposed rate increases through an open and transparent public hearing.

The OEB's current rate-setting process establishes base rates for each distribution utility through a comprehensive review of the utility's costs as detailed in its rate application. This review typically occurs every four years for electricity distributors. In the intervening years, the Board provides for inflationary increases adjusted by a productivity measure.

For transmission and distribution rates, H1 submits applications to the OEB presenting its forecast revenue requirements to recover allowable costs, including operating costs, such as pension expenses, and the cost of capital (depreciation, debt costs, and an allowable return on equity, based on its deemed capital structure). OPG submits applications presenting its forecast revenue requirements for costs related to its regulated generation facilities (nuclear, large hydro, and, prospectively, other smaller hydro facilities).

The OEB assesses the prudence of the submitted costs and makes a determination on costs ("revenue requirements") that are allowable for inclusion in transmission and distribution rates for H1 and in electricity rates for OPG's regulated generation facilities.

Based on approved revenue requirements, the OEB sets transmission and distribution rates, and rates for OPG's regulated generation such that the revenue requirements are expected to be collected over the rate-setting period.

Where actual costs differ from forecast costs and are deemed outside the control of the regulated electricity companies (such as pension costs), the OEB may allow variance accounts to be established. These accounts track the difference between projected costs in approved regulated rates and actual costs; these cost differences can be considered for recovery in future rate hearings. Pension costs can create challenges for the regulator, in situations where the costs in the variance accounts are approved for recovery at a later date but turn out to be much higher than predicted.

In the case of the IESO, the OEB approves the annual business plan and converts the revenue required to operate the IESO to a fixed charge on electricity consumption. The IESO can adjust any under- or over-recovery of revenue the following year.

The OEB does not regulate the ESA and is not involved in its pricing.

The OEB will often set out a policy framework to guide applicants and interveners as to how certain costs will be examined and allocated through the rate-setting process. To date, the OEB has not established such a policy with respect to the treatment of pension costs. However, the Board has raised concerns about high compensation levels in general at OPG, and the impact on rates. In particular, it stated that "The Board remains concerned about compensation costs, ... and would be assisted by a comprehensive benchmarking study comparing OPG's total compensation with broadly comparable organizations." (EB-2010-0008: Decision with Reasons for OPG Payment Amounts Application, page 88).

Impact of Pension Costs on Electricity Rates

Pension costs are reflected in the price that H1, IESO and OPG charge for their services. As noted earlier, all transmission grid connected ratepayers in Ontario pay for H1 transmission, IESO operations and OPG generation. In addition, H1's 1.25 million distribution customers must also pay the pension costs for H1 distribution.

Pension costs represent a significant risk to prices. It is difficult to predict pension expense as market returns shift, low interest rates continue, and mortality assumptions change. This volatility represents a price risk for customers.

There is also a fiscal risk to the Province to the extent that pension costs are not fully recovered in rates, or deviate from forecasts without a variance account with an OEB-approved recovery. Pension costs not recovered through electricity rates would reduce net income and payments-in-lieu of taxes paid by OPG and H1 to the Ontario Electricity Financial Corporation (OEFC), which is consolidated in the Province's financial statements.

2.3 Collective Bargaining Environment

Generally, employees and employers are able to negotiate a compensation package that can include tradeoffs between current and future compensation, where pensions represent future payments. In the electricity sector, it is not obvious that such tradeoffs have been realized: the pensions are generous, in comparison to comparators; and, according to the companies, current compensation is also at least equivalent to, or better than, other employers.

Bargaining Pensions

As noted earlier, all elements of the pension plans at these companies are determined in collective bargaining. Notwithstanding the fact that the employers are the plan sponsors and bear all of the risks, the collective agreements contain language providing that terms can only be altered with the consent of both parties.

Historically, pensions have been a key subject of negotiations at the bargaining table. Both the PWU and the Society maintain that over the years they have made concessions on some elements of current compensation in return for pension plan improvements, and that the total compensation package must be considered at the negotiating table. They were very clear in discussions with the Special Advisor that government should respect the collective bargaining process and that pensions should remain part of the collective bargaining process.

Collective bargaining in this sector is decentralized — it takes place on an employer-by-employer and union-by-union basis. The four employers do not coordinate their bargaining activity or mandates. However, outcomes at one table directly influence outcomes at the others.

Collective Bargaining Background

Collective bargaining in the electricity sector is governed by the *Labour Relations Act, 1995* (LRA). There is no provincial essential services statute covering employees.

In general, the parties are free to strike or lockout, although the Society has agreed to interest arbitration in place of the right to strike other than at H1. The Society is covered by voluntary recognition agreements (VRA) which prohibit a strike/lock-out so long as the VRA remains in effect.

The PWU has two classes of employees that are covered under an essential services protocol negotiated by the parties. There is no requirement under the collective agreement to negotiate such a protocol, but it was done voluntarily when the parties negotiated work conditions specific to those classes.

The binding interest arbitration framework negotiated by the Society and electricity employers is a non-statutory regime. The framework is contained in VRAs/collective agreements which originated with Ontario Hydro and have been modified over subsequent bargaining rounds.

The binding interest arbitration is conducted by a sole mediator-arbitrator. Monetary issues must be determined through consideration of criteria:

a) balanced assessment of internal relativities, general economic conditions, external relativities;

b) employer need to retain, motivate and recruit qualified staff;

c) the cost of changes and their impact on total compensation; and

d) the financial soundness of the employer and its ability to pay.

Pensions are normally considered part of the compensation package by interest arbitrators. Whether money is given as salary or as an employer pension contribution, it is part of the total compensation package. A request to shift the pension obligation from the employer to the employee is likely to be seen by arbitrators as a form of compensation reduction unless it is offset by an increase in wages. In addition, arbitrators tend to direct parties to resolve significant pension-related decisions through subsequent rounds of bargaining and have not made significant changes to pension plan design.

Recent Collective Bargaining Outcomes

As of August 2013, all collective agreements in the sector had been settled either through the negotiation process or interest arbitration.

In the case of collective bargaining process at H1, modest incremental increases to employee pension contributions were negotiated with both PWU and the Society. The negotiated changes would shift the ratio of employer-employee contributions from about 80:20 to 73:27.

In the cases of ESA and IESO, the agencies negotiated modest incremental increases of employee pension contributions with the Society and PWU respectively.

No changes were made to the employee contribution as a result of collective bargaining or the interest arbitration process at OPG.

Electricity Sector Bargaining in Other Jurisdictions

The relatively high value of total compensation generally in the Ontario electricity sector and these pensions specifically, is demonstrated by comparing their recent agreements to other companies operating in similar circumstances across Canada.

New Brunswick Power

- Since 2010, negotiations have resulted in zero per cent wage increases in large collective agreements; in addition, the company instituted a two-year wage freeze on non-union positions, eliminated 300 full-time positions, eliminated executive bonuses and reduced the number of vice-president positions.

Hydro-Québec

- Collective bargaining with Canadian Union of Public Employees (CUPE) coalition was completed in December 2013. These agreements included:
  - a wage freeze for 2014 and 2015;
  - wage increases of 3 per cent in 2016, 2.75 per cent in 2017 and 2.5 per cent in 2018;
  - the establishment of 50/50 pension cost-sharing formula; and
  - the elimination of the profit-sharing plan in 2014 and partial integration of bonuses into wage rates.
- The collective agreement with the engineers' union previously negotiated reflects the same terms.

Chapter 3: Key Findings from Meetings with Stakeholders and Data Analysis

3.1 Pension Benefits are Generous and Costly

Benefits in these four plans are quite similar and they are very close to the maximum benefits allowed under the *Income Tax Act*.

In general, benefits in these plans are richer than most of the Broader Public Service (BPS) plans and employee contributions are also lower than BPS plans in general. As noted earlier, features of certain plans include:

- maximum benefit accrual rates, at 2 per cent per year of service;
- retirement calculation based on best 3 years' average salary,
- early unreduced retirement based on factor 82;
- CPP bridging benefit formula;
- fully guaranteed indexing; and
- maximum joint and survivor benefits.

Employee contributions for plan members are generally in the range of 6 to 7 per cent of salary;[7] recently there have been some negotiated increases in employee contributions towards 7.75 per cent. This can be compared to Toronto Hydro and other local distribution companies in the municipal sector that are part of OMERS, which offers less generous benefits whereas employee contributions are currently over 14 per cent of salary.[8]

As a result of generous benefits and larger employer contributions these plans are expensive. As noted earlier, employers bear the majority of costs. Based on the most recent valuation reports filed with the pension regulator, the Financial Services Commission of Ontario (FSCO), the employer current service cost represents approximately 18 per cent of payroll for OPG and 19 per cent of payroll for H1. With special payments, employer contributions represent approximately 24 per cent and 27 per cent of payroll respectively. They are also close to 24 per cent for both IESO and ESA. (See Table 4 in Appendix B for further details).

3.2 Affordability and Risks: Analysis of Pension Plan Value by Benefit Component

As noted, these plans are relatively expensive, and relatively mature. As such, the accrued benefits of existing retirees combined with those already earned by active employees represent the significant portion of the overall liability for the plans. Only the relatively small future liability that is accrued each year is subject to change.

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7 Management members of the pension plan pay, on average, more than unionized staff. Rates vary from 7 per cent at OPG to 10.2 per cent at the ESA.

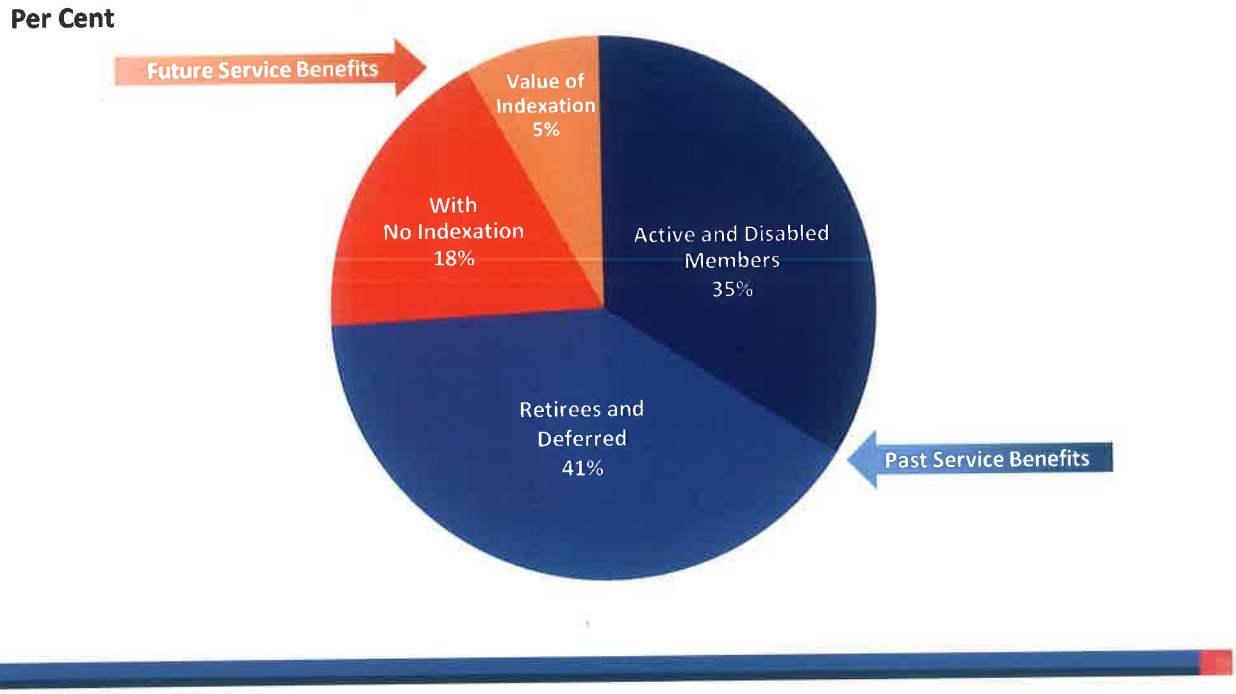
8 All contribution rates in this paragraph are applicable to earnings above the yearly maximum pensionable earnings under the CPP.

The following pie chart demonstrates the value of the past and future benefits in percentage terms for the four electricity sector pension plans.

Cost Value of Past and Future Service Benefits

Chart 2

for the Four Electricity Sector Pension Plans



No single change to the plans would make them sustainable over time. Multiple levers are required: indexation, bridge benefits and early retirement subsidies are each expensive elements of the plans that need to be addressed. For example, turning inflation indexing "on or off" based on the financial health of the plan is an effective and easy way to cushion the impact of market volatility and low interest rates for all members. Adjusting the early retirement subsidy and CPP bridge "on or off" is more difficult to accomplish while maintaining equity across generations; nevertheless as shown on the next page, the early retirement subsidy and CPP bridge are costly and set up inequities amongst members.

It is not clear that, in the dynamics of collective bargaining at these agencies, such plan design changes can be made to affect future benefits. However, for these plans to be sustainable in the long term, future benefits must be part of negotiated changes. Subsidized early retirement, CPP bridge and fully guaranteed indexation represent significant costs for these plans. Without the option to adjust future benefits, plans have little ability to manage future funding.

Flexibility to reduce benefits on a temporary basis in the future, if needed, should be built into the plans now so that the adverse effects of volatile markets and increased longevity can be managed. It is important that the parties understand and agree on what could be changed in those eventualities.

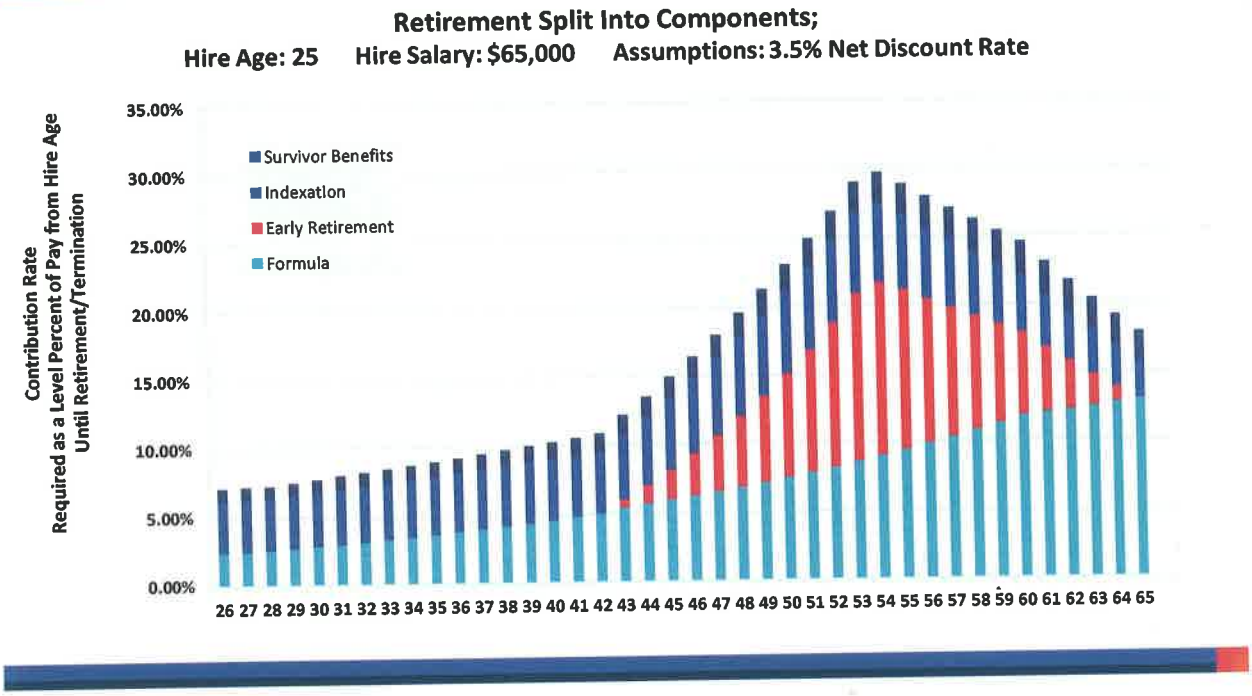
The cost of a pension is based on the value of its various elements. It is possible to break these costs out for different employees, using various assumptions, to demonstrate the cost drivers of the pension plans. It is changing these elements that can change the future service benefits, and make a plan sustainable.

Chart 3 below is an example of the differing costs of a pension plan, as a percentage of payroll.[9] It shows that for an individual who starts employment with an electricity sector company at age 25 and retires at age 54 (factor 82), it will require a contribution rate of almost 30 per cent of salary for his entire working life to cover all benefits. However, if that same individual works until 63, the cost will be approximately 20 per cent, due to a lower subsidy for early retirement and reduced costs for future indexation, partially offset by a larger base pension. As this Chart clearly illustrates, longer working employees are subsidizing those who choose to retire early which is inherently unfair.

Electricity Sector Pension Plan

Chart 3

Total Equivalent Contribution Required from Hire Age to Termination



[9] The calculations assume a male participant and are based on certain actuarial assumptions outlined below (which are similar to the assumptions used for the actuarial valuations of the electricity sector pension plans). The pension plan provisions valued are the legacy provisions that include the pension formula with three-year average earnings, bridge benefits, unreduced early retirement at 82 points or age 60 and 25 years of service, 66-2/3% survivor pension and 100% of CPI indexation. Actuarial Assumptions:

Increase on CPI:	2.00% per year	Nominal Interest Rate:	5.50% per year
Increase in YMPE:	2.75% per year	Real Interest Rate:	3.50% per year
Increase in Salaries:	3.75% per year	Termination Rates:	None
Spouse:	4 years young	Mortality Rates:	CPM-RPP2014 Priv With CPM-A Improvement Scale

3.3 The Plans are Far from Sustainable

As demonstrated by Chart 2, approximately 75 per cent of pension plan benefits' liabilities have accrued and cannot be changed under the *PBA*. With employer contributions already at high levels, none of the plans have the ability to absorb further market fluctuations, investment performance significantly below actuarial assumptions or the costs associated with increased longevity of its members. Should plans go further into deficit, the sponsors, and ultimately ratepayers, will be required to pay even larger contributions. This exposes the plans to volatility.

Employer contribution rates have been volatile with large increases in special payments in the period since the 2008 economic downturn. As described earlier, this volatility increases the potential impact on regulated electricity rates. With stronger 2013 investment returns and higher long-term interest rates (as reflected in the plans' discount rate), deficits in all plans are decreasing. This may create a sense of complacency — "if we just wait, the problem will go away". However, the plans are far from sustainable: they have a high total cost, volatile/unpredictable contribution rates, have yet to incorporate new actuarial mortality assumptions[10] and no flexibility to absorb the effect of future adverse events.

It is critical that the plans build flexibility into their structure so that they are able to accommodate shocks in the future. Because so much of the pension liability is already accrued, and changes can only affect future service, benefit changes that provide flexibility must be adopted sooner rather than later to have a meaningful impact.

3.4 More Pension Data Transparency and Information Sharing is Needed

Indications are that, in recent years, there has been increased pension information and data sharing and discussions of pension issues between the companies and unions, companies and employees, and unions and members. This is a change from past practice of pension information being withheld by employers, and is a positive development.

There has also been movement to institutionalize or regularize such arrangements through the collective bargaining process. For example, under the most recent collective agreement between the IESO and the PWU, parties have agreed to establish a new joint committee to discuss pension plan sustainability. The Forecasts and Assessments Standing Committee (FASC) is set to meet annually to discuss plan administration, funding and performance.

Similarly, ESA, H1 and OPG meet regularly with the unions to discuss pension plan information and data.

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[10] For example, the Canadian Institute of Actuaries (CIA) has recently issued the first-ever mortality tables and mortality improvement scales that are based on Canadian pensioner mortality experience. In prior years, many Canadian pension actuaries have used the U.S. standard tables published in 1994 to derive their assumptions. According to the CIA, the financial impact of adopting the new Canadian tables may vary considerably between pension plans. Reported pension obligations could increase by as much as 7 per cent or more for some plans but, more typically, increases may be in the range of 3 to 4 percent. Some larger Canadian pension plans, such as OPG, have determined mortality assumptions from their own experience.

Engagement of the plan actuaries in the process has contributed to the agreement of the parties on the projections and assumptions underlying the plan, and a better understanding of the challenges associated with the generous level of the current benefits and the plans' exposure to risk.

It is also important to note that pension issues are high priority items on the respective Boards' agendas. Board members emphasized in meetings with the Special Advisor an understanding of the importance of ensuring that the pension plans are both affordable and sustainable, and are actively devoting time and resources to developing potential solutions.

3.5 Shared Recognition of Pension Challenges

Both employers and unions agree on the need for change. In particular, all parties:

- Support a sustainable and affordable DB pension plan model. Differences arise, however, around the definition of what comprises "sustainable and affordable".
- Recognize that current benefits are generous and expensive, and that the public perceives electricity sector pensions as even more generous compared to other public sector pensions.
- Recognize that the pension plans' demographic profiles are mature and in most cases maturing over the near future.
- Recognize that the status-quo is not an option.
- Share concern that some "solution" could be imposed and have a desire to be architects of any fundamental changes.
- Are ready to engage in discussions and development of solutions through a government-led Working Group.

This shared recognition of key pension challenges in the sector provides valuable impetus for the efforts of a Working Group.

With respect to the collective bargaining context, the position of both unions is clear: existing pensions are a product of the collective bargaining process and any changes to the plans should be made through that process. They further argue that the existing agreements are protected by the Canadian Charter of Rights and Freedoms.[11]

3.6 Perspectives on Potential Solutions

Movement towards equal-cost-sharing:

The companies' focus has been on achieving improved sustainability and affordability by moving to 50/50 cost sharing. Unions generally support negotiating over time toward 50/50 cost sharing, with appropriate negotiated offsets, through collective bargaining; unfortunately, this only exacerbates the pension plan's funding challenge.

[11] It is important to note that the case law in this area is developing.

Moving to a 50/50 contribution ratio will help to:

- Address the public concern over the impact of the employer contributions to these generous pension plans on electricity rates.
- Address affordability for ratepayers by increasing the contributions for employees, without a compensating offset to salaries. However, if the plans are not fully funded, employers will still be responsible for future special payments. This creates risk for ratepayers.
- Introduce more incentive for the parties to negotiate lower future benefits if necessary, as employers and employees are both paying a significant portion of the costs of benefits.

However, movement towards 50/50, while helpful in addressing affordability issues, is not sufficient to address the sustainability challenges. Changing the ratio of contributions from employers to employees does not necessarily provide any additional funds to the pension plans — increasing the total contributions to the pension plans by increasing employee contributions and holding steady employer rates would push the total funding for pensions beyond acceptable levels.

The data shows that funding levels of the plans remain unchanged or in some cases are improving as a result of strong 2013 returns; however, they are still fragile with little room to absorb further funding pressures due to the high level of employer contributions.

Joint Governance and the Collective Bargaining Process:

The companies respect the collective bargaining process and have tried to use the process to achieve needed changes to pension plans.

However, the collective bargaining process is not designed for working through complex, technical pension issues that tend to require both long-term timeframes for their resolution and short-term flexibility to deal with economic downturns.

This observation is echoed in the report of the Ontario Expert Commission on Pensions led by Dr. Harry Arthurs which found that:

> "...the adversarial, one-minute-to-midnight atmosphere of collective negotiations is sub-optimal for working through complex, technical pension issues that often require lengthy horizons for their resolutions. Indeed as some stakeholders reported — pension decisions taken at the bargaining table are sometimes made with little or no information about the plan. Moreover, the plan itself is not represented in the negotiations, so there is a risk that pension concerns may be set aside by the principal parties if seen as impeding the settlement of more immediate, comprehensible and controversial issues."
>
> *Report of the Expert Commission on Pensions, page 157, 2008.*

The companies favour potential conversion to a JSPP. However, they differ in their preference for a sector-wide multi-employer JSPP or a single-employer JSPP model. While joint-sponsorship involving a single union, rather than both unions, would simplify governance from the union perspective, it is considered to be complex from the employers' perspectives.

Unions differ in their preference or readiness to explore the idea of one multi-employer JSPP or two union-specific JSPPs. Regardless, they still would like to retain collective bargaining as the vehicle to influence pension plan features.

Both employer and union representatives noted that merging the four plans into a single multi-employer JSPP would be difficult given the differences between the current plans in terms of:

- demographic profiles of membership;
- the mandates and regulatory frameworks governing the agencies;
- union membership; and
- contribution rates and plan benefits.[12]

Questions were also raised regarding responsibility for past and future liabilities, and the potentially high costs associated with converting from a single sponsor to joint sponsorship.

Clearly, a sector-wide JSPP — about fourteen years after the original Ontario Hydro plans were divided — would be a difficult and lengthy negotiation. It would also create complexity if further changes in the structure of the sector are contemplated.

Pooled Asset Management

Further to the 2013 Budget announcement, the government has established a technical working group with expertise in design, governance and transition issues related to implementing a new pooled asset management entity for public-sector SEPPs. Officials from OPG and H1, with expertise in asset management, participate in the working group deliberations. The working group's advice will assist the government in determining how to move forward with implementation in 2014.

This initiative follows up on the 2012 announcement of the government's intention to introduce an asset pooling framework for public-sector pension plans; the subsequent report by the Province's Pension Investment Advisor, Bill Morneau, which recommended the government establish a new entity for this purpose; and the Commission on the Reform of Ontario's Public Services recommendations to achieve efficiencies for broader public-sector plans.

Among the agencies, there were mixed opinions on the value of pooling assets. The larger companies do not agree on the value of pooling assets, given the different characteristics and profiles of the plans, while the two smaller agencies are very supportive of a BPS pooled asset management entity, and recognize the value of greater efficiencies in asset management.

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[12] Table 3 in Appendix B sets out the contribution rates by union and by company. In the case of H1, Society members have different contribution rates and different benefits, depending on their date of hire.

Chapter 4: Conclusions and Recommendations

This Report's recommendations reflect many of the experiences and insights shared by the four agencies and the two unions with the Special Advisor and offers a balanced response to the many complex issues confronting Ontario's electricity sector pension plans.

Summary of Key Conclusions:

The purpose of this Report is to create a roadmap so that the sector can achieve sustainable pension plans at affordable costs. It is not the goal of this Report to set out specific pension plan terms, or provide a specific cost for those plans. Rather, it is to provide context and understanding for the government, employers and employees, so that those parties can reach an agreement that will address the issues faced by the sector's plans.

The following key conclusions guided the formation of the Report's recommendations:

- *Defined benefit pension plan model is preferred over alternatives provided it is affordable, sustainable and flexible.*
- *The four pension plans are relatively generous and very costly to employers.*
- *None of the pension plans are currently stable — nor do they have the ability/flexibility to handle any adversity as the parties do not share risks and the benefits are fully guaranteed regardless of the investment performance of plans.*
- *Exposure of regulators, ratepayers and customers to open-ended and volatile pension costs needs to be minimized.*
- *None of the plans have stated strategies on how to handle future surpluses or deficits should the plans over/under perform actuarial assumptions.*
- *There is no history or experience of shared governance, risk sharing or cost sharing.*
- *Historically, limited institutionalized transparency and data sharing suggests that further employee education may be needed.*
- *IESO and ESA are too small to have efficient asset management.*
- *Collective bargaining process, on its own, is not an optimal process to ensure that the pension plans are sustainable and affordable on an ongoing basis.*

4.1 Equal Cost-Sharing for Ongoing Contributions

It is recommended that employer/employee contribution move to the target of 50/50 on an agreed timeline. The government has suggested five years to reach that target which would appear to be a reasonable phase in period.

4.2 Affordability: Contribution Ceiling

The parties should establish a ceiling on the contribution rate (current service plus special payments) to be paid by the employer and employees. A suggested appropriate range would be 9 per cent to 12 per cent.[13] Limiting pension costs to 24 per cent (i.e. 12 per cent for each of the employer and the employee) of salary would appear to be appropriate; however this should be determined by the parties. The reduction in employer contribution levels could be phased in to allow funding of any existing deficits by the agencies. As noted earlier, there are examples of effective ceilings that have been negotiated in the public sector — in 2012 and 2013 the government successfully negotiated contribution ceilings with certain consolidated JSPP pension plans. These ceilings require reductions in future benefits rather than increased contributions in the event of future deficits.

If the parties are unable to agree on an affordable ceiling then there could be a role for government in establishing a ceiling on the contribution rate.

4.3 Joint Responsibility for the Sustainability of Plans

The opportunity to make the necessary plan changes is increased if, for the time being, the agency plans remain as SEPPs; this approach is the most practical in light of the additional complexities associated with moving to a MEPP or joint sponsorship.[14] However, there are a number of elements that typically support single-employer jointly-sponsored pension plan governance that would be very beneficial to the agency plans and would help ensure their sustainability.

These include:

- Institutionalized pension information and data sharing processes. It is recommended that the parties institutionalize pension information and data sharing through the plan sponsor reporting the plan status to a proposed Funding Management Committee (comprising employer and employee representatives) on a quarterly basis.

- A Funding Management Policy (FMP) that sets out what would happen in the event the plan is in surplus or deficit going forward. A new funding management policy would guide the parties in terms of affordability of current and future pension benefits. Its primary purpose is to ensure sustainability of the plan so that both active and retired members know their retirement will be secure. A strong FMP requires the pension plan be managed in the most prudent manner, reducing the reliance on the plan sponsor's solvency to fund benefits.

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[13] Nine per cent of salary is the limit outlined in the *Income Tax Act* as the maximum employee contribution level; contribution levels above 9 per cent must be approved by the Canada Revenue Agency. There has been commentary within the actuarial community that due to the prolonged level of low interest rates, 12 per cent may be a more appropriate upper limit. The parties may wish to canvass their membership to determine contribution rate appetite.

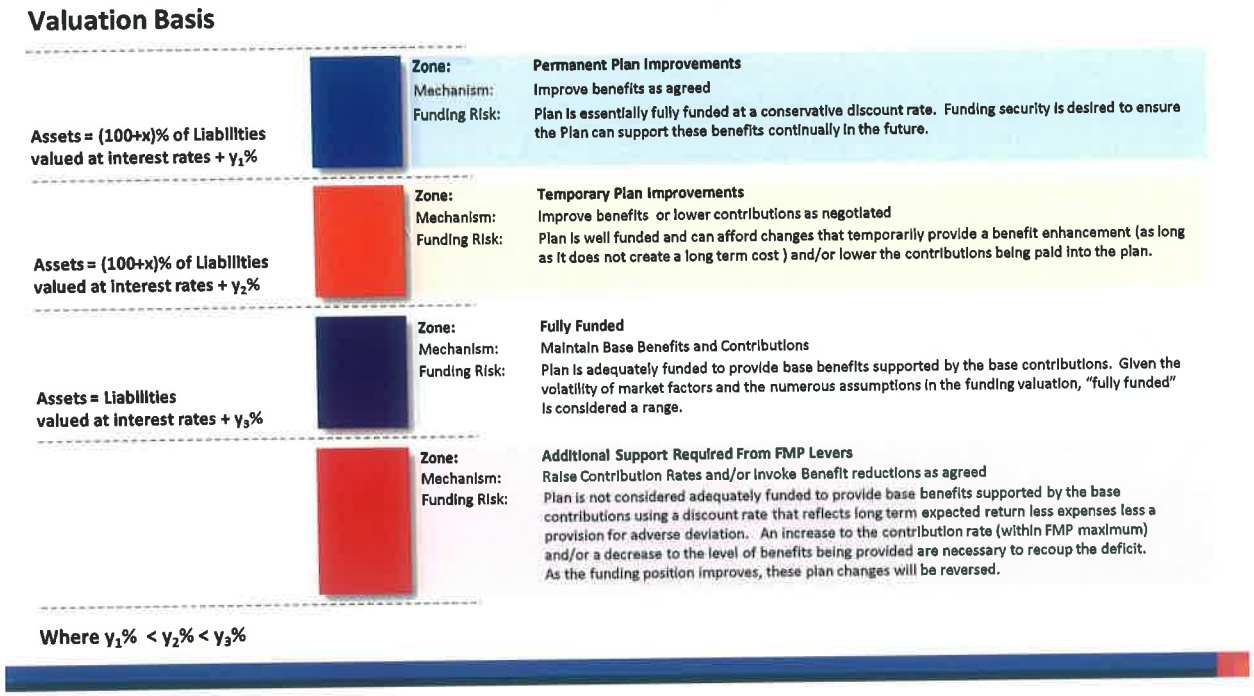
[14] There are no existing barriers to the parties agreeing to a funding management policy and contribution ceiling under the SEPP structure. However, the *PBA* currently does not allow for the conversion of SEPP benefits to a JSPP. The Province has signalled its intention to develop a legislative framework to facilitate conversion of existing benefits from a SEPP to a JSPP.

Accordingly, it is recommended that the parties immediately engage in a process to implement formal information and data sharing processes and develop an agreed-upon FMP, contribution ceiling and 50/50 cost sharing phase in period, as SEPPs. During this process, the parties may determine it to be in their interests to move to a company-specific JSPP which the government should facilitate.

Chart 4 sets out a general framework for a FMP. The intent is that the FMP would steer a plan to sustainability over the long term by making decisions automatic, based on funding status. An FMP can be designed with specific valuation thresholds that determine what contribution rates should be, when benefits may require temporary reduction, and when those benefits may be restored or new benefits offered. The framework provides mechanisms for benefit and contribution changes in response to pension funding risks. It may be that the parties would prefer that the FMP form part of a collective agreement but it should operate automatically outside of the collective bargaining cycle.

Funding Management Policy — Framework Description

Chart 4



The JSPP model has many positive attributes, including joint involvement in decision making, but can also represent a risk for members. For instance, benefits can be reduced on the wind-up of a JSPP. It is possible to design an FMP that can mimic many of the attributes that the JSPP model can provide with respect to funding decisions, while not converting completely to that model. The following compares key attributes of a JSPP and the proposed SEPP model with a FMP and contribution ceiling. The comparative table demonstrates that a SEPP with FMP and contribution ceiling can allow for:

- increased pension data/information transparency;
- co-governance;
- effective use of collective bargaining process to address complex and long-term pension plan challenges; and
- pension plan design flexibility.

Attributes of a JSPP	Attributes of a SEPP with Funding Management Policy/Contribution Constraints
General	
Employer and employee jointly responsible for plan; jointly determine plan design and what actions must be taken in the event of a deficit or surplus.	Employer remains plan sponsor but financial exposure is defined. Employer and employees jointly determine in advance what actions must be taken in the event of a deficit or surplus.

Attributes of a JSPP	Attributes of a SEPP with Funding Management Policy/Contribution Constraints
Benefits	
Sponsors can agree to certain benefits, as appropriate, to meet agreed contribution constraints.	Funding Management Policy (FMP) agreed by employer and union determines in advance the valuation parameters and what action is to be taken in the event of either a deficit or a surplus (i.e. plan is put on auto-pilot). For example, in the event of a deficit, once the contribution ceiling is reached, benefits start to decrease on a temporary basis. Once the plan is no longer in deficit, benefit reductions can be restored. Examples of benefit flexibility include: inflation protection; early retirement subsidy; bridge benefit.
Given plan can only reduce future benefits under current legislation, it would be important that as many benefits as possible become conditional as soon as possible (but not necessarily invoked) to start the "grow in"; otherwise there is too much risk borne by young actives.	Given plan can only reduce future benefits under current legislation, it would be important that as many benefits as possible become conditional as soon as possible (but not necessarily invoked) to start the "grow in"; otherwise there is too much risk borne by young actives.

Attributes of a JSPP	Attributes of a SEPP with Funding Management Policy/Contribution Constraints
Governance	
Removed from formal collective bargaining process: full transparency and decisions made collaboratively (usually through a Committee comprised of equal representation from the employer and the employees) with equal information.	Does not legally remove from collective bargaining process — FMP is collectively agreed. Parameters are set for long term, beyond the normal collective bargaining cycle. Plan administrator reports with full transparency to Funding Management Committee (comprising agency and union representatives) on a quarterly basis. Committee is responsible to ensure plan decisions made in accordance with FMP.
Default	
Regulatory default in case of no agreement to solve deficit is to raise contributions.	FMP defines what happens in the event of a deficit.
Solvency	
Only JSPPs named in a regulation under the PBA are exempted from funding solvency deficit.	As SEPPs, solvency funding requirements would continue to apply.
Process to Convert	
It requires enabling legislation to convert existing benefits from a SEPP to a JSPP. Process to convert must comply with collective bargaining parameters; broad parameters are laid out but employer/union have flexibility to work within those parameters	No enabling legislation is required provided employer and employees can agree to FMP and contribution ceiling.

4.4 Pooled Asset Management

Two of the four pension plans are quite small. Even together, the ESA and IESO are only managing approximately $600 million. As noted earlier, the government has created a technical working group to make recommendations on the creation of an investment entity. Once established, the government should facilitate IESO and ESA joining the new pooled asset management entity for public-sector SEPPs.

Both H1 and OPG are involved in the technical working group. They should consider if joining a new pooled asset management entity for public sector SEPPs will provide them with anticipated advantages.

4.5 Other

Supplementary Pension Plans

The four agencies should consider exploring establishment of a cap on pensionable earnings (e.g., exclude bonuses and/or cap pensionable salary) and/or lower the benefit accrual rate for the purpose of the supplementary pension plans.

Chapter 5: Implementation — Next Steps

Consistent with intent of the 2013 Ontario Budget announcement of a Working Group, it is recommended that the parties establish four separate agency-specific Working Groups for employer and employee nominated representatives to jointly address the changes in cost sharing, the introduction of contribution ceilings and the development of a FMP.

Given the recommendation that the plans remain separate, a one-table approach would add unnecessary complexity to negotiations. Separate tables will allow the parties to develop tailored solutions for each company. The FMPs need to be negotiated for the long-term so the plans can operate on "auto-pilot" but be incorporated in the collective agreements. The four plans' respective FMPs will have similar structure but the terms will be unique to each plan, allowing for customization.

The Working Groups' activities should be facilitated by an experienced labour mediator with pension knowledge.

It is recommended that the Working Groups work diligently through 2014, with a view to completing framework agreements that can inform collective bargaining activities in 2015 and beyond.

This approach offers a window of opportunity to have a discussion regarding pensions. No collective agreements are subject to negotiation before the end of this year[15]. Pension negotiations will require time, and much more analysis than was available in the production of this Report. Both employers and employees will require access to information and actuarial analysis. Nine months seems to be a reasonable timeframe for the Working Groups to arrive at negotiated solutions broadly consistent with the recommendations of this Report, concluding prior to the 2015 collective bargaining process.

Public Sector Temporary Solvency Funding Relief Program

It is recommended that, subject to meeting eligibility requirements of the program and achieving progress in advancing a sustainable framework through the Working Groups, the three electricity sector agencies that applied to the program in 2013 be reconsidered for admission to the program at the end of 2014.

[15] With exception of the agreement between PWU and ESA that expires on March 31, 2014. The parties are already in negotiations.

Appendix A

Terms of Reference for Special Advisor on the Sustainability of Electricity Sector Pension Plans December 16, 2013

Background

There are four government agencies operating in the electricity sector that sponsor pension plans for its employees. The four agencies are:

1. Electrical Safety Authority (ESA);
2. Hydro One;
3. Independent Electricity System Operator (IESO); and
4. Ontario Power Generation (OPG).

The four agencies and their plans are the subject of the review by the government's newly-appointed Special Advisor, Electricity Sector Pension Sustainability. The two government agencies within the electricity sector that are not part of the review, the Ontario Energy Board and the Ontario Power Authority, do not sponsor their own pension plans.

Ontario Budget 2013

The 2013 Budget re-iterated the government's commitment to:

- ensuring that single-employer pension plans (SEPPs) move to equal cost-sharing for ongoing contributions within five years; and
- exploring opportunities to support joint sponsorship as the model for pension plan governance and funding in Ontario's public sector.

It also specifically addressed the issue of sustainability of electricity sector pensions and committed to engaging with both employer and labour representatives on the challenges facing electricity sector plans in order to promote a common understanding of the pension challenges and move toward a more sustainable framework.

The 2013 Ontario Economic Outlook and Fiscal Review further indicated the government's commitment to seeing changes in cost sharing, governance, and other provisions to make Ontario's electricity sector pensions more affordable.

Mandate

The mandate of the Special Advisor is to prepare a report for the Minister of Finance setting out:

- a summary of the funding sources and funding status of the plans;
- the nature of funding challenges (including potential electricity price impacts resulting from funding challenges);
- workplace changes in demographics (including planned OPG workforce reductions);
- a summary of the treatment of management and executives within the plans;
- a list of appropriate comparators and how the provisions and governance of current electricity sector pension plans compare to them;
- advice on how to move forward on initiatives to improve the sustainability and the affordability of the plans, including the potential benefit of pooled asset management for the sector; and
- an assessment of the implications of such initiatives, which could include, but are not limited to, moving toward:
    1. equal cost sharing between employers and employees for ongoing contributions within five years;
    2. joint governance by employers and plan members, and joint responsibility for funding shortfalls on a prospective basis through joint sponsorship of plan(s); and
    3. more affordable pension benefits, such as conditional prospective benefits.

Any advice on initiatives to address the sustainability and affordability should operate within the context of collective agreements and existing labour agreements.

The Working Group announced in Budget 2013 will provide a forum, under the leadership of Ministry of Finance officials for sector-nominated employer and employee representatives to consider the potential approaches to improving sustainability and affordability of the electricity sector pension plans. The report of the Special Advisor is intended to inform and help frame the efforts of the Working Group.

Special Advisor Consultations

In preparing the report for the Minister, the Special Advisor is expected to consult with management and union representatives within the sector. This should include representatives of the following organizations:

- Ontario Power Generation;
- Hydro One;
- the Independent Electricity System Operator;
- the Electrical Safety Authority;
- the Power Workers Union; and
- the Society of Energy Professionals.

Key contacts for these organizations are attached in the Appendix.

Deliverables and Timing

The Special Advisor will provide a final report to the Minister of Finance by February 28th, 2014. The proposal will include options and a recommended strategy for improved affordability and sustainability, including implementation considerations and timelines.

Meetings and Reporting

The schedule of meetings is to be developed by the Special Advisor to meet the above deliverable.

Resources and Budget

In addition to the costs related to the appointment of the Special Advisor, the Ministry of Finance will fund outside expertise as required to fulfill the mandate of the Special Advisor.

The Broader Public Sector Pension Branch of the Ministry of Finance will provide secretariat support in the organization and scheduling of meetings.

Appendix B

Table 1: Pension Plan Membership Status, Affiliation and Demographics

	OPG	H1	IESO	ESA	Total
Membership (#)[1]					
Active	11, 238	5, 621	439	455	17,753
Retired	10, 282	7, 093	291	263	17,929
Deferred	840	309	37	23	1,209
Affiliation of Active Members (#):[2]					
PWU	6, 628	3,514	50	366	10,558
Society	3, 435	1,384	329	49	5,197
Management	1, 175	641	76	40	1,932
Average Age:[3]					
Active Members	46.6	44.2	NA	49	NA
At Retirement	59.1	58.6	56.6	60	NA

1 As of December 31, 2012.
2 As of December 31, 2012 for OPG and ESA and as of September 30, 2013 for H1 and December 31, 2013 for IESO.
3 As of December 31, 2012 for OPG, IESO, ESA and as of December 31, 2011 for H1 (most recent valuation).

Table 2: Employer and Employee Contributions[1]

For 2012 (millions)	OPG	H1	IESO	ESA**	Total
Employer Contributions (current service costs) ($)	225M	126.2M	7M	6.5M	364.5M
Employer Contributions (going concern special payments) ($)	65M	36.8M	6.5M	3.4M	111.7M
Employer Contributions (solvency special payments) ($)	n/a	0	2.4M	0	2.4M
Employee Contributions (Current Service Costs)	73M	26.9M	3.6M	2.8M	106.3
Employer/Employee Contribution Ratio (Current Service Cost)	76%/24%	81%/19%*	66%/34%	70%/30%	–

1 Represents cash contributions to pension plans other than voluntary employer contributions.
2 Estimated to be 77%/23% in 2013.
3 Additional contributions of $0.6M were made in 2012 in excess of minimum in respect of PWU gain-sharing.

Table 3: Comparison of key features of the electricity sector agencies' pension plans with major pension plans including PSPP, OPSEU Pension Plan, OMERS, HOOPP, OTPP, Enbridge, Bruce Power, BC Hydro, Quebec Hydro.

Benefit Provision	OPG	Hydro One	IESO	ESA
Averaging Period For Earnings (yrs)	3	3 (5 for new non-represented and society members)[1]	3 (5 for new non-represented)[2]	3
Benefit Rate After Age 65 (per year of pensionable service) • Below CPP Wage Base • Above CPP Wage Base	1.50% 2.00%	1.50% (1.375% for non-represented and new society)[1] 2.00%	1.50% (1.375% for non-represented) 2.00%	1.50% 2.00%
Benefit Rate Before Age 65 (per year of pensionable service)	2.229%	2.229% (2.10% for non-represented) No bridge for new non-represented and society members[1]	2.229% (2.10% for non-represented)	2.229%
Subsidized Payment Form • With Spouse • Without Spouse	66⅔% J&S LG5 (life annuity with 5 years guaranteed)	66⅔% J&S LG5	66⅔% J&S LG5	66⅔% J&S LG5
Earliest Age For Unreduced Early Retirement Pension	82 points (84 points non-represented), or age 60 + 25 years, or 35 years	82 points (85 points for new non-represented and society members)[1], or age 60 + 25 years, or 35 years	82 points (84 points non-represented/ 90 points new non-represented[2]), or age 60 + 25 years, or 35 years	82 points, or age 60 + 25 years, or 35 years
Indexation of Pension Benefits	100% of CPI	100% of CPI (75% of CPI for new non-represented and society members)[1]	100% of CPI (75% of CPI[2])	100% of CPI
Member Contribution Rates • Below/Above CPP Wage Base	PWU: 5.0%/7.0% Society/non-represented: 7.0%	Non-represented: 4.75%/6.75% Society: 4.0%/6.0% increasing to 6.5%/8.5%[3] PWU: 4.5%/6.5% increasing to 6.25%/8.25%[4]	PWU: 6.75%/8.75% Society: 7.0% Non-represented: 6.0%/8.0%	Non-represented: 9.5%/10.2% Society: 8.25%/8.95% (8.5%/9.2%[5]) PWU: 5.2%/7.2% plus gainsharing

1 Non-represented hired on or after January 1, 2004 or Society members hired on or after November 17, 2005.
2 Post-2006 Non-represented new hires.
3 Effective April 1, 2015.
4 Effective April 1, 2014 and rates 0.5% lower for post-November 2005 Society hires.
5 Effective April 1, 2014.

Benefit Provision	HOOPP	Ontario Teachers' Pension Plan (OTPP)	OMERS	Ontario Public Service Pension Plan (OPB)	OPSEU Pension Plan (OPT)
Averaging Period For Earnings (yrs)	5	5	5	5	5
Benefit Rate After Age 65 (per year of pensionable service)					
• Below CPP Wage Base	1.50%	1.55%	1.325%	1.30%	1.30%
• Above CPP Wage Base	2.00%	2.00%	2.00%	2.00%	2.00%
Benefit Rate Before Age 65 (per year of pensionable service)	2.00%	2.00%	2.00%	2.00%	2.00%
Subsidized Payment Form					
• With Spouse	60% J&S	50% J&S	66⅔% J&S	50% J&S	60% J&S
• Without Spouse	LG15	LG10	ROC[1]	ROC[1]	ROC[1]
Earliest Age For Unreduced Early Retirement Pension	age 60, or age 55 + 30 years	85 points	age 55 + 30 years, or age 55 + 90 points	age 60 + 20 years, or 90 points	age 60 + 20 years, or 90 points
Indexation of Pension Benefits	Pre-2006 Benefits: 75% of CPI Post-2005 Benefits: Conditional up to 75% of CPI	Pre-2010 Benefits: 100% of CPI 2010–2013 Benefits: 50% of CPI plus conditional up to 100% of CPI Post-2013 Benefits: 0% of CPI plus conditional up to 100% of CPI	100% of CPI	100% of CPI	100% of CPI
Member Contribution Rates					
• Below/Above CPP Wage Base	6.90%/9.20%	11.50%/13.10%	9.00%/14.60%	6.40%/9.50%	9.40%/11.00%

[1] Life annuity, with total pension payments not less than member contributions with interest.

Benefit Provision	BC Hydro	Hydro-Québec	Bruce Power	Enbridge[1]
Averaging Period For Earnings (yrs)	5	5	5	3
Benefit Rate After Age 65 (per year of pensionable service) • Below CPP Wage Base • Above CPP Wage Base	 1.40% 2.00%	 1.55% 2.25%	 1.50% 2.00%	 1.25% 1.60%
Benefit Rate Before Age 65 (per year of pensionable service)	2.00%	2.25% + 0.20% below YMPE from 60 to 65, or + 0.40% below YMPE from 55 to 60	2.229%	1.60% (only before age 60)
Subsidized Payment Form • With Spouse • Without Spouse	 LG10 LG10	 50% J&S with other options subsidized at half the cost ROC	 66⅔% J&S LG5	 60% J&S LG15
Earliest Age For Unreduced Early Retirement Pension	age 60, or age 55 + 85 points	age 60 + 15 years, or age 55 + 85 points	82 points (84 points for non-represented), or 35 years	age 60, or 30 years
Indexation of Pension Benefits	Conditional based on sufficient funds in indexation account	Greater of: 100% of CPI up to 2%, or CPI – 3%	100% of CPI	50% of CPI
Member Contribution Rates • Below/Above CPP Wage Base	3.65%/5.21% plus 0.77%/1.10% to indexation account (intent is to move to 50/50 sharing of current service cost)	50% of current service cost subject to a maximum of 7.5% in 2014 grading up to 10.75% in 2018; from 2019 onward, maximum increase of 0.5% from previous year	4.50%/6.50% (as of January 1, 2013; may have been changed subsequent to this)	none

[1] Also a Savings Plan with 100% Company match on employee contributions up to 2.5%; also choice of DC pension plan instead of DB pension plan.

Table 4: Current service costs as a per cent of pensionable salary.

	OPG	H1	IESO	ESA
Funded Status Date	January 1, 2013	December 31, 2011	January 1, 2011	January 1, 2013
Total Current Service Cost ($000's)	$310,800	$126,221	$10,331	$9,650
As a % of Valuation Compensation	26.5%	24.0%	23.6%	23.8%
Annual Special Payments from last filed Actuarial Valuation ($000's)*	$64,837	$59,675	$9,021	$3,352

*May be based on funded status using asset smoothing.

TAB 8

Empirical Research in Support of Incentive Rate-Setting: 2013 Benchmarking Update

Report to the Ontario Energy Board

July 2014

Pacific Economics Group Research, LLC

The views expressed in this report are those of Pacific Economics Group Research, and do not necessarily represent the views of, and should not be attributed to, the Ontario Energy Board, any individual Board Member, or Ontario Energy Board staff.

Empirical Research in Support of Incentive Rate-Setting: 2013 Benchmarking Update

Report to the Ontario Energy Board

July 2014

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1. Introduction

In 2013 the Ontario Energy Board ("OEB") issued a report titled "Rate Setting Parameters and Benchmarking under the Renewed Regulatory Framework for Ontario's Electricity Distributors"[1] ("Board Report") in which it set forth the framework for setting rate adjustment formulas for local distribution companies ("LDCs"). According to the Board Report, rates will be indexed by a formula "which is used to adjust the distribution rates to reflect expected growth in the distributors' input prices (the inflation factor) less allowance for appropriate rates of productivity and efficiency gains (the X-factor)."[2] The productivity part of the X-Factor is the same for all LDCs. The efficiency gains part of the X-Factor is called the stretch factor and can vary by company. This stretch factor reflects the potential for incremental productivity gains by a given LDC under incentive regulation which in turn depends on an individual distributor's level of cost efficiency.

These stretch factor assignments are based on the results of a statistical cost benchmarking study designed to make inferences on individual distributors' cost efficiency. An econometric model is used to predict the level of cost associated with each distributor's operating conditions. Distributors that had actual cost that was lower than that predicted by the model were assigned lower stretch factors than those that did not. The October 18, 2013 report by Pacific Economics Group ("PEG") study titled "Productivity and Benchmarking Research in Support of Incentive Rate Setting in Ontario" describes the model used to produce the benchmarking results. The purpose of this project is to update the stretch factors using 2013 data and the methodology for assigning stretch factors detailed in the Board Report and the PEG benchmarking study.

Section 2 of this report discusses the methodology used for the 2013 update. Section 3 discusses the data used. Section 4 presents the benchmarking results and updated stretch factors.

[1] Issued on November 21, 2013 and corrected on December 4, 2013.

[2] Board Report, page 5.

2. Benchmarking Methodology

The model used to determine the cost efficiency of distributors is based on econometrics. Distributor cost in this model is estimated as a function of business conditions faced by each distributor. These business conditions include the number of customers served and the price of inputs such as labor and capital. The parameters of this model establish the relationship between each business condition and distributor cost. These parameters were estimated using Ontario LDC data from 2002-2012.

The model can make a prediction of each distributor's cost given its business conditions by multiplying the company's business condition variables by the model parameters and summing the results[3]. The distributor's actual cost is then compared to that predicted by the model. The percentage difference between actual and predicted cost is the measure of cost performance. Companies with larger negative differences between actual and predicted costs are considered to be better cost performers and therefore eligible for lower stretch factors. A detailed description of the econometric model including estimation technique and other technical details are contained in sections 6 and A2.1 of the PEG report.

The econometric model used to obtain the updated stretch factors is identical to the model described in the PEG report. The Board intentionally decided not to update the parameters of the econometric model to include 2013 data. The goal was to establish a fixed benchmark that would allow companies a fair opportunity to demonstrate improved cost performance and earn a lower stretch factor. The parameters from the previous model were combined with each company's data – including 2013 data - to produce 2013 predicted cost. The rationale for this decision is discussed in the Board Report and in a memorandum by PEG that also makes some

[3] The table of parameters published in the PEG report was for the full sample. When making predictions of cost for each company, the econometric program estimated the model without including the subject of benchmarking in the sample. Therefore, there exist 73 different sets of parameters which are very similar to each other. For ease of presentation, the PEG report did not present the parameters specific to each distributor. These company-specific parameters are necessary for the 2013 calculations and are contained within the working papers associated with this report.

corrections to the 2012 results.[4] The PEG memorandum contains the corrected final results of the 2010-2012 benchmarking model used in this update.

In order to apply the 2013 values to the model parameters, the data must be transformed to be consistent with how the data were specified for the estimated econometric model. One example of a transformation is that many of the explanatory variables were expressed as logarithms prior to the model being estimated. The PEG report describes the details of the estimation process in section A2.1. The working papers associated with this report contain an excel spreadsheet that contains the all the necessary transformations.

The purpose of the benchmarking work is to evaluate the total cost incurred by each distributor. Table One shows the formulas used to calculate the measure of total cost used in PEG's benchmarking analysis. As described in the PEG benchmarking report, adjustments were undertaken with the purpose of standardizing cost in order to facilitate more accurate cost comparisons among distributors. These adjustments included the treatment of high voltage and low voltage costs.

The variables used to explain total cost are the same as in the previous PEG report. They include outputs such as customers, kWh deliveries, and capacity. Prices for capital and OM&A along with other business conditions such as customer growth and average length of lines are also included. A complete discussion of the explanatory variables can be found in section 6 of the PEG report. The explanatory variables are used to explain the level of cost incurred by each LDC. Cost that is not explained by the variables is deemed to be due to management performance.

3. Benchmarking Data

The source of the cost and output data used in the calculations is from the distributors as reported in RRR filings. The study assumes that the data as reported by the distributors conforms to guidelines described in the Accounting Procedures Handbook and other instructions contained within the RRR filing system. It is also assumed that the LDCs have taken ownership

[4] Available on the OEB website in the file "PEG_Memorandum_OEB on_corrections_20131220.pdf"+

Table 1

Calculation of 2013 Total Cost

Variable	Reference	Formula	Source
Total Cost		= OM&A + Capital Cost	Formula
OM&A		= A+B+C+D+E+F+G+I+J	Formula
2013 Operation	A		RRR
2013 Maintenance	B		RRR
2013 Billing and Collection	C		RRR
2013 Community Relations	D		RRR
2013 Administrative and General Expenses	E		RRR
2013 Insurance Expense	F		RRR
2013 Advertising Expenses	G		RRR
Adjustments to OM&A			
2013 Smart Meter	H	Not Applicable for 2013	OEB Staff
2013 HV Adjustment	I		RRR
2013 LV Adjustment	J		Hydro One Networks
Capital			
2012 Asset Price Index	K		PEG Report Working Papers
2012 Capital Price	L		PEG Report Working Papers
2012 Capital Quantity	M		PEG Report Working Papers
2012 Capital cost	N		PEG Report Working Papers
2013 Asset Price Index	O	=K x (EUCPI 2013 / EUCPI 2012)	Formula, Statistics Canada
2013 Capital Additions	P		RRR
2013 HV Capital Additions	Q		RRR
2013 Quantity of Capital Additions	R	=(P-Q) / O	Formula
Depreciation Rate	S	Fixed at 4.59% for All Years	PEG Report
2013 Capital Quantity	T	= M - S x M + R	Formula
2013 Rate of Return	U	= 4 months @ 5.91 + 8 months @ 5.98 = 5.96	OEB Staff
2013 Capital Price	V	=U x K + S x O	Formula
2013 Capital Cost	W	= V x T	Formula

of the data provided to the Board and significant revisions are not anticipated.[5] The source of the input price data was Statistics Canada. The input price indexes used were the same as those used in PEG's original study.

The update was done in the same manner as the original work with a two exceptions. The first is that the Board has improved the quality of the capital additions data requested from the distributors. PEG has accordingly relied upon these newly-available capital additions data instead of inferring these data from changes in gross plant[6]. The second exception is related to the treatment of deferred smart meter OM&A expenses. In the previous report, an adjustment was made for the estimated amount of amortization that was included in the reported OM&A expenses as a result of clearing amounts from account 1555. Board staff has advised that due to improved reporting requirements, this adjustment is no longer necessary.

Table One describes the calculation of total cost. Table Two shows each distributor's growth in total cost from 2012 to 2013. As can be seen, the majority of distributors had cost growth or cost reductions in 2013 of 5% or less. All but five showed changes in within 10% of 2012 values. On average, the growth in cost was 2.6%, median cost growth was slightly higher at 2.9%. OM&A cost grew by an average of 6.0% while capital cost did not grow on average.

The econometric model estimates LDCs' costs as a function of distributor output, input price growth, and other business condition variables beyond management control. It will also produce a prediction of the level of cost consistent with these business conditions and thus

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[5] The Ontario Energy Board (the "Board") released the Report of the Board on Scorecard (EB-2010-0379) on March 5, 2014 (the "Scorecard Report") states that: '*While the Board will create consistent Scorecard reports for distributors, ownership of the data and Scorecard resides with the distributor.*'

[6] This improvement in data quality also extends to the collection of smart meter capital additions. The previous study estimated capital additions for distribution capital exclusive of meters for the period 2006-2012 in order to be able to isolate the accounting treatment of smart meters. The capital expenditures on smart meters were gathered for each company via a supplemental data request. These capital expenditures were then used as a proxy for capital additions and added to the total. Board staff have reviewed the filing requirements and have determined that the 2013 additions reported by the companies should be suitable for use in benchmarking. Therefore, additional data collection of smart meter cost is no longer necessary.

Table 2

Total Cost by Distributor: 2012 vs. 2013

	OM&A Cost			Capital Cost			Total Cost		
	2012	2013	Percent Change	2012	2013	Percent Change	2012	2013	Percent Change
Algoma Power Inc.	9,344,954	10,672,392	13.3%	11,637,041	12,061,469	3.6%	20,981,995	22,733,861	8.0%
Atikokan Hydro Inc.	1,276,679	1,031,675	-21.3%	477,698	479,889	0.5%	1,754,377	1,511,565	-14.9%
Bluewater Power Distribution Corporation	10,898,384	11,982,293	9.5%	11,463,901	11,260,638	-1.8%	22,362,285	23,242,931	3.9%
Brant County Power Inc.	4,034,570	3,899,113	-3.4%	3,362,550	3,307,373	-1.7%	7,397,120	7,206,486	-2.6%
Brantford Power Inc.	7,799,196	8,727,540	11.2%	11,178,510	10,801,397	-3.4%	18,977,706	19,528,936	2.9%
Burlington Hydro Inc.	15,294,577	16,773,837	9.2%	23,080,181	22,349,707	-3.2%	38,374,757	39,123,544	1.9%
Cambridge And North Dumfries Hydro Inc.	13,013,048	14,096,634	8.0%	17,804,176	18,493,432	3.8%	30,817,223	32,590,066	5.6%
Canadian Niagara Power Inc.	7,763,192	8,474,686	8.8%	11,533,897	12,266,383	6.2%	19,297,089	20,741,069	7.2%
Centre Wellington Hydro Ltd.	2,177,203	2,048,511	-6.1%	1,802,203	2,069,458	13.8%	3,979,406	4,117,969	3.4%
Chapleau Public Utilities Corporation	631,919	629,802	-0.3%	188,477	184,934	-1.9%	820,396	814,736	-0.7%
Collus Power Corporation	4,546,539	4,438,351	-2.4%	3,802,246	3,693,997	-2.9%	8,348,785	8,132,348	-2.6%
Cooperative Hydro Embrun Inc.	527,731	634,625	18.4%	513,689	480,314	-6.7%	1,041,420	1,114,938	6.8%
E.L.K. Energy Inc.	2,301,329	2,251,429	-2.2%	2,490,380	2,351,659	-5.7%	4,791,709	4,603,088	-4.0%
Enersource Hydro Mississauga Inc.	50,243,869	52,980,754	5.3%	86,084,985	85,379,945	-0.8%	136,328,854	138,360,699	1.5%
Entegrus Powerlines	7,989,410	9,380,758	16.1%	11,923,935	12,062,450	1.2%	19,913,345	21,443,208	7.4%
Enwin Utilities Ltd.	25,470,629	21,511,933	-16.9%	34,865,142	34,602,624	-0.8%	60,335,771	56,114,557	-7.3%
Erie Thames Powerlines Corporation	4,853,651	5,504,432	12.6%	5,556,482	5,546,493	-0.2%	10,410,133	11,050,924	6.0%
Espanola Regional Hydro Distribution Corporation	1,305,451	1,295,367	-0.8%	738,721	725,251	-1.8%	2,044,172	2,020,618	-1.2%
Essex Powerlines Corporation	6,034,095	5,885,995	-2.5%	7,787,166	7,807,709	0.3%	13,821,261	13,693,704	-0.9%
Festival Hydro Inc.	4,528,911	4,923,387	8.4%	7,745,876	7,739,859	-0.1%	12,274,788	12,663,246	3.1%
Fort Frances Power Corporation	1,519,108	1,428,272	-6.2%	888,315	869,730	-2.1%	2,407,423	2,298,002	-4.7%
Greater Sudbury Hydro Inc.	12,803,057	11,080,580	-14.4%	15,543,973	15,268,858	-1.8%	28,347,030	26,349,437	-7.3%
Grimsby Power Incorporated	2,862,102	2,653,353	-7.6%	3,090,197	3,043,922	-1.5%	5,952,300	5,697,275	-4.4%
Guelph Hydro Electric Systems Inc.	13,183,392	14,769,960	11.4%	17,068,444	17,048,266	-0.1%	30,251,836	31,818,226	5.0%
Haldimand County Hydro Inc.	8,017,287	7,405,150	-7.9%	6,724,771	7,053,403	4.8%	14,742,058	14,458,553	-1.9%
Halton Hills Hydro Inc.	5,536,317	4,821,336	-13.8%	8,747,736	8,973,989	2.6%	14,284,052	13,795,325	-3.5%
Hearst Power Distribution Company Limited	823,872	830,789	0.8%	341,018	323,871	-5.2%	1,164,890	1,154,661	-0.9%
Horizon Utilities Corporation	46,250,267	53,770,377	15.1%	65,205,021	65,449,395	0.4%	111,455,288	119,219,771	6.7%
Hydro 2000 Inc.	488,455	504,541	3.2%	150,312	143,051	-5.0%	638,767	647,592	1.4%
Hydro Hawkesbury Inc.	964,306	1,084,232	11.7%	496,545	482,818	-2.8%	1,460,851	1,567,050	7.0%
Hydro One Brampton Networks Inc.	19,523,282	22,922,932	16.1%	61,432,767	62,611,816	1.9%	80,956,049	85,534,748	5.5%
Hydro One Networks Inc.	509,039,133	561,763,830	9.9%	762,026,378	714,915,315	-6.4%	1,271,065,511	1,276,679,145	0.4%
Hydro Ottawa Limited	69,443,905	70,831,893	2.0%	106,561,196	111,356,553	4.4%	176,005,102	182,188,446	3.5%
Innisfil Hydro Distribution Systems Limited	4,715,318	4,983,184	5.5%	6,122,720	6,251,667	2.1%	10,838,037	11,234,850	3.6%
Kenora Hydro Electric Corporation Ltd.	1,805,783	1,854,498	2.7%	1,126,235	1,105,187	-1.9%	2,932,019	2,959,685	0.9%
Kingston Hydro Corporation	5,873,203	6,643,269	12.3%	7,322,822	7,354,110	0.4%	13,196,025	13,997,379	5.9%
Kitchener	13,712,945	15,004,498	9.0%	26,337,710	26,935,883	2.2%	40,050,655	41,940,381	4.6%
Lakefront Utilities Inc.	2,112,426	2,511,656	17.3%	2,085,756	2,068,176	-0.8%	4,198,182	4,579,831	8.7%
Lakeland Power Distribution Ltd.	3,094,802	3,727,137	18.6%	3,123,894	3,105,555	-0.6%	6,218,697	6,832,692	9.4%
London Hydro Inc.	29,512,195	30,754,942	4.1%	39,793,289	39,627,172	-0.4%	69,305,485	70,382,114	1.5%
Midland Power Utility Corporation	2,282,499	2,235,312	-2.1%	2,414,878	2,405,395	-0.4%	4,697,377	4,640,707	-1.2%
Milton Hydro Distribution Inc.	6,718,637	8,382,166	22.1%	14,087,319	13,885,854	-1.4%	20,805,956	22,268,020	6.8%

Table 2

Total Cost by Distributor: 2012 vs. 2013

	OM&A Cost			Capital Cost			Total Cost		
	2012	2013	Percent Change	2012	2013	Percent Change	2012	2013	Percent Change
Newmarket	6,631,888	7,255,412	9.0%	11,530,459	11,542,366	0.1%	18,162,347	18,797,778	3.4%
Niagara Peninsula Energy Inc.	14,194,450	13,580,949	-4.4%	20,816,934	20,834,453	0.1%	35,011,383	34,415,402	-1.7%
Niagara-On-The-Lake Hydro Inc.	1,956,396	2,146,011	9.3%	3,928,108	3,890,131	-1.0%	5,884,503	6,036,142	2.5%
Norfolk Power Distribution Inc.	5,957,976	5,932,696	-0.4%	7,508,848	7,396,521	-1.5%	13,466,824	13,329,218	-1.0%
North Bay Hydro Distribution Limited	5,223,313	5,533,893	5.8%	9,119,327	9,174,129	0.6%	14,342,640	14,708,022	2.5%
Northern Ontario Wires Inc.	2,463,137	2,685,165	8.6%	1,342,023	1,484,059	10.1%	3,805,160	4,169,224	9.1%
Oakville Hydro Electricity Distribution Inc.	13,122,738	16,795,534	24.7%	31,424,569	30,499,177	-3.0%	44,547,307	47,294,711	6.0%
Orangeville Hydro Limited	3,031,389	3,315,703	9.0%	3,417,045	3,325,594	-2.7%	6,448,434	6,641,298	2.9%
Orillia Power Distribution Corporation	4,587,513	4,440,795	-3.3%	3,207,920	3,370,879	5.0%	7,795,433	7,811,673	0.2%
Oshawa PUC Networks Inc.	10,665,324	10,496,484	-1.6%	16,555,731	16,742,890	1.1%	27,221,055	27,239,374	0.1%
Ottawa River Power Corporation	2,683,611	3,114,733	14.9%	2,314,816	2,297,662	-0.7%	4,998,427	5,412,395	8.0%
Parry Sound Power Corporation	1,362,933	1,616,081	17.0%	1,067,975	1,170,226	9.1%	2,430,908	2,786,307	13.6%
Peterborough Distribution Incorporated	6,408,729	7,788,114	19.5%	12,682,146	12,364,177	-2.5%	19,090,875	20,152,291	5.4%
Powerstream Inc.	72,205,853	77,277,917	6.8%	147,329,585	149,127,719	1.2%	219,535,438	226,405,635	3.1%
PUC Distribution Inc.	9,300,318	11,448,896	20.8%	11,039,503	11,484,981	4.0%	20,339,820	22,933,877	12.0%
Renfrew Hydro Inc.	1,193,548	1,238,889	3.7%	1,170,325	1,130,662	-3.4%	2,363,873	2,369,550	0.2%
Rideau St. Lawrence Distribution Inc.	1,743,359	1,830,016	4.9%	1,051,280	1,035,425	-1.5%	2,794,639	2,865,441	2.5%
Sioux Lookout Hydro Inc.	1,382,139	1,383,941	0.1%	861,423	836,234	-3.0%	2,243,561	2,220,174	-1.0%
St. Thomas Energy Inc.	4,701,996	3,817,984	-20.8%	4,747,094	4,635,216	-2.4%	9,449,090	8,453,200	-11.1%
Thunder Bay Hydro Electricity Distribution Inc.	12,111,748	13,010,456	7.2%	16,272,496	16,336,816	0.4%	28,384,244	29,347,271	3.3%
Tillsonburg Hydro Inc.	2,366,184	2,971,581	22.8%	2,157,231	2,078,980	-3.7%	4,523,415	5,050,561	11.0%
Toronto Hydro-Electric System Limited	211,458,815	232,504,073	9.5%	435,592,634	446,117,008	2.4%	647,051,449	678,621,081	4.8%
Veridian Connections Inc.	24,873,631	24,791,293	-0.3%	38,871,421	36,716,863	-5.7%	63,745,052	61,508,156	-3.6%
Wasaga Distribution Inc.	2,626,599	2,710,686	3.2%	2,471,818	2,510,806	1.6%	5,098,417	5,221,492	2.4%
Waterloo North Hydro Inc.	9,445,450	12,543,732	28.4%	26,490,219	26,910,118	1.6%	35,935,669	39,453,850	9.3%
Welland Hydro-Electric System Corp.	5,879,790	5,889,642	0.2%	4,755,958	4,653,232	-2.2%	10,635,748	10,542,875	-0.9%
Wellington North Power Inc.	1,524,561	1,724,131	12.3%	1,176,698	1,177,200	0.0%	2,701,259	2,901,330	7.1%
West Coast Huron Energy Inc.	1,660,820	1,830,008	9.7%	1,137,326	1,253,215	9.7%	2,798,146	3,083,223	9.7%
Westario Power Inc.	4,568,604	5,723,054	22.5%	6,900,093	6,774,353	-1.8%	11,468,698	12,497,407	8.6%
Whitby Hydro Electric Corporation	8,762,358	10,650,328	19.5%	15,802,170	15,817,326	0.1%	24,564,528	26,467,655	7.5%
Woodstock Hydro Services Inc.	3,717,435	4,080,997	9.3%	7,452,651	7,394,128	-0.8%	11,170,086	11,475,125	2.7%
Average			6.06%			-0.03%			2.60%
Median			8.00%			-0.59%			2.95%

"explain" some of the observed cost level. As described in the PEG benchmarking report, changes not accounted for by these factors are deemed to be due to management performance. The parameter estimates measure the cost impact of the different business conditions and are presented on Table 16 of the PEG benchmarking report.

The first of the cost drivers is output quantity. The model uses three measures for the quantity of distributor output. The first is the number of customers served and the second is kWh delivered. The third is a proxy for the capacity of the distribution system. The capacity variable is described in the PEG report and is equal to the largest peak load experienced as of the current year of data. For example, the 2012 value for the capacity variable is equal to largest reported system summer or winter kW in all the years 2002-2012. Therefore, for 2013, this capacity variable only increased if the distributor's kW demand in that year exceeded kW demand in every year between 2002 and 2012. Of the three output variables, the model estimates that the number of customers has the largest impact on cost, followed by the system capacity variable. The kWh delivered was the least important of the output variables. For the average company, the number of customers was found to be a more important cost driver than the other two combined. For each 1% change in number of customers, cost was estimated to change by 0.44%.

The second group of cost drivers were input prices for capital and OM&A. For the average company, the cost impact of changes in the capital price was found to be almost twice as important as that for OM&A. For every 1% change in capital price, the impact on total cost was about 0.63%. The corresponding impact for changes in the OM&A price was 0.37%. The relevant indexes were updated to include 2013 data. For the OM&A price, the growth in average weekly earnings and that for the GDP price index for final domestic demand ("GDPIPI FDD") were calculated. The 2013 growth in the OM&A price index is calculated as 70% times average weekly earnings growth plus 30% times GDPIPI FDD growth. The 2012 values for the OM&A price index from the previous report were escalated by the growth that occurred in 2013. The capital price calculation is based upon an asset price index, an economic depreciation rate, and a rate of return. The depreciation rate is fixed at 4.59% consistent with the previous work. The rate of return is a weighted average of the rates for return on equity, long term debt, and short term debt as per the OEB. Because these values are available for January and May of 2013, a weighted average was taken of the two values. The weight given to the January value (4/12)

assumes that the first value was in effect from January 1 to April 30. The weight given to the May (8/12) assumes that it was in effect starting May 1. The asset price index was the Electric Utility Construction Price Index as calculated by Statistics Canada. The formula used to update the capital price index is shown on Table One.

The last group of cost drivers consists of other business condition variables. The first was the percentage of customers added over the last ten years. The second was the average km of distribution line. In each case these variables were updated to include 2013 data. For each 1% change in line length, total cost was estimated to increase by 0.29%. The model also contains a time trend that accounts for changes in cost over time that are not accounted for by the other cost drivers. This variable estimates that cost should rise by 1.7% per year for reasons not identified by other variables in the model.

4. Benchmarking Results and Updated Stretch Factors

Table Three presents benchmarking results for each distributor. The first column contains the three year, 2010-2012 average difference between actual and predicted costs from the December 2013 PEG Memorandum. The next column presents the same results for the year 2013. Most companies had 2013 benchmarking results within 5% of their average, measured benchmarking performance in 2010-2012. All but six distributors had cost performance within 10% of their 2010-2012 average results.

The third column presents the 2011-2013 average benchmarking results for all distributors. All but four distributors had average cost performance that changed by less than 5%. Average 2011-2013 performance deteriorated by 0.7% relative to 2010-2012 levels. This decline in average performance is due to the exclusion of 2010 from the three year average because average performance in 2010 was superior to that of 2011-2012.

Updated stretch factors are assigned based on a three-year average of actual less predicted cost over the 2011-2013 period. As discussed in the Board Report, distributors that averaged 25% or more below cost received the lowest stretch factor of 0%. Those that averaged between 10% and 25% below cost received a stretch factor of 0.15%. Those within 10% of predicted cost received a stretch factor of 0.30%. Those distributors that had cost in excess of 10% to 25% of

Table 3

Summary of Benchmarking Results

	Actual Cost less Predicted Cost			
	2010-2012 Final Results	2013	2011-2013	Difference from 2010-2012
Algoma Power Inc.	65.5%	71.1%	68.5%	3.0%
Atikokan Hydro Inc.	18.5%	12.0%	17.5%	-1.0%
Bluewater Power Distribution Corporation	1.6%	5.8%	4.6%	3.0%
Brant County Power Inc.	16.5%	5.0%	13.0%	-3.5%
Brantford Power Inc.	2.0%	0.5%	0.9%	-1.1%
Burlington Hydro Inc.	-7.9%	-7.9%	-8.0%	-0.1%
Cambridge And North Dumfries Hydro Inc.	-7.0%	0.0%	-3.7%	3.4%
Canadian Niagara Power Inc.	14.0%	13.9%	13.2%	-0.8%
Centre Wellington Hydro Ltd.	-4.4%	0.0%	-1.5%	2.9%
Chapleau Public Utilities Corporation	18.8%	20.7%	19.8%	1.0%
Collus Power Corporation	-6.3%	-12.5%	-7.7%	-1.5%
Cooperative Hydro Embrun Inc.	-20.9%	-20.1%	-21.2%	-0.3%
E.L.K. Energy Inc.	-26.6%	-33.2%	-28.3%	-1.7%
Enersource Hydro Mississauga Inc.	-11.7%	-11.3%	-12.3%	-0.6%
Entegrus Powerlines	-12.5%	-12.6%	-12.3%	0.2%
Enwin Utilities Ltd.	19.5%	10.0%	16.9%	-2.6%
Erie Thames Powerlines Corporation	11.1%	7.9%	8.7%	-2.3%
Espanola Regional Hydro Distribution Corporation	-20.0%	-19.3%	-18.9%	1.1%
Essex Powerlines Corporation	-15.5%	-17.5%	-15.7%	-0.2%
Festival Hydro Inc.	19.6%	19.5%	19.2%	-0.3%
Fort Frances Power Corporation	12.3%	6.5%	9.6%	-2.8%
Greater Sudbury Hydro Inc.	9.5%	4.9%	11.9%	2.4%
Grimsby Power Incorporated	-17.1%	-17.4%	-15.2%	1.9%
Guelph Hydro Electric Systems Inc.	8.3%	-0.1%	4.2%	-4.2%
Haldimand County Hydro Inc.	-23.5%	-23.8%	-22.2%	1.3%
Halton Hills Hydro Inc.	-26.5%	-36.2%	-29.5%	-3.0%

Table 3

Summary of Benchmarking Results

	Actual Cost less Predicted Cost			
	2010-2012 Final Results	2013	2011-2013	Difference from 2010-2012
Hearst Power Distribution Company Limited	-28.3%	-33.1%	-30.6%	-2.3%
Horizon Utilities Corporation	-11.2%	-5.7%	-8.8%	2.4%
Hydro 2000 Inc.	-9.3%	-1.0%	-4.7%	4.6%
Hydro Hawkesbury Inc.	-59.0%	-51.2%	-55.5%	3.5%
Hydro One Brampton Networks Inc.	-7.4%	-6.9%	-7.8%	-0.4%
Hydro One Networks Inc.	58.2%	27.4%	47.8%	-10.4%
Hydro Ottawa Limited	1.7%	8.2%	4.5%	2.8%
Innisfil Hydro Distribution Systems Limited	-5.2%	-3.0%	-3.9%	1.3%
Kenora Hydro Electric Corporation Ltd.	-7.1%	-10.5%	-6.8%	0.3%
Kingston Hydro Corporation	1.6%	3.7%	2.8%	1.2%
Kitchener	-22.2%	-19.8%	-21.1%	1.0%
Lakefront Utilities Inc.	-15.3%	-7.6%	-12.9%	2.4%
Lakeland Power Distribution Ltd.	-10.4%	-6.5%	-10.05%	0.3%
London Hydro Inc.	-12.7%	-11.2%	-10.8%	1.9%
Midland Power Utility Corporation	17.7%	18.1%	18.2%	0.5%
Milton Hydro Distribution Inc.	-14.9%	-6.6%	-15.7%	-0.8%
Newmarket	-18.3%	-19.8%	-20.1%	-1.7%
Niagara Peninsula Energy Inc.	6.9%	0.8%	5.4%	-1.5%
Niagara-On-The-Lake Hydro Inc.	5.6%	-1.0%	2.7%	-2.9%
Norfolk Power Distribution Inc.	0.5%	1.1%	1.5%	1.0%
North Bay Hydro Distribution Limited	5.0%	5.2%	5.5%	0.5%
Northern Ontario Wires Inc.	-33.3%	-21.4%	-27.6%	5.7%
Oakville Hydro Electricity Distribution Inc.	10.2%	13.2%	12.0%	1.8%
Orangeville Hydro Limited	-0.1%	-0.2%	0.7%	0.8%
Orillia Power Distribution Corporation	-3.1%	-4.9%	-3.5%	-0.5%
Oshawa PUC Networks Inc.	-18.1%	-17.6%	-16.7%	1.4%

Table 3

Summary of Benchmarking Results

	Actual Cost less Predicted Cost			
	2010-2012 Final Results	2013	2011-2013	Difference from 2010-2012
Ottawa River Power Corporation	-0.1%	4.3%	2.3%	2.4%
Parry Sound Power Corporation	3.9%	14.1%	7.0%	3.1%
Peterborough Distribution Incorporated	14.3%	14.5%	14.4%	0.2%
Powerstream Inc.	-4.2%	2.2%	-1.0%	3.2%
PUC Distribution Inc.	-0.1%	22.6%	10.2%	10.4%
Renfrew Hydro Inc.	17.3%	15.5%	17.4%	0.1%
Rideau St. Lawrence Distribution Inc.	-10.4%	-7.3%	-9.3%	1.1%
Sioux Lookout Hydro Inc.	2.1%	2.9%	2.9%	0.8%
St. Thomas Energy Inc.	-1.4%	-0.5%	0.6%	2.0%
Thunder Bay Hydro Electricity Distribution Inc.	4.9%	8.1%	4.4%	-0.5%
Tillsonburg Hydro Inc.	12.2%	19.3%	14.1%	1.9%
Toronto Hydro-Electric System Limited	44.8%	48.3%	47.0%	2.2%
Veridian Connections Inc.	-2.3%	-4.8%	-2.3%	-0.1%
Wasaga Distribution Inc.	-43.6%	-42.1%	-42.1%	1.6%
Waterloo North Hydro Inc.	2.5%	10.1%	7.0%	4.4%
Welland Hydro-Electric System Corp.	-15.4%	-15.3%	-14.0%	1.4%
Wellington North Power Inc.	12.7%	17.5%	16.1%	3.4%
West Coast Huron Energy Inc.	21.7%	41.2%	30.7%	9.0%
Westario Power Inc.	-1.5%	2.0%	0.2%	1.7%
Whitby Hydro Electric Corporation	-3.2%	-2.2%	-4.1%	-0.9%
Woodstock Hydro Services Inc.	31.8%	28.1%	30.0%	-1.8%
Average	-0.89%	-0.08%	-0.17%	0.73%

that predicted received a stretch factor of 0.45%. The few distributors that had cost in excess of 25% were assigned the highest stretch factor of 0.60%.

Table Four presents a summary of previous and updated performance and stretch factors. The stretch factors for most companies were not influenced by the 2013 update. Seven companies did have different stretch factors and they are highlighted in bold type on the table. Of those companies that have new stretch factors, six have increased and two have decreased. Of the seven changes, five had performance changes of 3% or less. Table Five presents the 2013 stretch factor assignments in the format of Appendix D of the Board report.

Table 4

Summary of Stretch Factor Assignments

	2010-2012		2011-2013		Change in Stretch Factor
	Benchmarking Performance	Stretch Factor	Benchmarking Performance	Stretch Factor	
Algoma Power Inc.	65.5%	0.60	68.5%	0.60	NO
Atikokan Hydro Inc.	18.5%	0.45	17.5%	0.45	NO
Bluewater Power Distribution Corporation	1.6%	0.30	4.6%	0.30	NO
Brant County Power Inc.	16.5%	0.45	13.0%	0.45	NO
Brantford Power Inc.	2.0%	0.30	0.9%	0.30	NO
Burlington Hydro Inc.	-7.9%	0.30	-8.0%	0.30	NO
Cambridge And North Dumfries Hydro Inc.	-7.0%	0.30	-3.7%	0.30	NO
Canadian Niagara Power Inc.	14.0%	0.45	13.2%	0.45	NO
Centre Wellington Hydro Ltd.	-4.4%	0.30	-1.5%	0.30	NO
Chapleau Public Utilities Corporation	18.8%	0.45	19.8%	0.45	NO
Collus Power Corporation	-6.3%	0.30	-7.7%	0.30	NO
Cooperative Hydro Embrun Inc.	-20.9%	0.15	-21.2%	0.15	NO
E.L.K. Energy Inc.	-26.6%	0.00	-28.3%	0.00	NO
Enersource Hydro Mississauga Inc.	-11.7%	0.15	-12.3%	0.15	NO
Entegrus Powerlines	-12.5%	0.15	-12.3%	0.15	NO
Enwin Utilities Ltd.	19.5%	0.45	16.9%	0.45	NO
Erie Thames Powerlines Corporation	**11.1%**	**0.45**	**8.7%**	**0.30**	**YES**
Espanola Regional Hydro Distribution Corporation	-20.0%	0.15	-18.9%	0.15	NO
Essex Powerlines Corporation	-15.5%	0.15	-15.7%	0.15	NO
Festival Hydro Inc.	19.6%	0.45	19.2%	0.45	NO
Fort Frances Power Corporation	**12.3%**	**0.45**	**9.6%**	**0.30**	**YES**
Greater Sudbury Hydro Inc.	**9.5%**	**0.30**	**11.9%**	**0.45**	**YES**
Grimsby Power Incorporated	-17.1%	0.15	-15.2%	0.15	NO
Guelph Hydro Electric Systems Inc.	8.3%	0.30	4.2%	0.30	NO
Haldimand County Hydro Inc.	-23.5%	0.15	-22.2%	0.15	NO
Halton Hills Hydro Inc.	-26.5%	0.00	-29.5%	0.00	NO
Hearst Power Distribution Company Limited	-28.3%	0.00	-30.6%	0.00	NO
Horizon Utilities Corporation	**-11.2%**	**0.15**	**-8.8%**	**0.30**	**YES**
Hydro 2000 Inc.	-9.3%	0.30	-4.7%	0.30	NO
Hydro Hawkesbury Inc.	-59.0%	0.00	-55.5%	0.00	NO

Table 4

Summary of Stretch Factor Assignments

	2010-2012		2011-2013		Change in Stretch Factor
	Benchmarking Performance	Stretch Factor	Benchmarking Performance	Stretch Factor	
Hydro One Brampton Networks Inc.	-7.4%	0.30	-7.8%	0.30	NO
Hydro One Networks Inc.	58.2%	0.60	47.8%	0.60	NO
Hydro Ottawa Limited	1.7%	0.30	4.5%	0.30	NO
Innisfil Hydro Distribution Systems Limited	-5.2%	0.30	-3.9%	0.30	NO
Kenora Hydro Electric Corporation Ltd.	-7.1%	0.30	-6.8%	0.30	NO
Kingston Hydro Corporation	1.6%	0.30	2.8%	0.30	NO
Kitchener	-22.2%	0.15	-21.1%	0.15	NO
Lakefront Utilities Inc.	-15.3%	0.15	-12.9%	0.15	NO
Lakeland Power Distribution Ltd.	-10.4%	0.15	-10.1%	0.15	NO
London Hydro Inc.	-12.7%	0.15	-10.8%	0.15	NO
Midland Power Utility Corporation	17.7%	0.45	18.2%	0.45	NO
Milton Hydro Distribution Inc.	-14.9%	0.15	-15.7%	0.15	NO
Newmarket	-18.3%	0.15	-20.1%	0.15	NO
Niagara Peninsula Energy Inc.	6.9%	0.30	5.4%	0.30	NO
Niagara-On-The-Lake Hydro Inc.	5.6%	0.30	2.7%	0.30	NO
Norfolk Power Distribution Inc.	0.5%	0.30	1.5%	0.30	NO
North Bay Hydro Distribution Limited	5.0%	0.30	5.5%	0.30	NO
Northern Ontario Wires Inc.	-33.3%	0.00	-27.6%	0.00	NO
Oakville Hydro Electricity Distribution Inc.	10.2%	0.45	12.0%	0.45	NO
Orangeville Hydro Limited	-0.1%	0.30	0.7%	0.30	NO
Orillia Power Distribution Corporation	-3.1%	0.30	-3.5%	0.30	NO
Oshawa PUC Networks Inc.	-18.1%	0.15	-16.7%	0.15	NO
Ottawa River Power Corporation	-0.1%	0.30	2.3%	0.30	NO
Parry Sound Power Corporation	3.9%	0.30	7.0%	0.30	NO
Peterborough Distribution Incorporated	14.3%	0.45	14.4%	0.45	NO
Powerstream Inc.	-4.2%	0.30	-1.0%	0.30	NO
PUC Distribution Inc.	**-0.1%**	**0.30**	**10.2%**	**0.45**	**YES**
Renfrew Hydro Inc.	17.3%	0.45	17.4%	0.45	NO
Rideau St. Lawrence Distribution Inc.	**-10.4%**	**0.15**	**-9.3%**	**0.30**	**YES**
Sioux Lookout Hydro Inc.	2.1%	0.30	2.9%	0.30	NO

Table 4

Summary of Stretch Factor Assignments

	2010-2012		2011-2013		Change in Stretch Factor
	Benchmarking Performance	Stretch Factor	Benchmarking Performance	Stretch Factor	
St. Thomas Energy Inc.	-1.4%	0.30	0.6%	0.30	NO
Thunder Bay Hydro Electricity Distribution Inc.	4.9%	0.30	4.4%	0.30	NO
Tillsonburg Hydro Inc.	12.2%	0.45	14.1%	0.45	NO
Toronto Hydro-Electric System Limited	44.8%	0.60	47.0%	0.60	NO
Veridian Connections Inc.	-2.3%	0.30	-2.3%	0.30	NO
Wasaga Distribution Inc.	-43.6%	0.00	-42.1%	0.00	NO
Waterloo North Hydro Inc.	2.5%	0.30	7.0%	0.30	NO
Welland Hydro-Electric System Corp.	-15.4%	0.15	-14.0%	0.15	NO
Wellington North Power Inc.	12.7%	0.45	16.1%	0.45	NO
West Coast Huron Energy Inc.	**21.7%**	**0.45**	**30.7%**	**0.60**	**YES**
Westario Power Inc.	-1.5%	0.30	0.2%	0.30	NO
Whitby Hydro Electric Corporation	-3.2%	0.30	-4.1%	0.30	NO
Woodstock Hydro Services Inc.	31.8%	0.60	30.0%	0.60	NO

Table 5

Stretch Factor Assignments by Group

Group I	Group II	Group III	Group IV	Group V
Stretch Factor = 0%	Stretch Factor = 0.15%	Stretch Factor = 0.30%	Stretch Factor = 0.45%	Stretch Factor = 0.60%
E.L.K. Energy Inc.	Cooperative Hydro Embrun Inc.	Bluewater Power Distribution Corporation	Atikokan Hydro Inc.	Algoma Power Inc.
Halton Hills Hydro Inc.	Enersource Hydro Mississauga Inc.	Brantford Power Inc.	Brant County Power Inc.	Hydro One Networks Inc.
Hearst Power Distribution Company Limited	Entegrus Powerlines	Burlington Hydro Inc.	Canadian Niagara Power Inc.	Toronto Hydro-Electric System Limited
Hydro Hawkesbury Inc.	Espanola Regional Hydro Distribution Corporation	Cambridge And North Dumfries Hydro Inc.	Chapleau Public Utilities Corporation	**West Coast Huron Energy Inc.**
Northern Ontario Wires Inc.	Essex Powerlines Corporation	Centre Wellington Hydro Ltd.	Enwin Utilities Ltd.	Woodstock Hydro Services Inc.
Wasaga Distribution Inc.	Grimsby Power Incorporated	Collus Power Corporation	Festival Hydro Inc.	
	Haldimand County Hydro Inc.	**Erie Thames Powerlines Corporation**	**Greater Sudbury Hydro Inc.**	
	Kitchener	**Fort Frances Power Corporation**	Midland Power Utility Corporation	
	Lakefront Utilities Inc.	Guelph Hydro Electric Systems Inc.	Oakville Hydro Electricity Distribution Inc.	
	Lakeland Power Distribution Ltd.	**Horizon Utilities Corporation**	Peterborough Distribution Incorporated	
	London Hydro Inc.	Hydro 2000 Inc.	**PUC Distribution Inc.**	
	Milton Hydro Distribution Inc.	Hydro One Brampton Networks Inc.	Renfrew Hydro Inc.	
	Newmarket	Hydro Ottawa Limited	Tillsonburg Hydro Inc.	
	Oshawa PUC Networks Inc.	Innisfil Hydro Distribution Systems Limited	Wellington North Power Inc.	
	Welland Hydro-Electric System Corp.	Kenora Hydro Electric Corporation Ltd.		
		Kingston Hydro Corporation		
		Niagara Peninsula Energy Inc.		
		Niagara-On-The-Lake Hydro Inc.		
		Norfolk Power Distribution Inc.		
		North Bay Hydro Distribution Limited		
		Orangeville Hydro Limited		
		Orillia Power Distribution Corporation		
		Ottawa River Power Corporation		
		Parry Sound Power Corporation		
		Powerstream Inc.		
		Rideau St. Lawrence Distribution Inc.		
		Sioux Lookout Hydro Inc.		
		St. Thomas Energy Inc.		
		Thunder Bay Hydro Electricity Distribution Inc.		
		Veridian Connections Inc.		
		Waterloo North Hydro Inc.		
		Westario Power Inc.		
		Whitby Hydro Electric Corporation		

Company	Year	Efficiency Assessment	Cost per Customer	Cost per km of Line
ALGOMA POWER INC.	2013	68.5%	1,952	12,302
ATIKOKAN HYDRO INC.	2013	17.5%	908	16,430
BLUEWATER POWER DISTRIBUTION CORPORATION	2013	4.6%	646	29,017
BRANT COUNTY POWER INC.	2013	13.0%	731	13,939
BRANTFORD POWER INC.	2013	0.9%	507	39,373
BURLINGTON HYDRO INC.	2013	-8.0%	587	25,773
CAMBRIDGE and NORTH DUMFRIES HYDRO INC.	2013	-3.7%	624	28,714
CANADIAN NIAGARA POWER INC.	2013	13.2%	726	20,275
CENTRE WELLINGTON HYDRO LTD.	2013	-1.5%	614	27,271
CHAPLEAU PUBLIC UTILITIES CORPORATION	2013	19.8%	653	30,175
COLLUS POWER CORPORATION	2013	-7.7%	500	23,849
COOPERATIVE HYDRO EMBRUN INC.	2013	-21.2%	568	39,819
E.L.K. ENERGY INC.	2013	-28.3%	401	29,697
ENERSOURCE HYDRO MISSISSAUGA INC.	2013	-12.3%	692	26,742
Entegrus Powerlines	2013	-12.3%	531	22,407
ENWIN UTILITIES LTD.	2013	16.9%	652	48,500
ERIE THAMES POWERLINES CORPORATION	2013	8.7%	610	32,792
ESPANOLA REGIONAL HYDRO DISTRIBUTION CORPORA	2013	-18.9%	612	14,642
ESSEX POWERLINES CORPORATION	2013	-15.7%	482	29,323
FESTIVAL HYDRO INC.	2013	19.2%	627	49,466
FORT FRANCES POWER CORPORATION	2013	9.6%	622	30,237
GREATER SUDBURY HYDRO INC.	2013	11.9%	560	26,887
GRIMSBY POWER INCORPORATED	2013	-15.2%	538	23,739
GUELPH HYDRO ELECTRIC SYSTEMS INC.	2013	4.2%	608	28,952
HALDIMAND COUNTY HYDRO INC.	2013	-22.2%	681	8,310
HALTON HILLS HYDRO INC.	2013	-29.5%	642	9,034
HEARST POWER DISTRIBUTION COMPANY LIMITED	2013	-30.6%	414	16,980
HORIZON UTILITIES CORPORATION	2013	-8.8%	499	35,054
HYDRO 2000 INC.	2013	-4.7%	531	30,838
HYDRO HAWKESBURY INC.	2013	-55.5%	284	23,045
HYDRO ONE BRAMPTON NETWORKS INC.	2013	-7.8%	586	27,565
HYDRO ONE NETWORKS INC.	2013	47.8%	1,046	10,682

Company	Year	Efficiency Assessment	Cost per Customer	Cost per km of Line
HYDRO OTTAWA LIMITED	2013	4.5%	579	33,222
INNISFIL HYDRO DISTRIBUTION SYSTEMS LIMITED	2013	-3.9%	732	14,168
KENORA HYDRO ELECTRIC CORPORATION LTD.	2013	-6.8%	532	30,201
KINGSTON HYDRO CORPORATION	2013	2.8%	517	38,667
KITCHENER	2013	-21.1%	466	22,062
LAKEFRONT UTILITIES INC.	2013	-12.9%	465	39,825
LAKELAND POWER DISTRIBUTION LTD.	2013	-10.1%	700	22,852
LONDON HYDRO INC.	2013	-10.8%	466	24,430
MIDLAND POWER UTILITY CORPORATION	2013	18.2%	662	34,376
MILTON HYDRO DISTRIBUTION INC.	2013	-15.7%	654	22,402
NEWMARKET	2013	-20.1%	543	22,272
NIAGARA PENINSULA ENERGY INC.	2013	5.4%	672	17,408
NIAGARA-ON-THE-LAKE HYDRO INC.	2013	2.7%	699	18,516
NORFOLK POWER DISTRIBUTION INC.	2013	1.5%	689	16,915
NORTH BAY HYDRO DISTRIBUTION LIMITED	2013	5.5%	614	25,228
NORTHERN ONTARIO WIRES INC.	2013	-27.6%	687	11,268
OAKVILLE HYDRO ELECTRICITY DISTRIBUTION INC.	2013	12.0%	730	26,377
ORANGEVILLE HYDRO LIMITED	2013	0.7%	577	32,555
ORILLIA POWER DISTRIBUTION CORPORATION	2013	-3.5%	591	32,280
OSHAWA PUC NETWORKS INC.	2013	-16.7%	505	27,050
OTTAWA RIVER POWER CORPORATION	2013	2.3%	505	32,410
PARRY SOUND POWER CORPORATION	2013	7.0%	805	21,599
PETERBOROUGH DISTRIBUTION INCORPORATED	2013	14.4%	562	35,731
POWERSTREAM INC.	2013	-1.0%	653	29,912
PUC DISTRIBUTION INC.	2013	10.2%	687	30,950
RENFREW HYDRO INC.	2013	17.4%	561	39,493
RIDEAU ST. LAWRENCE DISTRIBUTION INC.	2013	-9.3%	489	27,552
SIOUX LOOKOUT HYDRO INC.	2013	2.9%	802	7,845
ST. THOMAS ENERGY INC.	2013	0.6%	533	33,412
THUNDER BAY HYDRO ELECTRICITY DISTRIBUTION INC	2013	4.4%	585	25,631
TILLSONBURG HYDRO INC.	2013	14.1%	736	32,796
TORONTO HYDRO-ELECTRIC SYSTEM LIMITED	2013	47.0%	924	66,793

Company	Year	Efficiency Assessment	Cost per Customer	Cost per km of Line
VERIDIAN CONNECTIONS INC.	2013	-2.3%	529	23,757
WASAGA DISTRIBUTION INC.	2013	-42.1%	407	20,238
WATERLOO NORTH HYDRO INC.	2013	7.0%	728	25,066
WELLAND HYDRO-ELECTRIC SYSTEM CORP.	2013	-14.0%	472	23,533
WELLINGTON NORTH POWER INC.	2013	16.1%	785	38,175
WEST COAST HURON ENERGY INC.	2013	30.7%	820	50,545
WESTARIO POWER INC.	2013	0.2%	550	24,220
WHITBY HYDRO ELECTRIC CORPORATION	2013	-4.1%	642	24,806
WOODSTOCK HYDRO SERVICES INC.	2013	30.0%	739	48,418

TAB 9

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NAED PAR Report™
Supply Chain Scorecard
BUSINESS TOOLS
PARTNERS AND ALLIANCES
MEDIA

Benchmarking

Employee Compensation and Benefit Report

Hiring and keeping good employes is essential to the profitability of your business, especially in today's economy! To achieve this goal, you must consider your overall employee compensation plan - not just your pay scales, but your benefits program as well - in comparison to other distribution firms. That is why you need benchmarks.

NAED PAR Report™

The NAED PAR Report™ provided members with an up-to-date picture of actual operations throughout the industry. Each year, industry statistics are compiled into a report from a confidential, financial performance survey administered by a third-party research provider. Participants also have the option of receiving a personalized report comparing their operation with others of similar size and customer emphasis.

Supply Chain Scorecard

The NAED Supply Chain Scorecard is an industry initiative to create a sustainable competitive advantage for the electrical distribution channel. What gets measures, gets done! The use of an industry-wide supply chain scorecard for evaluating service levels will help to make processes more efficient, lower the cost of doing business together, and deliver more value to customers.

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PRINT EMAIL

NAED's Employee Compensation Report

How does your firm's employee compensation package stack up in the industry? To help you evaluate your situation, NAED offers the NAED Employee Compensation Study. The 2014 Employee Compensation Report analyzes compensations data from more than 975 U.S. firms for 6,000 locations.

Firms who purchase the 2014 NAED Employee Compensation Survey will receive a wealth of information on topics such as:

- Executive and Employee Compensation
- Sales Commission Plans
- Inside/Counter Sales Policies
- Benefit Programs - including Health Care, Retirement Income and Paid Time Off/Vacation

How much does it cost to receive the final NAED Employee Compensation report?
NAED members that complete the survey pay only $95 (reports for non-participants will cost $295 for members, $395 for non-members). Order the 2014 Employee Compensation Report by contacting NAED Member Services at 888-791-2512.

What do I get with the final report?
The Employee Compensation Report includes:

- NAED Employee Compensation Report: This report presents the results of analysis of data submitted by all NAED participants. The document will be provided in a PDF file.
- Cross-Industry Results Report: This report presents the results of the analysis of data submitted by all participants from every sponsoring organization. It also features geographic breakdowns so you can compare various metropolitan areas around the U.S. This report will be provided in a PDF file and in an Excel spreadsheet.

How can the Employee Compensation survey results help my business?
The results of the Employee Compensation survey will help you run your business better by answering the following questions:

1. Is your employee turnover rate higher than it should be?
2. What changes have distributors already made in lights of the Affordable Care Act?
3. Does your compensation plan for salespeople make sense?
4. Is your salary in line with industry standards?
5. Is your retirement program overly generous, inadequate or about right?
6. What fringe benefits should you receive as an owner?
7. How does management compensation change as sales increase?
8. What deductibles are most firms offering in their health plans?
9. How much revenue should a beginning salesperson generate?
10. What is fair compensation for a branch manager?

Who administers the Employee Compensation survey?
Profit Planning Group specializes in a variety of financial improvement services. They have conducted numerous surveys with an unblemished confidentiality record. Profit Planning Group guarantees that your data will be held strictly confidential.

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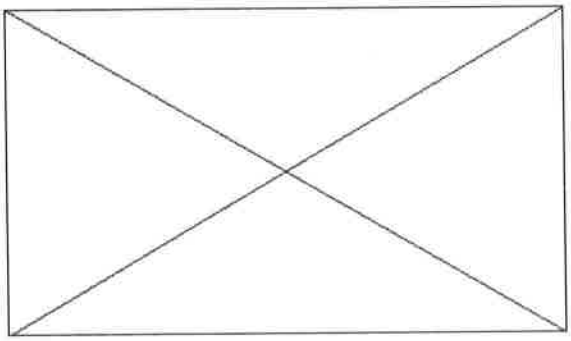
PRINT EMAIL

NAED PAR Report™

The NAED PAR Report™ provides members with an up-to-date picture of actual financial benchmarks throughout the industry. Industry statistics are compiled into a report from a confidential, financial performance survey administered by Industry Insights - an independent third-party research provider. Participants receive a personalized report comparing their financial situations with others of similar size and customer emphasis.

What is different this year?
This year's NAED PAR Report™ survey process is being administered by a third party research provider called Industry Insights. Participants still have the option of submitting their data *exactly* has they have in the past, but will also have the option of uploading their data to Industry Insights via a secure website. The final results will be available via a secure web portal where participants can access their results, download reports and raw data for use in their favorite BI software. This secure web portal will also feature customizable dashboards and reporting functionality. This distributor driven process also guarantees improved consistency in the data and more flexibility with the final products.

Watch this short video to find out more about the 2014 enhancements:



How much does it cost?
There is absolutely no cost to participate in the survey. However, if you wish to receive the final report, the following tools are available:

- Company Performance Report: Participating companies can receive this report for $299
- Industry Overview Report: Non-participating companies can receive this report for $299

Results will be made available through Industry Insights secure web portal at NAEDPARReport.com. Users have access to downloadable PDF and XLS results. You will also have access to customizable sorting and dashboard tools through the secure web portal.

When will I receive the results of the survey?
The results are now available. Participants can choose to receive the final results as a secure download in a PDF download, or as a .CSV format for importing to your favorite business intelligence (BI) tool, or they can simply login to the online dashboard to view and sort the results using a secure survey portal. All of the data will be archived on the survey portal so participants can have access to data from past years.

Who administers the survey?
All of the financial data inputted into the NAED PAR Report™ survey is handled 100% by an independent third party research provider called Industry Insights. *NAED will never see the individual financial data.* For nearly 35 years, Industry

Insights has been serving the research needs of trade and professional associations. They process over 100,000 survey forms every year that are similar to the NAED PAR Report™ and boast an unblemished confidentiality record. Industry Insights guarantees that your data will be held strictly confidential.

Industry Insights was hand selected by a group of NAED distributors serving on the NAED's Performance Analysis Committee with the assistance of consulting firm Brown, Smith and Wallace. Scott A. Hackworth, CPA, Sr VP, will lead the Industry Insights survey team for NAED. Mr. Hackworth leads many of Industry Insights' largest and most rigorous research projects. His responsibilities primarily include designing and implementing research strategies that will provide reliable and useful information. Over the past 14 years, his studies have been featured in National Geographic, The Wall Street Journal, USA Today, The New York Times, the Economist, and numerous other national and international news programs and publications.

TAB 12


Electrical Council
"A trusted, member-driven resource providing value to the Canadian electrical community."
ELECTRICAL COUNCIL
ELECTRO·FEDERATION CANADA
Discover the Power of Membership
Why You Should Join:
▶ Connect to the electrical industry in Canada — with manufacturers, distributors and manufacturers' reps — all across Canada.
▶ Gain data on market share and the size of your industry, by region and product group — on a timely basis.
▶ Keep current on industry news and trends with weekly updates and connect to end-customers through online platforms.
Download the membership application and join today!
For more information, visit us online at www.electrofed.com or call 1-866-602-8877

The Canadian Electrical Industry: A Shifting Paradigm

The Canadian electrical industry continues to undergo a major shift as businesses begin diversifying their strategies to gain market competitiveness. New technologies, business practices and customer engagement models are forcing businesses to reinvent their product offerings and their sales and marketing strategies.

Moreover, because of *perceived* similarities in standards, language and business models, some Canadian subsidiaries are becoming relocated to the U.S., resulting in the redundancy of sales, marketing and technical resources.

While these shifts can pose challenges for electrical manufacturers and distributors in the Canadian market, there are also opportunities to be had.

The Electrical Council is instrumental in bringing current issues and opportunities to the forefront for members to assess, so they can make more informed business decisions for market competitiveness.

Keeping You Current on the Top Issues & Opportunities Facing the Electrical Industry

E-COMMERCE

Keeping the electrical channel competitive.

The Internet is fast becoming the new store shelf. Personal purchasing habits are rapidly moving into business as customers continue to purchase products online. Customers are now searching, identifying and locating unique (read: high margin) items to price compare, find alternatives, match requirements, upgrade products, learn installation techniques and identify qualities of the product (size, weight, packaging). Manufacturers who sell through retail understand how important it is to have their product displayed; manufacturers who sell through distributors need to have their products and product attributes populated on searchable Websites. The challenge for businesses becomes the *opportunity* in itself: marketing and selling products through the *tried, traditional* channel to secure competiveness, while implementing e-Commerce strategies to service online customers.

CHEMICAL MANAGEMENT

Ensuring industry meets government regulations on banned and controlled chemicals.

The Government of Canada controls chemical substances to protect human health and the environment using a variety of tools. The government must determine what, if any, regulatory controls are required with respect to chemical substances. Such controls can range from risk management measures to an all-out ban or prohibition of a substance's manufacture, import and use in Canada.

ENVIRONMENT

Maintaining strong corporate citizenship.

Recycling programs for used lamps and batteries continue to be in place by government regulators in British Columbia, Manitoba, Ontario and Quebec. Plans for Nova Scotia and New Brunswick are underway. EFC and its Electrical Council continue to play a key role in putting government-approved programs in place to support members' compliance efforts.

CANADIAN ANTI-SPAM LEGISLATION

Supporting members' efforts to meet this new legislative requirement.

The Canadian Anti-Spam Legislation (CASL) is now in effect and applies to all commercial electronic messages (with limited exemptions) sent from your company. CASL requires your company to obtain express opt-in consent, prescribed information to be included in each message and a clear unsubscribe mechanism, among other things. With fines of up to $10 million per offence, it is important that your business is aware of the new legislation and its requirements. EFC and its Electrical Council have been instrumental in lobbying Industry Canada and the CRTC to ensure the legislation is fair and not overly burdensome to member companies, while still meeting its stated goal of combatting spam.

WIRE AND CABLE RETURNABLE REELS

Developing a program to reduce costs and improve our environmental impact.

In conjunction with the Electrical Council's Wire and Cable Section, several companies are working together to develop a solution that will improve reel performance and increase the effectiveness of the handling of reels, while reducing costs and the environmental footprint.

SKILLS SHORTAGE

Encouraging students to pursue careers in advanced manufacturing and trades.

Government and businesses across regions and sectors will need to work cooperatively and aggressively to address this ubiquitous issue, particularly in two key areas - technical resources (Electrical Engineers and CETs) and certified trade electricians. EFC continues with its scholarship initiative to encourage young people to enter into the electrical industry.

EXPANSION OF STATISTICAL SERVICES

Providing value-added statistical information for forecasting and trend analysis.

In addition to the 14 market share statistical programs currently in place for Electrical Council members, the statistical team is continually expanding the quality and level of statistical information beyond actual market share reports, through the development of high-level summaries that include import, export, and shipments for several product sections.

IMPROVED INDUSTRY FORECASTING

Providing high-level industry forecasts.

With the advent of new opportunities, it's more imperative than ever before for businesses to understand current market conditions and forthcoming trends. To this end, the Electrical Council and Kerrwil Publications offer members the comprehensive *Pathfinder* report, which provides a financial overview of the entire electrical industry in Canada, estimating numbers and size of markets and providing in-depth insight into specific markets. This report also includes statistical details on contractors and growth of the commercial, retail and utility markets.

REGULATION AND SUPPORTING STANDARDS HARMONIZATION

U.S. and Canada are opening the doors to align regulatory objectives and standards to reduce redundant cost from red tape.

This move intends to reduce the cost that manufacturers are required to pay for un-harmonized standards and certification to meet regulations by putting a focus on aligning processes and requirements. This effort should start with new standards, but may eventually include old ones, as prioritized by the industry. Over time, this could reduce cost-to-market by 30% ($500M or more) annually for our sectors. This harmonization effort involves the Regulatory Cooperation Council (RCC), who look at regulatory areas that can be aligned more efficiently, and the Standards Council of Canada (SCC), who work with their American counterparts to have respective Standard Developing Organizations (SDOs) become more bi-nationally efficient at harmonization.

HARMONICS

Who pays to clean up? The product producer or the power provider?

Utilities in Canada would like to adopt the European method of requiring all manufacturers to modify their products to lower harmonic current emissions back onto the power grid. EFC has been collaborating with a number of U.S. and Canadian manufacturing associations, working with Canadian Utilities and the Electric Power Research Institute (EPRI) for two years on a standardization project suitable for North America. A standard for residential products should be ready for publication by year end, and will target only new designs of selected high energy consumption products.

Given the changing landscape of the Canadian market, it's now more important than ever before to become part of a **Canadian association** that provides one voice for the electrical market.

About the Electrical Council

The Electrical Council (EC) is an industry organization that represents the interests and needs of more than 200 manufacturers, distributors and manufacturers' representatives in Canada.

Electrical Council members manufacture, distribute, market and sell a wide range of electrical products, including distribution equipment, industrial controls, lighting, motors and generators, transformers, wire and cable, wiring supplies and electric heating. These categories form the basis of Electrical Council's Product Sections, which offer a strong nucleus for members to discuss issues and opportunities pertaining to their company's product focus.

In addition, the Electrical Council maintains a strong focus on electrical safety, sustainability, advocacy, codes and standards, and also serves as a hub of networking, education, and industry research.

Scan here to view members' list.

What Does EC have to do with EFC?

Electro-Federation Canada (EFC) is a national, not-for-profit association with headquarters in Toronto, Ontario, that represents member companies that manufacture, distribute and service electrical and electronics products. The Electrical Council is one of EFC's councils.

EFC provides a powerful nucleus around which the Electrical Council benefits from shared core resources, including government relations, technical services, statistics and market research, and communications, furthering efforts, on behalf of members, in such key areas as regulatory issues, harmonization of standards, gathering of statistical information on sales and compensation data. The Electrical Council Executive Committee, which comprises member company representatives, derives its authority from, and is accountable to, the EFC Board of Directors.

Meet the Staff

Rick McCarten
Vice President, Electrical Council
Electro-Federation Canada
647-260-3087
rmccarten@electrofed.com

Rick has spent more than 30 years in the electrical market and has been instrumental in developing training, education, market research, and national and regional networking programs for the electrical market in Canada. Prior to this role, Rick managed the Ontario Electrical League. He spent eight years on the Board for the National Association of Wholesaler-Distributors (NAW) Research Foundation, during which time he assisted in the publication of over 50 books on the topic of distribution. Rick currently serves on the Texas A&M University Distributor Program Advisory Council.

Jim Taggart
President & CEO, Electro-Federation Canada
647-260-3093
jtaggart@electrofed.com

Jim provides strong strategic direction to Electro-Federation Canada (EFC) and each of its councils, including the Electrical Council. As a Past Chair of EFC, Jim understands the needs of members in the Canadian electrical market, and to this end, he and the EFC Board have developed a strategic plan that enhances EFC's value-added benefits by centralizing core services into a hub -- providing all members with increased benefits and market opportunities in such areas as electrical safety, sustainability, government relations and communications. Jim joined EFC in November 2010. Prior to EFC, he was Vice President, Vendor Relations at Sonepar Canada, one of the largest electrical distribution companies in Canada. He also served as President, Legrand Canada, a leading provider of electrical wiring devices and home systems.

Susan Adler
Member Services

Nathalie Lajoie
Events & Training/ Education Programs

Kathy Saunders
Atlantic Region Coordinator

Bill Bryans
Technical Services

John Jefkins
Marketing & Communications

Brisette Lucas
Government Relations

Swati Patel
Communications

Nicole Giardino
Events

Ivan Roy
Quebec Region Coordinator

Anne Harrigan
Market Research

Wayne Edwards
Sustainability & Electrical Safety

ELECTRICAL COUNCIL
ELECTRO-FEDERATION CANADA

Exclusively Yours: Membership Benefits

ELECTRICAL COUNCIL
ELECTRO-FEDERATION CANADA

The Electrical Council conducts annual membership surveys to measure performance and to determine next steps. Members continue to grade **networking, communications and industry statistics programs** with top marks for value and performance—and as core requirements for their business.

The Electrical Council also provides members with a forum for the development of **technical codes and standards, advocacy** of industry policies on legislative and regulatory affairs, as well as representation in and guidance on new and developing technologies related to **electrical safety and sustainability.**

Networking

Annual Electrical Council Conference: As the premier conference for the electrical market in Canada, this annual event draws 500+ senior executives from manufacturing, distribution and rep agencies—from all across North America! The conference's business program offers insight on trends and market opportunities, while social gatherings provide opportunities for networking and relationship building.

Other National Events: Throughout the year, the Electrical Council hosts national events for members, including the EFC Federation Cup Golf Tournament, an Annual General Meeting, Christmas Receptions across Canada, the Economic Forecast Day, and an e-Tech Marketing Forum.

Regional Events: Connect to the electrical market in Atlantic Canada, Quebec and Ontario by way of regional networking events, which include: golf tournaments, reception functions, gala dinners and more. **Other Regions:** Let us connect you to events hosted by the Electrical Leagues in Ontario, Manitoba, Saskatchewan, Alberta and British Columbia!

Industry Channel Summit: Once every two years, the Electrical Council hosts a gathering of the top executives across Canada to look at key issues facing the Canadian electrical market. Collectively, we solve the unsolvable. Members are encouraged to participate in this important network.

Training & Education

All member company employees can take advantage of the wide range of professional development and skills-based training programs that are offered through the Electrical Council's **Learning Centre**, including:

EPEC
ELECTRICAL PRODUCTS EDUCATION COURSE

Electrical Product Education Course (EPEC)

The Electrical Council's unique partnership with the National Association of Electrical Distributors (NAED) allows members to participate in EPEC—the cornerstone of sales and product training in the electrical distribution industry. These courses offer training on individual products, their applications and how they are interrelated with other products in electrical systems—and include key project modules and a capstone module along with supporting blueprints and references. *Bronze and silver level programs now available in both English and French.*

Industrial Distribution Training Programs

As a member, you have direct access to the following professional development programs for Industrial Distribution:

- Industrial Distribution Leadership Certificate Program (IDLCP) with Mohawk College
- University of Industrial Distribution (UID) with Purdue University
- Texas A&M University's Industrial Distribution Program

Communications

The Electrical Council regularly publishes communication pieces that allow members to remain at the forefront of industry news, trends and opportunities. Each week, members receive the ***InfoElectro*** e-newsletter, featuring association news, industry announcements and event information. Member companies are encouraged to submit their corporate announcements for inclusion in the e-newsletter to gain further exposure in the market.

InfoElectro magazine is also published bi-annually in print format and showcases the latest innovations in the industry. Free subscription for members.

The EFC Website (**www.electrofed.com**) keeps members up to date through the site's newsroom, media centre, industry events, learning centre, sustainability, research, technical services, career, and scholarship categories.

EFC's Annual Marketing Awards program recognizes organizations demonstrating marketing excellence and innovation within Canadian electrical manufacturing and distribution and electronics. Visit **www.electrofed.com/awards** for details.

NEW! Electrical Council members also receive exclusive access to Kerrwil's **electricalindustry.ca** — an online portal that provides a cost-effective way for members to reach a qualified audience of end users across Canada with the right reach and frequency.

This portal features:

- Two online newsletters produced by Kerrwil: ***Electrical Industry Newsweek***, a weekly newsletter that reaches those that specify, buy and install electrical equipment in Canada; and ***Canadian Electrical Wholesaler***, a monthly newsletter that reaches the entire Canadian Electrical Wholesaling channel;
- Kerrwil's online, mobile-enabled ***Electrical Industry GoldBook Directory***, featuring member company listings; and
- A research platform, providing members with unique database access for data appending and analysis needs.

Canadian Electrical Wholesaler

Industry Statistics

Statistical Programs

Members receive a myriad of Canadian industry data throughout the year, allowing members to track trends and develop accurate production and sales forecasts. The Electrical Council currently runs **14 confidential statistical programs** for different electrical product groups. These programs allow members to gauge their share of the market in any given product category, monitor industry trends year over year, and have access to the overall market size for their specific industries by region, by month and by specific category.

Market Research

Members have exclusive access to a range of market research reports that address the changing landscape of the electrical industry in Canada. Most notably, is the Electrical Council's annual **Pathfinder** report that provides a financial overview of the entire electrical industry in Canada. Complementing the Electrical Council's statistical programs, this report employs triangulation techniques to estimate numbers and size of markets, providing in-depth insight into specific markets. This report also includes statistical details on contractors and growth of the commercial, retail and utility markets.

Other research reports published include: studies on the future of the electrical market, trends and opportunities in e-Commerce, supply chain trends, profit analysis, compensation studies, and others.

The Electrical Council's **ChannelVision** monthly poll asks top executives in the market to share their opinion on current issues and trends in such topic areas as: unemployment numbers, sales volumes, business confidence and forecasting. These polls provide valuable insight into trends *before they happen.*

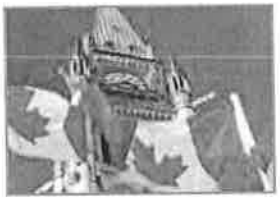
Company Survey Services

As an added value, the Electrical Council offers members the opportunity to conduct surveys for their own companies, such as Customer Satisfaction Surveys required for ISO requirements, internal Employee Satisfaction Surveys, or other general surveys—all at a very competitive rate.

Exclusively Yours: Membership Benefits – *continued*

Codes & Standards Representation

The Electrical Council works actively in the North American and International standards harmonization arenas to ensure members' interests are represented. Electrical Council members and staff reside on many Canadian Standards Association, Underwriters' Laboratories Inc. and International Electrotechnical Commission (IEC) technical committees, and maintain a close relationship with CANENA, working to facilitate the harmonization of North American electro-technical standards.



Government Relations

The Electrical Council represents the interests of Canadian electrical manufacturers, distributors and reps with all levels of government, regulatory agencies and electrical inspection authorities. The Electrical Council also provides advocacy on public policy issues such as: Extended Producer Responsibility, energy efficiency regulations and safety regulations. Through the Electrical Council, members are able to band together to offer one voice for legislative action and change.

Electrical Safety

The industry is committed to preventing electrical-related injuries and deaths in Canada through the shared responsibility of designing, manufacturing, selling and installing of safe products and services. This includes implementing measures to prevent counterfeit products from entering into the Canadian market. The Electrical Council is involved in many electrical safety programs, including:

- Electrical Safety Foundation International Canada, a collective group that provides electrical safety education to Canadians;
- Canadian Consumer Product Safety Coalition, which supports Health Canada's Consumer Product Safety Act and ensures the federal government sufficiently considers the market's interests and ability to comply.
- Canadian Anti-Counterfeiting Network, a coalition of individuals, businesses and associations that have united in the fight against product counterfeiting, fraud and copyright piracy in Canada and abroad;
- Canadian Chamber of Commerce's Canadian Intellectual Property Council;
- National Electrical Manufacturers Association's Anti-Counterfeiting Coalition;
- Electrical Safety Authority's Steering Committee for Unsafe Products; and
- British Electrotechnical & Allied Manufacturers Association Anti-Counterfeiting Coalition

Sustainability

The Electrical Council and its members are dedicated to the environmentally-responsible design, manufacture, packaging and recycling of electrical products in Canada. Members are continually bringing-to-market innovative, energy-efficient products for Canadians. The Electrical Council regularly updates members on any advances in Extended Producer Responsibility (EPR) regulations, energy efficiency standards and renewable energy options. The Electrical Council is helping members lead the way in electrical sustainability in Canada and has been instrumental in leading the following initiatives:

- Working closely with Product Care, a not-for-profit industry association that manages product stewardship programs for household hazardous and special waste;
- Development of a comprehensive whitepaper on EPR, which outlines what manufacturers and distributors are responsible for;
- Creation of an online portal, which features information and resources on CFLs, and addresses concerns related to the low-level of mercury in these lamps;
- Hosting regular industry seminars and Webinars on timely topics related to energy efficiency, EPR and renewable energy; and
- Maintaining ongoing correspondence with all levels of government and regulatory bodies to ensure members' interests are represented.

Electrical Council Product Sections

Members that manufacture products within the scope below may join one or more of the following product sections. Section programs are product-specific and services may include:

- ▶ Facilitating company participation in the standards development process;
- ▶ Representation in a national or provincial legislative or regulatory process;
- ▶ Participation in customized market research programs; and
- ▶ Participation in industry marketing initiatives, focused on expanding product-specific market opportunities.

Wire & Cable Section

The Wire & Cable Section is comprised of Canadian manufacturers of a wide range of electrical wiring and cabling products, including communication, coaxial, electronic, fiber optic and power cables, which includes building wire.

Industrial Control Section

The Industrial Control Section is comprised of Canadian manufacturers of a wide range of automation control products, including motor controllers, programmable controllers, variable speed devices, relays and timers, motion control, safety products and engineered products.

Transformers Section

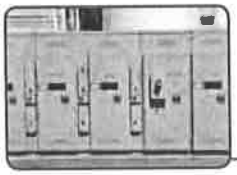
The Transformers Section is comprised of Canadian manufacturers of all dry type transformers, liquid-filled distribution transformers, power transformers and current or voltage instrument transformers of various classes.

Motor & Generator Section

The Motor & Generator Section is comprised of Canadian manufacturers of all motor and generator products for all horsepower categories.

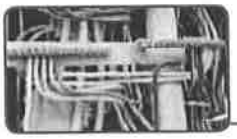
Lighting Section

The Lighting Section is comprised of Canadian manufacturers of lamps, luminaires, ballasts and emergency lighting.



Distribution Equipment Section

The Distribution Equipment Section is comprised of Canadian manufacturers of circuit breakers, panel boards, load centres, meter centres, safety switches, switch boards, switch gear and fuses.

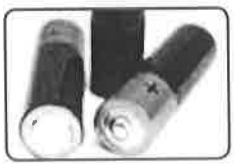


Wiring Supplies Section

The Wiring Supplies Section is comprised of Canadian manufacturers of wiring devices, hazardous location products, conduit fittings and outlet boxes, as well as other wiring products.

24-7 Service Providers Section

The 24-7 Service Providers Section encompasses companies that are concerned with the qualification and certification of field service technicians for industrial electrical apparatus.



Battery Section

The Battery Section is comprised of the major Canadian battery manufacturers as well as several other players. Represented as well, are some emergency lighting manufacturers whose products contain batteries.

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Electro-Federation Canada's Electrical Council (EC) is an industry organization that represents the interests and needs of more than 200 manufacturers, distributors and manufacturers' representatives in Canada. Electrical Council members manufacture, distribute, market and sell a wide range of electrical products, including distribution equipment, industrial controls, lighting, motors and generators, transformers, wire and cable, wiring supplies and electric heating. These categories form the basis of Electrical Council's Product Sections, which offer a strong nucleus for members to discuss issues and opportunities pertaining to their company's product focus.

In addition, the Electrical Council maintains a strong focus on electrical safety, sustainability, advocacy, codes and standards, and also serves as a hub of networking, education, and industry research.

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TAB 13

HYDRO ONE NETWORKS INC.
DISTRIBUTION
Revenue Deficiency/(Sufficiency)
Year Ending December 31, 2015 to 2019
($ Millions)

Line No.	Particulars	2015	2016	2017	2018	2019
1	Utility Rate Base	6,553.3	6,864.4	7,191.4	7,541.3	7,869.6
2	Deemed Equity Portion of Rate Base	2,621.3	2,745.8	2,876.6	3,016.5	3,147.9
3	Allowed / Target Return	9.71%	9.96%	10.16%	10.21%	10.21%
4	Allowed / Target Return on Equity	**254.5**	**273.5**	**292.3**	**308.0**	**321.4**
5	Revenue at Current Rates	1,198.2	1,205.0	1,215.5	1,219.3	1,221.9
6	Total Costs and Expenditures	1,107.9	1,188.6	1,222.7	1,242.0	1,268.8
7	Utility Net Income before taxes	90.3	16.4	(7.2)	(22.7)	(46.9)
8	Tax adjustments to accounting income	(103.3)	(100.0)	(111.7)	(121.0)	(122.8)
9	Taxable Income	(13.0)	(83.6)	(119.0)	(143.7)	(169.7)
10	Income Tax Rate	26.50%	26.50%	26.50%	26.50%	26.50%
11	Income Tax on Taxable Income	(3.4)	(22.2)	(31.5)	(38.1)	(45.0)
12	Income Tax Credits	(1.5)	(1.5)	(1.5)	(1.5)	(1.5)
13	Utility Net Income	**95.2**	**40.1**	**25.8**	**16.9**	**(0.4)**
14	Revenue Deficiency/(Sufficiency)	159.3	233.4	266.5	291.1	321.8
15	Gross Revenue Deficiency/(Sufficiency)	**216.7**	**317.5**	**362.5**	**396.1**	**437.8**

Assumptions:
No filing from 2015-19
Revenue at 2014 rates is with updated load forecast

TAB 14

SUMMARY OF HYDRO ONE CUSTOM APPLICATION FRAMEWORK

1.0 INTRODUCTION

On October 18, 2012, the Ontario Energy Board released its, Renewed Regulatory Framework for Electricity Distributors: A Performance-Based Approach ("RRFE"). The Board's new framework calls for distributors to focus on customer requirements and to demonstrate that their investment plans support cost-effective planning and operation of the distribution network. The Board's new approach consists of three main policies: rate-setting, planning, and measuring performance; founded on the principles of good asset management; coordinated long term planning; and measurable performance outcomes.

Hydro One Distribution is applying for a five year Custom Cost of Service application under the Board's new Custom Rate-setting method. Hydro One Distribution has determined that a custom application is most appropriate, given its proposed significant and necessary multi-year investments with relatively certain timing and levels of associated expenditures. This approach has been customized to fit Hydro One Distribution's specific circumstances to ensure that Hydro One Distribution is capable of effectively addressing the large capital expenditure requirements needed to manage its aging infrastructure and plan for future expansion and modernization of the distribution system. This is required to provide a safe, reliable and secure supply of electricity. This custom application process also allows Hydro One to propose a rate smoothing methodology to minimize the initial rate impact to customers resulting from rebasing after a three year IRM term, details of which, are provided in Exhibit F1, Tab 1, Schedule 2.

The Board expects distributors that apply the custom rate setting method to customize their application to fit their particular circumstances, and measure their performance to ensure the Company is delivering on its plan. The specifics of rate recovery and performance monitoring over the term of the plan, as outlined in the RRFE, will be up to the individual distributor to determine. As such, Hydro One has developed and stakeholdered a framework for adjustments and outcome measures.

2.0 HYDRO ONE'S CUSTOM APPLICATION FRAMEWORK

Hydro One Distribution's proposed custom application framework is consistent with the Board's RRFE requirements. Hydro One Distribution's custom application is a five year Cost of Service application that provides five years of revenue requirements to accommodate necessary investments in infrastructure and system integrity work to ensure continued safe, reliable and secure service. To accurately forecast out over a five year duration, Hydro One Distribution has undertaken a rigorous planning process, which is shaped by the customer and asset information it has collected, using the new data and analytical processes it has invested in over the past several years. (This is described further in Exhibit A, Tab 17, Schedules 1 and 7, while the customer information is filed at Exhibit A, Tab 5, Schedule 1.)

Hydro One Distribution recognizes that there are still risks associated with forecasting over a longer period. Changes in the industry may alter the investment needs or require changes to rate setting that could result in a significant impact on Hydro One's capability to execute its plan.

In order to mitigate the risk of externally driven factors that may be impactive; Hydro One Distribution is proposing a number of adjustment mechanisms in the design of its custom application to reflect plan changes outside the normal course of business in order

for the Company to avoid a regulatory review by the Board during the five year custom application period. Hydro One Distribution is also proposing a set of outcome measures to track its performance and delivery of the plan. These mechanisms are summarized in the following sections.

2.1 Adjustments

Hydro One Distribution is proposing adjustments to provide a safeguard to protect both the Company and customers against unexpected results in the operation of the plan. Hydro One Distribution is proposing adjustments only for events that are externally driven and beyond the control of management. The adjustments have been classified into three categories: (i) annual adjustments, (ii) adjustments outside of normal course of business, and (iii) off-ramps. The latter two adjustments will result in either a particular component or the entire plan being examined and adjusted or even possibly terminated.

Annual Adjustments

Hydro One Distribution is proposing annual adjustments for recurring events that are mechanical in nature. The adjustment calculation will be derived based on year-end audited financial statements or parameters issued by the Ontario Energy Board or the Federal or Provincial Government. Hydro One Distribution's proposal for annual adjustments will include such items as:

- changes in the cost of capital and working capital,
- changes in the tax rates,
- changes in other third party pass through charges, and
- disposition of deferral and variance accounts.

Hydro One Distribution's intention is to present to the Board annually an update of adjustments for the upcoming year as part of a draft rate order. Further details on annual adjustments will be provided in Exhibit A, Tab 4, Schedule 2.

Adjustments Outside of Normal Course of Business

Hydro One Distribution is proposing that adjustments outside the normal course of business will be sought for unexpected events that are materially impactive to the operation of the Company and which are outside of the Company's control. Hydro One Distribution's proposal for these adjustments will include such items as:

- new government directives or legislation,
- material changes to codes or standards, or
- material unforeseen weather events.

Hydro One Distribution's intention is to file an application to the Board for a review of a particular component of the plan, when a materially impactive event or cumulative events arises. Hydro One Distribution's proposal would be to track such adjustments in a variance account and adjust rates through a rate rider or adder. Further details will be provided in Exhibit A, Tab 4, Schedule 3.

Off-Ramps

Hydro One Distribution is proposing to apply the Board's policy in relation to off-ramps and to add two additional off-ramps in the event of industry restructuring or a major change to Hydro One's service territory.

Under the Renewed Regulatory Framework, the Board expects that a distributor that applies using the custom rate-setting method will be committed to that method for the duration of the approved term. However, the Board has recognized a distributor may need to seek early termination. Therefore the Board has provided a mechanism for a regulatory review to be initiated if the distributor performs outside of the ±300 basis points earnings dead band or if its performance erodes to unacceptable levels.

Hydro One also submits that industry restructuring of the electricity distribution sector would create a major change in the costs of the distribution business and would prevent continuing with the plan. Similarly, a significant change to Hydro One's licensed service territory which involved the transfer of a large amount of customers would have a very significant impact on revenues and costs and would prevent continuing with the plan. Hydro One proposes that these two items also be approved as off-ramps in this application. At the technical conferences and executive presentation in this proceeding, Hydro One was asked to clarify these off-ramps and give examples of what could trigger these off ramps.

Both off-ramps are designed to address only major events that could be imposed on the company during the five year plan. They are not designed to deal with LDC acquisitions as any acquisitions during the test years will not be included in the plan.

Examples of events that could trigger the industry restructuring off-ramp include:

i) a legislated change to the design of the electricity distribution sector in Ontario such as the introduction of 8 to 12 large regional distributors serving the province proposed in the Ontario Distribution Sector Review Panel report;

ii) a consolidation of Hydro One with Ontario Power Generation as currently being considered by some political parties.

Examples of events that could trigger the significant change to Hydro One's licensed service territory include:

i) a significant number of service area amendments in high density areas bordering LDCs that remove future Hydro One customers that were included in load forecasts and possibly existing customers in the same area as this could have a significant impact on the rates of remaining Hydro One customers; or even more impactive;

ii) a new Board policy resulting from the current Service Area Amendments and MAADS Rate-Making Policy Review (EB-2014-0138) that could allow LDCs to expand to their municipal boundaries. Typically this would result in the high density Hydro One customers transferring to other utilities at potentially less than market prices.

2.2 Outcome Measures

The Board's Renewed Regulatory Framework emphasized the need for utilities to demonstrate results that align with customer preferences, enhance productivity, promote innovation and provide value for money for its customers. Hydro One is proposing a set of outcome measures with targets that will track the Company's performance in meeting its five year plan as described in this application. The outcome measures will be tracked annually and the results of this tracking will be reported to the Board. Details regarding the outcome measures will be provided in Exhibit A, Tab 4, Schedule 4.

TAB 15

looking at?

MR. AMODEO: Again, I would have to go back and get that information for you.

MR. THIESSEN: Okay.

MS. LEA: If you are willing to do that, that would be great, TCJ1.3, information on current spending on cable locates.

UNDERTAKING NO. TCJ1.3: TO PROVIDE INFORMATION ON CURRENT SPENDING ON CABLE LOCATES.

MS. LEA: We were going to go to a slightly different area. All right. So Mr. Thiessen, I think, is going to move back to issue 1.4. This was not one of the -- I don't think we sent this question, did we?

MR. THIESSEN: No.

MS. LEA: No, we didn't send this question to you, so...

MR. THIESSEN: It is generally a policy question, and it has to do with the earnings sharing mechanism. And it actually -- I am referencing the Consumers Council of Canada Interrogatory No. 7, which is Exhibit I, tab 1.04, schedule 10, CCC 7.

And the question asks about whether an earnings sharing mechanism is possible. And the response equates the earnings sharing mechanism with rate smoothing, saying that you are proposing a rate smoothing and therefore an earnings sharing mechanism is not appropriate.

And I was wondering if you could explain that a bit more clearly.

MS. FRANK: Good. I was hoping that we would move down to the part of the response that says you learn from others.

So that is the part that is on the screen in front of us now, where we looked at the Enbridge Gas application as well, and they were using earnings sharing. And we have actually quoted something from that Enbridge case where they said:

> "Trying to match smoothing of rates and earnings sharing is incredibly difficult."

MS. LEA: You are lost somehow.

MS. FRANK: Did you just turn me off?

[Laughter]

MS. FRANK: Don't turn me off, Sam. So the challenge is when you do earnings -- when you do smoothing, you under-earn in some years and you over-earn so that customers have a steady rate change.

Then if you were now to look at a period of earnings sharing, every time you would over-earn I imagine you would be looking at giving money back to the customers, and every time you would under-earn that would be unfortunate for the company.

That does not work.

So I think you have a choice. You can have smoothing for customers. And in this case, as we all know, this is an application after several years of IRM where there was capital expenditures that were not being reflected in customers' rates. So there would have been a large rate

increase in the first year.

We thought that would not be something that customers would see as favourable, to have a large increase in year 1. So we suggested smoothing was more of a mitigant to customers, and that is why we put that in, rather than earnings sharing.

MR. THIESSEN: Well, I am not quarrelling with rate smoothing. Rate smoothing is a good thing and the way you have done it I think is a good thing.

But it would appear to me that you could still layer on an earnings sharing mechanism with a little bit of imagination and a way of maybe using a deferral account of some sort, sort of an accounting methodology, to populate an earnings sharing mechanism, on top of your rate smoothing.

Did you consider that? Or would you consider that?

MS. FRANK: First of all, it is complex to do, and it would have to be balanced. So it would have to be overs and unders, both ways, which is not typically what people talk about when they talk about earnings sharing. They just talk about the one side, the over.

But if you are going to do something like this -- and the idea would be over the, I imagine, the five-year period, and at the end of the day, you would say: Was there over- or under-earning for the whole five-year period?

I actually think that the Board normally looks at that when they set future rates and they determine what they're

going to allow for the costs. I believe they do look at history. That's why history is provided.

So to explicitly set up an earnings sharing mechanism with the balanced over and under, I think, is -- I would suggest additional effort to try to maintain, and the Board is already looking at it.

So from the company's perspective, I am not certain that the added effort adds benefit.

MR. THIESSEN: Thank you.

QUESTIONS BY MS. LEA:

MS. LEA: No other questions there; then I will move to a few questions that I have.

With respect to force majeure, and these were included in the issue 2.2, and it relates to your capital spending as well, and your SAIDI and SAIFI numbers.

So the interrogatory that I am looking at, it is Exhibit I, tab 2.02, schedule 11, Energy Probe 16. So that is issue 2.2.

And that interrogatory referred to evidence which we might want to look at, Exhibit A, tab 6, schedule 1. Exhibit A, tab 6, schedule 1, page 19.

And on that exhibit, it appears that the yearly SAIDI performance and SAIFI performance, excluding force majeure events, are relatively flat.

Have I interpreted that -- those charts correctly?

Perhaps it would be helpful to look at Exhibit A, tab 6, schedule 1, page 19, which has the bar charts on it. My copy of the evidence doesn't have it in colour, so...