

IN THE MATTER OF the *Ontario Energy Board Act 1998*,
Schedule B to the *Energy Competition Act*, 1998, S.O. 1998, c.15;

AND IN THE MATTER OF an Application Ontario Power
Generation Inc. for an order or orders approving payment amounts
for prescribed generating facilities commencing January 1, 2017.

**INTERROGATORIES FROM THE
SCHOOL ENERGY COALITION
TO OEB STAFF EXPERT WITNESSES**

Interrogatories on Exhibit M1 (Schiff Hardin)

M1-SEC-1

Please provide copies of the following:

- a. All experts' reports and all testimony that Mr. Roberts has given in a regulatory proceeding.
- b. All reports, advice, or work product of Mr. Roberts or Schiff Hardin conducted for, on behalf of, or regarding, an OPG facility or project.

M1-SEC-2

[p.5] Please provide details regarding Mr. Roberts' and Schiff Hardin's current and past relationships, commercial or otherwise, with OPG.

M1-SEC-3

Please provide a copy of the retainer agreement and any scope of work document between Schiff Hardin and the Ontario Energy Board, regarding this project. Please provide any documents between Schiff Hardin and the Ontario Energy Board relating in whole or in part to conflicts of interest.

M1-SEC-4

Please provide a copy of the documents referenced in footnotes 33, 34, 42, 62, 63, 65, 66, 71, 72, 76, 79, 88 and 93.

M1-SEC-5

[p.12] Please explain how Schiff Hardin can determine that the process to identify and evaluate risks for the risk register was consistent with industry standards if it ultimately made no determination on the content and completeness of the risk registry.

M1-SEC-5

[p.19] Please explain specifically what is meant by “Schiff did not independently verify the appropriateness, sufficiency, or correctness of the DR RQE cost estimate?”

M1-SEC-6

The Report said that a number of components of OPG’s DRP are within “industry standards”. With respect to each of the following, what is the industry standard? Please provide any documents setting out or describing the industry standard.

- a. [p.12] Preparing a risk register
- b. [p.13] Assess and mitigate the risks of the DRP
- c. [p.16] Project controls systems to manage risks during the Execution Phase of the DRP
- d. [p.23] Schedule development process
- e. [p.25] Staffing plan
- f. [p.28] Audit and oversight
- g. [p.29] Process and procedures to manage the project

M1-SEC-7

The Report states that within many areas, OPG is within the industry standards. In each of these areas, please identify if OPG is using best practices, and if not, please provide the best practices that OPG should follow.

M1-SEC-8

[p.65] The Report states: “*In recognition of this difficult task, many utility regulatory commissions require the utility to provide transparent and frequent reporting on the project status and the staff’s active participation and ongoing review in the project*”. If the Board was inclined to order similar measures, please specify what such reporting mechanisms, and ongoing reviews, should include.

Interrogatories on Exhibit M2 (Pacific Economics Group)

M2-SEC-1

[p.6 and 64] Please provide an estimate of the appropriate increase in the X factor if the CRVA is approved as proposed, and the basis for that estimate.

M2-SEC-2

[p.10] With respect to capital spending for hydroelectric generators generally:

- a. Please provide any data in the possession of the expert showing the normal long term level of capital spending, relative to depreciation, for a hydroelectric generation utility during a period where it is not increasing its capacity.
- b. If the expert is able to disaggregate that data based on median age of assets, or based on asset classes (for example, civil works vs. other physical assets), please provide that disaggregation.
- c. To what extent, if any, is the applicability of that data, disaggregated or otherwise, to OPG affected by the revaluation of OPG’s assets when it was reorganized and became

regulated? That is, how if at all should OPG's capital spending pattern (relative to depreciation) be expected to be different from the norm because its assets were revalued?

M2-SEC-3

[p.17 and 39] Please provide any data, whether empirical or anecdotal, on the general relationship between productivity growth and capex as a percentage of depreciation for hydroelectric generators.

M2-SEC-4

[p.19] Please confirm that, conceptually, a stretch factor is intended to capture, and share with customers, some of the value associated with the opportunity for the utility to increase its earnings during IRM due to increased efficiencies. Please advise whether, for a utility that has a history of earning less than its allowed rate of return under cost of service regulation, such as OPG, a stretch factor during IRM is less appropriate. If it is not, why not?

M2-SEC-5

[p.48] Please explain whether the exclusion of A&G costs in the LEI and PEG studies creates a potential bias in the productivity results. If that does create a bias, can that bias be characterized, directionally or otherwise?

M2-SEC-6

[p.55] Please confirm that it is reasonable to conclude, from this data, that in a steady state operating mode (i.e. excluding the Niagara Tunnel impacts) OPG has demonstrated that it is able to operate its hydroelectric generating business at a cost that escalates at inflation less 1.35%, and that in none of the years from 2002 to 2013 did its overall costs go up, relative to outputs, by an amount exceeding inflation.

M2-SEC-7

[p.60] Please explain the pros and cons of using, as the X factor for OPG going forward:

- a. The MFP trend for the PEG sample, 0.29%, plus a stretch factor, versus
- b. The steady state MFP trend actually achieved by OPG from 2002 to 2013, 1.35%, with or without a stretch factor.

M2-SEC-8

[p.63] Please estimate, if possible, the materiality threshold that would be appropriate for an OPG hydroelectric ICM given its forecast asset lives and the proposed 0.59% X factor.

M2-SEC-9

[p.64] Please assess whether, if a CRVA is approved, an ICM or ACM should also be available. If more than one mechanism is approved, what adjustments if any should be implemented to integrate those mechanisms with each other, and with the price cap formula?

Interrogatories on Exhibit M3 (The Brattle Group)

M3-SEC-1

Please provide a list detailing all of the reports or studies prepared by Dr. Villadsen, alone or jointly with others, in the last ten years dealing with return on equity, equity thickness, or cost of capital. For each such report, please provide the name of the client, and whether the client was a utility or utility association, regulator or association of regulators, customer or customer association, or other. For each such report that has been filed in a public proceeding, or has otherwise been made public, please provide a copy in electronic format.

M3-SEC-2

[p.5] Please describe the ways, if any, that the Board's decision to allow 45% equity thickness in EB-2013-0321 influenced the expert's conclusion that the equity thickness going forward should be 48%. Please include any independent assessment by the expert as to whether the 45% equity thickness was appropriate under the circumstances that existed when the Board so ordered.

M3-SEC-3

[p.7 and elsewhere] SEC is seeking to understand better how performance based regulation (IRM) increases or decreases the risk that a utility will be able to recover its prudently incurred costs, relative to forward test period cost of service regulation.

- a. Please explain how decoupling costs from rates makes revenues more variable, and/or makes income more variable, and how that translates into a greater or lesser risk of non-recovery of costs.
- b. Please explain how longer periods of rate and revenue certainty affect costs and cost management, and how that translates into a greater or lesser risk of non-recovery of costs.
- c. Please provide any empirical data in the expert's possession showing the increased cost of equity or equity thickness required when a generation utility is regulated under IRM.

M3-SEC-4

[p.12] Please confirm that legacy coal generation businesses face substantial risks related to future government actions and environmental controls. Please provide any information available to the expert on the appropriate equity thickness and return on equity for a generation utility that is solely or primarily generating electricity from existing coal facilities. Please provide any information available to the expert that compares the required equity thickness and return on equity for coal generation with the thickness and return for a nuclear generation business, or with the thickness and return for a hydroelectric generation business.

M3-SEC-5

[p.14] Please describe the extent, if any, to which the operating risk of OPG is reduced by:

- a. The mechanisms in place to allow flow through of cost components; and/or
- b. The implicit government guarantee of recovery of costs due to the dominant position of OPG in the Ontario generation sector.

To the extent, if any, that these reductions can be quantified empirically, please provide the quantified risk reductions.

M3-SEC-6

[p.17 and 34] With respect to the comparator group selection:

- a. Please explain why Bonneville, TVA and BC Hydro, which have higher concentrations of hydroelectric generation, more comparable to OPG, and are all AA or AAA rated and have equity less than 25%, are not better comparators for OPG than US investor-owned utilities with broadly different risk profiles.
- b. Please provide further details as to why these three utilities were excluded from the expert's sample.
- c. Please recalculate the average and median from the expert's sample if these three utilities were included in the sample.

M3-SEC-7

[p.18] Please provide the source of the "understanding" in fn. 36. Please advise whether the term "generation capacity" includes all capacity, whether or not available, or only capacity available to produce electricity at any given time.

M3-SEC-8

[p.22] Please confirm that the expert assumes OPG has 100% of its generation under regulation for the purposes of its equity thickness, and thus has zero market exposure. Please explain how this expert has adjusted the peer group risk to reflect the higher market exposure for the peer group compared to OPG.

M3-SEC-9

[p.23] Please confirm the expert's opinion that the equity thickness for OPG should be greater because of the risk that OPG will incur imprudent costs associated with the Darlington Refurbishment Program.

M3-SEC-10

[p.27] Please provide the details behind Figure 4, including the timing and capacity value of each unit of each nuclear station during this period. By way of example, if the Figure assumes that Darlington Unit #3 will be part of installed capacity for certain years, but not others, please advise how much capacity for that unit is included in the capacity figure for each year.

M3-SEC-11

[p.30] SEC is seeking to understand whether, if at all, demand destruction due to increasing nuclear costs and prices will have a future impact on OPG's ability to recover all costs for all of its potential production. Please advise whether the expert has reviewed this possibility, and if so what conclusions the expert has reached, if any, with respect to this risk.

M3-SEC-12

[p.32] Please advise the median and average hydroelectric generation in the refined proxy group, and compare that to OPG for each of the next five years. Please advise the median and average nuclear generation in the refined proxy group, and compare that to OPG for each of the next five years.

M3-SEC-13

[p.34] Please restate Figure 6 showing, for each of the companies on the list, the percentage of generation from each type of fuel or technology, adding up to 100% in each case. Please add OPG to the list for comparison purposes, and show the percentages by fuel or technology forecast for OPG for each of 2017 through 2021.

M3-SEC-14

[p.36] Please confirm that all of the credit metrics identified are measures of cash flow, calculated various ways, relative to debt or debt service requirements. Please confirm that the only two ways to improve these metrics are a) increase cash revenues from increased production or increased prices, or b) decrease the principal or interest on debt. Please explain how an external guarantee of debt or debt service affects the importance of any of the identified credit metrics.

M3-SEC-15

[p.39] Please estimate the portion of the proposed 3% increase in equity thickness that is caused by risks associated with the Darlington Refurbishment Program.

M3-SEC-16

[p.43] Please provide details on which risks associated with the forecast construction program that are NOT “offset by the protections provided by the province”.

M3-SEC-17

[p.44] SEC is seeking to understand the interaction, if any, between OPG’s history of failing to achieve its allowed rate of return in past years and the analysis done by the expert. Please provide the expert’s view on any interaction between this history of under-earning and:

- a. OPG’s existing and forecast credit metrics and credit rating, and
- b. The appropriate level of ROE and equity thickness for OPG going forward.

All of which is respectfully submitted this December 2, 2016.