AMPCO

VIA RESS, EMAIL AND COURIER

April 1, 2008

Ms. Kirsten Walli
Board Secretary
Ontario Energy Board
P.O. Box 2319, 27th Floor
2300 Yonge Street
Toronto, ON M4P 1E4

Dear Ms. Walli:

Re: Ontario Power Generation, Payment Amount Increases for Prescribed Generating Facilities, AMPCO Interrogatories
Board File No. EB-2007-0905

Pursuant to Procedural Order #2, issued March 20, 2008, attached please find AMPCO's interrogatories in the above proceeding.

Please contact me if you require additional information.

Sincerely yours,

Adam White
President

Copies to:
Applicant and Intervenors

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EB-2007-0905

Ontario Power Generation Inc.

Payment Amounts for Prescribed Generating Facilities

AMPCO Interrogatories

AMPCO Interrogatory # 1

Issue 1.1: Is the rate base appropriately determined in accordance with regulatory and accounting requirements? (B1T1S1) (B1T1S1)

Ref: B1, T1, S1

Over the period 2005-2009, please identify all of the projects with capitalized amounts that OPG claims constitute acquisition and construction of new assets, or rehabilitation/improvement/maintenance or replacement. Show how you applied your capitalization policy and the justification for their capitalization. Show any non-capitalized costs associated with each project.

AMPCO Interrogatory # 2

Issue 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? (C1/T1/S1, C1/T2/S1, C2/T1/S1)

Ref: C2, T1, S1, Page 89

Section IV F of Exhibit C2, compares the capital structures of what are referred to as peers. TransAlta Utilities, a publicly traded company, is identified as a peer that holds “heritage” Alberta assets. Two other generation companies owned by provincial governments that hold heritage assets are British Columbia (BC) Hydro and Hydro Quebec. Was the capital structure of these peer companies considered and if so, what bearing did they have on the final recommendations? If they were not considered, please indicate why they were excluded.

<u>AMPCO Interrogatory # 3</u>

Issue 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? (C1/T1/S1, C1/T2/S1, C2/T1/S1)

Ref: C2, T1, S1, Page 96

Please provide data from 1999 on the components of total capital (long-term debt and equity) for OPG from its inception and annually thereafter to the end of 2007. Please provide the source of this information.

<u>AMPCO Interrogatory # 4</u>

Issue 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? (C1/T1/S1, C1/T2/S1, C2/T1/S1)

Ref: C2, T1, S1, Page 59 - "OPG regulated assets do not typically set the market-clearing price, except in cases of unused baseload capacity."

Please indicate the number of occasions and number of hours since the opening of the Independent Electricity Market Operator (IMO)/Independent Electricity System Operator (IESO) market, excluding periods of market interruption such as August 14-16, 2003, in which the now prescribed hydro-electric assets set the market clearing price. Also, indicate which assets set the price (e.g. Beck peaking versus Beck baseload) and if these assets set the price in hours in which prescribed hydro-electric asset production exceeded 1,900 MW.

<u>AMPCO Interrogatory # 5</u>

Issue 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? (C1/T1/S1, C1/T2/S1, C2/T1/S1)

Ref: C2, T1, S1

Please indicate the number of occasions and number of hours since the opening of the IMO/IESO market, excluding periods of market interruption such as August 14-16, 2003, in which prescribed nuclear assets set the market clearing price.

AMPCO Interrogatory # 6

Issue 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? (C1/T1/S1, C1/T2/S1, C2/T1/S1)

Ref: C2, T1, S1, Page 65 - "Revenue risks also include the risk that hydroelectric assets will not be dispatched."

Please indicate the number of hours since IESO market opening, excluding periods of market interruption such as August 14-16, 2003, in which prescribed hydroelectric assets which had been offered into the IESO market were not dispatched. Also, indicate which assets failed to be dispatched (e.g. Beck peaking versus Beck baseload) and whether these were hours in which prescribed hydroelectric asset production was > 1,900 MW.

AMPCO Interrogatory # 7

Issue 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? (C1/T1/S1, C1/T2/S1, C2/T1/S1)

Ref: C2, T1, S1, Page 65 - "However, this risk (failure to be dispatched) will rise as additional low marginal cost generation becomes available."

Please describe what additional low cost sources of generation are expected to be available during the test period and describe how they might displace prescribed assets in the IESO merit order.

AMPCO Interrogatory # 8

Issue 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? (C1/T1/S1, C1/T2/S1, C2/T1/S1)

Ref: C2, T1, S1 – OPG's hydroelectric production faces risks due to "lower than expected demand (decreased demand would cause hydroelectric production to be reduced in advance of nuclear production)."

Please provide the number of hours since IMO/IESO market opening, excluding periods of market interruption such as August 14-16, 2003, when total market demand was less than the available capacity of prescribed assets and the average amount by which total demand was less than this capacity in these hours.

AMPCO Interrogatory # 9

Issue 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? (C1/T1/S1, C1/T2/S1, C2/T1/S1)

Ref: C2, T1, S1, Page 68 - "Revenue risks for nuclear operations include the risk that generating plants will not be dispatched".

Please provide the number of hours since IMO/IESO market opening, excluding periods of market interruption such as August 14-16, 2003, when prescribed nuclear assets which were offered into the IESO market were not dispatched (for market reasons i.e. not subject to congestion-related curtailment).

<u>AMPCO Interrogatory # 10</u>

Issue 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? (C1/T1/S1, C1/T2/S1, C2/T1/S1)

Ref: A1, T3, S1, Page 3 - "OPG is, therefore, seeking a fair rate of return on the prescribed assets. The current payment amounts were established on the basis of a forecast five percent return on equity. At the time, it was acknowledged that a five percent return on equity was significantly less than the appropriate return for regulated utilities in North America".

a) Describe any discussions that occurred or provide documentation produced or exchanged between the Province of Ontario and OPG with respect to the establishment of the 5% ROE. Provide copies of all memos, minutes of meetings, reports, letters or other correspondence in written and/or electronic format that considered this issue.

b) What is OPG's understanding of the basis upon which the Province selected 5% as the appropriate ROE for OPG?

c) AMPCO understands that when considering the ROE issue that lead to the Province ultimately setting on 5%, the Province retained the services of CIBC or another investment banker to conduct a study or report to consider, among other things, what ROE OPG should receive. Did OPG ever receive a copy of this study? If yes, please provide AMPCO with a copy of this report.

d) In a number of places throughout the Application OPG refers to the following statement that appears in the Purpose section contained in the August 17, 2005 Memorandum of Agreement between Ontario and OPG: "OPG will operate as a commercial enterprise…" It appears to AMPCO that OPG interprets this phrase as direction from the Province to OPG to seek the maximum possible return on equity and equity thickness. Please confirm whether this understanding is correct and if so, what is the rationale upon which OPG seeks the maximum return. If this matter is documented in electronic or written format as between the Province and OPG please provide this material.

e) Has the Province of Ontario ever directed or otherwise endorsed OPG to request 10.5% ROE from the OEB in these proceedings? Describe how these instructions or approval have been communicated to OPG and if in written or electronic format, please produce same. If the answer to this question is no, please explain why OPG did not think it was necessary or appropriate to canvas the opinion of its sole shareholder on this important matter given ROE's impact on the commodity prices for heritage assets generation that consumers will pay?

AMPCO Interrogatory # 11

Issue 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)

Ref: A1, T3, S1, Page 3

Please explain the tax treatment of the forecast return on equity (ROE) in O.Reg. 53/05. Was the 5% ROE intended to be pre tax or post tax? Please provide OPG's actual achieved regulated ROE for the period 2005-2007 applying the tax treatment originally intended when the regulation was established. In addition, indicate what the ROE would have been had all the net income associated with the prescribed assets been included including hydro-electric production in excess of 1900 MW, net income from SMO, net income from water transactions, and CMSC payments.

AMPCO Interrogatory # 12

Issue 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)

Ref: A1, T3, S1, Page 3

The 2000 Annual Report of the Ontario Electricity Financial Corporation (OEFC) states, "The Electricity Act, 1998 requires that dedicated electricity revenues must be paid by successor entities and municipal electric utilities (MEUs) to the OEFC to service stranded debt" (page 8). Dedicated income is defined by the OEFC as "the combined net income of OPG and HONI in excess of the Province's costs of its investment in its electricity subsidiaries" (page 8). Did this requirement to direct net income of OPG whatever its level towards the servicing of stranded debt have any bearing on OPG's recommendations for an appropriate ROE level and if so, how did it affect OPG's analysis?

AMPCO Interrogatory # 13

Issue 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)

Ref: A1, T3, S1, Page 3

In the development of OPG's recommendations on an appropriate ROE was consideration given to the fact that in addition to OPG's net income, consumers are paying for the original cost of these assets through the Debt Retirement Charge and Payments-in-Lieu of taxes (PILs) on the part of OPG, Hydro One and the Local Distribution Companies (LDCs)? If so, how did this information influence the results?

AMPCO Interrogatory # 14

Issue 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)

Ref: C1, T1, S1, Page 2 - "OPG does not expect (historical actual ROE) information will be necessary to support future payment applications as the regulatory proceeding to establish the initial payment amounts by the OEB will provide: Suitable context for assessing the adequacy of payment amounts established by the OEB (and) sufficient public information to understand OPG's regulated operations and OPG's expected financial position prior to subsequent proceedings."

In the event of new accounting rules that may fundamentally change the context of previous reporting and make historical information difficult to interpret in the context of new requirements, will OPG resist disclosure of historical information in updated formats?

AMPCO Interrogatory # 15

Issue 2.5: What are the implications of the deferral and variance accounts on OPG's financial risk? How should the implications be considered when determining the appropriate return on equity?

Ref: C2, T1, S1 - "From a relative risk perspective, the hydroelectricity variance account puts OPG on a similar footing to other utilities with significant hydroelectricity generation whose production is subject to water availability."

Except for Northwest Territories Power, please confirm that no other Canadian utility enjoys a hydro-electric water availability variance account. Please confirm that no other Canadian utility except Hydro Quebec at Beauharnois is capturing hydro-electric energy from such a large and climatologically diverse geographic area as are OPG's regulated hydro-electric facilities. Was any consideration given to relative production stability of the regulated hydro-electric facilities?

AMPCO Interrogatory # 16

Issue 3.1: Are the costs and financial commitments OPG is seeking to recover under section 6(2)4 [1] incurred to increase the output of, refurbish or add operating capacity to a prescribed facility? ([1] All section references are to O.Reg. 53/05) (D1/T1/S1 and D2/T1/S1)

Ref: D2/T1/S1, Chart 1

OPG spent $168.3 million in capital expenditures at Pickering B. Please explain why OPG considers it appropriate to account for such significant spending as capital on units that may not have significant future life pending the outcome of the refurbishment review now underway.

AMPCO Interrogatory # 17

Issue 3.3: If the costs and financial commitments are not within project budgets approved by the board of directors of OPG, are the costs and financial commitments prudent?

Ref: A2, T1, S1 Appendix A

OPG's 2007 financial statement indicates that the Beck Tunnel, Pickering B refurbishment decision, and the Lac Seul redevelopment project are behind schedule. Please provide:

a) the original project budgets approved by the directors of OPG and explain why any deviations from the approved costs and financial commitments are prudent;
b) the status of the projects and outlook for project completion;
c) the factors contributing to the delays; and
d) the impacts on project costs and costs associated with other related projects that would be incurred by OPG in the test period.

<u>AMPCO Interrogatory # 18</u>

Issue 3.5: Is the additional capital spending (beyond the levels being recovered under section 6(2)4)) appropriate?

In 1998, New York Power Authority (NYPA) began a Life Extension and Modernization project at the St. Lawrence-Franklin D. Roosevelt (FDR) facility. Most of the original equipment in the power house of the NYPA facility is being replaced or renovated at a cost originally forecast by NYPA to be $254 million (U.S.). The project was designed to ensure reliable power production for the future. Each of the project's 16 turbine-generators is scheduled to be completely refurbished by 2013. Please provide the unit energy efficiency ratings (kW/cms) and unit availabilities for refurbished St. Lawrence-FDR facilities and the actual R.H. Saunders average. Please comment on the appropriateness of benchmarking R.H. Saunders against St. Lawrence-FDR and provide any such studies or analysis.

<u>AMPCO Interrogatory # 19</u>

Issue 3.5: Is the additional capital spending (beyond the levels being recovered under section 6(2)4)) appropriate?

Ref: E1, T1, S1

Please provide the unit energy efficiency ratings (kW/cms) and unit availabilities for the units of Robert Moses Niagara vs. Beck 2 and Beck 1. Please comment on the appropriateness of benchmarking Beck 2 and Beck 1 against Robert Moses Niagara and provide any such studies.

<u>AMPCO Interrogatory # 20</u>

Issue 3.5: Is the additional capital spending (beyond the levels being recovered under section 6(2)4)) appropriate?

Ref: D2/T1/S2

With respect to the following capital projects and with attention to value for money, please detail the procurement processes with respect to the following OPG proposals:

Darlington shutdown system computers ($64.6 million)

Darlington standby generation controls replacement ($14.4 million)

Darlington fuel handling computer replacement ($10.4 million)

AMPCO Interrogatory # 21

Issue 3.5: Is the additional capital spending (beyond the levels being recovered under section 6(2)4)) appropriate?

Ref: D2, T1, S2, Page 5 (original material)

In the original prefiled material (before the updates), OPG was planning to spend $36.3 million on a water side security project although the project appears to be not included in the update. Please indicate the disposition of this previously-identified project.

AMPCO Interrogatory # 22

Issue 3.5: Is the additional capital spending (beyond the levels being recovered under section 6(2)4)) appropriate?

Ref: D2, T1, S2, Page 8

Between the issuance of the prefiled and the updated material, the cost of the proposed Darlington maintenance facility has increased from $30.1 million to $44.4 million. Why has this project increased in cost by almost half? With respect to this project and with attention to value for money, please detail the procurement process followed by OPG.

AMPCO Interrogatory # 23

Issue 3.5: Is the additional capital spending (beyond the levels being recovered under section 6(2)4)) appropriate?

Ref: D2, T1, S2, Page 17 (updated material)

OPG is proposing to spend $20.5 million for a furnace to maintain the powerhouse and Tritium Removal Facility (TRF) above 10 degrees Celcius (C) in winter in the event of a four unit shutdown. Please indicate how the 10 degree C requirement was established. Please summarize the options considered, including for example the trade-off between the specified furnace relative to a smaller furnace plus some insulation and/or weather sealing. With respect to this project and with attention to value for money, please detail the procurement process followed by OPG.

AMPCO Interrogatory # 24

Issue 4.1: Is the methodology used by OPG to generate the proposed hydroelectric and nuclear business production forecasts appropriate?

Ref: E1, T1, S2, Page 1 – " The annual mean Niagara River flow forecast for 2009 is about 97 percent of historic mean and about 95 percent for 2008. "

Please confirm that the "historic mean" referred to here is the 30 year mean. The 30 year average has only been realized one year out of the last eight. What error bounds should be applied to the 2008 and 2009 forecasts?

AMPCO Interrogatory # 25

Issue 4.1: Is the methodology used by OPG to generate the proposed hydroelectric and nuclear business production forecasts appropriate?

What is the annual net income sensitivity of plus or minus 1 TWh of regulated hydro-electric production and plus 2 TWh and minus 5 TWh of nuclear production?

AMPCO Interrogatory # 26

Issue 4.1: Is the methodology used by OPG to generate the proposed hydroelectric and nuclear business production forecasts appropriate?

Ref: E1, T1,S1

Please provide the most recent plan for regulating of the levels and outflows of Lake Ontario with an explanation of changes relative to Regulation Plan 1958-D and impacts on OPG during the test years. If the plan is voluminous but publicly available, please provide the URL.

AMPCO Interrogatory # 27

Issue 4.1: Is the methodology used by OPG to generate the proposed hydroelectric and nuclear business production forecasts appropriate?

For each year from 2005-2007, please provide OPG's actual water entitlement at each regulated hydro-electric station, the theoretical electrical generation potential of that available water given optimal generation performance at each station, and the actual production. Please identify any long term trends in the difference between optimal production and actual production.

AMPCO Interrogatory # 28

Issue 4.1: Is the methodology used by OPG to generate the proposed hydroelectric and nuclear business production forecasts appropriate?

Ref: E1, T1, S1 and E2, T1, S1

When will OPG update the 2008 actual and forecast production and the 2009 forecast production during this process?

AMPCO Interrogatory # 29

Issue 4.1: Is the methodology used by OPG to generate the proposed hydroelectric and nuclear business production forecasts appropriate?

Ref: E2, T1, S2, Table 1

Please confirm that nuclear production is forecast in an annually renewed rolling five year plan. Please provide each production plan starting in 2000 (to capture the 2005 actual production). If OPG undertakes production planning on a different forecast horizon, provide all the forecasts that captured 2005 and subsequent. Please provide any analysis OPG has conducted of nuclear production forecast bias and corrective actions taken.

AMPCO Interrogatory # 30

Issue 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)

Ref: F2, T2, S1 and F2, T3, S1 and F2, T4, S1

In the “base”, “project”, and “outage” operating cost information provided for Darlington in Exhibits F2/2/1, F2/3/1, and F2/4/1 please identify any costs associated with the Tritium Removal Facility (TRF) embedded in these figures.

AMPCO Interrogatory # 31

Issue 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)

The OPG Review Committee, in its report on the future of OPG entitled "Transforming Ontario's Power Generation Company" issued in March 2004, presents a chart (Introduction page 20) showing Capacity Factor (CF) and operating cost for each of OPG’s nuclear stations compared to the U.S.. Please update this chart.

AMPCO Interrogatory # 32

Issue 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)

For P1 restart analysis, the OPG Review Committee assumed going forward project costs of $500m (sunk costs at the time were $325 million), an in-service date of September 2005, remaining life capacity factor of 85%, average annual running cost of $86 million (Fuel, O&M, management, repairs and capital expenditures), and an operating life ending in December 2017. (Pickering chapter p. 4/25) The OPG Review

Committee also provided an untoward event scenario with capital costs up $50 M, Capacity Factor 80%, end of operating life in 2015, and annual cost up 10%. (p. Pickering chapter p. 8) Please report the actual annual results for Pickering 1 to date relative to these parameters.

AMPCO Interrogatory # 33

Issue 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)

Ref: A1, T4, S3, Page 13

Please compare the definition of Partial Unit Energy Cost (PUEC) used in the evidence with the annual running cost definition used by the OPG Review Committee.

AMPCO Interrogatory # 34

Issue 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)

The OPG Review Committee assumed a going forward Levelized Unit Energy Cost (LUEC) of Pickering 1 of $40-45/MWh (p. Pickering chapter p. 6) Please report the actual results for Pickering 1 to date relative to this parameter.

AMPCO Interrogatory # 35

Issue 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)

Ref: A1, T4, S3, Page 11 - "Overall, the (nuclear) business is not yet at the industry standard, but has made considerable progress in achieving this goal."

Please indicate what benchmarks support this judgment and the time frame assumed in making this statement?

AMPCO Interrogatory # 36

Issue 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)

Ref: A1, T4, S3, Page 12 - "Improved project review and monitoring process. This initiative includes examining the project portfolio to ensure that the number of planned projects is reasonable."

Please indicate what actions are taken if the number of planned projects is unreasonable?

AMPCO Interrogatory # 37

Issue 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)

Ref: A1, T4, S3, Page 12 - "Supply Chain is part way through their performance improvement plan which commenced in 2005, with a focus on three broad program objectives that include: improving material availability, establishing a competent nuclear supply chain organization, and reestablishing commercial leverage."

Please provide the performance improvement plan that initiated this process and a report on the actual achievement of the milestones within the plan.

AMPCO Interrogatory # 38

Issue 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)

Ref: A1, T4, S3, Page 17 (Table) and Page 18 - "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."

Since Pickering 4 has been in service since 2003 and Pickering 1 since 2005, please explain why 2007 results cannot be effectively benchmarked against peers.

AMPCO Interrogatory # 39

Issue 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)

Ref: A1, T4, S1 Appendix B, A2/T2/S1

In the Memorandum of Agreement between Ontario and OPG dated August 17, 2005, under Part A. Mandate (3) "OPG will seek continuous improvement in its nuclear generation business and internal services. 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. OPG's top operational priority will be to improve the operation of its existing nuclear fleet.

Under Part C. Generation Performance and Investment Plans (2), "Benchmarking will need to take account of key specific operational and technology factors including the operation of CANDU reactors worldwide, the role that OPG's coal plants play in the Ontario electricity market with respect to load following and the Government of Ontario's Coal replacement policy.

Please indicate the role of benchmarking, comparators and cohorts in OPG's business planning and budgeting processes.

AMPCO Interrogatory # 40

Issue 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)

Ref: A1, T4, S3, Page 10 - "The 2004 plan was to ensure that Darlington, the station with the most advanced design, would not deteriorate in performance due to material condition issues but rather would sustain its high capability performance. This increased investment was incorporated into the 2004 business plan."

Please provide the 2004 business plan referred to above.

AMPCO Interrogatory # 41

Issue 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)

Ref: A1, T4, S3, Page 13

Please reproduce Chart #2 including actual results for 2005-2007.

<u>AMPCO Interrogatory # 42</u>

Issue 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)

Ref: F2, T1, S1 Table 1 and D2, T1, S1 Chart 1

Please reconcile the "project O&M" for the years 2006-009 presented in F2/T1/S1 Table 1 and D2/T1/S1 Chart 1.

<u>AMPCO Interrogatory # 43</u>

Issue 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)

Ref: A1, T4, S3, Page 18 - "Darlington continues to perform very well, relative to its peer group, at $26/MWh."

OPG indicates that the median Partial Unit Energy Cost (PUEC) performance for U.S. reactors of similar size is $23/MWh. Please indicate the third quartile PUEC boundary.

AMPCO Interrogatory # 44

Issue 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)

Ref: A1/T4/S3, Page 13

What quartile will Darlington achieve in 2009 if the performance of the U.S. fleet remains constant?

AMPCO Interrogatory # 45

Issue 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)

Ref: A1/T4/S3 Page 19

Please indicate how much of OPG's nuclear Operation & Maintenance (O&M) is purchased in U.S. dollars or is effectively priced in U.S. dollars?

AMPCO Interrogatory # 46

Issue 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)

Based on information from New Brunswick (NB) Power's annual reports and OPG's prefiled material (where general nuclear operating costs are allocated on a per unit basis), the operating cost per unit of production for Pickering B compare with those of Point Lepreau as follows:

Year	Lepreau Op Cost ($/MWh)	Pickering B Op Cost ($/MWh)
2005	$33.49	$50.69
2006	$32.80	$54.12
2007	$35.25	$54.99

Please comment on the appropriateness of this comparison. In comparing Pickering B with Point Lepreau, what adjustment is appropriate in OPG's opinion taking into account Pickering B's younger age and larger station output, multi-unit design. Please explain why OPG has been unable to match the performance of NB Power with respect to operating costs.

AMPCO Interrogatory # 47

Issue 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)

Ref: F2/2/1, F2/3/1, F2/4/1, http://brucepower.com/pagecontent.aspx?navuid=124

Based on information from Bruce Power's annual reviews and OPG's prefiled material (where general nuclear operating costs are allocated on a per unit basis), the operating cost per unit of production for Darlington compare with those of Bruce Power as follows:

Year	BP Op Cost ($/MWh)	Darl. Op Cost ($/MWh)
2002	$25.00	
2003	$24.82	
2004	$23.60	
2005	$26.47	$22.97
2006	$25.01	$26.75
2007	$29.72	$29.08
2008		$27.99
2009		$29.92

Please comment on the appropriateness of this comparison. In comparing Darlington with Bruce Power, what adjustment is appropriate in OPG's opinion taking into account Darlington's much younger age relative to the average for Bruce, more modern design, and larger unit size. Please provide comparable figures for Darlington for the period 2002-2004.

<u>AMPCO Interrogatory # 48</u>

Issue 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)

Ref: E2, T1, S1

The nuclear Forced Loss Rate (FLR) forecast is based in part on historic investments in backlog reduction at each station. Please provide the records that are used for input and the model used to describe the impact or spending on FLR.

AMPCO Interrogatory # 49

Issue 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)

Ref: A1/T4/S3, Page 10

In 2006 and 2007, the performance of Pickering A and B were impacted negatively by two major problems: a release of resin into the demineralized water system and an electrical supply issue. In 2005 and 2006, the performance of Pickering B was impacted by materials left inside a steam generator following maintenance. Please provide Post Implementation Review (PIR) reports on these three events and any other root cause or other follow-up analysis associated with these events.

AMPCO Interrogatory # 50

Issue 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)

Ref: A2, T2, S1, Page 12

List all the comprehensive Post Implementation Review (PIRs) conducted in 2005 and 2006 and produce copies of all the PIRs conducted in 2007.

AMPCO Interrogatory # 51

Issue 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)

Ref: A1, T4, S3 Chart 3, Page 17

Please provide the third quartile level for each benchmarking criteria and whatever information OPG has for each benchmarking criteria identified in Chart 3 arising from the performance results of any of the other CANDU units operating in Canada.

AMPCO Interrogatory # 52

Issue 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)

Ref: A1, T4, S3 Chart 3, Page 17

Chart 3 provides benchmarking data based on the current business plan. For each of 2005-2007 inclusive, provide the actual results.

AMPCO Interrogatory # 53

Issue 6.1: Are the proposals for the treatment of revenues from Segregated Mode of Operation, water transactions and congestion Management Settlement Credits appropriate? (G1T1S1)

Ref: G1, T1, S1, pp. 5-13

Please estimate the impact on the deficiency if net revenues from Segregated Mode Operations and Water Transactions were subject to a 90% ratepayer/10% shareholder sharing formula.

AMPCO Interrogatory # 54

Issue 6.1: Are the proposals for the treatment of revenues from Segregated Mode of Operation, water transactions and congestion Management Settlement Credits appropriate? (G1T1S1)

Ref: G1, T1, S1 pp. 13-15

Please estimate the impact on the deficiency if net revenues from Congestion Management Settlement Credits were subject to a 50% ratepayer/50% shareholder sharing formula.

AMPCO Interrogatory # 55

Issue 7.1: The proposed rate base includes the estimated net book value of OPG's nuclear fixed assets, which in turn includes amounts related to OPG's obligations to decommission the nuclear plants and manage nuclear waste. Do the amounts fall within the parameters of O. Reg 53/05? The proposed revenue requirement includes depreciation of those nuclear fixed asset costs and a return on rate base. Is this method of recovering nuclear fixed asset removal and nuclear waste management costs appropriate? Or should alternative recovery mechanisms be considered? [H1/T1/S2]

Ref: B1, T1, S1, Table 2

Please reproduce this table breaking out all amounts related to nuclear decommissioning and waste disposal. Provide an explanation for all broken out amounts.

AMPCO Interrogatory # 56

Issue 7.1: The proposed rate base includes the estimated net book value of OPG's nuclear fixed assets, which in turn includes amounts related to OPG's obligations to decommission the nuclear plants and manage nuclear waste. Do the amounts fall within the parameters of O. Reg 53/05? The proposed revenue requirement includes depreciation of those nuclear fixed asset costs and a return on rate base. Is this method of recovering nuclear fixed asset removal and nuclear waste management costs appropriate? Or should alternative recovery mechanisms be considered? [H1/T1/S2

Ref: B1, T1, S1, Page 3

Please identify the sections of Generally Accepted Accounting Principles (GAAP) that OPG relies upon for support in including in rate base its nuclear waste liabilities.

AMPCO Interrogatory # 57

Issue 7.1: The proposed rate base includes the estimated net book value of OPG's nuclear fixed assets, which in turn includes amounts related to OPG's obligations to decommission the nuclear plants and manage nuclear waste. Do the amounts fall within the parameters of O. Reg 53/05? The proposed revenue requirement includes depreciation of those nuclear fixed asset costs and a return on rate base. Is this method of recovering nuclear fixed asset removal and nuclear waste management costs appropriate? Or should alternative recovery mechanisms be considered? [H1/T1/S2]

Please compare OPG's rate base treatment of nuclear waste liabilities with those of NB Power and Hydro Quebec.

AMPCO Interrogatory # 58

Issue 7.1: The proposed rate base includes the estimated net book value of OPG's nuclear fixed assets, which in turn includes amounts related to OPG's obligations to decommission the nuclear plants and manage nuclear waste. Do the amounts fall within the parameters of O. Reg 53/05? The proposed revenue requirement includes depreciation of those nuclear fixed asset costs and a return on rate base. Is this method of recovering nuclear fixed asset removal and nuclear waste management costs appropriate? Or should alternative recovery mechanisms be considered?

Ref: H1, T1, S2

Please indicate the impact on the deficiency if annually recognized nuclear liabilities were treated as a flowthrough and rather than as a rated base amount subject to ROE.

AMPCO Interrogatory # 59

Issue 8.1: Are OPG's suggested changes to the hydroelectric incentive payment system appropriate? (I1/T1/S1)

Ref: Exhibit C1, Tab2, Schedule 1, Table 1, line 6, column (d)

In this exhibit, an amount for Revenue at Interim Payment of $163.9 M is shown. Note 5 states that this is the total production > 1,900 MWh x $33/MWh which implies that production >1,900 MWh is 4.97 TWh. However, the 2006 OPG Annual Report, page 34 (referred to in note 3 to Table 1) states, “During 2006 electricity generation of 3.4 TWh related to production levels above 1,900 MWh in any hour”. Please clarify the apparent discrepancy between the two estimates of production above 1,900 MWh in any hour in 2006.

AMPCO Interrogatory # 60

Issue 8.1: Are OPG’s suggested changes to the hydroelectric incentive payment system appropriate? (I1/T1/S1)

For each year from 2005 through 2007 for the Beck Pumped Generation Storage (PGS) facility please provide the actual net energy loss, the actual financial value gain or loss for the energy input and output, and the financial gain or loss for the energy input and output that would apply if market rates applied to all energy transactions. For 2008 and 2009, please provide the forecast net energy loss, the forecast financial value gain or loss for the energy input and output. For each year from 2005-2009 provide the annual operating cost. Provide any analysis OPG has benchmarking the Beck PGS facility compared with the adjacent NYPA Robert Moses Niagara pumped storage facility.

AMPCO Interrogatory # 61

Issue 8.1: Are OPG's suggested changes to the hydroelectric incentive payment system appropriate? (I1/T1/S1)

Ref: A1/T4/S2, Chart 5

Please comment on how the Sir Adam Beck (SAB) Pumped Generation Storage(PGS) head compares to those of the comparators and the impact of this on the results.

AMPCO Interrogatory # 62

Issue 8.1: Are OPG's suggested changes to the hydroelectric incentive payment system appropriate? (I1/T1/S1)

Ref: E1, T1, S1

Please provide any analysis OPG has of the reliability of the forecast it intends to use for the basis of its proposed hydro-electric production variance account.

AMPCO Interrogatory # 63

Issue 8.1: Are OPG's suggested changes to the hydroelectric incentive payment system appropriate? (I1/T1/S1)

Ref: E1, T1, S1

Please estimate the quantum of consumer benefits that OPG believes would arise from implementing its proposed variance account for deviations between actual hydro-electric production vs. forecasted production as a result of changes in water condition.