

**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 OPG  
for an Order or Orders approving or fixing just  
and reasonable rates and other charges for the  
distribution of electricity commencing May 1,  
2008.**

**INTERROGATORIES  
OF THE  
SCHOOL ENERGY COALITION  
SET #1**

1. Ref: Exhibit J1:
  - a. For the purposes of any new or continuing deferral accounts, please confirm that the definition of “non-capital costs” is as defined in section 5(5) of Ontario Regulation 53/05.
  - b. Is it OPG’s position that the Regulation requires the Board, in making its first order in respect of payment amounts, to continue the deferral or variance accounts established by operation of s.5 of the Regulation?
2. Ref: J1/3/1, pg. 7: the evidence states that approval of the requested deferral account, the Increased Capacity/Output and Refurbishment Deferral Account, would be “consistent with the terms of the Regulation.”
  - a. Is it OPG’s position that s.6(2)4 of the Regulation *requires* the OEB to approve the continuation of this account? If so, why?
  - b. Please explain how the amounts to be recorded in this deferral account represents variances from forecast that are beyond the control of OPG.
3. Ref: J1/3/1: Nuclear Fuel Cost Deferral Account
  - a. The evidence states, at pg. 8, that “nuclear fuel cost volatility remains a significant business risk for OPG, and the probability of a material cost variance is high.” Please comment on the degree to which approval of this new account would reduce OPG’s business risk.
  - b. Please explain what incentive OPG would have to mitigate uranium and other fuel costs if this deferral account is created.

4. Ref: J1/3/1: Pension/Other Post Employment Benefit (“OPEB”) Cost Variance Account:
  - a. Please explain what would happen to the balance in the account in the event the “threshold/trigger” amount of \$75 million is not reached.
  - b. Does OPG state that its Pension or Other Post Employment Benefits are determined in a manner that is different than the gas or electric distributors regulated by the OEB? If so, how? If not, why does OPG believe this deferral account should be approved for OPG when there is no such deferral account for any of the utilities regulated by the OEB?
  - c. Please comment on the degree to which approval of this account would reduce OPG’s business risk.
5. Ref. A1/4/1, pg.6: please provide copies of the five directives issued to OPG from the Province of Ontario.
6. A1/4/3, pg. 8: Pickering and Darlington Refurbishment
  - a. Please provide copies of any economic feasibility studies conducted to date;
  - b. Please provide a copy of the recommendation to the OPG Board with respect to Pickering B refurbishment.
  - c. Regarding the decision not to proceed with the return to service of Units 2 and 3 of Pickering A, have there been any operational savings resulting from that decision or are the Pickering A operating costs relatively similar but with half the generating capacity? What was the production unit energy cost (\$/MW/h) for Pickering A prior to 1997 when all four units were operating?
  - d. Pg. 10: please provide more detail as to the continuing reliability issues with the Pickering A units that were put back into service in September 2003 and November 2005 respectively. If possible, please provide reliability statistics for the pre-1997 period as well as the post-2003/2005 period.
  - e. Pg. 10, line 30: please explain what is meant by the phrase “log standing major destiny issues such as feeders, steam generator, turbine and pressure tube (spacer relocation) issues.”
  - f. Pg. 10, line 30: What specific issues were addressed and what are the costs in 2008 and onwards?
  - g. Please explain what costs (base OM&A, project OM&A, capital, etc.) are included in computing the production unit energy cost (PUEC);
  - h. Are the Production Unit Energy Costs shown in Chart 2 on pg. 13 comparable to the OM&A Unit Energy Cost Targets shown in Chart 3C at Exhibit A1/4/2, pg. 13? If not, what adjustments are required to make the two figures comparable?

- i. Pg. 18: the evidence states that OPG expects that Pickering A will be in a position to be effectively benchmarked in 2008, when it is more firmly established in a steady state of operation. Please provide the most up to date PUEC for Pickering A.
- j. Given the planned investments to improve the level of performance of the Pickering plants, does OPG have a projection for the unit cost (PUEC) of these facilities 2008 or 2009? If so, what is it?
- k. Other things being equal, what would the unit costs (PUEC) for Pickering A, Pickering B and Darlington shown in Chart 3 of Exhibit A1/4/3 have been had the capital structure and rate of return proposed by OPG in this proceeding been in effect in 2006?

### **Nuclear Capital Budget**

- 7. Ref.: D2- Nuclear capital budget- please provide a list of capital projects approved by the OPG Board and which OPG believes fall under the direction given to the OEB under s.6(2)(4)(i) of the Regulation.
- 8. Ref: D2/1/1: Of the project costs set out in Chart 1 of D2/1/1, pg. 10, please identify what proportion of the projected expenditures for 2008 and 2009 represent projects in the project identification, projection initiation, or project definition stages.
- 9. Ref: D2/1/2: it is not clear from the evidence what OPG's proposal is with respect to capital projects with in-service dates beyond the test years. Does OPG propose to follow normal regulatory practice of not including projects in rate base until they are in service, or is OPG proposing that its capital expenditures be added to rate base as they are spent?
- 10. D2/1/3, pg.6:
  - a. if the approval of the OPG Board in respect of base OM&A, project OM&A and project capital for the Pickering B refurbishment was in writing, please provide a copy of the approval.
  - b. Please explain how the OPG Board could have approved expenditures for this project when:
    - i. The evidence states, at pg. 4, that "a recommendation with respect to Pickering B refurbishment options is expected to be provided to the Board of Directors in early 2008." How did the Board approve \$300 million in project capital costs without having received a recommendation as to refurbishment options?

- ii. Much of the work in Phase I of the project (“Assessment and viability recommendation” is yet to be completed?
- c. Please explain the \$150 million in project capital expenditures in each of 2008 and 2009 for the Pickering B refurbishment when the Refurbishment plan is still in Phase I and it is not clear when Phase I will be completed.

### **Base OM&A –Nuclear**

11. Ref: F2/2/1, Table 1:

- a. Please explain the two new entries on Table 1, Generation Development (\$100.0 million in 2008 and \$90 million in 2009) and Commercial Activities (\$3.5 million for each of 2008 and 2009). If the Generation Development is a result of a recommendation made to the Board of Directors, please provide a copy of the recommendation.
- b. Base 2008 and 2009 OM&A for Pickering A increases considerably in the updated evidence, from \$188.8 million to \$197.7 million for 2008, and from \$186.3 million to \$201.3 million for 2009. Please explain.

12. Ref F2/2/1, pg. 3- please provide copies of the business plans for each of the Nuclear divisions.

13. Ref: F2/2/1, pg. 5: please specify the increases in Base OM&A driven by changes driven by the CNSC.

14. F2/2/1, Table 2: “Other purchased services” increases from an average of \$126 million in 2005 and 2006 to \$162.3 million in 2007. The forecast for 2008 and 2009 (\$160.5 million and \$154.3 million respectively) remains close to the 2007 level. What was the reason for the large increase in “Other purchased services” costs in 2007. Why are those costs expected to remain close to the 2007 level in 2008 and 2009?

15. Ref: F2/2/1, pg. 19: the evidence states that the proportion of OPG’s base OM&A costs derived from labour costs, 74%, is comparable to other nuclear facilities. What is the source of that statement? Please provide any benchmark data OPG has comparing OPG’s labour costs with other nuclear facilities.

16. Ref: Ex F2/2/1/pg22 of 52

One of the components of the resource type “Other” OM&A costs are identified to be the inventory adjustments. The Applicant has stated that such adjustments is done in two ways:

- inventory valuation provision, to address de-valued inventory due to system or technology redesign and is done on a quarterly basis;
  - inventory obsolescence provision, which is done on an annual basis.
- a. Please provide the accounting entries made for inventory valuation provision and inventory obsolescence provision.

17. Ref: Ex F2/2/1/Table 3

The notes to Table 3 state “total regular staff numbers reflect staff currently working in and being paid by Nuclear (non home-base assignment)”.

Please explain what is meant by “non home-base assignment”.

18. Ref: F2/2/1, Table 4: please:

- a. expand Table 4 to show the total compensation for each year from 2005 to 2009 as well as the total year over year percentage increase in total compensation.
- b. Provide average total compensation per FTE (divided by base pay, overtime, benefits and incentive pay) for 2005-2009.

19. Ref: F2/2/1, pg. 25: please provide greater explanation of the efficiency improvements in the “on-line” work management processes as well as the improved “forced loss rate performance” and improvements in the preventive maintenance program implementation. Specifically, what improvements were made and what savings have been assumed in the test year budgets.

20. Ref: F2/2/2, Table 2: what percentage increase in labour rates was used to produce the “escalation adjusted variance” shown in Table 2? How does that compare to the years 2002 to 2008?

21. Ref: F2/2/2, pg. 2:

Regarding the increase of \$32.5 million in nuclear level common costs in 2009, the evidence states that the increase “reflects a planning estimate for contingency in 2009...[based on] preliminary estimates for potential issues at the time of 2007-20011 business planning, and will be allocated to identified work during 2008 business planning.” Please explain:

- a. what potential issues were identified in the 2007-2001 business planning process;
- b. how the amount (\$32.5 million) of the contingency was arrived at.

- c. Whether OPG has since developed a specific allocation or purpose for these funds.
22. Ref: F2/2/2, pg. 3-4: regarding the 2007 (escalation adjusted) growth in Stations (\$36.4 million):
- a. What portion of the (net of labour cost escalation) increase of \$86.9 million in 2007 over 2006 has been carried forward to the test year budgets.
  - b. What portion of the test year nuclear base OM&A budgets represent costs of staff in full-time training programs?
  - c. Pg. 4: please provide a more detailed explanation for the \$8.8 million increase in supply chain expenses. What is meant by “increased obsolescence provision”?
23. Ref: F2/2/2: please explain the year over year, and actual vs. planned variations in Tritium Removal facility: 10% increase in 2009 over 2008 (Table 1); 21% increase in 2007 over 2006 (Table 5); 16% increase in 2006 actual over 2006 budget (Table 7); 27% increase in 2006 over 2005 (Table 8); and an 11% decrease in actual 2005 from budget (Table 10).
24. Ref: F2/2/2, Table 7: the updated evidence shows that actual Base OM&A –Nuclear for 2007 was \$39.5 million less than budgeted (\$1,256.1 million budgeted vs. \$1,216.6 million actual). Please explain the reason for the decrease and whether any of the 2008 or 2009 spending represents spending deferred from 2007.

### **Project OM&A- Nuclear**

25. Ref: F2/3/1, pg. 2: please provide a copy of the business plan or other document pursuant to which the OPG Board of Directors approved \$290 million in project spending (\$172M capital and \$118OM&A) for 2008.
26. Ref: F2/3/3, pg. 2- are the five projects valued at between \$5M and \$10M with future balance to be released during the test period, are the balances to be released (column (e) in Table 2) included in OM&A budgets during the test period?
27. Ref: F2/3/3, pg. 2, line 21-24: are any expenditures for the 71 projects categorized as “Listed Work to be Released” (and listed at Tables 4a and 4b) included in the OM&A budgets for the test period?

### **Project Summaries**

28. Ref: F2/3/3

- a. Pg. 4- Project number 38296: Please explain why the original evidence in respect of this project listed the total expenditures at \$94.9M, which included a capital component of \$11.9M, whereas the updated evidence shows total expenditures of \$143.8M and no capital component? Why did the anticipated cost of the project increase by 52% between time the evidence was originally filed and the time the update was filed? Also, why is there no longer any capital component to the project?
- b. Pg. 5 (pg. 6 of original evidence) the total costs of project 38457 increased from \$47.5M in the original evidence to \$53.2M in the update. Please explain.
- c. Pg. 5: please clarify whether the following projects are still part of OPG's evidence, as the pages they appear on in the original evidence have been replaced with pages showing different projects in the updated evidence:
  - i. project 38440 on pg. 5 of original evidence). That page seems to have been replaced in the updated evidence by a new pg. 5, which refers to project 38457.
  - ii. Project 40564 on pg. 7 of original evidence- the new evidence has a different project (#40618) and there does not appear to be a new version of project 40564 in the update;
  - iii. Project 49211 on pg. 11 of original evidence. Pg. 11 in the update refers to project #49204 and there does not appear to be an updated version of project 49211.

#### Outage OM&A- Nuclear

29. Ref: F2/4/1: when a nuclear unit is shut down for maintenance, how is the lost power replaced? How does the cost of the replacement power compare to the cost/MWh of generating electricity through OPG's nuclear facilities?
30. Ref: F2/4/2:
  - a. Pg. 4: Please provide details of the additional 'other purchased services' driving the increase in outage costs for Pickering A in 2009.
  - b. Please provide additional details of the costs that Pickering A and B will incur with respect to preparations for a 2010 VBO. Please explain what a "VBO" is.
31. Ref: F2/4/1, Table 1:
  - a. please explain the increase in Outage OM&A as between the original and pre-filed evidence for the following years:
    - i. 2007: from \$193.5 million to \$215.6 million;
    - ii. 2008: from \$182.3 million to \$192.2 million;

- iii. 2009: from \$174.9 million to \$207.9 million (the majority of the variance in 2009 appears to be due to Pickering A NGS, which increases from \$37.9 million in the original evidence to \$61.1 million in the update);

### **Nuclear Fuel Costs**

32. Ref: F2/5/1: what percentage of OPG's uranium concentrate is purchased in the spot market vs. through long-term contracts?

33. Ref: F2/5/1, Table 1:

- a. please explain the following differences between the original and pre-filed evidence:
  - i. 2007: \$121.8 million to \$113 million;
  - ii. 2008: \$149.9 million to \$162.4 million;
  - iii. 2009: \$178.9 million to \$204.2 million.

34. Ref: Ex F2/5/1/pg4 of 9: Nuclear Fuel Costs – Fuel Bundles

OPG has a supply contract with one of the two domestic CANDU fuel bundle manufacturing suppliers.

- a. Please file a copy of the supply contract.
- b. Please describe the criteria and/or rating mechanism based on which the particular supplier is selected.
- c. Is OPG expecting to rely on this particular supplier over the long run?

35. Ref: Ex F2/5/1/pg8 of 9: Nuclear Fuel Costs – Nuclear Fuel Cost Forecast

The Applicant has stated that the weighting of the cost of the uranium concentrate to the total cost of the finished fuel bundle is expected to increase from 36% in 2006 to 63% in 2009, reflecting the recent market price increases.

On page 7 of Ex F2/5/1, the Applicant has claimed that spot market prices have increased by more than 700% since the beginning of 2003.

- a. Please provide the weighting factor of the cost of each of the three components to the total cost of the finished fuel bundle over 2005-2009.

	2005	2006	2007	2008	2009
Uranium concentrate					
Uranium conversion					
Fuel bundle					



- b. Please explain whether the year over year variation of the weighting of the component costs is attributed to unit price variances or volume variances.
- c. Please provide the historical average weekly price of U<sub>3</sub>O<sub>8</sub> (US\$/lb) from 2005-2007 based on Ux Consulting Company's U308 weekly spot price.
- d. Please provide the forecasted average weekly price of U<sub>3</sub>O<sub>8</sub> (US\$/lb) from 2008-2009 and the information source.

<b>Nuclear Fuel Costs per MWh Ex F2/5/1</b>													
<b>Ex F2/5/2</b>													
						<b>2006 vs. 2005</b>		<b>2007 vs. 2006</b>		<b>2008 vs. 2007</b>		<b>2009 vs. 2008</b>	
	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>\$</b>	<b>%</b>	<b>\$</b>	<b>%</b>	<b>\$</b>	<b>%</b>	<b>\$</b>	<b>%</b>
Darlington	1.81	1.88	2.11	2.76	3.7	0.07	4%	0.23	12%	0.65	31%	0.94	34%
Pickering A	1.89	1.74	1.89	2.4	3.23	-0.15	-8%	0.15	9%	0.51	27%	0.83	35%
Pickering B	1.92	1.92	2.09	2.74	3.66	0	0%	0.17	9%	0.65	31%	0.92	34%
Total	1.85	1.87	2.09	2.7	3.62	0.02	1%	0.22	12%	0.61	29%	0.92	34%

The above table shows the year over year variation of nuclear fuel cost measured on a per MWh basis.

Spot market prices have increased from US\$20/lb at the beginning of 2005 to a level close to US\$40/lb at the beginning of 2006, and further increased to over US\$70/lb at the beginning of 2007. Nuclear fuel cost per MWh has only increased by 1% in 2006 and 12% in 2007.

Spot market price of U<sub>3</sub>O<sub>8</sub> as of March 10, 2008 per UxC is US\$74/lb, steadily decreasing from the July 2007 high of US\$ 135/lb level. However, the Applicant has forecasted an increase of 29% in 2008 and another 34% in 2009 on a per MWh basis.

Please explain.

### **Corporate Costs Allocation**

36. Ref: Ex F3/1/1/pg4 of 31: Capitalization Policy

The Applicant has stated that the materiality threshold for capitalization of certain expenditures has been increased to \$25,000 starting in 2007 to ensure that OPG's policy is consistent with industry practice.

- Has OPG conducted any capitalization study to support the increase of the materiality threshold for capitalization? If yes, please file a copy of such study.
- Please provide examples within the industry demonstrating that OPG's previous capitalization threshold prior to 2007 was below the industry average.
- Please summarize and quantify (if possible), the revenue requirement impact of treating the expenditures as OM&A rather than capital for test period.

37. Ref: Ex F3/1/1/Table 1: Finance Costs

Total Corporate Cost – Finance increased by 10% or \$5.6 million in 2007 and another 7% or \$4.5 million in 2008.

The Applicant has provided 3 cost components under Corporate Finance costs.

						2006 vs. 2005		2007 vs. 2006		2008 vs. 2007	
\$M	2005	2006	2007	2008	2009	\$	%	\$	%	\$	%
Corporate Costs - Finance											
For preparation of OEB Evidence											
Dedicated controllership group											
Audit and Internal Control programs											
Total Corporate Costs - Finance	56.2	57	62.6	67.1	68.5	0.8	1%	5.6	10%	4.5	7%

- Please complete the table above.
- Please specify whether the increased expense is caused by incremental headcounts from external hiring. If yes, please provide details (number of headcounts, position, incremental labour costs, one-time or ongoing, etc.)

38. Ref: Ex F3/1/1/Table 1, Ex F3/1/1/pg5 of 31: CIO Costs

\$M	2005	2006	2007	2008	2009	2006 vs. 2005		2007 vs. 2006		2008 vs. 2007		2009 vs. 2008	
						\$	%	\$	%	\$	%	\$	%
CIO	149.5	146.4	168.2	192.3	190.3	-3.1	-2%	21.8	15%	24	14%	-2	-1%

The Applicant has stated that the increase of CIO costs was due to two factors: increase in the materiality threshold for capitalization of certain expenditures to \$25,000 starting in 2007, and higher project costs relating to the project management system project to improve resource management and costs.

- a. Please separately provide the amount related to the change of capitalization treatment and spending on project management system project costs.
- b. It appears that the benefit of the project management system project would lead to reduced current or future resource management costs. Please confirm. If yes, please provide the expected annual savings and which OM&A line item would the benefit be reported.

39. Ref: Ex F3/1/1/pg8, Table 1: Corporate Affairs

Total corporate affairs costs increased by \$3 million or 19% in 2007 compared to 2006 level, and another 57% or \$11 million in 2008.

The Applicant has elaborated on a number of key functions under corporate affairs, but little has been provided on the cost drivers explaining the year over year cost variations.

Please provide a detailed explanation of the increase in expenditures for this item from 2006-2008.

**40. Ref: Ex F3/1/1/pg17 of 31: Centrally Held Costs – Uplift and IESO Administration Charges**

\$M	2005	2006	2007	2008	2009	2006 vs. 2005		2007 vs. 2006		2008 vs. 2007		2009 vs. 2008	
						\$	%	\$	%	\$	%	\$	%
Uplift and IESO Administration	25.9	22.4	20.5	35.9	35.2	-3.5	-14%	-2	-8%	15	75%	-1	-2%

The Applicant has stated that Uplift and IESO administration charges are non-discretionary and apply to all withdrawals from the IESO controlled grid.

What are the assumptions to project a 75% increase in 2008 given that spending has been steadily decreasing from 2005 – 2007?

#### 41. Ref: Ex F3/1/1/pg17 of 31: Centrally Held Costs – Other

\$M						2006 vs. 2005		2007 vs. 2006		2008 vs. 2007		2009 vs. 2008	
	2005	2006	2007	2008	2009	\$	%	\$	%	\$	%	\$	%
Fees Payable to the Province for unfunded nuclear liabilities													
Vacation accruals													
Provincial sales tax													
Other	28	17.2	31.1	42.6	37.7	-10.8	-39%	14	81%	12	37%	-5	-12%

The Applicant has identified three components included in “Other Centrally Held Costs”.

- Please complete the table above.
- For Fees payable to the Province of Ontario for unfunded nuclear liabilities, what are the assumptions for making the test year accruals?
- For the amount of compensated vacation accruals, what are the assumptions for making the test year accruals?

#### 42. Ref: Ex F3/4/1/pg21 of 40: Benefits – Ontario Health Premium

The Applicant has stated that it was directed, through an arbitration award, to provide the Ontario health premium to all PWU-represented employees and pensioners. This resulted in an additional payment of approximately \$6 million each year, in addition to the expenditures incurred with a one-time pay system change to allow tracking and payment of these amounts.

- Please provide a copy of the arbitration award.
- Has this issue been revisited in subsequent collective bargaining with the PWU?  
If not, why not?

#### Procurement Process

#### 43. Ref: Ex F3/5/1: Overview of procurement process

The Applicant has described its process applied to the acquisition of goods and services above a threshold value of \$10,000. The Applicant has also stated that purchasing authority is delegated to the individual business through the use of a purchasing card for purchased below the \$10,000 threshold.

What level of authorization is required for purchases below the \$10,000 threshold?

44. Ref: Ex. F3/2/1 Appendix “A” and Appendix “B”- Depreciation Review Committee

The 2007 report of the Depreciation Review Committee (Appendix “B”) states, at pg. 7, that the end of life projection for Pickering B remains at 2014. The 2006 Report (F3/2/1, Appendix “A”, pg. 7) states that the end-of-life projection for Pickering B was changed from 2009 to 2014 after a 2005 assessment of major components, however, no mention is made in either document of the potential refurbishment of Pickering B.

- a. Please explain whether the end of life projection for Pickering B, and corresponding depreciation rates, need to be adjusted in view of the recommendation made to the OPG Board of Directors in respect of the Pickering B refurbishment.