K20.1

CME Compendium

Panel 5B

OPG 2017-2021 Rates – EB-2016-0152

Board Staff Interrogatory #169

Issue Number: 6.7
Issue: Are the corporate costs allocated to the nuclear businesses appropriate?

Interrogatory

Reference:
Ref: Exh F3-1-1 page 14
Ref: EB-2010-0008 Exh F5-3-2

Figure 1 on page 14 presents a summary of corporate cost benchmarking results.

a) Are the peer results at column (c) at 2014?

b) In EB-2010-0008, OPG filed a Finance benchmarking report prepared by the Hackett Group. The report included reporting by peer group quartiles. What was OPG's performance by quartile for each corporate function in 2010 and 2014?

c) For the 2017-2021 test period, please provide IT cost per end user, HR cost per employee, finance cost as a percent of forecast revenue and ECS cost as a percent of forecast revenue.

Response

a) As shown in Ex. F3-1-1, Attachment 1, p. 6, all data is represented in 2014 Canadian Dollars for comparison purposes.
   - PPP (Purchasing Power Parity) was used to adjust the peer data from US to Canadian Dollars
   - A 2%/year inflation rate was applied to the peer companies and OPG's 2010 costs/revenue to normalize the data to 2014 Canadian Dollars

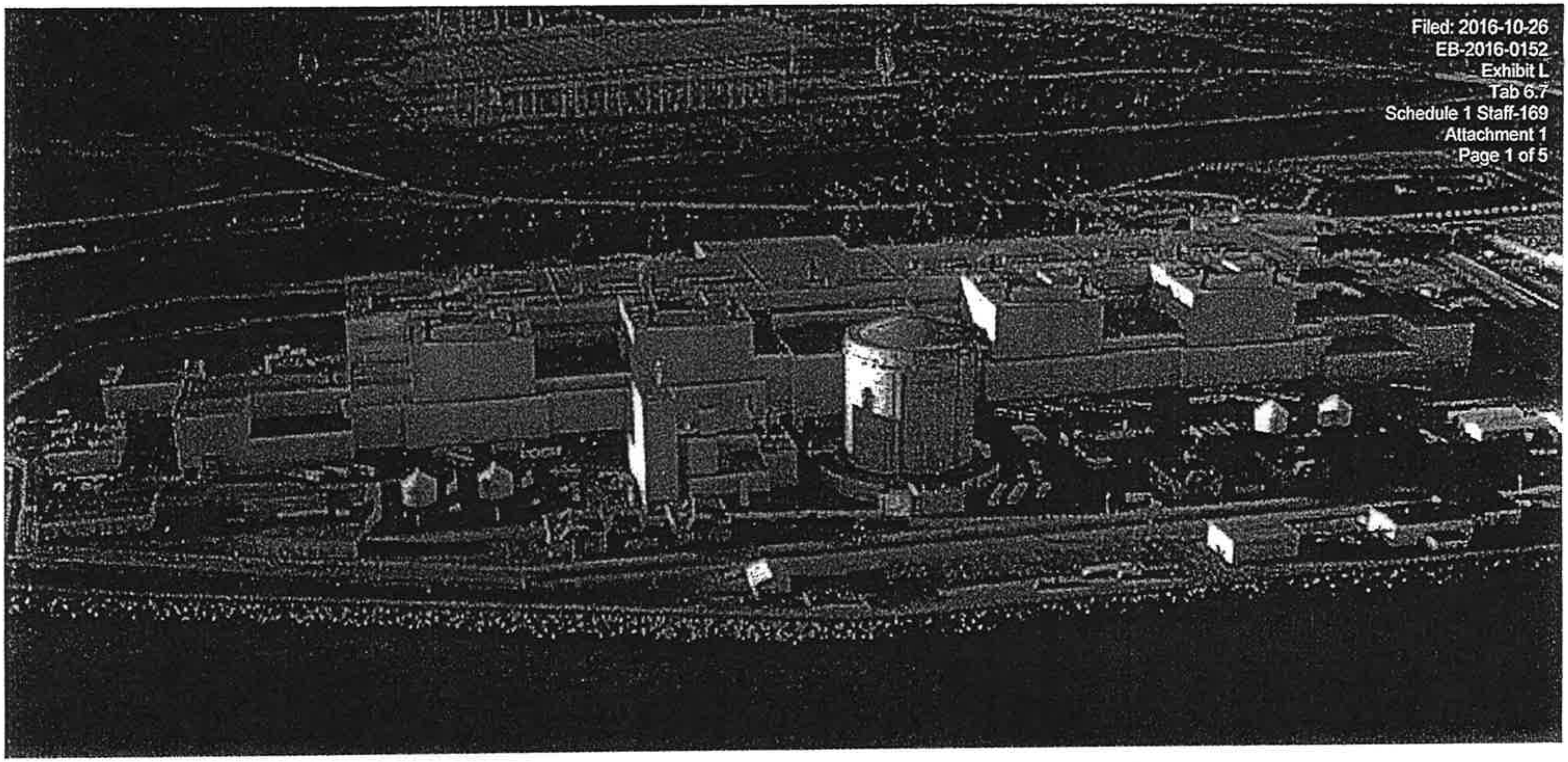
b) Attachment 1 to this response is OPG's performance by quartile as provided by the Hackett Group. Note, Attachment 1 is marked "confidential", however, OPG has determined this attachment to be non-confidential in its entirety.

c) Referring to the 2014 values at Ex. F3-1-1, Attachment 1, and forecasted corporate costs in Ex. F3-1-1, OPG has completed a high level estimate of the HR cost per employee, finance cost as a percent of forecast revenue and ECS cost as a percent of forecast revenue for OPG's nuclear business for 2017-2021, as illustrated in Chart 1 below. IT cost per end user is not included as OPG does not forecast end users.

Chart 1: Estimate of 2017-2021 HR cost per employee, Finance cost as a percent of forecast revenue and ECS cost as a percent of forecast revenue, for OPG's nuclear business.

	2017	2018	2019	2020	2021
HR per employee	$2,659	$2,661	$2,695	$2,781	$2,839
ECS as a %	2.84	2.85	2.95	2.58	2.81
Finance as a %	0.78	0.78	0.81	0.71	0.77

OPG notes that the values indicated in Chart 1 above represent an estimate based on information available to OPG, and have not been derived using the Hackett Group's taxonomy applied to 2010 and 2014 costs, or otherwise vigorously vetted by a similar taxonomy, as this is not an exercise OPG performs in its normal course of business.



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ONTARIO POWER GENERATION

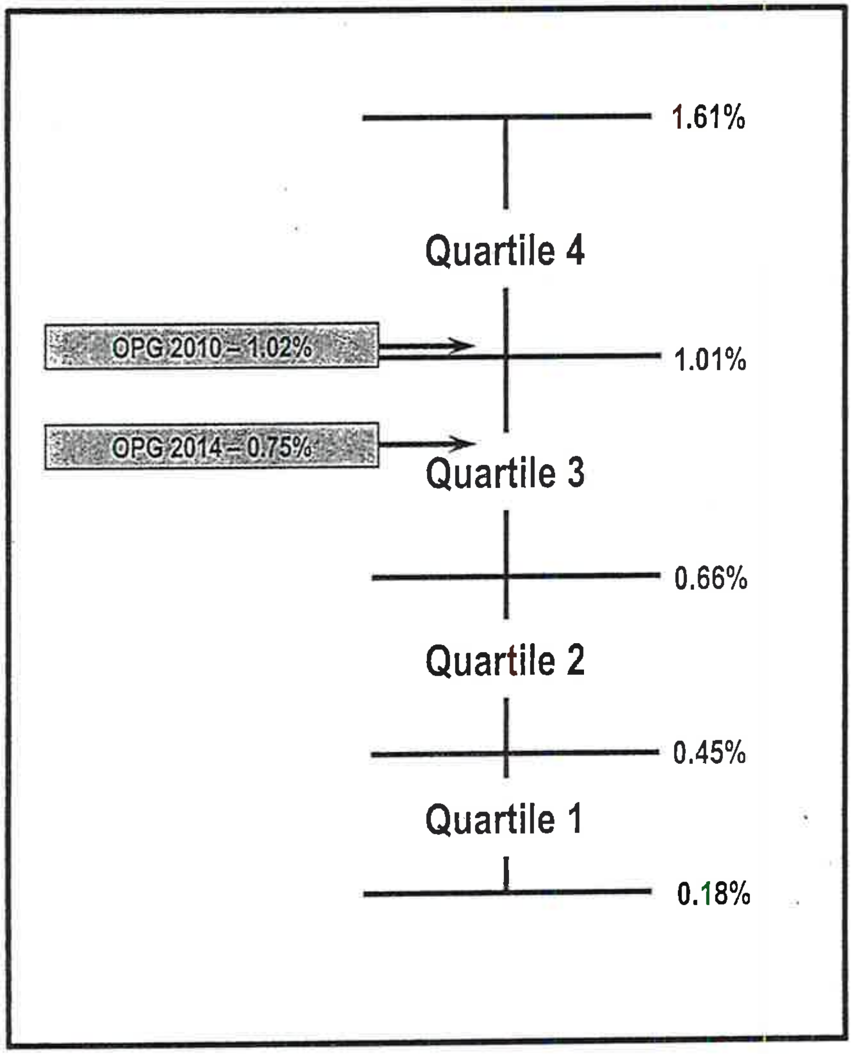
Benchmarking Study of OPG's Corporate Support Functions and Costs – Quartile Data

September 2016

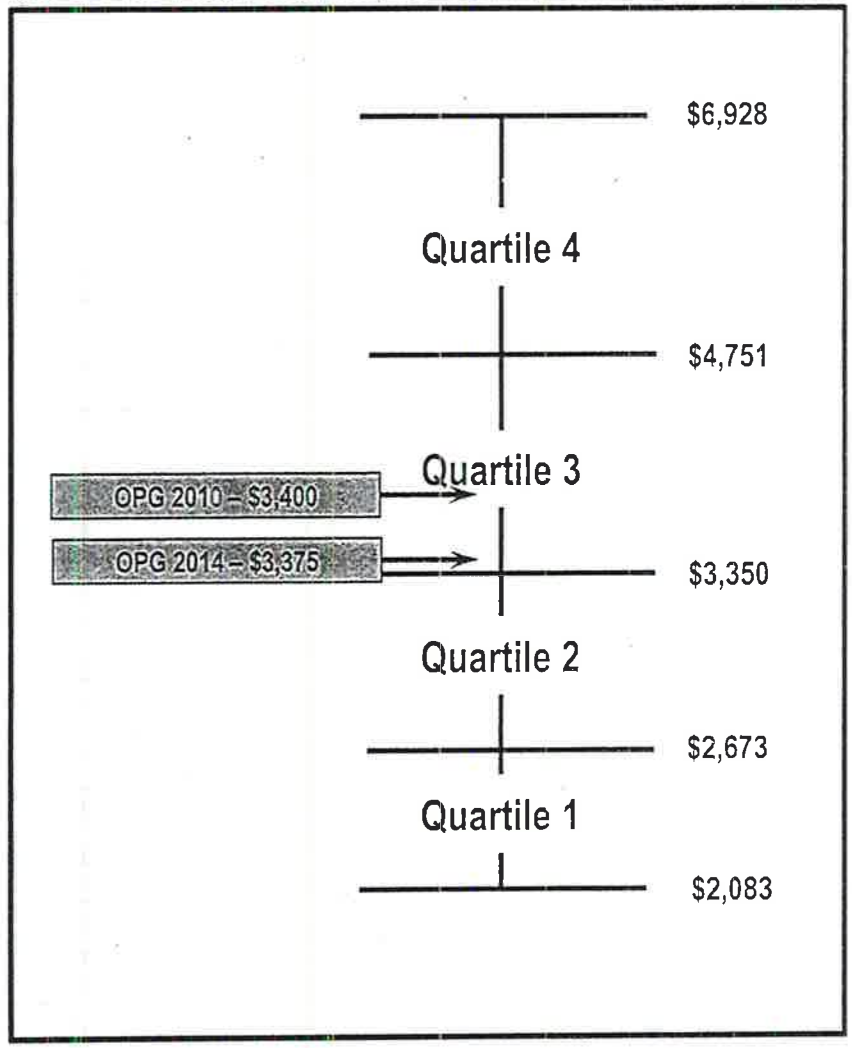
CONFIDENTIAL

Finance and HR Quartile Data

Finance Cost as a % of revenue



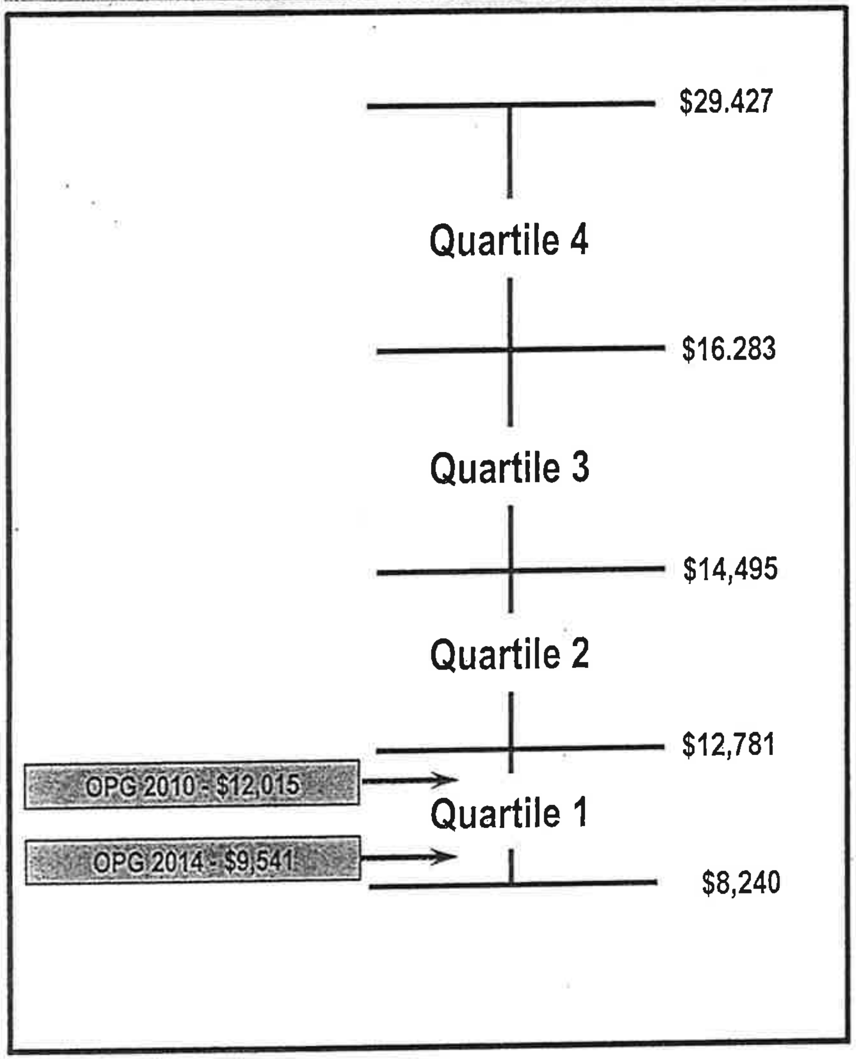
HR Cost per employee



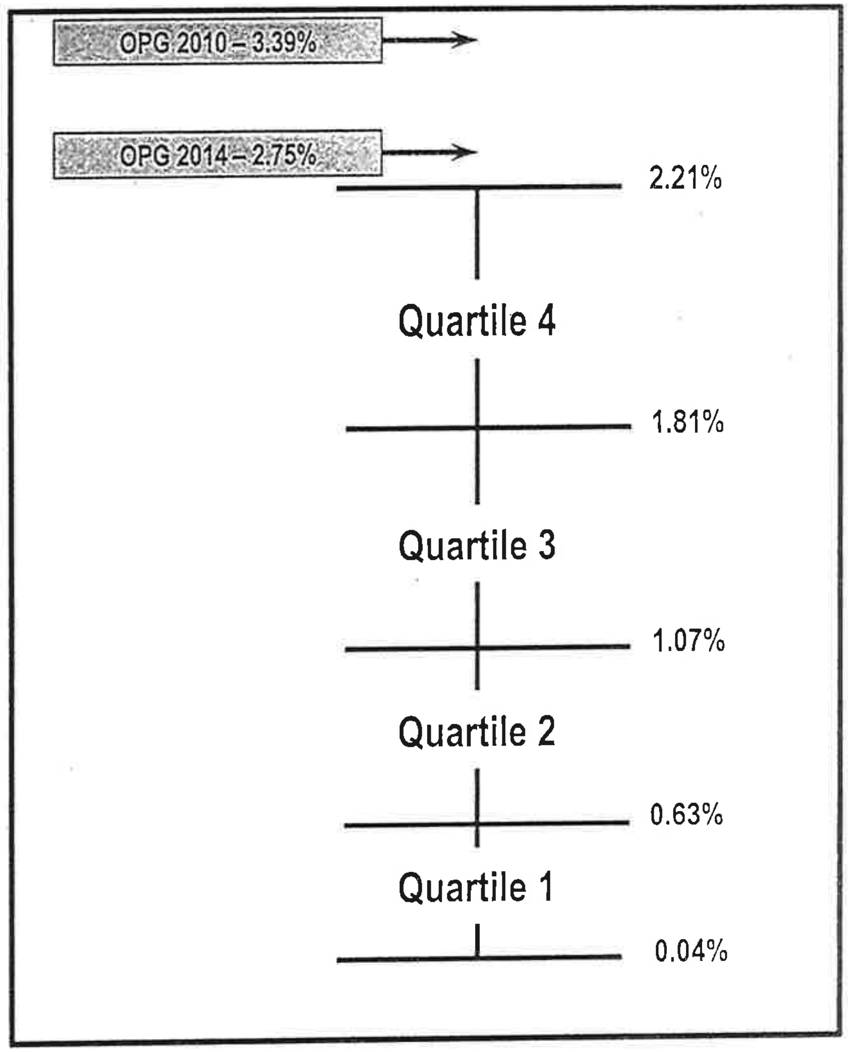
The Hackett Group

IT and ECS Quartile Data

IT Cost Per End User



ECS Cost as a % of revenue



The Hackett Group

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Statement of Confidentiality and Usage Restrictions

Assurance

The Assurance group includes Internal Audit and Nuclear Oversight. Internal Audit provides independent, objective assurance of the organization's operations; evaluates the effectiveness of governance and controls; and, maintains a strategic audit plan which includes key risk audits, mandatory audits, cyclical audits, major project audits, contract audits and other audits and reviews. Nuclear Oversight provides assurance that the Nuclear Management System (a condition of OPG's operating license) is effectively implemented in accordance with OPG's charter.

Exhibit F3-1-1 Table 3 summarizes Corporate Centre costs allocated to nuclear over the historical, bridge, and test years.

4.0 BENCHMARKING STUDY

In the EB-2013-0321 Decision (p. 95), OPG was directed to undertake an independent benchmarking study of corporate support functions and costs given the significant changes resulting from the Business Transformation initiative. The Hackett Group ("Hackett") carried out an independent benchmarking study in respect of that direction, which is filed as Attachment 1 to this Exhibit.

The study benchmarked OPG against peers in 2010 (before the start of the Business Transformation initiative) and in 2014 to show results in a manner that facilitates a transparent comparison before and after the Business Transformation initiative. Corporate costs assigned and allocated to both nuclear and regulated hydroelectric businesses were included in the scope of the benchmarking study.

OPG followed Hackett's independent benchmark methodology to enable OPG's corporate support functions and costs to be benchmarked against peers on a comparable basis.

Hackett normalized OPG's corporate costs based on key demand drivers for each function. For IT, number of end users was used to benchmark costs per end user. For

HR, number of employees was used to benchmark costs per employee. For Finance and Executive and Corporate Services ("ECS"), revenues were used to benchmark costs as a percentage of revenues.

The benchmarking study found that OPG's regulated corporate function costs declined 10 per cent from 2010 to 2014 while total regulated OPG headcount declined 11 per cent. It also found that OPG's overall cost benchmark performance at the functional level improved between 2010 and 2014 while comparisons to peer benchmarks varied by function, as shown in Figure 1.

Figure 1: Summary of Corporate Cost Benchmarking Results

Line No.	Corporate Function	OPG 2010 (a)	OPG 2014 (b)	Peer (c)	OPG Improvement 2010 - 2014 (%) (d)
1	IT Cost per End User	$12,015	$9,541	$14,995	21%
2	HR Cost per Employee	$3,400	$3,375	$3,350	1%
3	Finance Cost as a Percent of Revenue	1.02%	0.75%	0.66%	26%
4	ECS Cost as a Percent of Revenue	3.39%	2.75%	1.07%	19%

As shown in Figure 1:

- OPG's IT cost per end user decreased between 2010 and 2014 by 21 per cent and was 36 per cent less than the peer benchmark
- OPG's HR cost per employee remained relatively flat between 2010 and 2014 and was in closer proximity to the peer benchmark
- OPG's Finance cost as a percentage of revenue significantly closed the gap to peer decreasing by approximately 26 per cent between 2010 and 2014.
- OPG's ECS cost as a percentage of revenue was reduced by approximately 19 per cent between 2010 and 2014. ECS is comprised of 11 diverse sub-categories.[1]

[1] The 11 sub-categories are: Administrative Services, Transportation Services, Real Estate and Facilities Management, Government Affairs, Legal (includes Regulatory Affairs), Quality Management, Risk

The most significant challenges were faced in the ECS areas of Risk Management and Environmental, Health and Safety; Procurement; and, Real Estate and Facilities Management. These were the ECS areas where OPG's costs were most significant and where the gap between OPG and peers was greatest.

OPG's costs associated with Risk Management and Environmental, Health and Safety, and Procurement continue to be driven by nuclear-specific requirements and commitment to upholding OPG's social license to operate. OPG's adherence to strict CNSC regulations and its robust safety and environmental programs are examples of key cost drivers in these areas. OPG's nuclear stations have well-established environmental monitoring programs that are designed to assess impacts on human health and the environment, demonstrate compliance with regulatory limits, validate the effectiveness of containment and effluent controls, and verify predictions made by environmental risk assessments. For example, in addition to all of the conventional environmental requirements, OPG conducts a radiological environmental monitoring program to assess, among other things, radiation exposure to members of the public from OPG's nuclear generating stations. The Procurement function must address the significant quality requirements for materials that are used in nuclear facilities. In addition, the cost of Procurement activities is affected by aging assets, parts obsolescence and the limited market availability of nuclear qualified suppliers. The majority of the utilities included in OPG's peer benchmarking group were not nuclear power producers and therefore do not have the same breadth of requirements as OPG in these areas.

OPG's Real Estate and Facilities Management costs continue to be driven by business requirements associated with the large number of nuclear and hydroelectric facilities and the geographic spread of the facilities across the province. As noted in Attachment 1 (p. 16), OPG's Real Estate and Facilities Management costs included all facility costs

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Management and Environmental, Health and Safety, Corporate Communications, Planning and Strategy, Executive Office and Procurement.

AMPCO Interrogatory #12

Issue Number: 1.3
Issue: Is the overall increase in nuclear payment amounts including rate riders reasonable given the overall bill impact on customers?

Interrogatory

Reference:
Ref: I1-1-2 Page 1

Preamble: OPG provides the estimated monthly consumer bill impacts associated with the revenue requirement and OPG's deferral and variance account proposals.

a) Please provide the annualized bill impacts ($ and %) for a typical GS>50 kW and Large Use customer for the years 2017 to 2021 and show the calculations.

Response

See Ex. L-01.3-5 CCC-9. OPG is able to provide the annualized residential consumer impacts as presented in Ex. I1-1-2 table 1, by largely relying on the OEB's Bill Calculator which provides a sample bill calculation for each distributor within the province of Ontario using Time of Use rates. A similar tool is not available for GS > 50 kW and Large Use customers, and as such OPG is unable to provide bill impacts for rate classes other than the residential class.

The Board has consistently included all tax impacts in pension and OPEB-related accounts for OPG (i.e., the Pension and OPEB Cost Variance Account and the Impact for USGAAP Deferral Account), as well as other variance and deferral accounts (e.g., the Nuclear Liability Deferral Account and the Capacity Refurbishment Variance Account), because that is the appropriate place to address them. For example, the EB-2011-0090 Decision established the basis of the Pension and OPEB Cost Variance Account. The EB-2012-0002 Decision and Order approved the Settlement Agreement that approved the disposition and supported the continuation of the account. OPG's evidence in EB-2013-0321 summarizes the approved operation of the account (Ex. H1-1-1 p. 9, lines 12 to 17). Specifically, the account has continued to record:

(1) The pension and OPEB costs, **plus related income tax PILs**, reflected in the current revenue requirement approved by the OEB, and
(2) OPG's actual pension and OPEB costs, **and associated tax impacts**, for the prescribed generation facilities ***[emphasis added]***

Further, at page 89 of its Decision, the Board makes it clear that the purpose of the Pension & OPEB Cash Versus Accrual Differential Deferral Account is to address the outcome of the generic proceeding, as it relates to pension and OPEB accounting and mechanics of recovery, as applicable. In making this finding, the Board states there is to be no prudence review of the costs. By implication, OPG submits that this should also apply to tax effects that flow directly from the costs themselves. Staff seems to suggest that the Board should engage in exactly such a review with respect to the issue of associated tax effects. OPG submits that this is counter to the intent of the deferral account. OPG submits that the overall purpose of the deferral account is to hold the 2014/2015 revenue requirement impact of accrual pension and OPEB costs in excess of the corresponding cash amounts.

In any event, when the account balances are dispositioned, the Board will have an opportunity to review the tax impacts recorded therein. As such, Board Staff's recommendation is unnecessary and should be rejected.

7. Consumer Impacts

In their submissions, both CME and AMPCO requested that OPG expand the consumer impact analysis included within the draft Payment Amounts Order to cover general service and large volume consumers. OPG as a wholesale generator does not have customer classes and thus does not have customer class data. To be as responsive as possible, OPG has provided below the requested consumer impact information, but does not support its inclusion in the Payment Amounts Order.

Chart 1

Customer Class	Bill Impact ($/month)	Bill Impact (%)
Residential	2.53	2.1
Medium/Large Business	468	2.4
Large Industrial	13,773	2.5

In addition to the residential consumer impacts previously provided in the draft Payment Amounts Order at Appendix A, Table 9, the above Chart 1 shows calculations for "Medium/Large Business" and "Large Industrial" consumers. The Medium/Large Business and Large Industrial figures are calculated based on bill impact tables provided in Toronto Hydro's 2012 IRM application (EB-2012-0064), Draft Rate Order (Filed April 12, 2013). To OPG's knowledge, this is the most recent comprehensive information available from Toronto Hydro regarding typical bills. To calculate bill impacts for these customer groups, OPG has applied the same methodology that it used for residential consumers.

8. Implementation Language

The IESO made a specific recommendation on language that it requires in the final Payment Amounts Order for implementation. OPG accepts this recommendation, and has incorporated the specific language requested in the revised draft Payment Amounts Order.

9. Cash Working Capital

In their submissions, both LPMA and Energy Probe requested that the effects of any adjustments made in the Board's Decision that flow through to the cash working capital component of rate base be incorporated in the test period revenue requirement calculations. OPG submits that this request should be rejected for the reasons given below.

OPG's methodology for determining cash working capital is described in evidence at Ex. B1-1-2. The Overview section (Section 2.0 at page 1) states the following:

> "OPG has adopted the approach used in EB-2010-0008 by applying the net lag days provided in its EB-2007-0905 evidence to 2012 actual revenues and expenses."

The evidence contains several charts which clearly state in the title of each chart (Charts 2 through 6 inclusive), that the basis of the cash working capital calculations is 2012 actual information. Since the approved cash working capital figures are calculated based on 2012 actual information, changes in test period amounts have no impact on cash working capital. This approach has been used consistently in setting payment amounts in EB-2007-0905 and EB-2010-0008.

SEC Interrogatory #6

Issue Number: 1.3
Issue: Is the overall increase in nuclear payment amounts including rate riders reasonable given the overall bill impact on customers?

Interrogatory

Reference:

Attached is a spreadsheet setting out the nuclear and hydroelectric payment amounts, actual and proposed, for the period 2011 to 2026 inclusive, together with calculations of the impacts of those payment amounts on Ontario schools. To ensure that the impacts only reflect increases in OPG charges, school consumption has been kept constant at the 2013 BPS (Broader Public Service) reported volumes, and the split between hydroelectric and nuclear consumption has also been kept constant. In answering this interrogatory, please assume that the volumes for schools are correct. The rider for rate smoothing has been treated as part of base rates, rather than a separate rider. All other riders are treated as riders rather than base rates. The forecasts assume that the OPG's new payment amounts order is dated and effective January 1, 2017.

With respect to the spreadsheet and the impacts of the application on Ontario schools:

1. Please confirm that the payment amounts inserted in the spreadsheet are correct, and the calculations, based on those payment amounts are correct.

2. Please complete the years 2022-2026 for the Unsmoothed Rates with no Riders category using the OPG's most current estimates of those rates. If those estimate are not the same as the estimated used to estimate the smoothed rates of 11% annually for ten years, please explain the differences.

3. Please complete all years 2011-2026 for the Smoothed and Unsmoothed Rates with and without Riders, using the OPG's actual and forecast riders for 2011-2016, and the OPG's most current estimate of riders for all subsequent periods.

4. Please confirm that, under the OPG's proposal:

   a. Ontario schools can expect to pay, in base payment amounts, $79.5 million per annum more in 2026 than in 2011, a compounded annual growth rate in payment amounts to OPG of 6.7% per year for fifteen years. If that is not correct, please provide the correct calculation. Please calculate the same figure including rate riders.

   b. Ontario schools can expect to pay, in base payment amounts for nuclear, $74.3 million per annum more in 2026 than in 2011, a compounded annual growth rate in payment amounts to OPG of 8.2% per year for fifteen years. If that is not correct, please provide the correct calculation. Please calculate the same figure including rate riders.

c. Ontario schools can expect to pay, in base payment amounts, $72.4 million per annum more in 2026 than in 2061, a compounded annual growth rate in payment amounts to OPG of 8.7% per year for ten years. If that is not correct, please provide the correct calculation. Please calculate the same figure including rate riders.

d. Ontario schools can expect to pay, in base payment amounts for nuclear, $69.4 million per annum more in 2026 than in 2016, a compounded annual growth rate in payment amounts to OPG of 11.0% per year for ten years. If that is not correct, please provide the correct calculation. Please calculate the same figure including rate riders.

e. The OPG is proposing that, on average, Ontario schools should pay amounts for OPG generation each year over the next ten years that are 61.4% higher than 2016 payment amounts for the same amount of generation.

5. Please provide all examples in the possession of the OPG showing comparable long-term increases in generation rates for customers, and details surrounding the reasons for those increases. Please provide a comparison of the increases proposed by the OPG to the increases proposed (or charged) by the comparators.

Response

1. OPG confirms that the payment amounts inserted in the spreadsheet are correct for 2012, 2013, and 2016. In addition the proposed smoothed payment amounts for 2017-2021, and the illustrative unsmoothed payment amounts for 2017-2021 are correct.

   For the following payment amounts in the spreadsheet:
   - 2011 nuclear payment amounts were $51.52 beginning March 1, 2011, however; they were $52.98 for January and February of 2011.
   - 2011 hydroelectric payment amounts were $35.78 beginning March 1, 2011, however; they were $36.66 for January and February of 2011.
   - OPG has never had a payment amount of $37.57 approved for hydroelectric, OPG cannot confirm the 2014 hydroelectric payment amount referred to in the spreadsheet. 2014 payment amounts were $51.52 for January – October of 2014, however the payment amount of $59.29 became effective November 1st, 2014.
   - 2015 payment amounts were $59.29, not $51.52.
   - OPG has not proposed payment amounts for 2022-2026.

   OPG has reviewed the attached spreadsheet but cannot confirm whether the calculations performed by SEC (i.e., the assessment of the impact of OPG's proposed payment amounts on schools) are correct or complete. OPG is not familiar with the source(s) of the data or the methodology used by SEC to perform this calculation.

2. OPG has provided an estimate of the revenue requirements and production for the 2022-2026 period in Ex. A1-3-3. Chart 2 of this exhibit provides an average rate of $139/MWh for 2022-2026 absent rate smoothing. For a more detailed chart, see Ex. L-09.7-15 SEC-093.

3. Table 1 of attachment 1 provides the Nuclear payment amounts and riders from 2011-2021 (as approved in prior proceedings, or as proposed in this application). OPG has not forecast riders for the 2019-2021 period. As discussed in response to part 1, OPG has not proposed annual rates or riders (smoothed or unsmoothed) for the 2022-2026 period, however; illustrative rates are provided in response to Ex. L-09.7-15 SEC-093.

4. As discussed in response to part 1, OPG does not have the knowledge to provide or assess bill impacts for Ontario schools. In addition, and as discussed above, OPG has not proposed rates for the years 2022-2026 and as such cannot asses or speculate as to what the impact to schools will be in 2026.

5. To assess the magnitude of a long term increase in generation rates, information would be required on previous and newly regulated contracts with unregulated commercial companies. This type of information is not typically publicly available and as such OPG does not have such examples.

Board Staff Interrogatory #62

Issue Number: 4.3
Issue: Are the proposed nuclear capital expenditures and/or financial commitments for the Darlington Refurbishment Program reasonable?

Interrogatory

Reference:
Reference: D2-2-8, page 8
The above reference states that OPG will complete the Unit 2 refurbishments within the total budget envelope of $4.8B.

a) How does that fit in with the Capital Refurbishment Variance Account (CRVA)? I.e. if Unit 2 in service additions are greater than $4.8B, will those costs go into the CRVA?

b) When OPG comes in for its next application for 2022 will there be a reforecast of the remaining DRP costs?

Response

a) As stated at Ex. H1-1-1, pp. 12-13, lines 27-30, 1-5:

> the Capacity Refurbishment Variance Account was originally approved in EB-2007-0905... to record variances between the actual capital and non-capital costs and firm financial commitments incurred to increase the output of, refurbish or add operating capacity to a prescribed generation facility ... **In 2015, O. Reg. 53/05 was amended to affirm that the scope of this account includes the capital and non-capital costs and firm financial commitments incurred in respect of the Darlington Refurbishment Program**. [Emphasis added].

If actual in service additions are different (greater or less) than amounts approved by the OEB in this proceeding, including the $4.8B forecast for Unit 2 in-service addition, the cost impact of the difference will be booked to the Capacity Refurbishment Variance Account.

b) Yes. In OPG's next payment amounts application, the evidence will include the best available forecast of the remaining DRP costs.

CanLII

Payments under Section 78.1 of the Act, O Reg 53/05

Current version: in force since Mar 2, 2017

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Ontario Energy Board Act, 1998
Loi de 1998 sur la Commission de l'énergie de l'Ontario

ONTARIO REGULATION 53/05

Payments under Section 78.1 of the Act

Consolidation Period: From March 2, 2017 to the e-Laws currency date.

Last amendment: O. Reg. 57/17.

This Regulation is made in English only.

Definition

0.1 (1) In this Regulation,

"approved reference plan" means a reference plan, as defined in the Ontario Nuclear Funds Agreement, that has been approved by Her Majesty the Queen in right of Ontario in accordance with that agreement;

"calculation period" means each period for which the Board determines the approved revenue requirements under subparagraph 12 ii of subsection 6 (2) together with the year immediately prior to that period;

"Darlington Refurbishment Project" means the work undertaken by Ontario Power Generation Inc. in respect of the refurbishment, in whole or in part, of some or all of the generating units of the Darlington Nuclear Generating Station;

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and calculations used in making an order that determines payment amounts for the purpose of section 78.1 of the Act. O. Reg. 53/05, s. 6 (1).

(2) The following rules apply to the making of an order by the Board that determines payment amounts for the purpose of section 78.1 of the Act:

1. The Board shall ensure that Ontario Power Generation Inc. recovers the balance recorded in the variance account established under subsection 5 (1) over a period not to exceed three years, to the extent that the Board is satisfied that,

i. the revenues recorded in the account were earned or foregone and the costs were prudently incurred, and

ii. the revenues and costs are accurately recorded in the account.

2. In setting payment amounts for the assets prescribed under section 2, the Board shall not adopt any methodologies, assumptions or calculations that are based upon the contracting for all or any portion of the output of those assets.

3. The Board shall ensure that Ontario Power Generation Inc. recovers the balance recorded in the deferral account established under subsection 5 (4). The Board shall authorize recovery of the balance on a straight line basis over a period not to exceed 15 years.

4. The Board shall ensure that Ontario Power Generation Inc. recovers capital and non-capital costs and firm financial commitments incurred in respect of the Darlington Refurbishment Project or incurred to increase the output of, refurbish or add operating capacity to a generation facility referred to in section 2, including, but not limited to, assessment costs and pre-engineering costs and commitments,

i. if the costs and financial commitments were within the project budgets approved for that purpose by the board of directors of Ontario Power Generation Inc. before the making of the Board's first order under section 78.1 of the Act in respect of Ontario Power Generation Inc., or

ii. if the costs and financial commitments were not approved by the board of directors of Ontario Power Generation Inc. before the making of the Board's first order under section 78.1 of the Act in respect of Ontario Power Generation Inc., if the Board is satisfied that the costs were prudently incurred and that the financial commitments were prudently made.

4.1 The Board shall ensure that Ontario Power Generation Inc. recovers the costs incurred and firm financial commitments made in the course of planning and preparation for the development of proposed new nuclear generation facilities, to the extent the Board is satisfied that,

i. the costs were prudently incurred, and

ii. the financial commitments were prudently made.

5. In making its first order under section 78.1 of the Act in respect of Ontario Power Generation Inc., the Board shall accept the amounts for the following matters as set out in Ontario Power

CanLII

Payments under Section 78.1 of the Act, O Reg 53/05

This version is not the latest.

Past version: in force between Feb 9, 2007 and Feb 18, 2008

Link to this version:	http://www.canlii.org/t/1nsx
Citation to this version:	Payments under Section 78.1 of the Act, O Reg 53/05, <http://www.canlii.org/t/1nsx> retrieved on 2017-04-04

Ontario Energy Board Act, 1998
Loi de 1998 sur la Commission de l'énergie de l'Ontario

ONTARIO REGULATION 53/05

PAYMENTS UNDER SECTION 78.1 OF THE ACT

Historical version for the period February 9, 2007 to February 18, 2008.

Last amendment: O. Reg. 23/07.

This Regulation is made in English only.

Definition

0.1 In this Regulation,

"approved reference plan" means a reference plan, as defined in the Ontario Nuclear Funds Agreement, that has been approved by Her Majesty the Queen in right of Ontario in accordance with that agreement;

"nuclear decommissioning liability" means the liability of Ontario Power Generation Inc. for decommissioning its nuclear generation facilities and the management of its nuclear waste and used fuel;

"Ontario Nuclear Funds Agreement" means the agreement entered into as of April 1, 1999 by Her Majesty the Queen in right of Ontario, Ontario Power Generation Inc. and certain subsidiaries of Ontario Power Generation Inc., including any amendments to the agreement. O. Reg. 23/07, s. 1.

Prescribed generator

(b) the liability arising from the current approved reference plan. O. Reg. 23/07, s. 3.

(2) Ontario Power Generation Inc. shall record interest on the balance of the account as the Board may direct. O. Reg. 23/07, s. 3.

Rules governing determination of payment amounts by Board

6. (1) Subject to subsection (2), the Board may establish the form, methodology, assumptions and calculations used in making an order that determines payment amounts for the purpose of section 78.1 of the Act. O. Reg. 53/05, s. 6 (1).

(2) The following rules apply to the making of an order by the Board that determines payment amounts for the purpose of section 78.1 of the Act:

1. The Board shall ensure that Ontario Power Generation Inc. recovers the balance recorded in the variance account established under subsection 5 (1) over a period not to exceed three years, to the extent that the Board is satisfied that,

   i. the revenues recorded in the account were earned or foregone and the costs were prudently incurred, and

   ii. the revenues and costs are accurately recorded in the account.

2. In setting payment amounts for the assets prescribed under section 2, the Board shall not adopt any methodologies, assumptions or calculations that are based upon the contracting for all or any portion of the output of those assets.

3. The Board shall ensure that Ontario Power Generation Inc. recovers the balance recorded in the deferral account established under subsection 5 (4). The Board shall authorize recovery of the balance on a straight line basis over a period not to exceed 15 years.

4. The Board shall ensure that Ontario Power Generation Inc. recovers capital and non-capital costs, and firm financial commitments incurred to increase the output of, refurbish or add operating capacity to a generation facility referred to in section 2, including, but not limited to, assessment costs and pre-engineering costs and commitments,

   i. if the costs and financial commitments were within the project budgets approved for that purpose by the board of directors of Ontario Power Generation Inc. before the making of the Board's first order under section 78.1 of the Act in respect of Ontario Power Generation Inc., or

   ii. if the costs and financial commitments were not approved by the board of directors of Ontario Power Generation Inc. before the making of the Board's first order under section 78.1 of the Act in respect of Ontario Power Generation Inc., if the Board is satisfied that the costs were prudently incurred and that the financial commitments were prudently made.

The reference amounts used to determine entries into the account are as follows:

- From January 1, 2015 until the effective date of the payment amounts order in this proceeding, for both the nuclear and regulated hydroelectric facilities: the average of the monthly income tax provision for 2014 and 2015 underpinning the revenue requirement that was approved by the OEB in EB-2013-0321. As per the EB-2014-0370 payment amounts order, the monthly reference amount is $4.83M (Appendix B, page 7);
- As of the effective date of the payment amounts order in this proceeding, for the regulated hydroelectric facilities: OPG proposes the average of the monthly income tax provision for 2014-2015 underpinning the hydroelectric revenue requirement approved by the OEB in EB-2013-0321;
- As of the effective date of the payment amounts order in this proceeding, for nuclear facilities: OPG proposes on a monthly basis, 1/12 of the annual income tax provision underpinning the corresponding annual nuclear revenue requirements approved by the OEB in this proceeding.

The derivation of the credit addition to the nuclear portion of this account of $4.2M in 2015 is shown in Ex. H1-1-1 Table 6.[13] That addition to the nuclear portion of this account, which was recorded following the resolution during 2015 of the 2011 taxation year audit to reflect the related increase in the Scientific Research and Experimental Development ("SR&ED") Investment Tax Credits ("ITCs") recognition percentage from 75 per cent to 100 per cent for 2011. The addition is the same in nature and calculation as the equivalent SR&ED ITCs impacts previously recorded in the account in relation to resolution of prior year tax audits. SR&ED ITCs are discussed further in Ex. F4-2-1.

5.6 Capacity Refurbishment Variance Account

The Capacity Refurbishment Variance Account was originally approved in EB-2007-0905 and has been approved in all subsequent OPG applications. This account was established pursuant to section 6(2)4 of O. Reg. 53/05 to record variances between the actual capital and non-capital costs and firm financial commitments incurred to increase the output of,

[13] The credit addition to the regulated hydroelectric portion of the account in 2015 was less than $0.05M.

refurbish or add operating capacity to a prescribed generation facility referred to in section 2 of O. Reg. 53/05 and those forecast costs and firm financial commitments underpinning the revenue requirement that was approved by the OEB. In 2015, O. Reg. 53/05 was amended to affirm that the scope of this account includes the capital and non-capital costs and firm financial commitments incurred in respect of the Darlington Refurbishment Program ("DRP"). As required by O. Reg. 53/05, Section 6(2)4, this account will continue to include assessment costs and pre-engineering costs and commitments.[14]

Entries into the account will record variances as follows:

- Until the effective date of the payment amounts order in this proceeding, for both the nuclear and regulated hydroelectric facilities: the variance between actual capital and non-capital costs and firm financial commitments and those capital and non-capital forecast costs and firm financial commitments underpinning the revenue requirement approved by the OEB in EB-2013-0321[15];
- As of the effective date of the payment amounts order in this proceeding, for the regulated hydroelectric facilities: OPG proposes the variance between actual capital and non-capital costs and firm financial commitments and the 2014-2015 average forecast capital and non-capital costs and firm financial commitments underpinning the hydroelectric revenue requirement approved by the OEB in EB-2013-0321;
- As of the effective date of the payment amounts order in this proceeding, for nuclear facilities: OPG proposes the variance between actual capital and non-capital costs and firm financial commitments and those forecast capital and non-capital costs and firm financial commitments underpinning the annual nuclear revenue requirements approved by the OEB in this proceeding.

The derivation of the debit entry into the regulated hydroelectric portion of this account for 2015 of $1.2M is shown in Ex. H1-1-1 Table 7. That relatively small entry was due to

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[14] The methodology used to record entries into this account is the same as previously approved by the OEB.
[15] OPG shall ensure that amounts recorded in the account do not include those that OPG indicated it is not seeking to recover from, or refund to, ratepayers as part of the differences between the revenue requirement in its pre-filed evidence dated September 27, 2013 and the information based on OPG's 2014-2016 Business Plan. These amounts are outlined in OPG's Impact Statement dated December 6, 2013, as found at EB-2013-0321, Ex. N1-1-1 Chart 1.

variances in respect of several projects across the regulated hydroelectric fleet. The December 31, 2015 regulated hydroelectric balance in the account is a debit of $83.2M, as shown in Ex. H1-1-1 Table 1. The regulated hydroelectric balance relates largely to the Niagara Tunnel Project.

The derivation of the credit entry into the nuclear portion of this account for 2015 of $68.9M is shown in Ex. H1-1-1 Table 11. That entry was largely due to a ratepayer credit recorded on account of the tax deduction for DRP-related SR&ED expenditures and non-capital credit additions (i.e., OM&A expenses) to the account associated with the DRP, the Fuel Channel Life Cycle Management Project and Pickering Continued Operations, partly offset by the debit non-capital additions for the Fuel Channel Life Extension Project. The DRP and associated capital expenditures and in-service amounts are discussed in Ex. D2-2-1 and accompanying exhibits. The DRP OM&A expenses are discussed in Ex. F2-7-1. Further information on the Pickering Extended Operations initiative and related fuel channel work can be found in Ex. F2-2-3.

5.7 Pension and OPEB Cost Variance Account

The Pension and OPEB Cost Variance Account was originally approved in EB-2011-0090 and was continued in subsequent proceedings. This account records the difference between:

(1) the pension and OPEB costs, plus related income tax PILs, reflected in the current revenue requirement approved by the OEB (i.e., the reference amount); and,

(2) OPG's actual pension and OPEB costs, and associated tax impacts, for the prescribed generation facilities.

Actual pension and OPEB costs used in the calculation of the difference are calculated on an accrual basis using the same accounting standards as those used to derive the reference amount.

The balance in this account as at December 31, 2012, including interest accrued to that date, was split into the Historic Recovery and Future Recovery components, as ordered by the OEB in EB-2012-0002. In order to facilitate the presentation of entries into the account, OPG

Board Staff Interrogatory #210

Issue Number: 9.1
Issue: Is the nature or type of costs recorded in the deferral and variance accounts appropriate?

Interrogatory

Reference:
Ref: Exh H1-1-1, Table 11 and 11a Ref: Exh D2-2-10, Table 5

In the table referenced above the balance of the Capacity Refurbishment Variance Account (CRVA) for DRP is shown as $41.6M-$12.4 = ($10.9M) for non-capital and ($37.5M) for capital, for a total of ($48.2M).

a) Please confirm that the above numbers are correct.

b) Please provide an explanation for the variance between forecast and actual non- capital amounts.

c) Complete the following table with actual additions to rate base for 2014 and 2015:

d) Please reconcile the Net Plant Rate Base Amounts of $116M and $204.6M with the actual in-service capital additions of $43.5M and $147.1M shown in the second reference above.

$M	2014 Forecast	2014 Actual	2015 Forecast	2015 Actual
Darlington Energy Complex	92.0		89.6	
Water and Sewer Project	20.8		26.4	
Heavy Water Storage & Drum Handling Facility			20.3	
Darlington Operations Support Buildin Refurbishment			14.6	
Auxiliary Heating System			17.9	
Electric Power Distribution System	2.2		7.3	
Powerhouse Steam Venting System			5.0	
Third Emergency Power Generator Project			16.0	
Other Miscellaneous Projects	1.0		7.5	
Any other projects?				
Net Plant Rate Base Amount	116.0		204.6	

Response

a) Not confirmed.

The numbers cited in this question do not represent the balance of the Capacity Refurbishment Variance Account (CRVA) for the Darlington Refurbishment Program (DRP) as at December 31, 2015. Instead, Ex. H1-1-1 Table 11 and Table 11a outline additions to the account during 2015.

The amount of ($37.5M) cited in the question and found at Ex. H1-1-1 Table 11, line 34 is the capital portion of the CRVA addition for DRP during 2015. The non-capital (OM&A) portion of the CRVA addition for the DRP during 2015 is ($11.9M), not ($10.9M) cited in the question. The ($11.9M) addition represents ($10.9M) found at Ex. H1-1-1 Table 11, line 11 less $1.1M for the EB-2013-0321 Ex. N1 Impact Statement (Ex. N1) Adjustment. The $1.1M adjustment, found at Ex. H1-1-1, Table 11a, Note 1, line 9a, col. (a) and explained in Note 2 of that table, is embedded in Ex. H1-1-1 Table 11, line 16.

b) An explanation of the variance of ($16.7M) between actual and EB-2013-0321 forecast DRP OM&A for 2015 is found at Ex. F2-7-1, p. 1, lines 26-31. To arrive at the non-capital CRVA addition of ($11.9M) from part (a), offsetting the variance of ($16.7M) is the impact of averaging the 2014 and 2015 annual EB-2013-0321 forecast amounts in determining the reference amounts for calculating CRVA entries, as shown in Ex. H1-1-1 Table 11a, note 1, col. (a), lines 1a to 4a. This averaging approach to determining reference amounts is the same approach approved by the OEB for other variance accounts in the EB-2014-0370 and EB-2013-0321 Payment Amounts Orders (e.g., Ancillary Services Net Revenue Variance Account, Pension & OPEB Cash Payment Variance Account).

c) The requested information is provided in Table 1 of Attachment 1. To facilitate reconciliation with other evidence in this rate application and part (d) of the response, OPG has modified the table to include a sub-total for amounts excluding projects reclassified to Nuclear Operations subsequent to EB-2013-0321. This is discussed further in part (d). The 2014 Actual and 2015 Actual values shown are also found at Ex. L-2.2-1 Staff-9, Attachment 1.

d) The question requests a reconciliation of the forecast net plant rate base amounts to actual in-service capital additions. As in-service capital additions are one of the inputs into the computation of net plant rate base amounts, with other inputs being opening net plant values and depreciation expense, and as the amounts cited are of different vintages (i.e. forecast and actual), it is not possible to provide a direct reconciliation.

To provide further detail on the amounts in question, OPG has prepared the following Tables 2 and 3 in Attachment 1 showing DRP rate base continuities, including in service additions and depreciation, for each of forecast and actual net plant rate base amounts for 2014 and 2015.[1]

The forecast DRP net plant rate base amounts of $116.0M for 2014 and $204.6M for 2015 shown on line 9 of Table 2 in Attachment 1 (and detailed in part (c) of this response) represent the EB-2013-0321 approved forecasts underpinning the reference amounts used to calculate capital additions into the CRVA (Ex. H1-1-1 Table 11a, Note 6, line 1b). As the reclassification of certain projects to Nuclear Operations occurred subsequent to EB-2013-0321, these forecast amounts include the reclassified projects. The reclassified projects are further detailed and discussed in Ex. D2-2-10, section 2.4.4 and Ex. L-4.3-1 Staff-71.

The actual DRP net plant rate base amounts of $121.2M for 2014 and $192.6M for 2015 shown at line 9 of Table 3 in Attachment 1 (and detailed in part (c) above) were used in the calculation of CRVA capital additions at EB-2014-0370 Ex. H1-1-2, Table 12, line 19 for 2014 and EB-2016-0152 Ex. H1-1-1 Table 11, line 19 for 2015. These amounts exclude projects reclassified to Nuclear Operations, which effectively results in a CRVA ratepayer credit for the EB-2013-0321 revenue requirement impact associated with these projects.

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[1] Information for 2013 is included to support the 2014 opening net plant amounts.

Numbers may not add due to rounding

Table 1
Net Plant Rate Base Amounts ($M)[1]

Line No.		2014 Forecast	2014 Actual	2015 Forecast	2015 Actual
		(a)	(b)	(c)	(d)
1	Darlington Energy Complex	92.0	77.8	89.6	75.1
2	Water and Sewer Project	20.8	31.6	26.4	41.8
3	Heavy Water Storage & Drum Handling Facility	0.0	7.3	20.3	14.3
4	Electric Power Distribution System	2.2	2.6	7.3	10.1
5	Powerhouse Steam Venting System	0.0	0.0	5.0	2.6
6	Third Emergency Power Generator Project	0.0	0.0	16.0	4.8
7	Retube Feeder Replacement Island Support Annex	0.0	0.0	0.0	0.9
8	Refurbishment Project Office	0.0	0.0	0.0	28.8
9	Emergency Service Water Buried Piping	0.0	0.0	0.0	6.6
10	Other Miscellaneous Projects	1.0	2.1	7.5	7.7
11	**Net Plant Rate Base Amounts without Reclassified Projects**	**116.0**	**121.2**	**172.1**	**192.6**
12	Darlington Operations Support Building Refurbishment	0.0	0.0	14.6	9.1
13	Darlington Auxiliary Heating System	0.0	0.0	17.9	0.0
14	Emergency Service Water Pipe and Component Replacement	0.0	0.0	0.0	2.4
15	**Net Plant Rate Base Amount with Reclassified Projects**	**116.0**	**121.2**	**204.6**	**204.2**

Notes:
1 DRP forecasts approved in EB-2013-0321 included reclassified projects, as the reclassification did not take place until after EB-2013-0321. Actual DRP amounts are reported excluding the reclassified projects.

Numbers may not add due to rounding

Table 2

Darlington Refurbishment Program - EB-2013-0321 Forecast Rate Base ($M)

Line No		Notes	2013 Forecast	2014 Forecast[1]	2015 Forecast[1]
			(a)	(b)	(c)
1	**Gross Plant In-service - opening balance**		5.0	109.2	127.9
2	**Gross Plant In-service Additions**	2	104.2	18.7	209.4
3	**Gross Plant In-service - closing balance** (line 1 + line 2)		109.2	127.9	337.2
4	**Accumulated Depreciation - opening balance**		-	1.0	4.0
5	**Depreciation Expense**	3	1.0	3.0	6.1
6	**Accumulated Depreciation - closing balance** (line 4 + line 5)		1.0	4.0	10.0
7	**Net Plant In-service - opening balance** (line 1 - line 4)		5.0	108.2	123.9
8	**Net Plant In-service - closing balance** (line 3 - line 6)		108.1	123.9	327.2
9	**Net Plant Rate Base**		56.6	116.0	204.6

Notes:

1. As shown in EB-2013-0321 Ex. L-4.9-1 Staff-048, Chart 1 and does not reflect the subsequent reclassification of certain projects to Nuclear Operations.
2. As shown in EB-2013-0321 Ex. D2-2-1, Table 6, line 14.
3. As shown in EB-2013-0321 Ex. F4-1-1, Table 2, Note 1.

Board Staff Interrogatory #159

Issue Number: 6.6
Issue: Are the test period human resource related costs for the nuclear facilities (including wages, salaries, payments under contractual work arrangements, benefits, incentive payments, overtime, FTEs and pension costs, etc.) appropriate?

Interrogatory

Reference:
Ref. Exh F4-3-2, page 7
Ref: EB-2013-0321 Oral Hearing Tr Vol 13 page 18
Up until the OEB decision in EB-2013-0321, OPG had been recovering its pension and OPEB costs in rates on an accrual basis. In the oral hearing of the previous proceeding, OPG confirmed that any excess recovery is not set aside into any fund.

Please describe what OPG has done with any recoveries in excess of cash contributions/ benefit payments.

Response

As discussed at EB-2013-0321 Tr. Vol. 13, pp. 16-19, OPG does not track revenue inflows received based on authorized payment amounts by underlying revenue requirement elements and does not assign portions of revenue to specific cash expenditures. Instead, once payment amounts are established, OPG manages its cash flow on an overall basis. Generally speaking, cash inflows are used to pay for operating costs and capital expenditures, to fund/pay long-term obligations such as pension and Other Post-Employment Benefits (OPEB), to make principal and interest payments on debt obligations, and to maintain an appropriate cash balance. Therefore, any monies collected through payment amounts in relation to any revenue requirement item, including pension and OPEB costs, effectively form part of a pool of cash inflow used to pay for the above noted items. Where this pool of cash inflow is not sufficient to pay for the above noted items, OPG would incur debt.

OPG provided detailed submissions on September 22, 2016 in EB-2015-0040 on the regulatory treatment of pension and OPEB costs. The submissions address the issue of timing differences between recovery of pension and OPEB accrual costs and the payment/funding of the associated obligations.

Board Staff Interrogatory #20

Issue Number: 3.1
Issue: Are OPG's proposed capital structure and rate of return on equity appropriate?

Interrogatory

Reference:
3.1-Staff-20
Ref: Decision with Reasons EB-2010-0008, pages 116-118
Ref: *Report of the Board on Incentive Rate-making for Ontario Power Generation's Prescribed Generation Assets (EB-2012-0340)*, issued March 18, 2013
Ref: Exh C1-1-1
Ref: Exh I1-1-1 and Attachment 1 Revenue Requirement Work Form

In OPG's application for 2011-12 payments, the issue of technology-specific costs of capital (i.e., separate costs of capital for each of hydroelectric facilities and nuclear facilities, based on different risks for the two types of generation) was considered. While it has been generally accepted in all previous payment amount applications that nuclear generation is generally more risky than hydroelectric generation, OPG's cost of capital for regulated generation assets has been set in aggregate. In the Decision with Reasons EB-2010-0008, the OEB concluded that there was inadequate quantitative evidence to establish technology-specific costs of capital for each of hydroelectric and nuclear generation.[1] Thus in all payment order applications to date, OPG's cost of capital has been set on a common basis for all prescribed generation assets. The only real difference is that the cost of capital and the deemed capital structure for nuclear are set on the prescribed nuclear assets less the adjustment for the lesser of the unfunded nuclear liability or asset retirement obligations.

In the current application, there is a bifurcated approach for the rate setting for nuclear and regulated hydroelectric generation assets.

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[1] Decision with Reasons EB-2010-0008, March 10, 2011, pages 116-8.

a) Please confirm that the cost of capital explicitly reflected in the going-in hydroelectric payments (i.e., before the application of the first price cap adjustment for 2017), even with the proposed adjustments, would reflect the cost of capital approved in EB-2013-0321. In the alternative, please explain.

b) The cost of capital that is implicitly reflected in the hydroelectric payments "rates" will change every year in accordance with the fact that the price cap adjustment, and specifically the inflation component reflects changes in input prices, which include inflation on labour, material and capital equipment prices and the cost of financing (i.e., cost of capital), as the OEB has explicitly concluded in past policy.[2] Please confirm OPG's understanding that changes in the cost of capital are reflected, implicitly, through the price cap adjustment, even if an explicit decomposition of what the changed cost of capital parameters is not easily demonstrated.

c). For the payments for the nuclear assets, OPG has proposed that the cost of capital be set for nuclear at the outset of the plan. The forecasted weighted average cost of long-term debt varies by year, while the return on equity (ROE) and short-term debt rates and the capital structure are fixed over the five year term. This is demonstrated on sheet 4 "OEB Adjustment Sheet" of the Revenue Requirement Work Form (RRWF). Further, OPG has proposed a variance account that would track the revenue requirement impact between the forecast ROE approved in the decision to this application (initially proposed at 9.19%) and the ROE as annually updated in accordance with the OEB's policy on the cost of capital[3] for 2018 to 2021. This explicitly means that that the cost of capital explicitly varies on an annual basis. Please confirm.

[2] Further, for hydroelectric, any difference in the revenue requirement between the current 45% equity thickness and that determined by the OEB in its decision to this application, and which OPG has proposed to be 49%, would be tracked for later disposition.

[3] Currently *Report of the Board on the Cost of Capital for Ontario's Rate-regulated Utilities, (EB-2009-0084)*, December 11, 2009.

Response

a) OPG confirms that the cost of capital reflected in the going-in hydroelectric payment amounts reflects the cost of capital approved in EB-2013-0321.

b) OPG agrees that the cost of capital that is implicitly reflected in the hydroelectric payments "rates" will change every year in accordance with the price cap adjustment. OEB staff emphasized this point during the stakeholder consultation and, as a result, OPG eliminated from the application a proposed variance account which was intended to record differences in hydroelectric ROE during the IR term. However; the price cap adjustment only reflects changes in the cost of financing based on the capital structure embedded in the base rate. To the extent the capital structure changes going forward, and that change impacts the base rate, OPG does not agree that the annual price cap adjustment reflects OPG's financing costs. To address this, OPG has requested the Hydroelectric Capital Structure Variance Account to capture the revenue requirement impact of the difference between the 45 per cent equity/55 per cent debt capital structure approved by the OEB in EB-2013-0321 and the capital structure approved in this proceeding.

c) Confirmed. OPG's 2017-2021 revenue requirements as proposed include the OEB's 9.19 per cent ROE as published in the OEB's October 15, 2015 letter. OPG has proposed to track the revenue requirement impact of the difference between the ROE approved by the OEB for the nuclear business in this proceeding as part of the revenue requirements for 2018-2021 and the actual annually updated ROE specified by the OEB (Ex. H1-1-1, p. 31).

The nuclear payment amounts are based on a custom incentive regulation framework and do not have the implicit adjustment to cost of capital associated with an annual price cap adjustment.

Numbers may not add due to rounding.

Table 1
Calculation of Cost of Capital Using Current and Proposed Capital Structure ($M)

Line No.	Description	2017	2018	2019	2020	2021
		(a)	(b)	(c)	(d)	(e)
1	Nuclear Rate Base[1]	3,344.4	3,513.9	3,449.8	7,494.0	7,959.1
2	ROE[2]	9.19%	9.19%	9.19%	9.19%	9.19%
3	Cost of Debt[2]	4.91%	4.63%	4.56%	4.52%	4.51%
4	Deemed Equity (Proposed)[2]	49%	49%	49%	49%	49%
5	Deemed Debt (Proposed)[2]	51%	51%	51%	51%	51%
6	Proposed WACC[3]	7.0%	6.9%	6.8%	6.8%	6.8%
7	Deemed Equity (EB-2013-0321)	45%	45%	45%	45%	45%
8	Deemed Debt (EB-2013-0321)	55%	55%	55%	55%	55%
9	Proposed WACC (At EB-2013-0321 Capital Structure)[4]	6.8%	6.7%	6.6%	6.6%	6.6%
10	Revenue Requirement (Proposed)[5]	284.5	293.9	287.4	622.7	660.8
11	Revenue Requirement (At EB-2013-0321 Capital Structure)[6]	274.6	283.2	276.7	599.5	636.1
12	Revenue Requirement Impact if EB-2013-0321 Capital Structure is Maintained[7]	(9.8)	(10.7)	(10.6)	(23.2)	(24.7)

Notes
1 Ex. B1-1-1 Table 2, line 7 minus the Adjustment for Lesser of UNL or ARC from Ex. C1-1-1 Tables 1-5, line 7
2 C1-1-1Tables 1-5
3 Calculated as: (Line 2 X Line 4) + (Line 3 X Line 5)
4 Calculated as: (Line 2 X Line 7) + (Line 3 X Line 8)
5 (Line 1 x Line 6) + (Line 1 x Line 2 x Line 4) x (tax rate / 1- tax rate), where the tax rate is 25%
6 (Line 1 x Line 9) + (Line 1 x Line 2 x Line 7) x (tax rate / 1- tax rate), where the tax rate is 25%
7 (Line 11 - Line 10)

VECC Interrogatory #6

Issue Number: 3.1
Issue: Are OPG's proposed capital structure and rate of return on equity appropriate?

Interrogatory

Reference:
Reference: C1/T1/S1

In terms of the return on equity (ROE):

a) Please provide the actual return on equity for each year since and including 2005.

b) Please provide the approved ROE for each year since 2005.

c) Please indicate how the approved ROE was set for each year.

d) Please explain the factors that generated any differences between the actual and approved ROE.

e) Please indicate which periods OPG was regulated under any measures that could be defined as performance based incentive regulation.

f) With reference to the request deferral account on page 2, please provide a list of all the variance accounts available to OPG's regulated operations and the year end 2016 balances in each.

Response

a) OPG's actual return on equity for 2005-2015 is provided in Chart 1 below

Chart 1

2005	2006	2007	2008	2009	2010
2.43%	5.70%	(6.70)%	(3.11)%	1.10%	4.71%
2011	**2012**	**2013**	**2014**	**2015**	
4.80%	4.73%	0.46%	6.32%	3.63%	

b) OPG's OEB approved ROE is provided in Chart 2 below. OPG's first rates application to the OEB was EB-2007-0905 where the OEB approved an ROE for 2008 and 2009. As such OPG does not have an OEB approved ROE prior to 2008.

Chart 2

2008	2009	2011	2012	2014	2015
EB-2007-0905	EB-2007-0905	EB-2010-0008	EB-2010-0008	EB-2013-0321	EB-2013-0321
8.65%	8.65%	9.43%	9.55%	9.36%	9.30%

c) OPG's OEB approved ROE have been set as follows:
EB-2007-0905: Set at 8.65% consisting of a forecast long-term risk free rate of 4.75%, a risk premium of 3.4%, and a 0.5% adjustment for financing flexibility[1].
EB-2010-0008: Set at 9.43% for 2011 based on Bloomberg LLP, Consensus Forecasts, and Bank of Canada data for November 2010, which is three months in advance of March 1, 2011, and using the ROE methodology in Appendix B of the Cost of Capital Report[2]. Set at 9.55% for 2012 based on the Global Insight forecast and the OEB's methodology[3].
EB-2013-0321: Set at the OEB's Return on Equity for 2014 at 9.36%. Set at 9.3% for 2015 using the OEB's 2015 cost of capital parameters[4].

d) OPG's actual ROE has varied from OEB approved values predominantly as a result of variances in actual expenditures and nuclear production from OEB approved forecasts.

e) OPG has not previously been regulated under measures defined as performance based incentive regulation.

f) Attachment 1 provides the list of all variance and deferral accounts currently authorized for OPG's regulated operations and the projected year-end 2016 balances and activity therein, in the form of Ex. H1-1-1 Table 1a. The projected balances are based on 2016 forecasts in the pre-filed evidence, as updated for the impact on the pension contributions of the January 1, 2016 actuarial valuation of the OPG pension plan (see Ex. L-6.6-1 Staff-156).

[1] See EB-2007-0905 Decision with Reasons, Pages 157-158
[2] See EB-2010-0008 Decision and Order, Page 122
[3] See EB-2010-0008 Decision and Order, Page 123
[4] See EB-2013-0321 Decision and Order, page 117

SEC Interrogatory #8

Issue Number: 2.1
Issue: Are the amounts proposed for nuclear rate base (excluding those for the Darlington Refurbishment Program) appropriate?

Interrogatory

Reference:
[https://news.ontario.ca/opo/en/2016/09/maximizing-the-value-of-publicly-owned-assets.html]

With respect to OPG's head office:

a. Please provide status of the sale of the head office. When does OPG expect the sale to occur?

b. Please provide an estimate of the potential sale price of the head office. Please provide copies of all appraisal reports OPG has obtained.

c. For the purpose of this application, what assumptions has OPG made regarding the sale of the head office, including but not limited to changes in rate base, depreciation, and OM&A.

d. Please explain how OPG has allocated the gains from the sale to ratepayers.

e. Please provide all shareholder guidance and/or instructions OPG has received regarding the sale of the head office.

Response

a) Please refer to L-6.11-1 Staff-197, part (c).

b) OPG declines to provide the requested information on the basis of relevance. OPG's Head Office is not a prescribed facility and has never been included in OPG's rate base. As such, the requested information does not underpin OPG's request for payment amounts in this application and is not relevant to deciding any issue on the approved Issues List.

c) OPG's Head Office is not a prescribed facility and has never been included in OPG's rate base. As such, OPG has made no changes in rate base relating to the sale of its Head Office. As discussed at Ex. F3-2-1, p. 4, line 23 to p. 5, line 7, OPG's 2016-20018 Business Plan assumes that the budgeted asset service fee for OPG's Head Office would be discontinued effective April 1, 2016, at which point the asset service fee would be replaced by budgeted lease payments (see Real Estate OM&A costs in Ex. F3-1-1, Table 7).

d) Please refer to L-6.11-1 Staff-197, part (d).

e) Please refer to L-6.11-1 Staff-197, Attachment 1, which is a copy of the Shareholder Declaration and Resolution for the sale of OPG's head office at 700 University Avenue, Toronto.

Board Staff Interrogatory #197

Issue Number: 6.11
Issue: Are the asset service fee amounts charged to the nuclear businesses appropriate?

Interrogatory

Reference:
Ref: Exh F3-2-1

At the above reference it is noted that pursuant to a Shareholder Declaration and Resolution, OPG has decided to sell its head office at 700 University Avenue, Toronto. OPG also states that the Shareholder Declaration and Resolution also requires that OPG transfer the portion of the proceeds from the sale equal to the after-tax accounting gain on sale, net of transaction costs.

a) Please confirm that asset service fees previously charged in relation to 700 University Avenue have been replaced with lease payments and are considered a Real Estate Service cost.

b) Please provide the Shareholder Declaration and Resolution that is referenced above.

c) What is the current status of the sale and when is the sale expected to be completed?

d) Is OEB staff correct in understanding that OPG is not proposing to use any portion of the proceeds to offset the increase in test-year payment amounts?

e) How does OPG propose to recover the transaction costs, including all tax implications, related to the sale? If OPG is proposing to recover these costs from ratepayers, please explain the reasons for the approach.

Response

a) Yes, the asset service fees previously charged in relation to 700 University Avenue have been replaced with lease payments that are a Real Estate Service cost.

b) Attachment 1 to this response is a copy of the Shareholder Declaration and Resolution for the sale of OPG's head office at 700 University Avenue, Toronto.

c) OPG's Head Office was listed for sale and placed on the market on October 11, 2016. OPG does not have an estimate of the completion date for this sale.

d) Yes. OPG's Head Office is not a prescribed facility and has never been included in OPG's rate base. Pursuant to the Shareholder Declaration and Resolution, the portion of the proceeds from the sale equal to the after-tax accounting gain on sale, net of transaction costs, will be transferred to the Province.

e) OPG is not proposing to recover the transaction costs or tax implications from rate payers. Pursuant to the Shareholder Declaration and Resolution, the portion of the proceeds from the sale equal to the after-tax accounting gain on sale, net of transaction costs, will be transferred to the Province.

Numbers may not add due to rounding.

Filed: 2016-05-27
EB-2016-0152
Exhibit F3
Tab 2
Schedule 1
Table 2

Table 2

Asset Service Fees - Nuclear ($M)

Line No.	Business Unit	2013 Actual	2014 Actual	2015 Actual	2016 Budget	2017 Plan	2018 Plan	2019 Plan	2020 Plan	2021 Plan
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
1	**Nuclear**	22.7	23.3	32.9	28.4	27.9	27.9	28.3	22.9	20.7

Numbers may not add due to rounding.

Table 7

Allocation of Business and Administrative Service Costs - Nuclear ($M)

Line No.	Costs	2013 Actual	2014 Actual	2015 Actual	2016 Budget	2017 Plan	2018 Plan	2019 Plan	2020 Plan	2021 Plan
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
1	Infrastructure Management	27.3	26.7	25.8	22.9	22.2	21.4	21.4	20.6	20.0
2	Application Maintenance	12.2	11.9	11.5	10.2	9.9	9.5	9.5	9.2	8.9
3	Data Centre Services	12.4	12.1	11.7	10.4	10.0	9.7	9.7	9.3	9.0
4	Other Services	4.0	3.9	3.8	3.3	3.2	3.1	3.1	3.0	2.9
5	NHSS Base Costs	55.9	54.6	52.7	46.8	45.3	43.7	43.7	42.1	40.8
6	IT Support Costs	35.9	36.6	37.3	41.8	43.7	42.6	42.3	42.7	43.2
7	IT Costs (line 6 + line 7)	91.8	91.2	90.0	88.6	89.0	86.3	86.0	84.8	84.0
8	Supply Chain	48.6	42.5	41.1	47.6	47.3	46.7	47.8	49.2	50.3
9	Real Estate	88.4	83.3	82.5	89.9	94.5	92.8	95.0	95.5	98.7
10	OM&A Project Costs	17.8	10.2	17.4	18.9	15.3	13.3	12.2	12.8	13.1
11	Total	246.6	227.2	231.0	245.0	246.1	239.1	241.0	242.3	246.1

Board Staff Interrogatory #166

Issue Number: 6.7
Issue: Are the corporate costs allocated to the nuclear businesses appropriate?

Interrogatory

Reference:
Ref: Exh F3-1-1 Table 7

a) What are the reasons for the increase in Real Estate Service costs from $82.5M in 2015 to $94.5M in 2017? Please identify the factors that caused the increase and are these factors expected to continue in the test years?

b) The average of test year costs is $95.3M and represents a 12% increase compared to the average of actual costs for the most recent period (2013-2015), which is $84.7M. What are the factors that have caused OPG to increase the test year fore cast for Real Estate costs by 12% compared to actuals?

Response

a) Real Estate costs in crease from $82.5M in 2015 to $94.5M in 2017 due to incremental lease costs for OPG Head Office, inflationary increases, and higher labour costs as a result of the 53 week year in 2017. The inflationary increases and lease costs for OPG Head Office are expected to continue i n the test years. The Asset Service Fees related to OPG's Head Office are discontinued and replaced by the lease costs in the test years as described in Exhibit F3-2-1, page 5.

b) Real Estate costs increase during the test period primarily due to the incremental lease costs for OPG Head Office. As stated above in part (a), there are no Asset Service Fees related to OPG's Head Office in the test years.