

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 Ontario Power Generation Inc. pursuant to section 78.1 of the *Ontario Energy Board Act, 1998* for an order or orders determining 2014 and 2015 payment amounts for the output of certain of its generating facilities.

BOARD FILE EB-2013-0321

Submissions of the Society of Energy Professionals

1. The following are the Society of Energy Professionals (“SEP”) submissions to the Ontario Energy Board (the “Board”) on the issues reviewed in the matter of Ontario Power Generation Inc.’s (“OPG”) 2014-2015 payment amounts for its prescribed assets.
2. The submissions follow the approved Issues List with short overview and contextual introductions and a conclusions section.

Context

Historical context

3. SEP submits that it is important to understand the context for the current proceedings. The broader context that is pertinent is the wave of policy ideas that originated in the 1980s that were originally denoted by the label “deregulation, competition and privatization” and which is now more often dubbed “restructuring”. Ontario was one of the relatively few jurisdictions that has embraced the restructuring policy in a very complete form. The failure of this policy to achieve its objectives stands at the centre of the current proceedings which concern the revenues that are “just and reasonable” to be earned by OPG which is one of the successor organizations to the former Ontario Hydro, which was an integrated monopoly. The continued failure of the Ontario government to respond appropriately to the failure of the electricity restructuring policy continues to hobble the setting of just and reasonable rates for Ontario’s consumers.
4. Further, the origins of much of OPG’s challenges at the present time lie in the actions of the Ontario government under Premier Harris and of the appointed Chair and executive of Ontario Hydro prior to the passing into law of the **Energy Competition Act, 1998**.

5. The two most significant actions were: the “recovery” program for the Ontario hydro nuclear fleet known as the Nuclear Assets Optimization Plan (“NAOP”); and the creation of “stranded debt”.
6. NAOP called for the mothballing of the Bruce A and Pickering A nuclear stations, which continues to have material cost implications. Much of the current costs of Pickering A are due to its mothballing and subsequent recovery. *Inter alia*, this history of Pickering A renders any benchmarking meaningless. Of nearly equal importance was the “sea-change” to the relationship with the federal nuclear regulator that occurred as a result of NAOP. This relationship determines much of the cost structure of OPG’s nuclear operations, the costs of which dominate OPG’s total costs. The failure to understand this has already led to counterproductive interference in OPG’s operations by the Board. In EB-2010-0008 the Board ordered OPG to reduce arbitrarily Operations, Maintenance and Administration (OM&A) costs by \$145m (a Decision which was subsequently challenged and is still before the Supreme Court of Canada). The Decision has also provided the impetus for a Business Transformation process that is geared to impressing the regulator regarding headcount rather than addressing the real challenges of managing a large generating fleet, especially the nuclear component. The SEP submits that the Board should avoid a repeat of this error at all costs in the current proceeding.
7. The artificial creation of “stranded debt” (known as the “unfunded liability” on the books of Ontario Hydro’s legal continuation for bond redemption purposes, the Ontario Electrical Financial Corporation(OEFC)) and the institutional structures that were devised in the wake of this concept obviate any rational discussion of capital costs. About two thirds of the unfunded liability at restructuring in 1999 was simply a change in the capital structure that was designed to position OPG and Hydro One Networks Inc. (HONI) for privatization. The other part – the “residual stranded debt” was premised on an anticipated fall in the price of generated electricity due to “market competition” which, in fact, did not occur. The capital structure of OPG is a direct result of the Ontario government’s intent in 1999 to privatize OPG. SEP submits that the Ontario consumer has had to pay unnecessarily high capital costs to support the fiction that OPG is a private company and now is the time to give the consumer deserved relief.
8. Since EB-2010-0008, the Board has developed and now put in place the Renewed Regulatory Framework for Electricity (RRFE). The RRFE puts the consumer at the front of the Board’s balancing of its statutory objects. In a recent speech to the Ontario Energy Network, Rosemary T Leclair, the Chair of the Board, expressed this approach as follows;

“When I was last here....six months on the job.... I was preoccupied by this question...“How can... the regulator...within its mandate....better align the interests of

legislators, utilities and consumers...and achieve all of the objectives with which we are tasked... in a way that keeps the consumer front and centre?”

It is that question...that has guided the work of the Board over the last three years...as we have looked to become much more consumer centric in our approach to regulating the energy sector.”¹

Regulatory Limitations due to OPG Uniqueness

9. OPG is a unique organization. There are no precedents or examples from other jurisdictions on which the Ontario Energy Board (“Board”) can rely to guide it in understanding the complexities of OPG, precluding meaningful benchmarking. Moreover, OPG is a provincial crown corporation, contributing to its uniqueness, and this should be given considerable weight in Board’s decision-making. The expertise that the Board exercises under its governing statute, the *Ontario Energy Board Act, 1998* (“OEBA”), has very limited applicability to OPG. As a result the Board has a remit from the Ontario government for which it lacks sufficient capabilities to fulfill.
10. Administrative law in “Westminster” polities rests on the delegation of authority from Parliament to “expert” tribunals. SEP is of the view that the Ontario government erred in the provisions of O.Reg 53/05 when it included provision for the Board to regulate OPG. Since the Board is obliged to set payments, it should do so recognizing its own limitations of expertise. SEP submits that the Board should acknowledge the limits of its expertise by following the Hippocratic principle of “at least do no harm” and refrain from interfering in operating and capital spending decisions the full consequences of which the Board is unable to assess prudently.

ISSUES

Issue 3.1

What is the appropriate capital structure and rate of return on equity for the currently regulated facilities and newly regulated facilities?

The Board Should Repudiate the Standalone Principle and Increase OPG Debt to 90%

11. SEP submits that the Board should repudiate its endorsement of the “standalone principle”, which is the basis for the current capital structure, and therefore, costs. This principle is a relic of the failed privatization initiative of the Harris government

¹ April 28 2014

http://www.ontarioenergyboard.ca/oeb/Documents/Speeches/speech_leclair_OEN_20140428.pdf

as part of its restructuring policy and creates an unnecessary burden on the Ontario consumer.

12. Under the standalone principle, the Ontario consumer is made to bear the brunt of a manifest fiction, viz. that OPG is a private corporation like other private corporations and has to have a capital structure and Return on Equity (ROE) like a private corporation.
13. SEP notes that the standalone principle emerged out of the context noted above. While the US utilities that were affected by restructuring were investor-owned, the first wave of restructuring jurisdictions were the United Kingdom and New Zealand which had public-owned utilities. These organizations were either privatized or “corporatized”, which means they were made to “look like” a private company in readiness for privatization. The standalone principle codifies this concept; despite public ownership such “corporatized” organizations are treated as if they were private for purposes of setting capital costs. In Ontario the two successor organizations OPG and HONI were corporatized but no privatization has occurred. After 16 years the SEP submits that the Ontario electricity ratepayer has suffered enough to continue to maintain the pretense that OPG is a private corporation.

OPG Has No Risk, Making the StandAlone Principle Obsolete

14. The decisive underlying issue is risk. OPG has effectively no risk. Both financial ratings agencies whose reports were entered into evidence by OPG note that investors “look past” the corporate artifice and recognize that the government of Ontario will stand behind any debt issues. As Standard and Poors (S&P) observes:

“We assess that there is a 'high likelihood' that the government shareholder would provide timely and sufficient extraordinary support in the event of financial distress.”²

This is echoed by Dominion Bond Rating Service (BDRS), which states,

“DBRS believes the Province will continue to support its investment since OPG is a creation of the Province and is integral to fulfilling Ontario’s energy needs.”³

15. OPG’s expert witness on cost of capital concurred in this assessment.

MR. HOULDIN: Would you agree that the current capital structure and return on equity of OPG are designed to reflect the risks of an equivalent private corporation?

² Exhibit A2 Tab3 Schedule1 attachment 1 page2

³ Exhibit A2 Tab3 Schedule 1 attachment 2 page 2

MS. McSHANE: In the sense that the purpose of regulation is to emulate competition, then yes, but I think you have to take into account that OPG's operations that we're discussing here are regulated. So the capital structure and return do have to recognize its regulated status.

MR. HOULDIN: But in the context, as you say, of emulating a private corporation?

MS. McSHANE: Regulation is intended to emulate the competitive situation.

...

MR. HOULDIN: The second paragraph under the heading "Rationale."

So again, just -- it is a short sentence so I will read it:

"We assess that there is a 'high likelihood' that the government shareholder would provide timely and sufficient extraordinary support in the event of financial distress."

So Standard & Poor's makes that assessment. Could I ask you if you think that that is a -- do you agree with that statement by Standard & Poor's?

MS. McSHANE: I don't have any reason to disagree with it.⁴

16. SEP submits that it is inconceivable that, absent an unprecedented breakdown in civil order, the Ontario government would permit OPG's assets to cease operation.⁵

⁴ June 26, 2014 page 10, starting at line 6 and continuing at page 12 line 1

⁵ Or the appearance of the Dread Pirate Roberts

OPG's Debt Should Be Increased to 90%

17. In its Decision in EB 2007-0905, which is the most recent comment by the Board on the standalone principle, the Board makes contradictory assertions.

*“OPG is also different from the other entities the Board regulates in that it is not a **natural monopoly**.”*⁶ (emphasis added)

The Board goes on to say,

*“The Board concludes that if OPG is operated at arm's length, then **it should be examined in the same way as Hydro One**, another energy utility owned by the Province. In other words, Provincial ownership will not be a factor to be considered by the Board in establishing capital structure.”*⁷ (Emphasis added)

18. SEP notes that **HONI is a natural monopoly**. It simply does not follow that OPG should be regulated on the same basis by the Board's own logic. In the first quote the Board implies that OPG should be treated differently than natural monopolies but then goes on to say that it should be treated the same way as a particular natural monopoly, viz. HONI. In the first quote “regulates” in undefined but the specific context for this logical inconsistency is the defence of the standalone principle. The Board needs to revisit its reasoning for the retention of the standalone principle. A consideration of the fundamental nature of risk provides a logical basis for such a reconsideration. SEP submits that the Board should look past the highly ambiguous concept of an “arm's length” relationship with the “shareholder” and recognize what the investment community recognizes – that OPG's risk is the same as the government that owns it.⁸

19. The Board continues,

*“It would not be appropriate for the Board to assume that the Province will interfere in the distribution of OPG's risks now that the Board has regulatory authority over OPG; it is consistent therefore to regulate OPG on the basis that the Province will not control OPG's currently regulated facilities **in a manner which is adverse to OPG's commercial interests**.”*⁹ (Emphasis added)

20. Since the Board's Decision in EB-2007-0905 there have been significant changes, most notably the Ontario government's Long Term Energy Plan (LTEP) and the Board's own RRFE initiative. In the introduction to LTEP update of February 2014, Minister Chiarelli says,

⁶ page 140

⁷ page 142

⁸ The application of this argument to HONI is beyond the scope of this proceeding but SEP does not shrink from the application of the same reasoning to HONI.

⁹ Footnote 7, *op. cit.*

*“Ontario has adopted a policy of Conservation First, focusing on rate mitigation over major investments in generation or transmission **to curb costs for ratepayers**. This will mean pursuing lower-cost options to meet energy needs when and where we need it.”* (Emphasis added)

SEP submits that the Minister is signalling that control of costs is among the highest of priorities (along with energy conservation).

21. SEP has already quoted the Chair’s views on the relative balance of the Board’s objects. (See 12, above.) SEP submits that consistency with the RRFE and the Minister’s views implies that the consumer’s interests should take precedence over “commercial interests” whatever they may be.
22. The potential savings to the consumer from the recognition that the standalone principle is obsolete are very large. In its response to SEP Interrogatory (IR) 001, OPG indicates that the revenue requirement for OPG would be lowered by \$120.4million (m) in 2014 and \$120.2m in 2015 by a change to 70% debt and by \$262.4m and \$262.2m in 2014 and 2015, respectively, by a change to 90% debt. (90% debt was the capital structure of Ontario Hydro for most of its existence.)¹⁰
23. SEP submits that the Board should show that it truly puts the consumer first and is seized of the Ontario government’s desire to curb ratepayer costs by rejecting the standalone principle and ordering OPG to increase the debt portion of its capital structure to 90%.

Issue 3.2

Is OPG’s proposal for return on equity appropriate for the currently regulated facilities and for the newly regulated facilities?

Since the Government is the Sole Shareholder the Return on Equity (ROE) should reflect this and be reduced to the SDR

24. SEP submits that the ROE on all of OPG’s facilities is too high. In line with the rejection of the standalone principle, the relevant ROE is the return appropriate to the government shareholder. The correct economic return is the Social Discount Rate (SDR), the current rate for which should be requested from the Ontario government.¹¹

¹⁰ Exhibit L Tab 3.1 Schedule 19 SEP-001 tables 1 (page 2) and 2 (page 3)

¹¹ See paragraph 40, below, for the Board’s acknowledgment of the appropriateness of the SDR, which is the opportunity cost of capital for a government. The Ministry of Public Infrastructure Renewal issued a paper, **The Social Discount Rate for Ontario Government Investment Projects** authored by Peter Spiro in March 2008. This was Exhibit I Tab 31 Schedule 85 attachment 2 in EB-2007-0707. Spiro recommends a 5% real SDR; the 7% used for illustration represents a 2% inflation rate.

25. In 1999, at the time of OPG's creation, there was a view that there would be market competition for generation. Consequently, notwithstanding the intent of the Ontario government to privatize OPG, a competitive cost of capital for OPG was part of the market paradigm. There is now no competition in Ontario's "hybrid market", a fact underlined by the extension of the Board's remit in the current proceeding to previously unregulated hydroelectric capacity. There is, therefore, no reason to maintain an ROE above the warranted level or a government shareholder, i.e. the SDR.
26. SEP submits that, in conjunction with the changes in capital structure advocated above, the savings to Ontario electricity consumers from a lower ROE would be very substantial. In its response to SEP IR 002 OPG estimates that the combined effect of a 7% ROE and a 70% debt would be \$199.4m reduction in the revenue requirement in 2014 and 2015 and the combined effect of a 7% ROE and a 90% debt capital structure would be \$286.5m and \$286.4m in 2014 and 2015, respectively.¹²
27. SEP submits that the Board should order OPG to lower its ROE. Board Staff should consult with the Minister of Energy on the appropriate SDR and the Board should use this SDR value to set the ROE.

Issue 6.1

Is the test period Operations, Maintenance and Administration budget for the regulated hydroelectric facilities appropriate?

The Board Should Approve the Hydro-electric OM&A Budget

28. SEP submits that the budget is appropriate insofar as it reflects existing collective agreements.
29. SEP is also concerned that the problem of unfilled vacancies as a result of positions being left open for workers from the coal plants after those coal plants closed in early 2014, if not corrected, will impair OPG's ability to operate, maintain, and reinvest in the regulated hydroelectric facilities effectively.¹³ However, the Board should allow for this to be addressed through the collective bargaining process.

¹² Exhibit L Tab 3.2 Schedule 19 SEP-002 pages 2 and 3

¹³ See Exhibit F1 Tab2 Schedule 2, section 5; and Exhibit L Tab 6.1 Schedule13 LPMA-8.

30. SEP notes the following dialogue:

MR. MILLAR: And just to tie that down, Mr. Mazza, you spoke of thermal assets. I assume that means the coal plants?

MR. MAZZA: Yeah, the coal plants that are shut down.

MR. MILLAR: And sorry, I wasn't quite following. What you have been able to do is to take some of the operators that used to work in the coal plants, and they have been made available after some training to work on the hydro assets?

MR. MAZZA: Yeah, they would move into vacant positions as they would become trained, and a lot of these folks were available at the end of 2013.¹⁴

31. SEP also notes the following dialogue;

MR. MAZZA: Yeah, and as we discussed, there was -- if you are comparing the Board-approved budget, in the Board-approved budget there was a recognition in the budget that we would be filling some of the vacancies in 2013, and although we didn't fill the vacancies, we did replace them with temps and short-term contractors to fill some of the void. So when you are comparing Board-approved to the budget, that was also a driver.

MR. RUBENSTEIN: I just want to clarify, because yesterday there was a discussion with Mr. Millar about the difference -- there was a decrease from the actual versus Board-approved, because instead of filling positions with OPG personnel you used temporary or contract.

MR. MAZZA: Yes.

¹⁴ Transcript Vol. 3 June 16 page 159 line 23

MR. RUBENSTEIN: And I understood that to mean that those employees were cheaper than -- you know, their labour rates would be less than OPG personnel.

MR. MAZZA: We only -- yeah, in the short-term, just to fill in voids, in the short-term they could be cheaper, but from a long-term standpoint you need to have continuity, especially in the operations area of staff.¹⁵

32. With respect, the SEP submits that the Board does not possess the necessary expertise to make prudent judgments on hydroelectric OM&A costs.
33. OPG operates 54 regulated hydroelectric plants representing approximately 6.5GW. These plants vary in size from 2MW to 1499MW. They are on 22 river systems. OPG has to manage water regimes in conjunction with the requirements of the Ministry of Natural Resources and several federal statutes as well as an international treaty with the US.¹⁶ The Sir Adam Beck (SAB) plants, with their pumped storage facility, comprise among the largest and most complex hydroelectric operations in the World. Making decisions on these facilities requires extremely fine knowledge of operational requirements and tradeoffs with capital expenditures to ensure efficient, reliable and safe generation in the long term, consistent with many statutory and treaty requirements. Management and labour at OPG understand all of this complexity. The fixation in all three proceedings¹⁷ with headcount shows a lack of understanding of the complexity of the tasks facing OPG.
35. The complexity of hydroelectric operations has not been extensively probed as part of this application. However, this complexity can be seen in the totality of hydroelectric evidence: Exhibit A1-4-1 attachment 1 and A1-4-2 describe the vast geographic footprint of OPG's operations; Exhibit A1-6-1 section 7 lists the extensive number of legislative and regulatory requirements; Ex. D1-1-1 and F1-3-1 describe the large number of projects managed; Ex. F1-1-1 Appendix A summarizes the planning and maintenance processes; Ex. F1-2-1 summarizes the activities performed in the hydroelectric organization, and Ex. F1-4-1 describes several water agreements that OPG must administer.

¹⁵ Transcript Vol. 4 June 17 pages 65-66

¹⁶ See Exhibit A1 Tab4 Schedule 2

¹⁷ i.e., the current proceeding, EB-2010-0008 and EB-2007-0905

36. SEP also encourages the Board to review the record from past applications. For example, in EB-2010-0008, Ex. F1-2-1 provides a more detailed description of activities performed by hydroelectric staff; PWU Interrogatory L-11-10 details annual engineering reviews and plant condition assessments; and EP Interrogatory L-6-21 lists ten local stakeholders, including a First Nation, related to just 1 of 54 stations, R.H. Saunders GS. In EB-2007-0905, SEC Interrogatory L-14-79 provides examples of plant condition assessments for the DeCew Falls Generating Stations, and SEC Interrogatory L-14-87 details OPG's hydroelectric maintenance program.
37. Given the complexity of the facilities, and the limited technical capabilities of the Board to address it, SEP, with respect, believes that the Board lacks the necessary expertise to make prudent judgments on hydroelectric OM&A costs.
38. The submission by Board staff tacitly accepts the Board's lack of expertise by suggesting that third party review should be considered.¹⁸

Incentive Rates are an Implicit Acknowledgment of a Lack of Expertise

39. The Board has tacitly acknowledged its lack of knowledge by endorsing a move to an Incentive Rates (IR) regime for OPG.¹⁹ At the heart of IR regimes is the concept of information asymmetry. As a consultant to the Board explains, IR is an alternative to Cost of Service (CoS);

“COS regulation is often criticized for failing to achieve the maximum possible net benefits for society. This parallels the critique that economists have made about the merits of competition and regulation for contestable, but traditionally regulated, utility services. When services are not characterized by natural monopoly conditions, competition is feasible and preferable to regulation. For natural monopoly services, the regulatory system should attempt to harness and replicate the same incentives for efficient performance that exist in competitive markets. COS regulation often fails to create these incentives. Part of the problem is the high cost that must be incurred for regulators to fully understand a utility's operations. If they knew the efficient way to produce and market utility services, regulators could simply set prices to recover the minimum cost of providing the optimal array of utility services. Unfortunately, it is often difficult even for utility company managers to recognize best practices given the

¹⁸ Board Staff Submission, August 19, 2014 top of page 61

¹⁹ Board Report, **Incentive Rate-making for Ontario Power Generation's Prescribed Generation Assets**, March 28, 2013, EB-2012-0340

substantial uncertainty that exists regarding future supply, demand, and policy conditions. The challenge is much greater for regulators since they are apt to have little direct experience with utility operations. This results in “information asymmetry.” Redressing the informational asymmetry between company managers and regulators requires substantial data exchange, processing, and analysis, a process that is both time consuming, costly, and often inefficient.”²⁰

40. The Board has, of course, adopted IR for the regulation of natural gas and electricity distribution. While information asymmetry may have played a role in the Board’s decisions to move to IR in these cases, there are other factors that apply in these cases but not for OPG. The OEB has gathered experience in regulating natural gas distribution for 60 years, for example, and there are over 70 electricity distributors currently and there were over 200 when the Board began to regulate them. Neither of these considerations apply to OPG; it is difficult to conceive another reason to regulate OPG under IR other than for reasons of information asymmetry. The Board provides no actual reasons for its decision to apply IR to OPG, merely re-stating its statutory objects and the objectives of the RRFE:

“The Board remains of the view that a move to IR for the purposes of setting payment amounts for OPG’s prescribed generation assets is appropriate. IR can further the Board’s statutory objectives of protecting the interests of consumers and promoting economic efficiency while providing a stable planning environment for OPG. It is also consistent with the approach and objectives underlying the Board’s renewed regulatory framework for electricity, including the promotion of cost-effective planning and operations and a longer-term view.”²¹

41. Fundamentally, the role of the regulator is to emulate market outcomes as the Board clearly states;

“Electric transmission and distribution companies and natural gas distribution utilities are natural monopolies and are subject to rate regulation in Ontario by the Ontario Energy Board. In this context, the purpose of rate regulation, among other things, is to create or emulate an efficient market solution that cannot otherwise be achieved due to the presence of one or more market failures. As it relates to a rate regulated entity’s cost of capital, the role of the regulator is to determine, as accurately as possible, the opportunity cost of capital to ensure that an efficient

²⁰ Pacific Economic Group, ICF Consulting and Exel Energy Group, **Discussion Paper on Rate Regulation in Ontario**, September 2014 (RP-2004-0213). See also any text on economic regulation regarding the “Averch-Johnson” effect, e.g. Kahn, A. E., **The Economics of Regulation; Principles and Institutions** (Volume 2), Wiley, New York, 1971. For a more recent discussion see, Lyon, T.P., “Incentive regulation in theory and practice” in Crew, M.A. (ed), **Incentive Regulation for Public Utilities**, Kluwer, Boston, 1994.

²¹ **Board Report** *op.cit.* footnote 18, page 2

*amount of investment occurs in the public interest for the purpose of setting utility rates.*²²

42. The central feature of markets is that prices provide the information necessary for economic agents to make decisions. Economic theory holds that market prices reflect marginal costs. The only basic economic justification for guessing what the “right” price is (which is what IR, at root, involves) is that there must be information asymmetry that prevents the regulator from assessing marginal costs.²³

Collective Bargaining Provides the Best Way to Set Cost Structures

43. In contrast to the Board’s lack of knowledge, the collective bargaining process involves two parties with full and equivalent knowledge. Moreover, SEP submits that the collective bargaining process is the most effective means of determining what the value and costs of labour should be. In the case of OPG collective bargaining has a long history which informs the process, which was acknowledged by Mr Fitzsimmons.

MR. HOULDIN: Has there been a history of collective agreements between Ontario Power Generation and its predecessor Ontario Hydro with the Power Workers' Union and the Society of Energy Professionals?

MR. FITZSIMMONS: Yes.

MR. HOULDIN: Do you know how far back those collective agreements go?

MR. FITZSIMMONS: The first agreement with the Society of Energy Professionals would have been 1993.

The Power Workers dates back in -- their predecessor, the

²² **Board Report** on the Cost of Capital for Ontario’s Regulated Utilities, EB-2009-0084 December 2009, page 15.

²³ SEP notes that the logic of Board staff’s submission supports SEPs’ view. Board staff acknowledge the principle of market emulation but apply it narrowly and inappropriately to collective bargaining; “One of the chief roles of the Board is to act as a proxy for the market..” (page 78). In emulating the market, regulators seek to set costs close to marginal costs, not second-guess the terms of employment contracts in the private sector.

Ontario Hydro Employees Union, into the 1950s, I believe.²⁴

44. SEP submits that collective bargaining in the former Ontario Hydro and now in its successor organizations represents the institutionalization of “continuous improvement” that the Board is seeking in the distribution and transmission sectors under the RRFE.

45. The following summary points from Mr Chaykowski, OPG’s expert witness on collective bargaining, provides emphasis to the above²⁵:

“A “forcing strategy” in collective bargaining that attempts to achieve substantial reductions in the labour cost structure at OPG is not likely to be successful in the near term.

The best likelihood of success through collective bargaining is to adopt a fostering approach and negotiate incremental change that also preserves the high quality of the labour-management relationship.

Interest arbitration at OPG will not yield significant labour cost reductions at OPG.

The OPG collective agreements with the PWU and SEP provide very little scope for achieving significant labour cost reductions through either some form of contracting out or a restructuring.”

Controlling costs requires an understanding of tradeoffs between OM&A and Capital Spending

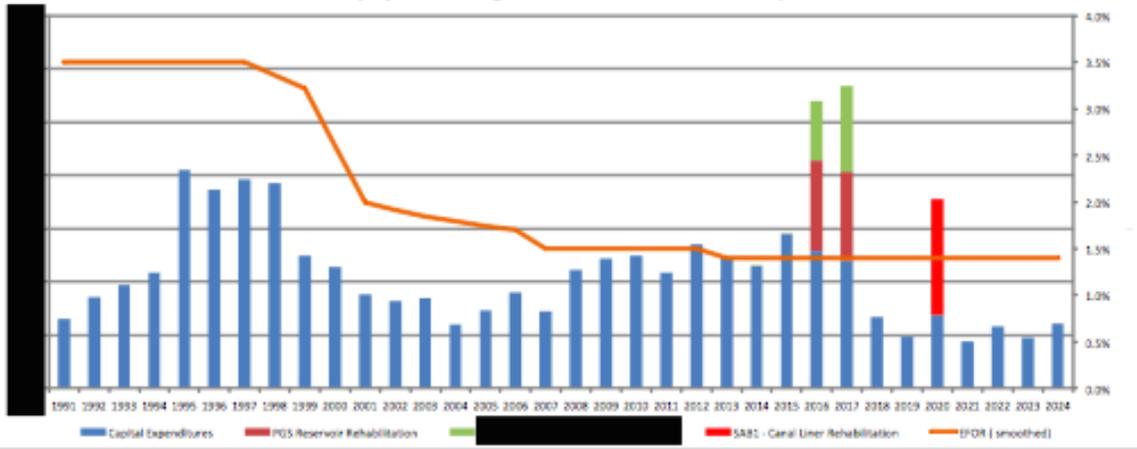
46. All productive processes require judgments about the relative contributions of capital and labour. As an example, OPG’s response to SEP IR 003 which includes the chart below.²⁶

²⁴ Transcript Vol. 7 June 20 page 40 line 11

²⁵ Exhibit F4 Tab3 Schedule 1 attachment 1, executive summary

²⁶ Exhibit L Tab 6 Schedule 19 SEP-004

Hydro Capital Expenditures vs EFOR (1991 - 2024)
(adjusted using CPI to 2013 constant dollars)



While the scale has been redacted, what the chart shows is that the Equivalent Forced Outage Rate (EFOR) for its hydroelectric plants (the continuous line, right scale) fell to about half of its previous level in 2003 following several years of increased real spending on capital. This illustrates how the performance of generating units (in this case hydroelectric) is a matter not only of headcount and the nature of staffing but also of capital spent to keep equipment in good repair.

Issue 6.2

Is the benchmarking methodology reasonable? Are the benchmarking results and targets flowing from those results for the regulated hydroelectric facilities reasonable?

Reliance on Benchmarking is Misguided

47. SEP re-emphasizes the uniqueness of OPG in relation to benchmarking.
48. Consequently, SEP has reservations regarding the benchmarking methodology used by OPG, both in principle and as applied to OPG. In particular, SEP submits that the nuclear benchmarking and the benchmarking of compensation lead to incorrect conclusions. These matters will be discussed below. However, SEP also submits that benchmarking the hydroelectric facilities has limited practical value. In addition, SEP submits that the Board has over-emphasized the benchmarking of headcounts. In turn, this has led OPG senior management to take counterproductive measures with regard to staffing so as to be able to show progress to the Board.
49. With regard to the counterproductive pre-occupation with headcount, the Attorney General's 2013 Report provides a good illustration.²⁷ The Report talks about some

²⁷ Exhibit KT 2 4, Auditor General's Report OPG Human Resources Chapter 3 (section 3.05)

functions like engineering being significantly understaffed while others may be overstaffed, according to the Goodnight benchmarking. Thus, a general reduction in a certain number of positions is not valid as it needs to be applied to the specific areas that are overstaffed and in a way that is consistent with the terms of the collective agreements on staff reductions if it is to be done in a way other than through attrition.

50. The main reason that benchmarking OPG, in general, is of limited or negative value is that OPG is unique; consequently it has no meaningful benchmarks.

51. Under cross-examination, expert witness McShane confirmed that she knows of no similar situation in North America.²⁸

MR. HOULDIN:

Am I correct, to your knowledge, that there are no other examples of a public-owned electricity generator that is subject to economic regulation by a quasi-judicial tribunal?

MS. McSHANE: I'm not aware of any.

52. The only examples worldwide that Standard and Poor's could find for financial rating purposes are; Vattenfall, Statkraft, EDF Energy and DONG Energy.²⁹ All of these companies garner revenues from other forms of energy, either natural gas or oil.³⁰

53. Specifically with regard to OPG's hydroelectric operations, there is no comparable organization covered by the EUCG database with regard to the scale, diversity and complexity of OPG's fleet of generators.

54. Breaking down OPG's total operations into individual plants or plant types or by function misses the complexity of managing OPG's assets. Benchmarks should only be guidelines and little reliance should be placed on such methods. OPG's Argument-in-Chief acknowledges this:

"Benchmarking data provides a starting point to compare the costs and reliability of OPG's regulated hydroelectric facilities with those of other hydroelectric facilities. OPG obtains benchmarking data from three main sources: EUCG Inc. ("EUCG"), Navigant Consulting and Canadian Electrical Association ("CEA") (Ex.

²⁸ Transcript Vol. 7 June 26, page 10 at line 19

²⁹ Exhibit A2 Tab3 Schedule 1 Attachment 1, page 11

³⁰ Vatenfall <http://corporate.vattenfall.com>; Statkraft <http://www.statkraft.com>; EDF Energy <http://www.edfenergy.com>; and DONG <http://www.dongenergy.com/EN/business%20activities/Pages/default.aspx>

*F1-1-1, p. 11). Because of the differing geographic locations and distribution of the plants, as well as differences in regulatory regimes, absolute comparisons cannot be made between the regulated hydroelectric station costs and other stations.*³¹

Issue 6.4

Is the benchmarking methodology reasonable? Are the benchmarking results and targets flowing from those results for the nuclear facilities reasonable?

Benchmarking OPG's Nuclear Operations is Not Meaningful

55. SEP has similar reservations as discussed in relation to Issue 6.2 but even more so for the nuclear operations. SEP submits that the benchmarking results and targets are not reasonable.

56. Benchmarking is based primarily on US light water moderated Pressurized Water Reactors (PWRs). The CANDU reactors which comprise OPG's fleet are very different. In particular, the on-power refuelling of CANDUs, permitted by its unique use of heavy water as a moderator and coolant, stands in stark contrast to the light water PWRs, which have to shut down completely to refuel.

57. The only truly comparable organization for nuclear operations is Bruce Energy. Unfortunately, the payments to Bruce Energy have been set by a non-transparent process (which, nevertheless, may be closer to the long-run optimum than the OEB-determined process). Moreover, Bruce Energy LLP makes very little information public. SEP submits that OPG's employees, many of whom worked at the Bruce station when it was part of Ontario Hydro, have a better understanding of the relevant comparisons from which genuine learning may take place than the benchmarking process.

58. Also, the benchmarking carried out by Goodnight makes no use of the experience of CANDU operations outside of Canada.³² Considerable reactor-years of experience are associated with the Wolsung, Chinese and Romanian plants. This experience is far more relevant than comparisons to US PWRs.

MR. HOULDIN: I am not sure which panel member is the right one to answer this question; it's fairly straightforward.

³¹ Page 67 line 9

³² Exhibit F2 Tab 1 Schedule 1 Attachment 1 page 2

Could you please confirm the data from the non-Canadian CANDU plants were not part of the benchmarking?

MS. CARMICHAEL: On Exhibit F2, 1-1 attachment 1, we list the industry peer groups that we benchmarked against. You will see that on the very right-hand column, where it says EUCG North American plants, it says US and Canada. We would have included non-CANDU plants and operators in that panel.³³

OPG's witness goes on to admit that data from CANDU reactors outside North America could have been useful in benchmarking.

MR. HOULDIN: The next question I have is -- refers to a quote from page 2 of Exhibit F, tab 1, schedule 1, attachment 1, and so it's in the very last full paragraph. You will see there is a statement that the only CANDU operators reporting day-to-day EUCG in 2011 were OPG and Bruce power, which is not a sufficiently large panel to provide a basis for comparison. You see that?

MS. CARMICHAEL: Yes, I do.

MR. HOULDIN: So my question is simply: How large a sample would be needed for a basis of comparison?

MS. CARMICHAEL: Well, since I can't say for sure how many, whether it would be another five or so, but because we only have access to two CANDU operators, ours and Bruce, we don't believe that that's a sufficient amount of panel members to compare ourselves against.

So, I mean, I'd have to go back and figure out with Scott

³³ Transcript Vol 3 June 18 page7 line 2

Madden, who actually developed this report, and determine with them how many would require sufficient benchmarking, in their expert opinion.

MR. HOULDIN: So, for example, you don't know that if you used cost data from the Korean plant and the Romanian plant, that that would be enough data?

MS. CARMICHAEL: Since there's not that many CANDU operators, probably most of the ones that exist would be sufficient. I mean, it would be about ten and that would probably be the amount we could get, and that would be sufficient.³⁴

59. SEP submits that even if benchmarking were not vitiated by general considerations, the specific benchmarks used in the Goodnight study should be regarded as incomplete since they did not include relevant data from the CANDU reactors outside of North America.

60. Benchmarking is also inappropriate because of the mixed ages of the supposed comparator plants and the OPG reactors. All reactor types show diminished average performance with age. Aside from the crucial difference in technology, there is no point in comparing the Pickering reactors, which are all 40 years old or older with US reactors that began operations in the late 1980s or 90s. (Just as comparisons between 20 and 40 year old US reactors are not meaningful.) In addition, as argued in paragraph 6 above, the Pickering A reactors, in particular, have no equivalent comparators due to their unique history.

61. As already noted, OM&A costs cannot be considered in isolation from capital spending. In this regard, OPG's OM&A benchmarking is not consistent with corresponding data on capital. Under cross-examination, OPG's witness agreed that this is the case.³⁵

MR. HOULDIN: Please confirm that OPG is unable to compare definitively capital maintenance spending for the peer benchmark

³⁴ *ibid* page 8 line 10

³⁵ *ibid* page 12 line 17

organizations with the staffing benchmarking that was done.

MS. CARMICHAEL: So, yeah, there are basically two separate benchmarks that are performed.

And as noted in the first paragraph, the first one is derived from the Electric Utilities Cost Group information.

And then the Goodnight Consulting report, which was the staffing analysis, they used they own panel, which was very specifically selected. They were large PWR benchmarks. And their database is a proprietary database, so they wouldn't necessarily correlate to the EUCG information. However, most of those peer groups, those PWRs, would most likely be members of the EUCG panels.

MR. HOULDIN: So you can confirm that statement?

MS. CARMICHAEL: We confirm our response, yes.

62. SEP submits that Board staff's criticisms of OPG's nuclear productivity³⁶ flow from a misunderstanding of the nature of productivity and its relationship to benchmarking. Productivity is the ratio of productive outputs to inputs, such as labor productivity, which might be expressed, for example, as MWh per hour of labour.³⁷ Benchmarking is only valid when inputs and and outputs of comparator organizations are similar in a pertinent way.³⁸ Hydroelectric plants have inherently high labour productivity, for example, so comparisons to fossil-fuelled plants are meaningless. Sweeping statements about nuclear productivity (MWh per dollar or unit of labour or per index number) ignore the unique nature of OPG's nuclear fleet, as argued above. No other generator operates as diverse a fleet of CANDU reactors or has to cope with the continuing consequences of NAOP. The nearest comparator, Bruce Power, is not subject to commensurate scrutiny so apples-to-apples comparisons of the composition of inputs (e.g. types of labour) is not possible.

³⁶ page 71

³⁷ Note that the intuitive meaning of productivity disappears when the denominator is an index number, such as an index of "total factors", which is the basis for distributor IRM.

³⁸ See paragraph 80

63. As an illustration, suppose the Board were to be benchmarked against other regulators. Leaving aside the difficulties in deriving acceptable quantitative measures for adjudicative tribunals, how comparable is the Board to US state regulators commissions or the British Columbia Utilities Commission, Nova Scotia Utility and Review Board, Alberta Utilities Commission, or Manitoba Public Utilities Board or the Régie de l'énergie, given the lack of any common remits?³⁹ Similarly, as argued, there is no comparable generator to OPG, so any productivity metrics are meaningless.

64. For the above reasons, SEP submits that the benchmarking results and targets of the nuclear plants SEP are not reasonable.

Benchmarking and Headcount Issues

65. Another example of the counterproductive nature of an over-emphasis on headcount that is the result of past benchmarking is provided in Exhibit D2 Tab 2 Schedule 2 attachment 1 with regard to the Darlington Campus Plan projects.

*“Over the last quarter, BMcD/Modus has engaged in a thorough review of several key Campus Plan projects in an attempt to identify trends and understand the causes of these cost and schedule overruns. Our findings show that the predominant cause was OPG’s Projects & Modifications (“P&M”) organization, who is managing this work for the DR Project, incorrectly applied an “oversight” project management approach for its **Engineer, Procure and Construct** (EPC) contracting strategy, leading to a series of cascading management failures and contractor performance issues, including misunderstandings of scope, uncontrolled scope creep, poor quality cost estimates, unrealistic and incorrect schedules and an inability to manage known risks, additional costs and delays.”⁴⁰ (emphasized text not in original)*

Senior management used P&M to develop and oversee all of the Campus Plan Projects. The P&M’s portfolio increased drastically with scale and technical complexity unprecedented for OPG, while at the same time, OPG was under pressure to decrease its staff. OPG once had considerable in-house construction, planning, procurement and engineering. Under pressure from prior Board cases, resources have been shrinking and the capability for managing and directing large capital projects has been sacrificed. Currently, there is only

³⁹ The Board has introduced the concept of “outcomes” as opposed to outputs. While it is not clear if this is mere semantics, taking the concept at face value the only outcomes over which the Board has any control are the quantity and quality of its adjudications (which are influenced by its code and other “policy” related activities). (Licensing and compliance are driven by external factors).

⁴⁰ Burns & McDonnell Modus Strategic Solutions Report, May 13, 2014 Executive Summary page 2

one dedicated cost estimator for all of P&M's work. P&M relied on the perceived ability of the EPC contracting model to shift project risk to the contractor and alleviate the need for active project management by providing oversight of the contractor's work at arms-length. Bmcd/Modus indicates that to facilitate the recovery of the situation, OPG will likely have to make some accommodations to its normal course of business as the company-at-large for the hiring of temporary employees and provide incentives for employees to work in transitional project environments.

Bmcd/Modus also found that OPG often relied on the vendors to suggest more creative solutions to their issues when OPG's team knew the best course to take all along. This was evident with the polar crane package inside the plant. OPG left it to the vendors to discern what was needed. The vendors decided to replace all of the cranes, even though OPG's team determined only refurbishment, not replacement, was required.

Issue 6.8

Are the 2014 and 2015 human resource related costs (wages, salaries, benefits, incentive payments, FTEs and pension costs) appropriate?

Costs Derived from Collective Bargaining are Just and Reasonable

66. SEP submits that for the most part, the 2014 and 2015 human resource related costs are, subject to collective bargaining, appropriate. The only fair and reasonable basis for these costs is collective agreements. The benchmarking that was carried out by OPG to support the costs is flawed.
67. SEP has reservations with regard to the Business Transformation process and the over-simplistic emphasis on achieving headcount reductions. Headcount over-emphasis can result in work being contracted out and done by less qualified and more expensive workers resulting in higher costs than if the work was done internally by a regular workforce.
68. Executive compensation is not subject to a bargaining process and may lead to inappropriate compensation, but SEP makes no comment in this regard.

Benchmarking of Compensation is Opaque and Flawed

69. Benchmarking of compensation is a relatively new business that emerged coincident with the precipitous rise in executive compensation over the past 30

years.⁴¹ The primary purpose of such benchmarking is to enable “leapfrogging” of executive compensation; benchmarking of employee compensation is a logical outgrowth.

70. As such, the firms that provide these services are not subject to any objective, independent review and use proprietary data gathered in an opaque manner.

71. OPG relies on third-party consultants whose data is not subject to transparent scrutiny. In EB-2010-0008 OPG used the services of Scott Madden; in the current proceeding the firm AON Hewitt provided employee compensation benchmarking. The old question asked by the Romans is still relevant:

- o *Quis custodiet ipsos custodiet?*
(Who will keep the keepers?)

72. OPG does not “benchmark the benchmarkers”.⁴² As a result, the quality of the benchmarking it carries out is a concern. This should be addressed by OPG going forward.

MR. HOULDIN: So my question here is really just to ask you to confirm that OPG is not aware of any service that benchmarks the benchmarkers, and it does not retain such services.

MS. CARMICHAEL: When we filed this response, we were not aware of any service that benchmarked the benchmarkers, and we did not -- OPG did not retain such services.

The AON Hewitt Report is Flawed

73. Turning specifically to the AON Hewitt evidence, SEP makes the following submissions.

74. On the comparability of companies included in AON Hewitt’s survey, SEP submits that none of the companies are suitable for benchmarking. Many companies operate no generation at all. SEP has indicated above in relation to Issue 6.2 that the relevant hydroelectric comparison is with a fleet of generators and that none of the AON Hewitt companies are close to comparable to OPG. With regard to nuclear generation, which represents about 90% of OPG’s OM&A

⁴¹ Thomas A. DiPrete, Greg Eirich and Matthew Pittinsky, **Compensation Benchmarking, Leapfrogs, and the Surge in Executive Pay**, *American Journal of Sociology*, vol. 115, no. 6 May 2010

⁴² Transcript Vol. 5 June 18 page 9 line 5 and Exhibit L Tab 6.8 Schedule19 SEP-009

costs, only New Brunswick Power, Hydro Quebec and Bruce Energy run nuclear plants. The former two only operate one reactor and OPG's reactor-years of experience are roughly double those of Bruce Energy.

75. SEP submits that the AON Hewitt report is statistically flawed. The response rate to the survey was 66%⁴³ which means that 34% of respondents did not provide data. Under cross-examination OPG indicated that they were not aware of efforts by AON Hewitt to correct for non-response rate bias and referred to the Terms of AON Hewitt's Terms of Reference. These do not contain any reference to non-response bias. SEP concludes and submits that Board must conclude that no corrections were applied.⁴⁴ Non-response bias means that the distribution of responses from those who did not respond may be different from those who did. When non-response bias is not corrected the implicit statistical assumption is that non-respondents' responses would fall in the same sample distribution as those that did. This assumption has no validity since nothing is known, by definition, about non-respondents (since they did not respond). As an illustration of the importance of this issue consider the question of whether or not particular OPG job categories lie in the first quartile of compensation level (i.e 75% of jobs in the benchmark sample have lower compensation). If the 34% of non-respondents all have higher compensation than OPG then OPG would move from the first to the 2nd Quartile. Without correcting for non-response bias, the Board should not accept any arguments that proceed from the AON Hewitt benchmarking.

Collective Bargaining has historically Set the Cost Structure for OPG Appropriately

76. SEP submits that OPG and its workforce understand its costs better than anyone else, therefore collective bargaining is the best method for arriving at fair and reasonable compensation. The current collective bargaining agreements with the Power Workers Union (PWU) and SEP reflect long processes in which there has been mutual accommodation by management and employees for the good of the electricity sector, based on detailed knowledge of the sector.⁴⁵

MR. HOULDIN: The 2014 and 2015 human resources costs that are in your application are based on collective agreements; is that correct?

⁴³ Undertaking J7-10

⁴⁴ Transcript Vol. 7 June 20 page 151, line 10 and Exhibit L Tab 6.8, schedule 17, SEC 115.

⁴⁵ See footnote 23 *op cit*.

MS. LADAK: Yes, that's correct.

MR. HOULDIN: Thank you. For the 2014-2015 period, is it OPG's intention to respect its obligations under the collective agreements?

MR. SMITH: It's OPG's position that we are required at law to do so.

77. The foregoing does not mean that, in the view of SEP, the cost structure of OPG is optimal. OPG's cost structure is the result of its unique history which includes the NAOP⁴⁶, described in the contextual discussion, and the subsequent transformation in the relationship with the Canadian Nuclear Safety Commission (CNSC), formerly the Atomic Energy Control Board. Collective bargaining has occurred within these constraints and, SEP, submits, managed to achieve rational results for the consumer in difficult circumstances.

SEP Collective Bargaining Agreements have been Appropriate

78. SEP submits that the collective agreements between SEP and OPG reflect outcomes that have been in the best interests of the industry as a whole, for example, with respect to average wage settlements since the dissolution of Ontario Hydro the lowest is for OPG.⁴⁷

MR. HOULDIN: So I just ask, so the -- if you look at the table there, you will see there are cumulative numbers for the wage increases of the Society of Energy Professionals compared among the successor companies to Ontario Hydro. And there are three highlighted rows there; one for the historic period, one for 2014, one for 2015.

Am I correct that with the exception of Kinectrics and Inergi, the cumulative Society of Energy Professional's wage increases for OPG are lower than those for other Ontario Hydro successor companies?

⁴⁶ See paragraph 6

⁴⁷ Exhibit F4, Tab 3, Schedule 1 page 14

MS. EARLE: Yes, that's what's in this chart.⁴⁸

79. PWU and SEP members who went to Bruce Power after the leasing deal in 2000 were spun out of OPG. At that time they had the same wages as the same collective agreement went with the employees to their new employer. Since that time SEP Bruce Power wages have increased by 8.5% more than SEP OPG wages and Bruce Power PWU wages have increased by 5.8% more than OPG PWU wages. This shows very clearly, as compared to the most relevant benchmark (the only other Ontario Candu operator), that the wages of PWU and SEP represented workers are just and reasonable at OPG.⁴⁹

80. SEP submits that Board staff err in its conclusions on compensation,

*“Although Board staff accepts that achieving the 50th percentile is not realistic in the near term on account of Ontario’s collective bargaining regime, **many similar organizations** have been able to achieve better results than OPG.”* (emphasis added).⁵⁰

Board staff do not provide any identification of these “similar” organizations. Similarity is a relative concept: a chair is similar to a beetle in that neither is a cantaloupe. SEP submits that there are not similar organizations to OPG for the pertinent purpose of these proceedings, viz. determining just and reasonable payments for a unique generator.

CONCLUSION

81. For all the above reasons, the SEP respectfully submits that OPG’s proposed 2014 and 2015 payment amounts for its prescribed assets are reasonable and prudent, and therefore merit Board approval as proposed, with the exception of the payments to capital.

82. In order to be consistent with the RRFE, and to take appropriate account of OPG being a low risk, provincially owned crown corporation, the Board should order a change in the capital structure to a debt of 90% and a lowering of the ROE to the SDR.

83. SEP submits that the only savings to consumers that do not have adverse operational consequences, with the possible exception of executive compensation and staffing levels, are those available from the reduction of capital costs. These savings are potentially substantial – about \$290M – and the

⁴⁸ Transcript Vol 7 June 20 page 152 at line 3

⁴⁹ Exhibit F4 Tab 3 Schedule 1 Tables 3 and 5

⁵⁰ Board Staff submission page 85

SEP urges the Board to provide the relief to consumers that may be achieved. Such relief is consistent with the Board focus on consumers and the emphasis in the need for cost reductions, outlined in the provincial Long Term Energy Plan.

84. SEP submits that with regard to the flaws in benchmarking and the over-emphasis on headcount derived from previous Board Decisions, as reflected in Business Transformation, the collective bargaining process is the best way to resolve these issues.

ALL OF WHICH IS RESPECTFULLY SUBMITTED