**EB-2007-0905**

**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 payment amounts for the output of certain of its generating facilities.

**Ontario Power Generation Inc.**

**Payment Amounts for Prescribed Generating Facilities**

**2008 and 2009 Revenue Requirement**

**(EB-2007-0905)**

## Submissions of the Power Workers' Union

1. These are the Power Workers' Union's (PWU) submissions on several of the issues reviewed in the matter of Ontario Power Generation Inc.'s (OPG) Payment Amounts for Prescribed Generating Facilities ("prescribed assets") for 2008 and 2009 Revenue Requirement (EB-2007-0905). The PWU's submissions stem from its energy policy statement:

> **Reliable, secure, safe, environmentally sustainable and reasonably priced electricity supply and service, supported by a financially viable energy industry and skilled labour force is essential for the continued prosperity and social welfare of the people of Ontario. In minimizing environmental impacts, due consideration must be given to economic impacts and the efficiency and sustainability of all energy sources and existing assets. A stable business environment and predictable and fair regulatory framework will promote investment in technical innovation that results in efficiency gains.**

2. The PWU notes that this is the first time that the Ontario Energy Board (OEB) reviews OPG's cost of service. It is therefore essential that in

rendering a decision on OPG's application for 2008 and 2009 payment amounts for its prescribed assets, the Board recognize its relatively limited experience in reviewing or otherwise dealing with OPG's regulated business. The PWU urges the Board to allow itself the opportunity to build an understanding of the generation business and gain experience through the review of this and subsequent cost of service reviews of OPG's prescribed assets. As a general submission, the PWU therefore identifies the need for the Board in making its decisions and giving direction to OPG to act cautiously and give significant weight to OPG's evidence and submissions.

## I. CAPITAL STRUCTURE AND COST OF CAPITAL (Exhibit C)

**Issues List: 2.1**

**What is the appropriate capital structure for OPG's regulated business for the 2008 and 2009 test years? Should the same capital structure be used for both OPG's regulated hydroelectric and nuclear businesses? If not, what capital structure is appropriate for each business?**

**Issues List: 2.2**

**What is the appropriate return on equity (ROE) for OPG's regulated business for the 2008 and 2009 test years? Should the ROE be the same for both OPG's regulated hydroelectric and nuclear businesses? If not, what is the appropriate ROE for each business? *(C1/T1/S1, C1/T2/S1, C2/T1/S1)***

### I.1. Introduction

3. According to its Memorandum of Agreement (MOA) with the Government of Ontario (the shareholder)[1], OPG will operate as a commercial enterprise with a fiduciary responsibility and duty to act in the best interest of OPG at all times. The PWU submits that as a commercial entity OPG should be entitled to earn a fair return on its prescribed assets. The PWU agrees with OPG's expert testimony provided by Ms. McShane that as a corporate entity with a commercial mandate to operate on a financially

[1] Exhibit A1-4-1, Attachment B

sustainable basis, OPG should be positioned with adequate access to the public debt Markets (Exhibit C2/T1/S1, page 54). In addition, as a commercial entity, OPG should be financed with a capital structure that, similar to investor-owned utilities, reflects its business risks and, in principle, would allow it to access the capital markets on reasonable terms and conditions on a stand-alone basis.

4. Existing interim payment amounts for OPG's prescribed assets were based on a 55/45 debt/equity ratio and a 5% ROE. The PWU agrees with OPG that this capital structure and ROE are inadequate given OPG's mandate to operate as a commercial entity. Board Staff's expert witness also admitted that a return of 5% for OPG's prescribed assets was "clearly inappropriate" from a financial market and utility perspective (Board Staff Expert Evidence, page 7 and Transcript, Volume 12, page 116).

5. OPG has applied for payment amounts of its prescribed assets based on a deemed equity ratio of 57.5% and a ROE of 10.5%.

6. Ms. McShane estimates that the absence of variance accounts which were provided under Regulation 53/05 (e.g. the Water Conditions Variance Account, and the Ancillary Services Variance Account) and newly proposed accounts (i.e. Nuclear Fuel Cost Variance, Segregated Mode and Water Transactions Variance, Pension and OPEB Cost Variance and Changes in Taxation Rates or Rules Variance Accounts) for which OPG is seeking Board approval for 2008 and 2009 would increase OPG's cost of equity by approximately 25-50 basis points. When translated into a required change in common equity ratio (keeping the proposed ROE constant at 10.5%), the proposed common equity ratio would increase from the proposed 57.5% to a range of approximately 60-63% (Exhibit KT1.6 and Undertaking J12.2).

7. In addition, OPG's expert testimony indicates that OPG's ROE would increase by 25 basis points or, alternatively, the proposed percentage of equity in the capital structure would increase to approximately 60%, if the 25% fixed payment is not accepted by the Board (Exhibit L-12-1 and OPG's Argument in Chief, page 23).

8. The PWU submits that OPG's proposal is consistent with the fair return standard and its commercial mandate to operate on a financially sustainable basis. OPG's financial sustainability is essential for the on going reliability and safety of the prescribed assets.

**I.2. Return on Equity**

9. OPG's proposed ROE of 10.5% is based on the outcome of three tests used to estimate a reasonable ROE for a benchmark Canadian utility. Updates of the three tests as of April 2008 are summarized as follows (Transcript, Volume 10, page 12-14 and OPG's Argument in Chief page 19-21):

| Test | "Bare-Bones" Cost of Equity | Fair Return on Equity |
|---|---|---|
| **Equity Risk Premium** | 9-9.75% | 9.5-10.25% |
| **Discounted Cash Flow** | 9.5-10% | 10-10.5% |
| **Comparable Earnings** | N/A | 12.5% |

10. As OPG's expert testimony states, the outcome of the tests, updated as of April 2008, resulted in no change in the aggregate estimate ROE which remains at 10.5% (Transcript, Volume 10, page 14). The update shows a lower government interest rate partially offset by a higher risk premium which is reflected in a higher spread between long-term A-rated utility bonds and government bond yields.

11. With regard to the Equity Risk Premium (ERP) test, Ms. McShane applied the following three tests to calculate OPG's ROE: the Capital Asset Pricing Model (CAPM), the historical utility risk premium test and Discount Cash Flow (DCF) risk premium test. Ms. McShane came up with an equity risk premium range of 4.5 to 5.25%, with a midpoint of 4.875%. This combined with an estimate risk-free rate, as of April 2008, of 4.5% and 0.5% Financing Flexibility Adjustment, produced a fair ROE, using the ERP test, in the range of 9.5-10.25%.

12. Using the DCF model test and the Comparable Earnings test to calculate a fair ROE for OPG's prescribed assets, Ms. McShane derived fair ROEs of 10-10.5% and 12.5%, respectively.

13. In their testimony on behalf of Pollution Probe Dr. Lawrence Kryzanowski and Dr. Gordon Roberts exclusively used the ERP test to calculate OPG's ROE and propose an ROE of 7.35% for 2008 and 7.4% for 2009. Professor Laurence Booth, on behalf of CCC & VECC relied on the CAPM approach and recommends an ROE of 7.75%. The PWU notes that the ROEs recommended by Professor Booth and Drs. Kryzanowski and Roberts are lower than the OEB approved ROE levels for the electric and gas utilities reported in Undertaking J11.1.

14. With respect to the DCF test, Ms. McShane notes that this model has the distinct advantage of allowing analysts to estimate the cost of equity directly since the DCF test relies on analysts' projections. The PWU understands that there are studies which suggest that there is an upward analyst estimation bias in growth stocks (Transcript, Volume 10, page 21 and OPG's Argument in Chief, page 20). However, Ms. McShane notes that in her DCF-base risk premium test, she looked at the growth rate forecast by analysts over the period back to 1993, and found that on average the analysts' forecasts were about 60 basis points lower than the

consensus forecast for economic growth. Consequently, there is no reason to believe that investors would view the analysts' estimates as systematically optimistic (Transcript, Volume 10, page 22).

15. In connection with the Comparable Earnings approach, Ms. McShane states that this test remains the only test that explicitly recognizes that in the North American framework, the return is applied to an original cost (book value) rate base. OPG's expert testimony noted that the application of the results of the CAPM and DCF tests, unless adjusted do not make any allowance for the discrepancy between the return on market value and the corresponding fair return on book value. By contrast, the Comparable Earnings test allows for this discrepancy. In particular, this test provides a measure of returns for a sample of Canadian industrial companies that are relatively low risk and is expected to have stable earned returns (Exhibit C2/T1/S1, page 46-50 and OPG's Argument in Chief, page 21). The selection process starts with the recognition that industrials are generally exposed to higher business risk, but lower financial risk, than a benchmark Canadian utility. The higher risk of the industrials relative to a benchmark utility requires a modest downward adjustment relative to the industrials (Exhibit C2/T1/S1, page 168-171). This adjustment was captured by Ms. McShane's estimate of the ROE using the Comparable Earning test.

16. In their evidence, Drs. Kryzanowski and Roberts outline a number of problems encountered in implementing the Comparable Earnings approach. However, Ms. McShane points out that none of the tests that are used to estimate the return are perfect and that similar hurdles are also faced by the other tests (Transcript, Volume 10, page 24). She also notes that every test is, in a sense, an oversimplification of reality; only the risk-free rate is a number that is observable while the other pieces have to be inferred (Transcript, Volume 10, page 17-18).

17. Given the above discussions, the PWU submits that the estimate of the ROE should not rely on any single test. The PWU recommends that the Board give weight to each of the tests proposed by OPG's expert witness. The PWU also submits that for consistency with the fair return standard the Board needs to give weight to a measure of earnings associated with a sample of Canadian industrial companies with relatively low risk and stable earnings, as captured by the Comparable Earnings test.

**I.3. Capital Structure**

18. The PWU agrees with OPG's expert testimony that the capital structure should be consistent with the business risks of the specific entity for which the capital structure is being set. The business risks to which investors in a utility are exposed are those that reflect the basic characteristics of the operating environment and regulatory framework of the utility that can lead to failure to recover a compensatory return on, and/or the return of, the capital investment itself (C2/T1/S1, page 54).

19. Ms. McShane noted that her views on the relative hierarchy of risks among energy companies were shared by most of the other cost of capital experts in this case. The lowest risk utilities are electricity transmission companies; next are gas and electric distribution companies; followed by vertically integrated (transmission, distribution and generation) companies. At the upper end of the regulated spectrum is generation - nuclear being considerably more risky than hydroelectric, but both hydroelectric and nuclear being more risky than an integrated electric utility (OPG's Argument in Chief, page 22, line 26-32). The PWU agrees with the conclusion drawn in OPG's expert testimony at C2/T1/S1, Section B.5, that OPG's regulated operations face significantly higher business risks than the typical Canadian utility and the typical vertically integrated electric utility in Canada or the US. The PWU would add that contributing to the

generation companies' higher risk is the higher risk related to generation production levels compared to the throughput risk of energy transmission and delivery companies This is so given the high diversity of large numbers of supply sources that the network system draws from that mitigates the throughput risk of transmission and delivery companies.

20. OPG's proposed 57.5% equity capital structure assumes an A credit risk rating. According to OPG, the analysis of stand alone coverage ratios at the benchmark ROE of 10.5% and the common equity ratio of 57.5% indicates that the principal cash flow metrics for the regulated operations of OPG are expected to be sufficient to achieve and maintain stand alone debt rating in the A category (OPG's Argument in Chief, page 26).

### I.3.1 The Importance of an "A" Category Debt Rating

21. Although OPG's regulated operations are not governed by the obligation to serve principle, the PWU submits that Regulation that prescribes OPG's payment amounts for its regulated assets clearly establish these assets as "must run" facilities and not unconstrained generators in the competitive market. In addition, in line with the OPA's implementation of the Minister's Supply Mix, OPG was directed by the Minister to begin an assessment of the refurbishment of its existing nuclear units and the construction of new nuclear units to meet Ontario's supply requirement. The PWU agrees with Ms. McShane that the success and cost of implementing possible future expansion plans will depend in part on the ability of OPG to raise funds when required and on reasonable terms and conditions. If OPG is to be able to achieve a sustainable financial model, as mandated under its MOA with the Province of Ontario, it is essential that OPG access sufficient funds from the public markets for refurbishment and expansion. Its inability to do so puts at risk Ontario's future supply reliability.

22. The PWU submits that OPG's ability to raise funds on reasonable terms and conditions requires ready access to the long-term debt markets. The PWU agrees with OPG that financing long-term assets with short-term debt creates a mismatch between recovery of the investment in regulated payments and the return to investors of the capital committed, and exposes the utility to higher refinancing risk (Exhibit C2/T1/S1, page 79).

23. The PWU agrees with OPG's expert testimony that while debt ratings of BBB- or better are considered investment grade, debt ratings in the A category provide assurance that a utility will be able to access the debt markets as required on reasonable terms and conditions.

24. Drs. Kryzanowski and Roberts assert that the experiences of companies covered by their sample of Canadian utilities (Exhibit M, Tab 12, Schedules 3.2-3.4) suggest that a bond rating starting at BBB is sufficient to maintain good access to capital markets. According to Drs. Kryzanowski and Roberts, a bond rating of BBB did not impede these companies from conducting their business profitably (Exhibit M, Tab 12, page 44-45). However, Drs Kryzanowski and Roberts do not consider OPG's requirement to comply with its mandate to operate on a sustainable financial basis in relation to OPG's ability to raise funds under reasonable terms and conditions for future refurbishment and expansion in meeting its mandated contribution to Ontario's future supply mix.

25. Under cross-examination by Pollution Probe, Ms. McShane stated that from the universe of utilities in Canada, A ratings are the rule, and BBB ratings are the exception. Of all the corporate debt issued between 2006 and May 2008, out of approximately $165 billion, only 6% was raised by companies with a rating in the BBB category or lower. According to Ms. McShane, 12% was raised by companies with split ratings (i.e. one rating in the A category and one rating in the BBB category). Ms. McShane

notes that the BBB market remains small. With regard to the type of debt raised by companies with BBB ratings, she adds that only a third of the issues were in excess of 10 years. The data provided by Ms. McShane confirms that companies with ratings in BBB category or lower lack access to the long-term market (Transcript, Volume 10, page 16-17).

26. Canadian utilities with debt ratings in the A category include: Atco Ltd., Canadian Utilities Inc., Enbridge Gas Distribution Inc./Enbridge Inc., Newfoundland Power and TransCanada Pipelines (as reported at Exhibit M. Tab 12, Schedule 3.2), Gaz Metro, Hydro One, Terasen Gas, Toronto Hydro (Exhibit L-12-54), Hydro-Québec, and BC Hydro (Board Staff Expert Evidence, Appendix A). This confirms the rule that Canadian utilities are rated in the A category.

27. Furthermore, utilities with debt ratings in the BBB category usually pay more than A rated utilities. Ms. McShane has stated that in recent years the spread between long-term BBB rated utility debt and A rated utility debt in Canada has been as high as 175 basis points (Exhibit C2/T1/S1, page 79 and 80). In cross examination (Transcript, Volume 13, page 68-69) Ms. McShane stated that, as of May 12, 2008, the spread over a long-term Canada bond yield for a new 30-year bond issue for a BBB rated utility (e.g. TransAlta Corp.) was 380 basis points, while for an A rated utility, (e.g. Enbridge Gas Distribution Inc.) it was 170 basis points. The result is a difference of 210 basis points between a BBB rated utility and an A rated utility. Ms. McShane added that the spread over a long-term Canada bond yield for a new 30-year bond issue for Hydro One, as of May 12, 2008 was 133 basis points. In this case the difference between a BBB rated utility and an A rated utility results in a spread of about 250 basis points. The PWU submits that this is indicative of the more onerous terms faced by BBB rated utilities compared to A rated utilities.

28. For the above reason, the PWU submits that debt rating in the A category will ensure OPG's ability to raise funds on reasonable terms and conditions.

### I.4. CIBC World Markets' Estimate of Bruce Power's Cost of Capital

29. In cross examination by the PWU, Ms. McShane reviewed the comparison between OPG's proposed cost of capital and CIBC World Markets' estimates for Bruce Power set out in its letter to the Minister of Energy, dated October 17, 2005 with respect to the agreement between the Government of Ontario and Bruce Power A L.P. (the "Supplier") pertaining to the refurbishment, restart, operation, and maintenance of Bruce A Generating Station and the supply of electricity produced by the Bruce A and Bruce B generating stations sold into the Independent Electricity System Operator (IESO) administered market.

30. First, Ms. McShane addressed differences that would be taken into account in assessing the cost of capital for OPG's regulatory assets and Bruce Power's assets. Such differences include the construction cost risk related to the Bruce Power Refurbishment Project and the fact that Bruce Power would be selling the output of the facilities in the open market. Ms. McShane also pointed out that her recommendation deals with OPG's prescribed assets and reflects the lower risk associated with OPG's hydroelectric regulated assets.

31. With regard to the construction cost risk and the lower risk of OPG's hydroelectric regulated assets, the transcript is as follows:

> **"MR. STEPHENSON: Okay. Now, obviously this transaction is different than the exercise that the Board is undertaking here, in terms of assessing an ROE for OPG. But I did want to just raise some of the issues by which it may well be considered to be different, and get your comment on them.**

> **Number 1 is, I take it that this transaction would be at least different from OPG's prescribed assets, in the sense that Bruce Power was undertaking here some risk regarding construction costs and getting the project on time and on budget.**
>
> **I take it that is a different kind of risk than OPG faces? Fair?**
>
> **MS. McSHANE: Could we just back up one step first?**
>
> **MR. STEPHENSON: Sure.**
>
> **MS. McSHANE: I would start by saying, first of all, that the recommendation that I made here is for all of the prescribed assets, so that recommendation reflects the lower risk hydroelectric assets. So I think we have to just keep that in mind to start with.**
>
> **But to address your specific question, my understanding is that with respect to the Bruce transaction that, yes, they were taking on some of the construction risk. There was a sharing of construction risk, as I understand it". (Transcript, Volume 11, from page 41, line 18 to page 42, line 15).**

32. Ms. McShane's comment on the fact that Bruce Power would be selling the output of its facilities in the open market is as follows:

> **"MR. STEPHENSON: All right. Secondly, I take it that there is a point of distinction or potential distinction, would be that, unlike OPG in the context of the prescribed assets, Bruce Power is -- would be selling the output of the facilities, in essence, in the open market.**
>
> **MS. McSHANE: Correct. But I understood that they had a fixed price in the contract for that output, and that price would increase by some percentage of the CPI every year over the life of the contract.**
>
> **MR. STEPHENSON: Right. Actually, if you go to Page 5 of the letter, sort of at the middle of the page, paragraph says:**
>
> **"We also understand that the agreements entitle the supplier to a specified selling price in respect of the actual Bruce A electricity generation for the full term of the agreements, defined as the contract price. The initial contract price will be $63 a megawatt." (Transcript, Volume 11, from page 42, line 16 to page 43, line 6).**

33. In order to determine the opportunity cost equity for the Supplier, CIBC World Markets used the CAPM. Based on its estimate of the supplier's beta, the risk free rate and its estimates of the equity premium, size premium and supplier premium, CIBC World Markets has estimated the Supplier's cost of equity in the range of 13.7 to 18%. In discussing

whether CIBC World Markets' estimate on the appropriate cost of equity for the Supplier was relevant to the analysis she came up with for OPG. Ms. McShane indicates that the CIBC World Market's estimate provides her with comfort that her recommendations are reasonable. The transcript is as follows:

> **"MR. STEPHENSON: Okay. I guess the question I have for you is this: Bearing in mind that this is an Ontario nuclear generation facility, do you view CIBC World Markets' views regarding the -- its estimate of an appropriate cost of equity to be, in any way, relevant to the kind of analysis that you have undertaken for OPG in this case?**
>
> **MS. McSHANE: Well, I guess I would say, to the extent that we're dealing with basically very similar assets, that, yes, there would be some relevance.**
>
> **Bruce is really the only operation that could be considered, from sort of a fundamental operating perspective, the same as OPG's prescribed nuclear assets.**
>
> **I would note that their point of departure for estimating the equity return for Bruce seems to be sort of a similar approach that I took, which is to look at comparables. And their comparables -- when you look at, well, the first paragraph at the top of page 10 -- they looked at betas of several public companies considered by us to be indirectly comparable to the supplier, including British Energy and six additional public electricity generation companies, and 19 public utilities with some level of nuclear generation capacity.**
>
> **Of course, I didn't look at British Energy and I didn't look at six additional public electricity generation companies, but I did focus on public utilities with a level of nuclear generation capacity.**
>
> **If you come down and look at the numbers, I think what they do is provide, to me at least, some comfort that the recommendations that I have made are certainly in the ballpark." (Transcript, Volume 11, from page 44, line 17 to page 45, line 20)**

34. The CIBC World Markets' opinion pertaining to the Supplier's capital structure puts Ms. McShane's recommendation on OPG's capital structure in the "ballpark":

> **"MS. McSHANE: They're saying -- this is on page 9 -- I mean they're saying that a transaction of this type could probably have a reasonable capital structure of between 20 and 40 percent debt, so let's call that 30 percent, and we're talking about something**

> **considerably higher than that, 42-1/2. Well, again that is for the combined assets.**
>
> **But if we looked sort of at the OPG nuclear assets in the context of the IRs that I prepared where I was asked to separate out the cost of capital for the nuclear and the hydroelectric, if you compare the CIBC's weighted average cost of capital, which combines the capital structure in the ROE -" (Transcript, Volume 11, from page 45, line 26 to page 46, line 10)**

35. Ms. McShane's comparison of CIBC World Markets' Weighted Average Cost of Capital (WACC) estimate of 10.6-13.8% for Bruce Power with her estimate of WACC of around 8% on an after-tax basis, stemmed from the results reported in her responses to Pollution Probe interrogatories. In this response, Ms. McShane came up with an estimate of the cost of capital that she recommends if the Board were to deem separate costs of capital for nuclear and hydroelectric businesses. For this circumstance, Ms. McShane produced a range of common equity ratios of 65%-75% for OPG's nuclear operations at a 10.5% ROE (Exhibit L-12-2, page 3, line 27-40). The transcript on the comparison between CIBC World Markets' estimate and Ms. McShane's estimate is as follows:

> **"MS. McSHANE: That's on page 10 in the paragraph just before comparison of targeted and estimated IRR to the supplier WACC, so we've got -- these are after-tax costs of capital of 10.6 to 13.8. The midpoint of that is about 12. I did a comparison: What is my result if I had used the numbers that I prepared for Pollution Probe's IRs when they asked me to look at nuclear separately?**
>
> **And my number for the nuclear assets is around 8 percent on an after-tax basis. So when you consider the -- there are greater risks, obviously, with the Bruce transaction. They don't have the regulatory protection, but it's the same type of assets. I would say that the differential is imminently real." (Transcript, Volume 11, from page 46, line 12 to page 46, line 24)**

36. Notwithstanding that the CIBC World Markets' estimate was produced in October 2005, Ms McShane does not find any material change from the capital markets' perspective:

> **"MR. STEPHENSON: The last thing just on this is you will see that this was prepared back in October of 2005.**
>
> **MS. McSHANE: Yes.**

> **MR. STEPHENSON: Okay. And obviously now we're heading towards three years later.**
>
> **MS. McSHANE: Correct.**
>
> **MR. STEPHENSON: Just on that time differential, in terms of your knowledge of financial circumstances –**
>
> **MS. McSHANE: Yes.**
>
> **MR. STEPHENSON: -- would that shift in time materially impact on your view of what CIBC would have said now, if it was asked to do the same thing, or how it relates to what you have done?**
>
> **MS. McSHANE: Well, that's a good question.**
>
> **If you come back to the same area of the -- let's look at page 9, and we look at the paragraph that says, "In preparing our financial analysis". That's about –**
>
> **MR. STEPHENSON: Second from the bottom?**
>
> **MS. McSHANE: Yes. We calculated the after-tax cost of debt based on the risk-free rate of return and an estimated borrowing spread, and then they give you the pre-tax cost of debt of 6.2.**
>
> **So while they don't tell us what the risk-free rate or the spread is, we can make reasonable assumptions about the combination, and so we are back in October 2005. Spreads for A-rated companies probably were 130 basis points.**
>
> **I don't know what their assumption was, as far as the credit rating, but it doesn't really make that much difference. The risk-free rate would have to be in the 4-1/2 to 5 percent range, which is pretty similar to what we're looking at now.**
>
> **So I would say, from that perspective, there wouldn't be any material shift from a change in capital markets' perspective". (Transcript, Volume 11, from page 46, line 25 to page 48, line 4)**

37. Ms. McShane concluded that while there were a number of differences, CIBC World Markets' estimate for Bruce Power gave some degree of comfort regarding her cost of capital estimate for OPG (Transcript, Volume 11, page 48, line 5-9).

38. Finally, Ms. McShane provided her view on whether the risk for regulated or unregulated generation is comparable. In this regard, Ms. McShane referenced Hydro One's transmission proceeding:

> **"MS. McSHANE: …And in the interrogatory process, they were asked a question, Well, don't you have to take into account the fact that you're using unregulated companies as a proxy for regulated companies? And what their response was was that effectively you're dealing with companies in the same business.**
>
> **So from their perspective, the risks were comparable. I don't totally agree with that, because I do believe that regulation is, typically, a risk mitigator, in that it can frame the fundamental risks and lower risks while that framework is in place, at least, to shareholders.**
>
> **But I do agree with them that regulated and unregulated generation are going to share certain risk characteristics that can't be eliminated." (Transcript, Volume 11, page 49 line 8-21)**

39. Notwithstanding the number of differences, the PWU submits that CIBC World Markets' estimate on the cost of capital for Bruce Power is an appropriate and reasonable reference to compare with OPG's proposed cost of capital and that the Board ought to give significant consideration to the CIBC World Markets' assessment on the cost of capital for Bruce Power in making its decision on the cost of capital for OPG's prescribed assets.

## II. OPERATING COSTS (Exhibit F)

**Issues List:**

**5.1 Are the Operation, Maintenance and Administration ("OM&A") budgets for the prescribed hydroelectric and nuclear business appropriate? (F1/T1/S1, F2/T1/S1)**

**Issues List:**

**5.3 Are the 2008 and 2009 human resource related costs (wages, salaries, benefits, incentive payments, FTEs and pension costs) appropriate? (F3/T4/S1)**

### II.1. OM&A Costs

40. The PWU recommends that the Board approve OPG's proposed overall OM&A expenditures for nuclear and regulated hydroelectric activities for the test period on the basis that the proposed costs are necessary for the

reliable and safe operation of OPG's prescribed assets. OPG's proposed April 1 - Dec 31 2008 OM&A expenses for the prescribed assets is $1755.8M (Exhibit K1/T1/S1, Table 1). OPG's proposed 2009 OM&A expenditures for the prescribed assets is $2287.7M (Exhibit K1/T1/S1, Table 2).

**II.2. Labour Expense**

41. Labour costs are identified as a major driver of OPG's OM&A expense. The PWU understands that some intervenors have expressed concerns with respect to total labour cost for nuclear operations over the period 2005-2009. According to Exhibit L-16-16, Table 1, overall labour costs for nuclear increases from $882.2M in 2005 to $1133M in 2009.

42. The PWU submits that in order to assess the reasonableness of labour cost variance the comparison should be undertaken in terms of labour costs per full time employee (FTE) excluding costs related to a number of components that are subject to significant variance, such as pension, Other Post-employment Benefits (OPEB), overtime and non-regular staff. The PWU submits that the analysis of labour cost per employee trend for nuclear and regulated hydroelectric should be done based on the following assumptions, set out in OPG's Undertaking J2.4:

- Included within base labour are certain non-pensionable bonuses, allowances, shift premiums, etc;
- The base labour figures exclude overtime and represent regular staff only; and
- The only burden components that are removed are pension and OPEB (i.e. OPG has not excluded other non-statutory burdens such as health, dental, group life insurance, maternity supplements and statutory burdens such as CPP and EI).

43. Tables provided in Undertaking J2.4 show that labour costs per regular FTE for the prescribed generation increase on average by about 4% per year over the period 2005-2009. As OPG indicates, this increase is consistent with the range of 3-4% in the annual escalation of the significant components of OPG's standard labour rate.

44. In this circumstance, the PWU submits that labour cost trends for nuclear and regulated hydroelectric over the period 2005-2009 are reasonable.

**II.3. OPG's Nuclear Performance**

45. In its MOA with the Government of Ontario OPG was mandated to seek continuous improvement in its nuclear generation business and internal services. According to the MOA, OPG will benchmark its performance in these areas against CANDU nuclear plants worldwide as well as against the top quartile of private and publicly-owned nuclear electricity generators in North America. In addition, the MOA states that OPG's top operational priority will be to improve the operation of its existing nuclear fleet.

46. Consistent with this mandate, OPG uses benchmarking information to set performance targets in its business plan and to identify opportunities for improvements. OPG uses a number of databases to benchmark nuclear and hydroelectric performance and labour compensations. In addition, OPG commissioned studies to address specific issues. For instance, in 2006 OPG engaged Navigant to compare its nuclear staff levels to those of other Canadian CANDU plants in order to identify potential improvement opportunities.

47. In its evidence OPG has submitted two benchmarking sources on performance of nuclear facilities:

- World Association of Nuclear Operators ("WANO") for non-cost performance data; and

- Electric Utility Cost Group ("EUCG") for cost performance data.

48. OPG's proposal for the payment amounts for its prescribed assets for the test period relies on performance targets which are supported by benchmarking data from CANDU nuclear plants worldwide and from North American nuclear electricity generators. Nuclear generating station targets are presented at Exhibit A1/T4/S3, Chart 2. These targets are consistent with OPG's 2008-2010 Business Plan Nuclear Operations (Exhibit L-4-2, Attachment 3).

49. Some intervenors and Board staff have expressed concerns on the performance of OPG's nuclear plants over the past years.

50. Nuclear Performance Results for 2006 are reported at A1/T4/S3, Chart 3, and for 2007 they are reported in Undertakings J4.6, J4.7 and J4.8.

51. Nuclear Benchmarking results for 2006 and 2007 show that Darlington values are close to CANDU Data top quartile in terms of Unit Capability Factor (UCF) and Nuclear Performance Index (NPI). In 2007 Darlington's actual UCF was 89.5% (compared to CANDU World Data, top quartile at 89.4) while NPI was 91.2 (compared to CANDU World Data, top quartile at 92.2). With regard to Elective Maintenance Backlogs, Darlington has been showing a significant improvement in this area and is approaching the US median of 348 and US top quartile of 304. For 2005, 2006 and 2007 Darlington shows Online Elective Maintenance Backlogs per Unit of 767, 584 and 373, respectively (Exhibit F2/T2/S1, Appendix B, Chart 2). With respect to costs, Darlington achieved Production Unit Energy Costs (PUEC) of 29 $/MWh (US industry median is 23 $/MWh and US top quartile is 20 $/MWh) in 2007. It is worthwhile to note that the comparison of OPG's cost with US utilities has been negatively impacted over the last

years due to the appreciation of the Canadian dollar relative to the US dollar.

52. For 2008, Darlington expects to achieve higher performance with a UCF of 92.7%, a NPI of 95.7 and an Elective Maintenance Backlogs of 350 per unit. A decrease in 2009 targets for UCF and NPI for Darlington are due to the Vacuum Build Outage (VBO). This is a Canadian Nuclear Safety Commission (CNSC) mandated outage that occurs every 12 years that requires the shut down of all four units. As such, the PWU submits that this outage is a regulatory requirement that is not in the control of OPG and must be recognized as such in the Board's assessment of Darlington's 2009 performance targets.

53. Most of the intervenor concerns deal with Pickering A and Pickering B performance. The PWU submits that benchmarking these two units against US top quartile is not realistic.

54. First, as explained by OPG Pickering A and Pickering B are not comparable to similar sized plants in the US :

> **MR. ROBINSON: …"Pickering A and Pickering B are first-generation CANDU plants, very, very complicated, compared to a comparable-sized plant in the U.S.**
>
> **For example, a 500-megawatt unit in the U.S. would have two steam generators and two heat transport pumps. At Pickering A and Pickering B, there are 12 steam generators, and 16 heat transport pumps.**
>
> **If you multiply that with all of the attendant instrumentation and alarms and controls associated with all of those components, you get a very, very complex unit.**
>
> **In addition to that, that single unit PWR in the U.S., 500 megawatts, has one pressure vessel over which you do certain periodic inspections, whereas the CANDU unit has 300-plus pressure tubes that have to be inspected." (Transcript, Volume 4, from page 47, line 28 to page 48, line 13)**

55. Second, despite the fact that Pickering B and Point Lepreau nuclear station in New Brunswick are of similar age, these two stations do not have similar technology:

> **"MR. RODGER: Panel, if you have page 15 of the AMPCO exhibit, K4.1, this is AMPCO Interrogatory No. 46, Exhibit L, tab 2, schedule 46, page 1 of 2, and what we asked is OPG to compare operating costs per unit of production between your Pickering B station and the Point Lepreau nuclear station in New Brunswick.**
>
> **You will see that we've laid out operating costs per unit of production for both facilities from 2005 to 2007.**
>
> **While we would acknowledge that there is not an identical comparison between the two units, would you agree with me that both of these facilities are similar ages? Pickering's first unit was 1983, and the Point Lepreau unit was built in 1983; is that correct?**
>
> **MR. PASQUET: The age is equivalent and that's just about where, you know, when you compare designs as we go through in that interrogatory, there is significant design differences between the Pickering B and the Lepreau, which is a CANDU 6 station.**
>
> **MR. RODGER: We will get to some differences in a minute. But just in terms of the –**
>
> **MR. PASQUET: Age of Lepreau unit and unit five is approximately the same.**
>
> **MR. RODGER: They're not identical sizes, but they are similar unit sizes. Pickering is 540 megawatts and Point Lepreau is 680 megawatts; is that correct?**
>
> **MR. PASQUET: Yes, as stated in the IR.**
>
> **MR. RODGER: Would you also agree with me that Pickering B has some advantages over Point Lepreau, one being Pickering B is a multi-unit facility, so you get the scale and scope economies to spread costs versus Point Lepreau, which is a single unit. Would you agree with that?**
>
> **MR. PASQUET: Pickering B is the multi-unit station. Lepreau is a single-unit station; that is correct.**
>
> **MR. RODGER: Multi-units, you can spread the costs over; whereas Point Lepreau, there is only one unit and there is nowhere else to spread the cost; is that right?**
>
> **MR. PASQUET: But when you look at the number of components on Pickering B, the components -- it is a more complex plant than the Lepreau plant. So, yes, there is some economy of scale, because Pickering B is a four-unit station, but it is a different facility**

**than the Lepreau site." (Transcript, Volume 4, from page 23, line 3 to page 24, line 17)**

56. Third, in comparing Bruce Power nuclear generating stations with the Pickering A and Pickering B stations, the differences in size must be considered. The Pickering A and Pickering B units at 540 MW each are smaller than the Bruce Power units. The size for Bruce A and Bruce B are as follows:

> **"According to Bruce Power (see final attachment), the rated output of their units is as follows:**
> **• Bruce B has 2 units at 795 MW and 2 units at 822 MW**
> **• Bruce A has 2 operating units at 750 MW**
> **(Source: A Reporter's Guide to Bruce Power, Station Profiles)". (Undertaking J5.5, page 3)**

57. Finally, even though the Pickering B units are younger than the Pickering A units, the basic design of the units are quite comparable from the standpoint of the number of components and the complexity of the plants (Transcript, Volume 4, page 104, line 2-6).

58. The PWU submits that in light of the age, size and technology complexity of Pickering A and Pickering B, the establishment of targets based on performance benchmarks for these stations against the top quartile of North American nuclear plants is simply not realistic. Due to their technology complexity, size and age, Pickering A and Pickering B's PUEC are above US nuclear plants. Targets for these two plants for the test period are close to their 2006 performance. However, Pickering A's target for the test years indicate a significant improvement from its 2007 performance.

59. It should be noted that the EUCG database does not include other CANDU nuclear plants. A comparison, of OPG's nuclear plant's PUEC against other CANDU plants is therefore not available.

60. In determining a realistic and feasible objective, OPG has set out a performance program for Pickering B, called 85/5, which targets 85% unit capability factor and 5% forced loss rate. The 85% target on unit capability factor is consistent with the CANDU data median of about 86% (Exhibit A1/T4/S3, Chart 3).

61. With regard to NPI, OPG's targets for Pickering A and Pickering B are consistent with their CANDU data median of about 70% (74.6% in 2006 and 67% in 2007).

62. Regarding maintenance backlog measures, data provided at Exhibit F2/T2/S1, Appendix B, Chart 2, indicates a decrease in Pickering A Online Elective Maintenance Backlogs per unit. Targets set out over the test period approach international standards. For Pickering B, over the period 2005-2007, the priority focus was on Corrective Elective Backlogs. However, over the test period the priority has been shifted to Online Elective Maintenance Backlogs. Although this measure is not expected to achieve international standards over the test period, targets show a substantial improvement with respect to past years as seen in Chart 2 below (Exhibit F2/T2/S1, Appendix B, Chart 2).

**Chart 2**

**Online Elective and Corrective Maintenance Backlogs per Unit**

| Station | Backlog Description | 2005 Actual | 2006 Actual | 2007 Actual | 2008 Plan | 2009 Plan |
|---|---|---|---|---|---|---|
| Pickering A | Elective | 541 | 558 | 428 | 425 | 375 |
| | Corrective | 8 | 17 | 14 | 20 | 15 |
| Pickering B | Elective | 805 | 885 | 926 | 700 | 575 |
| | Corrective | 148 | 71 | 22 | 25 | 25 |
| Darlington | Elective | 767 | 584 | 373 | 350 | 325 |
| | Corrective | 20 | 14 | 13 | 15 | 15 |

63. In light of the above, the PWU submits that OPG's proposal for the payment amounts for its prescribed assets relies on performance targets which are supported by benchmarking data from worldwide CANDU plants

and North American nuclear electricity generators. As such OPG has used benchmarking on an ongoing basis and as a key tool in supporting business planning targets and priorities.

64. The PWU submits that OPG's 2008-2009 performance targets for each of its nuclear plants are realistic and reasonable, and that OPG's targets and benchmarks for each nuclear generating station are appropriate for their corresponding size, age, and technology and design complexity.

65. The PWU submits that OPG's performance targets for the test years indicate significant performance improvements over past performance in a number of areas and that OPG is consistent with its mandate as its top operational priority to improve the operation of its fleet.

**II.4. The Demographic Challenge**

66. OPG identifies its aging work force as one of many challenges it faces. This demographic issue will result in a critical loss of highly-skilled staff in the coming years. OPG estimates that between 2007 and 2011 about 30% of its staff will need to be replaced because of retirements and terminations. No party to the proceeding questions OPG's demographic challenge.

67. The PWU recognizes that the demographic challenge is a common issue faced by the electricity industry across North America. However, the PWU submits that there are a number of factors that are potentially unique to OPG's workforce that further impact OPG's future labour cost. These issues were introduced by the PWU in its cross-examination of OPG's Corporate and Other Operating Costs Panel.

68. One factor, as pointed out by the PWU, is the shortage of available trades persons:

> **"MR. STEPHENSON: One factor is that -- certainly that there is a shortage or a perceived shortage, at least, of available skilled trades persons that are interested in entering this sector; is that correct?**
>
> **MS. IRVINE: I believe there's an anticipated shortfall of interest in trades, yes." (Transcript, Volume 8, page 61, line 1-6).**

69. An OPG-specific issue that may contribute to OPG's future labour cost pressures relates to restructurings that OPG has undertaken over the last years that have contributed to the substantial portion of its workforce that is projected to be eligible for retirement within the next years.

> **"MR. STEPHENSON: One OPG-specific issue that has some impact, as I understand it, on your current vintaging of your work force is that OPG has, in fact -- and going back to Ontario Hydro in the last, say, 15 years, went through a number of restructurings. I take it you are generally familiar with that?**
>
> **MS. IRVINE: I certainly am.**
>
> **MR. STEPHENSON: There were a variety of downsizing packages that occurred at various points in time, some of which were targeted and some of which were either untargeted or less targeted; is that fair?**
>
> **MS. IRVINE: That's fair.**
>
> **MR. STEPHENSON: I take it that one of the consequences of some of those earlier downsizings is that you lost from the company, typically speaking, a lot of older workers that are towards the last few years of their time in the company, and a lot of relatively new entrants. And you kept the band more or less in the middle. Directionally, am I right there?**
>
> **MS. IRVINE: I would say that directionally, most voluntary termination programs do tend to attract those audiences, those who are eligible to retire and those who do not have a lot of stake in being in the company.**
>
> **MR. STEPHENSON: What I am getting at, I think, at the end of the day, was that middle band, while it was the middle band back in the late '90s, ten years later, that middle band is the very band that you are now projecting at being retirement-eligible within the next few years? Fair?**
>
> **MS. IRVINE: Fair." (Transcript, Volume 8, from page 64, line 13, to page 65, line 14).**

70. Another issue brought to light by the PWU"s cross-examination of OPG's Corporate and Other Operating Costs Panel is OPG's need for an increase in its workforce size associated with the increase in the size of OPG's nuclear fleet:

> **"MR. STEPHENSON: One additional factor, I take it, that has had some impact, at least, in terms of your workforce and demand and supply of labour, is that in some respects, you're actually, at least on the regulated side, a bigger company than you were a few years ago insofar as you have added two operating units at Pickering. You went from being an eight-unit nuclear fleet to a ten-unit nuclear fleet. at least from an operating perspective; correct?**
>
> **MS. IRVINE: Correct.**
>
> **MR. STEPHENSON: That's had some impact on your need, in terms of workforce. Fair?**
>
> **MS. IRVINE: Certainly." (Transcript, Volume 8, page 65, line 15-27).**

71. In light of these factors, OPG admits future upward pressure in labour costs and the need for more efficient deployment of existing resources:

> **"MR. STEPHENSON: Now, the net impact of these sort of macroeconomic issues, in terms of demand and supply for labour, I take it you are not projecting in the next few years that you are going to be able to meaningfully decrease per-employee compensation on average in your business? Am I right about that?**
>
> **MS. IRVINE: I would say that would be a difficult objective.**
>
> **MR. STEPHENSON: Am I right that rather than sort of staking your hopes on doing, achieving that outcome, you are attempting to do other things to more efficiently deploy the employees that you do have. Is that fair?**
>
> **MS. IRVINE: That's fair. I believe also in the past we have made some strides towards trying to -- how shall we say -- restrict the progression of wage rates" (Transcript, Volume 8, page 66, line 1-15).**

72. With regard to OPG's future labour cost pressures, OPG outlines as part of its resourcing strategy the challenge of recruitment in an increasingly competitive environment (L-14-50, Attachment 6, page 4):

> **"Resourcing Strategies**
> ***Recruitment in an increasingly competitive environment***

> ***Challenge:***
> **- A significant portion of OPG's workforce is approaching retirement at a time when we are experiencing increased competition for replacement workers. Hiring freezes and downsizing over the past 15 years have created a situation where retiring workers may not have ready replacements. This creates a threat to productivity and ongoing operations.**
>
> **- OPG's growing need for replacement workers will take place in an external business environment characterized by an increasingly tight and competitive labour market.**
>
> **- The resurgence in Nuclear across North America and closer to home in Ontario creates unprecedented competition for labour resources. This competition will not only impact our ability to secure new talent but also to retain existing staff.**
>
> **- As the nuclear industry prepares for the potential of new build, there will be increased competition for the same resources."(L-14-50, Attachment 6, page 4)**

73. In light of the above, the PWU submits that the Board should not expect there to be, at least in terms of per employee cash compensation, material reductions, if any, in the foreseeable future, notwithstanding OPG's best efforts. Per employee compensation should not be looked at in isolation; the context in which this metric operates is critical, including the increase in the overall work programs, the resulting labour requirements, the demographic challenge and the special circumstances that impact OPG's workforce.

### II.5. OPG's Non-regular Staff and Overtime Budget

74. Board staff has expressed concern with respect to the trend away from non-regular staff towards regular staff. Specifically, Board staff asked OPG whether this trend is the most cost-effective approach as opposed to using temporary or contract staff. (Transcript, Volume 4, page 137, line 2-11).

75. The PWU recognizes that OPG management has the prerogative to meet part of its human resources needs through its resourcing policy on overtime. The PWU also recognizes that notwithstanding the premium rates which are payable for overtime, the company may find this option is generally less expensive than it is to add additional complement to the regular staff.

76. The PWU also understands that the use of the PWU's hiring hall and hiring workers on a non-regular basis are key components of OPG's on going strategy to efficiently deploy available resources and reduce operating costs. As OPG indicated, it does not undertake any long-term employment obligations (i.e. pension and OPEB obligations) for non-regular employees. In addition, this option provides a degree of flexibility for OPG to decrease or increase the size of its workforce above its regular staff complement where the need is identified (Transcript, Volume 8, p. 68). The PWU has been an active partner with OPG in the creation and operation of the PWU hiring hall.

77. In supporting OPG's existing trend of hiring regular versus more non-regular staff, the PWU understands that non-regular staff are used on a temporary and contingency basis by allocating work that requires less skilled resources to non-regular staff so that more skilled permanent staff can be assigned to work requiring high skills.

78. The PWU agrees with OPG that hiring workers on a non-regular basis and assigning overtime over hiring regular staff should not apply when a project is of long duration or if there is sufficient work to carry on over several business cycles. In these situations hiring regular staff ensures that OPG has the required staff to carry out planned work.

79. The other aspect relating to the hiring of regular staff, as noted by OPG, is that the company is dealing with the demographic issue that has created the need to hire regular staff to replace staff that will be retiring in the coming four, five and six years (Transcript, Volume 9, page 71, line 3-7).

80. The PWU submits that OPG's human resources policy ensures that efficiency through the use of non-regular staff is maximized. However, current circumstances including routine on going work, the training and skills required to do the work, and the demographic issue suggest that OPG's current trend away from non-regular staff towards higher-skilled regular staff is prudent and cost-effective as a transition strategy to building up its skilled workforce.

### II.6. Bruce Power as OPG's Comparator

81. The PWU submits that from the perspective of labour compensation costs, Bruce Power is the most appropriate and relevant comparator for OPG for the following reasons:

a. Bruce Power a nuclear generation company located in Ontario;
b. OPG and Bruce Power operate similar technology and their employee groups and skill sets line up reasonably well;
c. Both face similar demographic issues. As OPG stated in its evidence:

> **"These highly skilled staff are in high demand across the country, and OPG must compete for these employees with Bruce Power and other private generators and energy service organizations as well as the general marketplace." (Exhibit F3/T4/S1, page 4, line 2-5)**

d. Bruce Power is under a similar regulatory regime, in a sense, the CNSC regulation.
e. Both share a similar union representation.

82. In its cross-examination by the PWU, OPG commented that ownership and governance are factors that affect the comparison of OPG with Bruce Power from the perspective of compensation costs. In this regard, OPG's witness stated that Bruce Power does provide a good comparator with regard to type of work, structure of work, etc; but in consideration of ownership and governance, Bruce Power is not necessarily a good comparator:

> **"MR. STEPHENSON: At least from the perspective of compensation costs, intuitively, my sense was that Bruce Power was likely to be as close a comparator as you were likely to find, for a variety of reasons. Do you agree with that proposition?**
>
> **MS. IRVINE: I would agree with it on some terms. I believe Bruce Power does provide a good comparator, if you are trying to compare type of work, structure of work, etcetera.**
>
> **It's not necessarily a great comparator when you consider its overall ownership and governance, which is another part of the puzzle." (Transcript, Volume 8, page 70, line 2-13)**

83. In response to questions from Board Panel Member Chaplin, OPG's Corporate and Other Costs Panel expanded as follows:

> **"MS. IRVINE: Well, I think that ownership and governance does affect ability to pay and ability to pay does factor into how you structure and eventually agree in negotiations.**
>
> **MS. CHAPLIN: And the implications for the two entities?**
>
> **MS. IRVINE: The implications are that Bruce has potentially deeper pockets, in terms of achieving the labour piece than we do." (Transcript, Volume 9, from page 96 line 25 to page 97 line 6)**

84. For the above reasons, the PWU submits that Bruce Power is the comparator for OPG from a labour compensation perspective.

85. OPG indicates that the comparison between OPG's PWU nuclear staff and Bruce Power's PWU staff shows that OPG's wages on a weighted average basis were 12.8% lower in 2006, a difference which will grow to

13.3% in 2008 (Ex. F3/T4/S1, page 36 and OPG's Argument in Chief, page 61).

**The 2006 Navigant Study**

86. In 2006 Navigant Consulting conducted a Staffing Benchmarking Analysis for OPG which compared OPG staff levels to staff levels of other Canadian CANDU nuclear plants.

87. The Navigant Study developed staffing benchmarks for each of 45 work functions. The study found that for several functions OPG staff levels were above the Canadian CANDU benchmarks. The Navigant Study found that overall OPG nuclear staffing was 12% above the benchmark. In light of this finding, some intervenors have suggested that OPG's labour budget ought to be cut by 12% (Transcript, Volume 5, page 82, line 3-7).

88. The PWU submits that there are a numbers of issues pertaining to the Navigant study that must be taken into account to avoid drawing inappropriate conclusions from the resulting benchmarks.

89. First, the study was done at one point in time (i.e. early in 2006). On this basis, benchmark results could be affected by specific work programs. OPG noted that at the time the study was conducted it had invested additional resources to bring the backlogs at Darlington down. This temporary staff increase is forecast to decline in the test years. In this circumstance, Darlington would have expected to see more programs and staff than other benchmarked utilities (Transcript, Volume 4, page 169-170).

90. Second, the study does not take into account considerations relative to the design and complexity of nuclear plants. As discussed above, these

issues are relevant and, the PWU submits, must be taken into account in the comparison of Pickering A and Pickering B with other nuclear plants.

91. Third, OPG's nuclear plants were compared to a limited number of benchmarked nuclear plants (i.e. Point Lepreau, Gentilly and Bruce Power) (Transcript, Volume 5, page 82).

92. The PWU is also of the view that the results of the Navigant Benchmarking study should not be used in isolation and should be put in the context of the purpose of the study:

> **"MR. PENNY: So what was the purpose or what was OPG's intention at the time it retained Navigant? What were your intentions with respect to what you were going to do with this report or this data once you got it?**
>
> **MR. ROBINSON: Oh, again, we were going to look at that data. We were going to look at our performance with respect to our targets, and, where we saw opportunities, we were going to look further into the data. We would have to match that against the work programs that we had going on at the time and essentially be able to see directionally where we were able to go, from a staffing standpoint, with the organization". (Transcript, Volume 5, page 13, line 14-25)**

93. To the extent that the study reveals areas with differences between OPG's actual staff and CANDU benchmarks, such differences are not a proof that those areas have an inappropriate number of staff. The PWU submits that those differences may be justified upon further examination as revealed in the PWU's cross examination of OPG's witness:

> **"MR. STEPHENSON: Now, we have heard that there are -- that the study reveals that in certain areas OPG has more staff than the CANDU benchmark.**
>
> **I take it, however, that you don't necessarily take that fact as being definitive proof that you have too many staff in any particular area. Is that fair?**
>
> **MR. ROBINSON: That's correct.**
>
> **MR. STEPHENSON: In fact, you use this management tool, in essence, to look back at your own organization and to determine**

> **whether there are any particular circumstances on the ground that justify those differentials. Is that fair?**
>
> **MR. ROBINSON: That's fair.**
>
> **MR. STEPHENSON: And it may be that upon examination, the differentials are justified, and maybe they're not justified; fair?**
>
> **MR. ROBINSON: That's correct.**
>
> **MR. STEPHENSON: The management step you take, if any, will depend upon your analysis of the actual circumstances on the ground, and whether there is an apparent justification for any differential; fair?**
>
> **MR. ROBINSON: That's correct." (Transcript, Volume 5, page 54, line 5-26)**

94. Upon further examination and review of the findings made in the Navigant study with respect to the differences between OPG's actuals and benchmarks, OPG concludes that in certain cases the higher OPG staff levels were justified by offsetting benefits (OPG's Argument in Chief, page 61).

95. In light of the above reasons, the PWU recommends the Board refrain from drawing any conclusion from the 2006 Benchmarking study that impacts OPG's labour budgets.

## III. DESIGN OF PAYMENT AMOUNTS (Exhibit I)

**Issues List: 8.1**

**Are OPG's suggested changes to the hydroelectric incentive payment system appropriate? (I1/T1/S1)**

### III.1. OPG's Design of the Hydroelectric Payment Amounts

96. The PWU submits that OPG's proposed hydroelectric incentive mechanism enhances efficiency of the electricity market providing the correct market drivers for peak production from OPG's hydroelectric regulated facilities. OPG estimates that the market consumer benefits

from lower market prices would be in the range between $80 million and $270 million, while OPG would be benefited with an incentive payment forecasted at approximately $12 million for 2009 (Exhibit I1/T1/S1, page 15-17). The PWU submits that OPG's proposed hydroelectric incentive mechanism is heavily weighed to the benefit of consumers and is a reasonable incentive worthy of the Board's approval.

**Issues List: 8.2**

**Is the fixed payment of 25% of revenue requirement an appropriate design for the nuclear facilities? (I1/T2/S1)**

### III.2. OPG's Design of the Nuclear Payment Amounts

97. The PWU submits that OPG's proposed 25% fixed component in the payment amounts for the output of its nuclear prescribed assets is appropriate.

98. OPG's fixed component of nuclear payment amount directionally relies on the cost causality rate making principle given the fact that the costs of OPG's nuclear facilities are over 90% fixed.

99. To the extent that the payment amounts for OPG's prescribed assets are regulated (i.e. not competitive) OPG's payment amounts for the output of its nuclear assets is consistent with rate structures approved by the OEB for other regulated entities which typically include both a fixed and a variable component.

100. In addition, the PWU submits that OPG's proposed 25% fixed component still preserves a strong incentive to maximize production and enhance the performance of its nuclear fleet.

**Conclusion**

101. In conclusion, the PWU submits that the Board should approve OPG's application for payment amounts in respect of the prescribed assets, as filed by OPG.

**ALL OF WHICH IS RESPECTFULLY SUBMITTED**

**PALIARE ROLAND ROSENBERG ROTHSTEIN LLP**
Barristers
Suite 501, 250 University Avenue
Toronto, Ontario M5H 3E5

**Richard P. Stephenson**
Tel 416.646.4325
Fax 416.646.4335
richard.stephenson@paliareroland.com

Counsel for the Power Workers' Union

Doc No 696242

PWU_SUB_OPGPrescribedAssets_20080721