PUBLIC INTEREST ADVOCACY CENTRE
LE CENTRE POUR LA DÉFENSE DE L'INTÉRÊT PUBLIC

October 3, 2016

VIA E-MAIL

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

Dear Ms. Walli:

Re: EB-2016-01652 – Ontario Power Generation Inc.
2017 Payments Application
Interrogatories of Vulnerable Energy Consumers Coalition (VECC)

Please find enclosed the interrogatories of VECC in the above-noted proceeding. Interrogatories are noted under the issues that are bolded and highlighted.

Yours truly,

Michael Janigan
Counsel for VECC

Chris Fralick, Vice President Regulatory Affairs
Chris.fralick@opg.com

REQUESTOR NAME	**VECC**
TO:	**OPG**
DATE:	**October 3, 2016**
CASE NO:	**EB-2016-0152**
APPLICATION NAME	**2017 Payments Amounts**

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1. GENERAL

1.1 Has OPG responded appropriately to all relevant OEB directions from previous proceedings?

1.2 Are OPG's economic and business planning assumptions that impact the nuclear facilities appropriate?

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

None

2. RATE BASE

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

2.1-VECC-1

Reference: D2/T2/S10/pg.8

a) What is meant by "partially placed in service in November 2015" for the Retube and Feeder Replacement Island Support Annex? Specifically what part and what amount was placed in- service? Is the $40.7 million shown in Chart 1 the entire project or the amount put into service?

2.1-VECC-2

Reference: D2/T2/S10/pg.16-

a) With respect to the Heavy Water Facility please provide the initial entire budget ($110.0m), the updated budget ($278m in EB-2013-0321) and the final budget ($381.m).

b) Please explain the statement "*While cited as a Class 2 estimate, this was not the case*". Specifically who cited what budget as a class 2 estimate?
c) What contracting penalty provisions were invoked due this overrun and termination of the initial contract?
d) Is this contractor in question currently employed as part of the DRP?
e) Is the current-in-service date for this project still May 2017?

2.1-VECC-3

Reference: D2/T2/S11/Attachment 1

a) At page 7 of the Concentric Report there is a listing of key risk sharing aspects of the re-tubing project. Is this list what was relied upon by Concentric in making its determination?
b) If not please list each aspect of the contract that was considered by Concentric. For each issue please show whether Concentric considered it prudent and upon what basis was that conclusion was made (e.g. comparison to similar contract, industry specifications etc.).

2.1-VECC-4

Reference: D2/T2/S11/Attachment 3 – Pegus Global Holdings Inc.

a) Please provide a summary of the past 10 years of projects for which Pegus Global Holdings, or the noted authors have opined on the robustness of a client's project forecast. For each study please provide the original the project estimate and the actual subsequent in-service cost of the project.

2.2 Are the amounts proposed for nuclear rate base for the Darlington Refurbishment Program appropriate?

None

3. CAPITAL STRUCTURE AND COST OF CAPITAL

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

3.1-VECC – 5

Reference: C1/T1/S1

In terms of OPG's requested capital structure at EB2016-0152 please provide the following:

a) The actual approved capital structure of OPG for each year since 2005.
b) The applied capital structure for each year in EB2007-0905 and subsequent applications.
c) The percentage rate base assets in nuclear and hydro for each year since 2005.
d) The forecast rate base percentage asserts for each year in nuclear and hydro in EB-2007-0905 and subsequent applications.
e) Please restate the Chart 1 data on page 1 to include the periods between 2005 and 2016.

3.1-VECC-6

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.

3.1- VECC –7

Reference: C1/T1/S1

Pre-amble: In terms of the overall Cost of capital, EB2016-0152, OPG was part of Ontario Hydro and as a Crown corporation required to provide electricity at cost. Subsequently, it was converted to a separate OBCA company, required to make payments in lieu of income taxes, finance with a higher percentage of “equity” and charge HST on its revenues. In each case, additional money flowed to the Province of Ontario either as HST, equity income or PILs. As a Crown, OPG was generally required to earn 115% of its interest payments, similar to other Canadian Crown owned electricity companies.

a) Starting with OPG’s 2017 requested operating income after interest, please identify the additional monies earned by the Province of Ontario above what it would have earned if OPG was still regulated as a Crown corporation, namely the result of changes to:
   i. OPG’s requested capital structure versus the 115% interest coverage target;
   ii. The imposition of PILs; and,
   iii. The provincial HST charge.
b) Please show all calculations and the increase in the total charge for electricity resulting from the increased payments to its owner, the Province of Ontario, due to these policy changes.
c) In OPG’s judgement is it riskier being regulated as a Crown with lower electricity charges or as an OBCA company 100% owned by the Province of Ontario?

3.1- VECC - 8

Reference: C1/T1/S1/Attachment 1 - Concentric Energy Report

a) Please confirm that in April 19, 2013 Concentric Energy provided a report to the Regie authored by Mr. Coyne and Mr. Trogonoski with a recommended fair ROE and common equity ratio for Hydro Quebec Transmission (HQT) and Hydro Quebec Distribution (HQD).
b) Please provide a copy of that testimony and confirm that:
   i. the recommended and allowed common equity ratio was 30% for HQT and 35% for HQD;
   ii. the recommendations were based on the stand-alone principle; and,
   iii. that on page 9 of the summary Concentric stated:

"the only important difference is that a percentage of electric companies in the US Proxy group (and in Canada) own some regulated generation, which suggests that these companies have somewhat more business risk than HQD and HQT."

iv. that on page 53 of that report Concentric stated:

"as discussed in the following section of this testimony the incremental ROE required to offset the increased operating risk of regulated generation is approximately 41 basis points."

In the context of an incremental ROE of 0.41% please indicate how much this would translate to in terms of common equity ratio if the ROE were not adjusted for the differential generating risk.

v. that the Regie allowed HQT and HQD an ROE of 8.2% while at the same time the Ontario formula ROE allowed Ontario's electric distributors an ROE of 9.30% and Concentric recommended the same 9.22% ROE for HQT and HQD.

c) Please confirm that S&P has a policy of not rating debt issued by subsidiaries higher than that of its parent unless it is "ring fenced" and that OPG was downgraded to BBB+ because S&P downgraded its parent, the Province of Ontario. In addition:

i. Please indicate whether the actions of S&P in its rating policy is consistent with the stand alone principle of regulation

ii. Please provide copies of both the S&P OPG rating and the current DBRS rating and report.

iii. Please explain in detail why the selection criteria used to form proxy samples for OPG are different from those used for HQT and HQD.

iv. Please confirm that none of the utilities in the proxy group on Page 34 are 100% provincially or state owned and that Concentric's recommendation would not change if OPG were still a Crown corporation, rather than an OBCA company.

v. Please confirm that OPG is included in the Provincial budget as income from government business enterprises.

3.1-VECC-9

Reference: C1/T1/S1

Pre-amble: In the 2016 Ontario budget announcement found at http://www.fin.gov.on.ca/en/budget/ontariobudgets/2016/bk9.html, the province stated:

The Province remains committed to building a cleaner and more sustainable energy system for all Ontarians while reducing electricity system cost pressures. Since 2003, more than $34 billion has been invested in cleaner energy generation in Ontario, with Hydro One investing about $15 billion in modern transmission and distribution infrastructure. Other initiatives include:

- Pursuing the continued operation of the Pickering Nuclear Generating Station beyond 2020 up to 2024. By doing this, Ontario Power Generation (OPG) would protect 4,500 jobs across the Durham region, avoid eight million tonnes of GHG emissions, and save Ontario electricity consumers up to $600 million.
- Moving forward with OPG's refurbishment of the four units at the Darlington Nuclear Generating Station. The Independent Electricity System Operator has updated its contract with Bruce Power to refurbish six nuclear units, in addition to two already refurbished units at the Bruce nuclear site. Together, this secures over 9,800 megawatts (MW) of affordable, reliable and emission-free power.

a) Please confirm that in the Ontario Government's infrastructure programme it includes the costs of the Darlington refurbishment programme as provincial government expenditures.
b) Please indicate whether any of the generating plants in the proxy sample are instructed by their owners to follow non-financial objectives such as preserving 4,500 jobs and if their owners put out a release with titles similar to that of Ontario's "Jobs for today and tomorrow". In Concentric's judgement is such an attitude by the shareholder consistent with the stand alone principle.
c) Please indicate the capital structure and allowed ROE for the following 100% provincially owned Canadian electric utilities: New Brunswick Power, Manitoba Hydro Electric System, Saskatchewan Power and BC Hydro.
d) Please explain in detail why the equivalent 100% owned Canadian electric companies are not a better reference point for a fair capital structure than the US private non-government owned entities, particularly since S&P rates the two entities (electric company and province) the same.

e) Is Concentric aware that NB Power also has a CANDU nuclear reactor at Point LePreau?

3.1-VECC – 10

Reference: C1/T1/S1/ Attachment 1 -Concentric Energy Report

a) Please provide the Moody’s or DBRS bond ratings for the respective companies as well as the S&P ratings already provided
b) Please provide justification (page 360) for “*the investment community’s view that generation, in general, is the riskiest business segment for a regulated utility.*” Would this assessment apply to Emera’s main operating unit Nova Scotia Power?
c) In terms of the DRP, is it Concentric’s view that when a provincial or state owned utility undertakes a substantial capital programme at the behest of that owner, then the “stand alone” principle still applies and the owner is “rewarded” with a higher capital structure ratio due to its own actions? Please provide full theoretical justification or such a proposition if that it Concentric’s view.
d) Given that S&P “consolidates” OPG’s bond ratings with that of the Province of Ontario please indicate what the capital expenditures ratio on page 37 is for the Province rather than its “subsidiary”.
e) At page 38 Concentric claims that the proxy group has “similar risk mitigating properties” as OPG. This is Concentric’s judgment, please provide for each company their allowed and actual earned ROE for each year for the last 10 years to verify this judgment.
f) With reference to the quotation from the OEB on page 40, please indicate what revenue % for each company in the proxy sample is derived from merchant generation, which the OEB regards as riskier.
g) Please indicate whether Concentric agrees with the statement that, all else constant, nuclear assets are base load generation and difficult to shut down and then start up in response to demand shifts and that within generation base load is regarded as less riskier than assets used to meet peaking demand. If not why not?
h) Given Concentric’s judgment that OPG is riskier due to the DRP and its future nuclear assets would this judgement change if OPG was not owned by the Province of Ontario and required to meet provincial policy objectives and as a result operated say with gas cogeneration or coal plants, rather than nuclear plants?

3.1-VECC – 11

Reference: C1/T1/S1/Attachment 1 Concentric Energy Report

Preamble: In its Decision EB-2011-0354 the Board stated (page 7):

> "*Regarding the risk of future events, the Board agrees with CCC that the relevant future risks are those that are likely to affect Enbridge in the near term. Any risks that may materialize over the longer term can be taken into account in subsequent proceedings. In considering the risk of future events, the Board will take into account the fact that, generally, the more distant the potential event, the more speculative is any conclusion on the likelihood that the risk will materialize."*

a) In Concentric's view has the additional risk of nuclear facilities "materialized" given that at the earliest it is at the tail end of the test period and may in all probability slip beyond the test period?

b) Is it Concentric's view that current ratepayers should pay the "risk" cost of DRP given that the facilities are not currently part of their cost of service? Please explain in detail whether this meets inter-generational equity concerns.

3.2 Are OPG's proposed costs for the long-term and short-term debt components of its capital structure appropriate?

3.2-VECC – 12

Ref: C1/T1/S2/pg.5

OPG uses the Global Insight forecast for the 10 year Canada yield as the basis for its own forecast borrowing cost:

a) Please indicate any analysis that OPG has performed to justify its implicit assumption that Global Insight's forecast are accurate.

b) Please provide the latest Global Insight forecast and if none is available indicate the current 10 year Canada yield and the rate on January 1, 2016.

c) Please indicate why OPG does not use the forecast ten year yield incorporated into the current yield curve. If it lacks the internal skills please explain why it cannot ask the staff at OEFC for an estimate.

d) Please confirm that the current forecast by the Royal Bank of Canada (FMM, September 9, 2016) has the 10 year Canada rate at 1.25% at the end of 2016, Q4 and 1.90% as of 2017, Q4 versus the Global Insight values used by OPG of 2.26% (1,01% higher) and 2.48% (0.58% higher)

3.2- VECC- 13

Reference: C1/T1/S3 Cost of short term debt

a) Please include the critical details of $1 billion bank facility that was renewed in May 2016 and discussed at page 1
b) Given the small size of its commercial paper issue please discuss and contrast the total cost of OPG using its own name to issue commercial paper versus issuing Bankers Acceptances or simply borrowing on a credit line from its bank.
c) Please confirm that the RBC forecast for the 91 day T Bill yield is 0.50% for 2016, Q4 and 0.60% for 2017, Q4.
d) Please confirm that the $2.6 million allocated to the bank credit facility represents an annual cost of 6.5% at the forecast $2.6 million annual cost on an average outstanding balance of $40 million (2.6/40).
e) OPG forecasts that its short term debt cost for 2016 is 2.9% rising to 4.1% in 2021, please tie this cost into the terms of the new credit facility.
f) Please indicate the current all in cost of issuing one year notes and why OPG would not simply issue such notes and leave the cash on deposit to fund its short term needs.

4 CAPITAL PROJECTS

4.1 Do the costs associated with the nuclear projects that are subject to section 6(2)4 of O. Reg. 53/05 and proposed for recovery meet the requirements of that section?

4.2 Are the proposed nuclear capital expenditures and/or financial commitments (excluding those for the Darlington Refurbishment Program) reasonable?

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

4.3-VECC-14

Reference: D2/T2/S8

a) OPG states the DRP is estimated at a cost of $12.8B. However, the evidence shows that there are a number of ancillary costs (e.g. DRP OM&A, Darlington DRP related outages, etc.) related to this project. Please provide a table which shows all DRP capital and related costs for the period 2013 through 2020. Please identify capital, OM&A and related costs separately.

4.3-VECC-15

Reference: D2/T2/S8

a) OPG state that the RQE for the DRP is a Class 3 AACE estimate. Yet the utility has engaged most of its contractors at or surpassing the bid/tender stage – i.e. Class 2 or higher. Please explain why OPG believes that the expected accuracy (-20 to +30) of its Class 3 estimate is much greater than should be expected at this stage of contracting (i.e. Class 2 or higher -15 to + 20%).
b) Chart 2 of the evidence indicates that a number of elements of this project are at class 2 or class 1. Given this fact why does OPG believe the overall accuracy of its costs estimates remains at Class 3?
c) Given the current stage of contracting why is RQE not consider a Class 1 estimate. Please provide a specific response as to what elements of the existing contracting are not in place which would allow Class 1 confidence level in the DRP cost estimates.

4.3-VECC-16

Reference: D2/T2/S8Chart 4 & D2/T2/S7

a) Using Chart 4 please provide the AACE class estimate for the 4.8B refurbishment of unit 2.
b) Please explain how the contingency of 14% is consistent with the AACE class estimate for this project.

4.3-VECC-17

Reference: D2/T2/S8/Attachment 3 KPMG "RQE Report November 6, 2015"

a) Please provide the cost (by category – RFR, BOP, O&M) of gaps in Category B and C shown in the table at page 7 of the KPMG Report.

b) Please explain if/how the 84 issues identified have been addressed and are in accordance with the recommendation of KPMG: "*It is anticipated that these quality issues (combined with OPG's own checklist of quality issues) will provide a comprehensive 'checklist' for closing gaps when the estimates undergo the final 'check estimate' in 2016 and we consider that OPG have ample time to work with vendors in addressing these gaps prior to execution. This process should be started as soon as possible*."

4.3-VECC-18

Reference D2/T2/S8/Attachment 3 WorkStream 2

a) Please provide either a redacted version of the WorkStream report or its summary conclusions in respect to the vertical slice review of the estimates.

4.4 Are the proposed test period in-service additions for nuclear projects (excluding those for the Darlington Refurbishment Program) appropriate?

4.5 Are the proposed test period in-service additions for the Darlington Refurbishment Program appropriate?
None

5 PRODUCTION FORECASTS

5.1 Is the proposed nuclear production forecast appropriate?

5.1-VECC-19

Reference: E2/T1/S2/Table 1

a) Please provide a table similar to Table 1 which provides the information by individual units (Darlington and Pickering) and for the period 2013-2020. For simplification please leave out the "change" and "OEB approved" columns.

6 OPERATING COSTS

6.1 Is the test period Operations, Maintenance and Administration budget for the nuclear facilities (excluding that for the Darlington Refurbishment Program) appropriate?

6.1-VECC-20

Reference: F2/T4/S1/Table 1

a) Please amend Table 1 to show outage OM&A by unit.

6.1-VECC-21

Reference: F2/T2/S2/pgs4-

a) Please explain what projects were completed at Pickering under the ambit of "*primarily due to spending to improve plant operations in areas of reliability and human performance*".
b) Please explain what is meant by "*There is an increase in the base OM&A associated with Inspection and Maintenance Services (+$13.2M or 38.8 per cent increase) primarily due to higher labour as a result of 2015 attrition and movement of resources in 2015 from base OM&A activities to support outage extensions*." Specifically is this indicating that costs were $13.2 million higher due to severance costs being allocated to this area?
c) Is the increase in security and emergency services of $12.1M simply a transfer of costs from other areas, or is there a net increase in OM&A of $12.1 million in these costs?

6.1-VECC-22

Reference: F2/T2/S1/Table 1

a) Between 2013 and 2014 there as a doubling of the costs in Fleet Operations and Maintenance. Please explain why.

6.1-VECC-23

Reference: F2/T2/S1/Table 1

a) Base OM&A spending with respect to Engineering shows a significant trend increase from 2014 ($147.6m) to 2021 ($191.8m). Please explain why.
b) Please explain what portion of this increase is due to increased labour costs and specifically what, if any increase in FTEs underlie the trend increase.

6.1-VECC-24

Reference: F2/T3/S1/Table 1

a) Please provide the basis for the forecast of Portfolio Projects Unallocated for each year 2017-2018. Specifically, please explain how each year's forecast was derived.

6.2 Is the nuclear benchmarking methodology reasonable? Are the benchmarking results and targets flowing from OPG's nuclear benchmarking reasonable?

6.2-VECC-25

Reference: F2/T1/S1/pg.15

a) Please explain how the Operational and Financial targets shown in Chart 4 and Chart 5 are related to compensation.
b) Why are none of the targets shown incorporated into the incentive rate making proposal?

6.3 Is the forecast of nuclear fuel costs appropriate?

6.3-VECC-26

Reference: F2/T5/S1/pg.2

a) Please explain the reasons for the conversion price increase and the fuel bundle manufacturing price over the 2013 to 2021 period.

6.3-VECC-27

Reference F2/T5/S1/pg.3

a) Please provide the forecast cost of the fuel load for Unit 2 in 2019 and the amount of this expected to be capitalized.
b) Please provide the forecast expected undepreciated cost of fuel in Unit 2 when it is refurbished.

6.4 Is the test period Operations, Maintenance and Administration budget for the Darlington Refurbishment Program appropriate?

6.4-VECC-28

Reference: F2/T7/S1

a) Please provide a breakdown/details of the 41.5m in unit refurbishment costs in 2017, the $13.8 million in 2018 and the 48.4m in 2020 and 19.7m in 2021

6.5 Are the test period expenditures related to extended operations for Pickering appropriate?

6.5-VECC-29

Reference: F2/T2/S3/Attachment 1 - IESO Assessment/ Slides, 21 22

a) Please confirm that the Pickering extension to 2024 becomes uneconomic at natural gas prices lower than $4MMBtu.
b) What is the current natural gas price (Dawn Hub)?
c) Please confirm that the Pickering extension also become uneconomic if costs increase by more than 30% from the current estimate of $307.2 million.
d) What programs have been put in place to ensure that the program can be completed for $330million or less?

6.5-VECC-30

Reference: F2/T2/S3/Attachment 2 – Technical and Economic Assessment of Pickering Extended Operations beyond 2020

a) The Technical Assessment of November 2015 recommends $52 million be released to complete a Periodic Safety Review, the Fuel Channel Life Assurance Project and to execute incremental outages and inspections. Was this amount released? Has any subsequent report been authored to confirm the viability of the project being completed within the current forecast budget? If yes please provide that report(s).

Corporate Costs

6.6 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?

6.6-VECC-31
Reference: F4/T3/S1/pg.22 & Attachment 3

a) The evidence states that a comparison of OPG wages with those provided by Bruce Power was undertaken by Towers. Attachment 3 there are tables showing such comparisons for Society and PWU employees. However we are unable to locate a similar table for management employees. Was such a comparison done? If so please provide the comparison table. If not please explain what analysis was done to compare OPG management costs with those of Bruce Power.

6.6-VECC-32
Reference: F4/T3/S1/pgs. 17-18

a) Please confirm that OPG has spent $212.85 million for Hydro One shares (9M x $23.65). If this is not correct please provide the actual cost.
b) How/where is this asset recorded for the purpose of regulatory accounting?

6.7 Are the corporate costs allocated to the nuclear businesses appropriate?

6.7-VECC-33
Reference: F3/T1/S1/pgs. 14-

a) OPG notes that in comparison to its peers costs in the area of Risk Management and Environmental, Health and Safety are different due to the unique requirements of nuclear energy production. What other studies has OPG undertaken of its costs in Risk Management and Environmental Health and Safety to understand whether its costs are reasonable as compared to comparable operations?

6.7-VECC-34
Reference: F3/T1/S3/Table 1

a) Please provide the FTEs for the Regulatory Affairs Department for the years 2013 through 2020. Please separate these into Management and Non-Management categories.
b) There is significant variance year to year in the Salaries/wages, operating expenses. In 2015 Board approved amounts for this category were approximately 3.4m. In 2016 these costs are forecast at $3.3m and 3.1m in 2017. Yet in 2015 only $2.8m was actually spent. Please explain how the forecast for salaries/wages, operating expenses is derived for 2016-2020.

6.7-VECC-35
Reference: F4/T4/S1

a) Please explain how the increase of $11M in Nuclear Insurance was calculated for 2016 and forecast for 2017. Has the 2016 premium been paid and is the $19.0M an actual amount?
b) Please explain (briefly) what new provisions in the new Nuclear Liability and Compensation Act contain which caused this increase.

6.8 Are the centrally held costs allocated to the nuclear business appropriate?
None

Depreciation

6.9 Is the proposed test period nuclear depreciation expense appropriate?

Income and Property Taxes

6.10 Are the amounts proposed to be included in the test period nuclear revenue requirement for income and property taxes appropriate?

Other Costs

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

None

7 OTHER REVENUES

Nuclear

7.1 Are the forecasts of nuclear business non-energy revenues appropriate?

7.1-VECC-36

a) When does OPG expect to produce its business plan for Cobalt-60 production at Darlington?
b) Will an update of this initiative be part of the mid-period review?

7.1-VECC-37
Reference G2/T1/S1/pg.5

a) Please explain the circumstances behind the failed sales of Helium-3 and specifically explain why there will be no opportunities in the future to make these sales.

7.1-VECC-38
Reference G2/T1/S1/Table 1

a) Why has OPG redacted the components of the forecast revenue for 2018 through 2021.
b) Do the total other revenues shown for 2018 include both sales of heavy water and isotope sales?

Bruce Nuclear Generating Station

7.2 Are the test period costs related to the Bruce Nuclear Generating Station, and costs and revenues related to the Bruce lease appropriate?

7.2-VECC-39

Reference: G2/T2/S1/pgs.1-5

a) OPG lists a number of changes from the new Bruce Lease Agreement. How have these changes affected the allocation of revenues and costs to the Bruce facilities?
b) Please provide the report or study which supports the use of the current cost allocation methodology for the revised agreement.

7.2-VECC-40

a) The effect of the new Bruce lease agreement is to transfer income produced from regulated (prescribed) OPG assets to the non-regulated Bruce assets. Is entirely due to the obligation of OPG with respect to the Bruce facility AROs?

8 NUCLEAR WASTE MANAGEMENT AND DECOMMISSIONING LIABILITIES

8.1 Is the revenue requirement methodology for recovering nuclear liabilities in relation to nuclear waste management and decommissioning costs appropriate? If not, what alternative methodology should be considered?

8.1-VECC – 41

Reference: C2/T1/S1

At the above reference OPG discusses the procedures for recovering its nuclear liabilities:

a) Have there been any changes to the Nuclear Fuels Waste Act since EB-2007-0905?
b) Please indicate the inspection process involved with low and intermediate level radioactive waste and any concerns raised by the Canadian nuclear safety commission since EB-2007-0905.
c) Please confirm the statement in EB-2007-0905, E H1, Tab 1 Schedule 1, page 3 that:

"*OPG has an exceptional safety record in the transportation of radioactive materials. There has not been any release of radioactive material to the environment from OPG's nuclear waste transportation operations*."

and indicate whether OPG still has an exceptional record?

d) In EB-2007-0905 OPG referred to its US based consultant TLG Consultants as "experienced" in US utilities and having prepared estimates for 19 of the 23 US nuclear plants that have been permanently shut down. Is OPG currently working with similar US experts in this area and is there anything special about the decommissioning risks attached to its CANDU reactors that warrant special treatment compared to 2007?
e) Please indicate any material changes in the nuclear funds waste management agreement between OPG and the Province of Ontario since 2007.

8.2 Is the revenue requirement impact of the nuclear liabilities appropriately determined?

8.2-VECC-42

Reference: C2/T1/S1/pg.6

a) When is the 2017 ONFA Reference Plan expected to be approved?
b) Why did OPG not use the draft 2017 plan for the purpose of this application and book any variance from this plan into the Nuclear Liability Deferral Account? If it had done so would there be a material difference?
c) The revenue requirement impact using the 2012 Plan is noted as $450.3 in 2017 and $454.3 in 2018. What would be the revenue impact for these years had the 2017 Draft Plan been used as the basis of the forecast?

9 DEFERRAL AND VARIANCE ACCOUNTS

9.1 Is the nature or type of costs recorded in the deferral and variance accounts appropriate?
9.2 Are the methodologies for recording costs in the deferral and variance accounts appropriate?
9.3 Are the balances for recovery in each of the deferral and variance accounts appropriate?
9.4 Are the proposed disposition amounts appropriate?
9.5 Is the disposition methodology appropriate?
9.6 Is the proposed continuation of deferral and variance accounts appropriate?
9.7 Is the rate smoothing deferral account in respect of the nuclear facilities that OPG proposes to establish consistent with O. Reg. 53/05 and appropriate?
9.8 Should any newly proposed deferral and variance accounts be approved by the OEB?

None

10 REPORTING AND RECORD KEEPING REQUIREMENTS

10.1 Are the proposed reporting and record keeping requirements appropriate?
10.2 Is the monitoring and reporting of performance proposed by OPG for the regulated hydroelectric facilities appropriate?
10.3 Is the monitoring and reporting of performance proposed by OPG for the nuclear facilities appropriate?

None

10.4 Is the proposed reporting for the Darlington Refurbishment Program appropriate?

10.4-VECC-43

Reference: D2/T2/S9

a) Please provide all internal audits present to the CEO and OPG Board of Directors in 2015 and 2016.
b) Please provide all presentations and reports made to the Darlington Refurbishment Committee in 2015 and 2016.

10.4-VECC-44

Reference: Technical Conference, September 23, 2016 Darlington Slide deck page 36 & D2/T2/S9/pg.12

a) Please explain if/(why not) the reports, as set out in D2-2-9 Attachment 2 and provided to the Darlington Refurbishment Committee could be used as the basis of periodic reporting to the OEB.
b) Is this report the only document which OPG will be using to monitor progress on the DRP? If not please identify the other progress reports that will be used by OPG. Please explain why/if these reports might be shared with the OEB for the purpose of periodic reporting on the DSP.

11 METHODOLOGIES FOR SETTING PAYMENT

11.1 Is OPG's approach to incentive rate-setting for establishing the regulated hydroelectric payment amounts appropriate?

11.2 Are the adjustments OPG has made to the regulated hydroelectric payment amounts arising from EB-2013-0321 appropriate for establishing base rates for applying the hydroelectric incentive regulation mechanism?

11.2-VECC-45

Reference: A1/T3/S2/Attachment 1 TFP Study pg.16

a) Dr. Denis Lawrence is acknowledged in this report but not noted as an author. Please describe the role of Dr. Lawrence in this study.
b) Please provide the TFP studies that were reviewed by the authors as part of this engagement.

11.2-VECC-46

Reference: A1/T3/S2/Attachment 1 TFP Study pg.19

a) The authors of the TFP Study state that they believe "*variability in annual hydrology should not be an obstacle to this TFP study*." Please explain what study was made of hydrology issues, including prolonged drought in the U.S. southwest that allowed the authors to come to this conclusion.

b) Specifically, did the authors use water flow variation of OPG to show the historical norm. Did the authors complete a similar analysis on each of the peer group participants? If yes, please provide this analysis.
c) Please explain why water rental rates were removed from the TFP study.

11.2-VECC-47

Reference: A1/T3/S2/Attachment 1 TFP Study pgs.27-

a) The authors choose a period of 2002-2014 for the study. Was a sensitivity analysis done of the time period? If yes what were the results?
b) Given the difficulty of obtaining a full year's revenue data for OPG for 2002 why was 2003 not considered a better starting point? What difference would starting the study at 2003 have made to the results?
c) Why was Purchasing Power Parity used to adjust for currency difference rather than exchange rates? Was an analysis of the trend completed using exchange rates? If yes please provide those results.
d) Please provide the annual difference as between to daily average annual exchange rate and the PPP.

11.2-VECC-48

Reference: A1/T3/S2/Attachment 1 TFP Study pg.38

a) Please explain specifically what data is unavailable from Hydro Quebec, Newfoundland & Labrador Hydro and Manitoba Hydro that precluded their inclusion in this study.
b) Please explain what businesses other than hydro- electric production was included in the available data of these utilities that precluded their inclusion in the TFP study.

Nuclear

11.3 Is OPG's approach to incentive rate-setting for establishing the nuclear payment amounts appropriate?

11.3-VECC-49

Reference: A1/T3/S2/pg.30-31

a) For the 25% of costs which OPG will not apply the stretch factor please identify all the individual area (e.g. emergency preparedness) and the total annual test year costs in those areas.
b) For each area please give the portion of costs that are compensation and benefit related.
c) OPG notes that these are areas in which it will not, or cannot compromise its commitments. However, it does not explain why it is not possible to execute its responsibilities in these areas in a more efficient manner. For each of the areas identified please explain the reason no efficiencies can be found while still carrying out the prescribed duties.

11.4 Does the Custom IR application adequately include expectations for productivity and efficiency gains relative to benchmarks and establish an appropriately structured incentive-based rate framework?

None

11.5 Is OPG's proposed mid-term review appropriate?

11.5-VECC-50

Reference: A1/T3/S3/pg.12-

a) Is the sole purpose of the mid-term review to adjust for changes in the nuclear power production and fuel cost?
b) In OPG's view at what point might an adjustment to the production forecast call into question the reasonableness of the approved revenue requirement?
c) Why are fuel costs being included in the mid-term review? What is the materiality of potential change in fuel costs?

11.6 Is OPG's proposal for smoothing nuclear payment amounts consistent with O. Reg. 53/05 and appropriate?

11.6-VECC-51

Reference: A1/T3/S3

a) Please amend Chart 4 to include the unsmoothed rate.
b) Please set out the relevant parts of O. Reg. 53/05 that address the issue of production forecast risk?
c) O.Reg. 53/05 s. 5.5 address the issue of Darlington refurbishment. Does the proposed revenue requirement shown at chart 1 (A1/T3/S3/pg.6) show the revenue requirement of all nuclear (Darlington and Pickering) or just the Darlington refurbishment? If the former please explain how this is contemplated under O. Reg. 53/05.

General

11.7 Is OPG's proposed off-ramp appropriate?

None

12. IMPLEMENTATION

12.1 Are the effective dates for new payment amounts and riders appropriate?
None

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