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August 26, 2014

BY EMAIL & BY COURIER

Ms. Kirsten Walli
Board Secretary
Ontario Energy Board
2300 Yonge St, Suite 2701
Toronto ON M4P 1E4

Dear Ms. Walli:

**Board File No. EB-2013-0321 --- Ontario Power Generation Inc.
2014 – 2015 Payment Amounts
Energy Probe – Final Submission**

Attached please find the Submissions of Energy Probe Research Foundation (Energy Probe) in the EB-2013-0321 proceeding for consideration of the Board

Should you require additional information, please do not hesitate to contact me.

Yours truly,

David S. MacIntosh
Case Manager

cc. Colin Anderson, Ontario Power Generation Inc. (By email)
Carlton D. Mathias, Ontario Power Generation Inc. (By email)
Crawford Smith, Torys LLP (By email)
Charles Keizer, Torys LLP (By email)
Norman Rubin, Consultant to Energy Probe (By email)
Lawrence Schwartz, Economic Consultant to Energy Probe (By email)
Interested Parties (By email)

Energy Probe Research Foundation 225 BRUNSWICK AVE., TORONTO, ONTARIO M5S 2M6

Phone: (416) 964-9223 Fax: (416) 964-8239 E-mail: EnergyProbe@nextcity.com Internet: www.EnergyProbe.org

Ontario Energy Board

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

AND IN THE MATTER OF an Application by Ontario Power
Generation Inc. pursuant to section 78.1 of the *Ontario Energy
Board Act, 1998* for an order or orders determining payment
amounts for the output of certain of its generating facilities.

FINAL ARGUMENT ON BEHALF OF
ENERGY PROBE RESEARCH FOUNDATION
(“ENERGY PROBE”)

August 26, 2014

**Final Argument On Behalf Of
Energy Probe Research Foundation**

How these Matters came before the Board

1. Energy Probe attended OPG's Stakeholder Information Session held in advance of the current Application filing, held on September 24, 2013.
2. On September 27, 2013, Ontario Power Generation Inc. (the "Applicant" or "OPG"), filed an application with the Ontario Energy Board (the "Board") seeking an Order or Orders of the Board for approval of increases in payment amounts for the output of its nuclear generating facilities and for the currently prescribed hydroelectric generation facilities effective January 1, 2014. The application also seeks approval for payment amounts for newly prescribed hydroelectric generation facilities to be effective July 1, 2014. Energy Probe Research Foundation ("Energy Probe") filed a Notice of Intervention on October 28, 2013.
3. On January 24, 2014 Energy Probe filed submissions on the Draft Issues List. On February 11, 2014 Energy Probe filed its surreply on the Draft Issues List. On February 24, 2014 Energy Probe filed its interrogatories to OPG. On March 31, 2014 Energy Probe filed its submission on Issues prioritization.
4. Energy Probe participated in the Technical Conferences held on July 22 and July 23, 2014. Further, Energy Probe took part in the intervenor teleconference on May 6th to discuss prioritization of issues and the May 20, 2014 intervenor meeting to discuss the upcoming Settlement Conference.

5. A Settlement Conference was held on May 21, May 22, May 23 and May 26, 2014. Oral Hearings commenced on October 4, 2010. Energy Probe participated in both and conducted cross-examination of a number of the Applicant's witness panels during October and November.

6. Energy Probe participated in the Oral Hearing which took place on June 12, June 13, June 15, June 17, June 18, June 19, June 20, June 23, June 24, June 26 and June 27, 2014. A Technical Conference took place on July 8 and July 9, 2014 in regard to updates that were filed with respect to the Darlington refurbishment project attended by all parties.

7. The Oral Hearing resumed on July 14 and continued through July 15, July 16, July 17 and July 18, 2014.

8. The Applicant filed Argument-in-Chief on July 28, 2014 and Board staff filed Submissions on August 19, 2014.

9. Energy Probe has conducted itself as an all issues intervenor throughout this proceeding. In its Argument, Energy Probe will not seek to explore all outstanding Issues before the Board, but will be examining those Issues of concern to Energy Probe where we believe we can be of most assistance to the Board.

3. CAPITAL STRUCTURE AND COST OF CAPITAL

Issue 3.1 (Primary): What is the appropriate capital structure and rate of return on equity for the currently regulated facilities and newly-regulated facilities?

Ref: Ex. L/Tab 3.1/Sch 17 SEC-024/Attachment 1

Deemed Capital Structure and Business Risk

THE EQUITY RATIO

10. OPG does not seek a change in the overall (or combined) 47% deemed equity thickness that the Board has adopted for OPG's regulated hydro and nuclear businesses. This is despite the finding in the Foster Report to OPG dated December 2013 that OPG's business risk from its regulated hydroelectric business has increased as a result of adding the newly-regulated hydroelectric plants. Nevertheless, the Foster Report does not recommend an increase in the 47% deemed equity thickness.

11. The Foster Report states that OPG's business risk is "somewhat higher" (p.23) than when the Board adopted the 47% deemed equity thickness. It attributes this to the higher operating risks of the newly-regulated hydroelectric plants in relation to OPG's existing regulated hydroelectric business.

12. The Foster Report attributes the higher operating risks of newly-regulated facilities to

- a. the larger number of structures and dams, their remoteness and dispersal and variability of production associated with inland rivers (p.12)
- b. "greater exposure to First Nations risk" (p.12)
- c. higher "incentive regulation risk" for both the hydroelectric and nuclear operations (p.16).
- d. the view that the equity thickness is to be set by reference to both company-specific and business-line issues (Transcript, Vol 10, June 26, 2014, p.89 ln 11-14)

13. Energy Probe submits that the Foster Report's conclusion regarding the higher relative operating risks of the newly-regulated hydro plants is not warranted by the facts it relies upon because, following the above sequence.

- a. OPG has considerable experience operating remote and dispersed structures and dams. Further, as the Foster Report notes, the Hydroelectric Water Conditions Variance Account mitigates the risk of variable production.
- b. OPG has experience with so-called "First Nations risk". Moreover, in her testimony in response to Energy Probe's question, Ms. McShane stated that she did not remember how many First Nations bands were involved in the negotiations with OPG nor could she give an indication how long it would take to resolve the issues (Transcript, Vol 10, June 26, 2014, p. 92 ln 1-p.92 ln 6). Indeed, her testimony in response to a question from SEC was that she learned about First Nations risk only from OPG and made no independent inquiries or confirmation of the alleged higher risk (Transcript, Vol 10, June 26, 2014, p. 108 ln 3 – p.11 ln 6). Her evidence on First Nations risk does not meet the standard of independence required of experts appearing before the Board and should be ignored.
- c. Ms. McShane's view, that incentive regulation is inherently risky because a regulated utility cannot be certain of cost recovery thereunder, must be mistaken because it challenges the very basis for moving away from cost-based ratemaking. In her testimony, she states that utilities have decreasing scope to introduce further efficiencies over time "because you can only reduce costs so much while maintaining safe and reliable service." (Transcript, Vol 10, June 26, 2014, p.91 ln 18-19) Indeed, it is the entire point of incentive regulation to provide continuous incentives for greater efficiency and higher profits.
- d. Finally, as noted in the Foster Report, the Board considered the technology-appropriate equity thickness (45%) based only on the higher risks of hydroelectric generation compared to electricity transmission and distribution utility operations (40%) (p.15). Ac-

cordingly, the increase in company-specific risk that the Foster Report alleges due to the newly-regulated hydro plants would have to result in higher relative risk for that ratio to be changed. There is no evidence in the record that suggests that that has occurred. Thus, even if the Board had adopted technology-specific equity ratios, it would not consider the alleged change in the business risk of OPG's hydro operations as a reason to alter that ratio because the risk relative to transmission and distribution has not changed. Accordingly, Ms. McShane's testimony that changes in the hydro business risk should be considered in determining the overall (or combined) equity thickness is at variance with Board policy.

14. Energy Probe submits that there is no convincing evidence that the technology-specific risk in OPG's hydro business has increased, yet it can be argued that that risk has decreased relative to the level thereof prior to adding the newly-regulated hydro plants. Nevertheless, under the Board's approach to determining the equity thickness, this change in company-specific risk is not a consideration. There is no evidence in this case that hydro generation is less risky than transmission and distribution, so the overall (or combined) equity thickness should remain at 47%.

4. CAPITAL PROJECTS

Issue 4.4 (Primary): Do the costs associated with the Niagara Tunnel Project that are subject to section 6(2)4 of O. Reg. 53/05 and proposed for recovery, meet the requirements of that section?

Ref: Exh. D1/Tab 2/Sched. 1/p.22-23

Design/Build v. Design/Bid/Build

15. In connection with the Niagara Tunnel Project, OPG's Application (Exh D1/Tab 2/Sch 1/pp. 22-23), briefly discusses the considerations that led it to adopt a "Design Build (DB)" contract rather than a "Design Bid Build (DBB)" contract. The DB agreement was awarded to Strabag in August 2005. Energy Probe submits that certain costs of the Niagara Tunnel Project are due to management mistakes in procurement and should be charged to OPG's Shareholder rather its customers.

16. The principal reasons for DB given in OPG's Application are time savings, cost savings, and savings in management resources that would be needed to manage the "interface between the design contractor and the construction contractor" under DBB.

17. However, due to serious scheduling delays and higher costs resulting from unexpected rock fall in Queenston shale formation and from the subsequent resolution of the resulting conflicts, OPG and Strabag negotiated an Amended Design-Build Agreement in May 2009.

18. It is noteworthy that OPG had considered the alternative of terminating Strabag and engaging another contractor. According to OPG's Application, it dismissed this alternative, in part, due to "the cost and schedule consequences of locating, hiring and mobilizing a replacement contractor". (Exh D1/Tab 2/Sch 1/p.102).

19. Energy Probe submits that, stated differently, the real concern was the fact that Strabag had designed the project pursuant to the DB Agreement, using its own design and construction expertise and experience and could not be replicated by a replacement contractor. Indeed, OPG chose the DB procedure, at least in part, to gain those benefits from the selected contractor (*ibid.*, p.22). A replacement construction contractor would not have Strabag's proprietary knowledge of the design or its specialized construction capabilities needed to implement it.

20. The centrality of these concerns came out in the Hearing. In Panel 3, Mr. Roger Ilsley, OPG's expert, emphasized precisely these elements of DB procurement:

There is a consideration that the people who know most about this process are the contractors. And necessarily that information is proprietary; they don't share it.

So the consultant that you hire may not have the expertise in the difficult project that you are contemplating.

So how do you get that expertise into the process during the development of the project documents? That's where the design bid process or procurement process comes from. It allows you, as the owner, to go out and find, say, half a dozen potential design-build teams.

Now, a design-build team would consist, first of all, of the contractor himself, who would then engage separately his own designer. But the contractor is in charge of the preparation of the proposed -- response to a proposal.

But from the owner's perspective, first of all he will set send out an SOQ, a statement of qualification request. Respondee will be reviewed and then, from that, he will select a short list of three to four design-build teams.

Then there is the process of developing the design, which is different. The process is one of collaboration. So a period of time -- first of all, you have three selected; each of those is running parallel at the same time with the development of the design over a period of time, and you would communicate with each party. And some information they give you is proprietary because they think it's going to give them a bidding advantage.

But the essential thing is you would get their expertise. You would understand why they are doing what they are doing, how they are designing their machine and why, and those elements of each particular preferences -- sometimes contractors prefer doing things a certain way; they are used to do that, and they understand it more -- would then be incorporated in their design.

Now, when they provide their design and proposal, they also give you a number, a bid quantity. So there are two parts to it, usually in terms of evaluation. To evaluate the winner, you have two parts to the process. One is you would score him on the quality of his proposed and design approach, and you would provide a score for that.

Then you would provide a score for the dollar value of his bid. You combine those scores, and then you arrive at a best value approach or a winning bidder.

But during that process, you, the client, the owner, has satisfied himself, to the degree that's possible, that he is engaging the best contractor, that the contractor understands what the issues are and then, therefore, priced it accordingly.

So that's the design-build, and the advantages to it are shortening of the overall procurement process. And the other particular advantage, as I say, is that you engage the expertise of the contractor in the design process.

(Transcript, Volume 2, June 13, 2014, pp.89 ln 27-91 ln 23)

21. The oral evidence of OPG's Mr. Young confirms that the apparent savings of time, financial and management resources led it to adopt DB procurement:

DR. SCHWARTZ: Mr. Young the opportunity because he wanted to address it.

I guess the question is this overall: Why would two separate procurement processes have increased overall cost, which is perhaps another way of saying does OPG use design- build exclusively, or does it use design bid/build as well on complex projects?

MR. YOUNG: I have used both processes. As Mr. Ilsley said a minute ago, one of the big advantages of the design-build process is that you can have the contractor and the designer working together.

So you can take the real world practicality of the contractor who has built other tunnels, or whatever it is you are building, who understands the problems of the construction methods very well, and you can take the textbook engineering of the designer and you marry those together. And together you can get a better overall product, which can be executed more efficiently.

So that's really why you'd be looking to the design-build process to give you a lower cost.

DR. SCHWARTZ: All right, thank you.

MR. YOUNG: So bringing the creativity of all the parties together to generate the best result. (Transcript, Vol 2, June 13, 2014, pp.99 ln 2-100 ln 24)

22. Based on the above considerations, Energy Probe submits the OPG's option to terminate Strabag and hire a replacement contractor was a theoretical option only. By proceeding initially by way of the DB procurement method, OPG effectively gave Strabag a "first mover advantage" enabling it to design a project that drew heavily on its unique capabilities which could not be duplicated. Indeed, both Mr. Ilsley and Mr. Young saw this as advantageous to OPG.

23. Energy Probe pursued the issue of the first mover advantage in the DB procurement method; Mr. Ilsley felt that there were no problems:

DR. SCHWARTZ:...Let me make a suggestion to you, just to clarify. And I think maybe you have touched on it when you said there aren't many people who have done this. Tell me if you think it might be a valid, if unattractive, consideration to say that some of the people who can actually construct it wouldn't take it unless they could actually do the design work, because of the specialized knowledge involved and their fear that they would be -- maybe it's not true, but maybe the belief that their own proprietary knowledge might somehow seep out if they were involved in a design-bid/build.

MR. ILSLEY: No, I don't think that's it.

DR. SCHWARTZ: That's fine.

(Transcript, Volume 2, June 13, 2014, pp. 96 ln 23—97 ln 10)

24. In effect, Mr. Ilsley denies that the first mover advantage that he says is inherent to DB procurement when contractors possess idiosyncratic information that they are unwilling to share. From his oral evidence cited above, he is clearly aware of the advantage but apparently he does not find it problematic, even though it was an important consideration in OPG's decision not to terminate Strabag.

25. In the Hearing, Mr. Roger Ilsley, identified as one of the world's leading tunnel experts (Transcript, Volume 1, p.31, ln 15), noted the relevance of his experience in a Washington D.C. project :

Why it's relevant here is that the procurement method being used on that project is design build, which is similar to -- well, the same as was used for this project. And through my some eight years of experience on that project, I had gained an intimate knowledge of the necessary requirements for design build contract, which is different than the design bid build contracts, which have been traditionally used in North America. (Transcript, Vol 1, June 12, 2014, p.37 lines 12-19)

26. In the Hearing, Energy Probe asked Mr. Ilsley three times to identify the advantages of DBB that, according to his own testimony, had made it the dominant form of procurement in North America. (Transcript, Vol 2, June 13, 2014, pp.89 ln 23+). Energy Probe finds it noteworthy that Mr. Ilsley did not answer its repeated question but instead talked only about the advantages of DB.

27. Energy Probe finds Mr. Ilsley's testimony highly puzzling. He testifies that contractors have better information than the organizations that hire them and do not want to share it, yet he denies that it is problematic in DB procurement. Together with his non-responsive answers to Energy Probe's questions about potential advantages of DBB procurement, Energy Probe submits that Mr. Ilsley lacks credibility in this part of his evidence.

28. Energy Probe recognizes that the procurement decision is a management responsibility, whether the chosen process is DB or DBB. This means, inter alia, that management must accept that any losses due specifically to a flawed procurement decision are its responsibility. Allowing OPG to recover all of the costs it now claims would fail to recognize the mistake that the OPG board and management made in their selection of DB procurement. Specifically, those additional expenditures that OPG incurred because it could not terminate Strabag should be deducted from its claimed amount.

29. Energy Probe recognizes that OPG would likely have incurred significant expenditures on the Niagara Tunnel Project under DBB procurement. It is here concerned only with those expenditures that OPG incurred because, realistically, it could not terminate Strabag.

30. The precise amount of those additional expenditures is not indicated in the Application but certain amounts therein are relevant to Energy Probe's concern. In particular, Table 8-Total Project Capital indicates that the following amounts were added in the Superseding Release Business Case Summary:

e. Interim Completion Fee	\$10 million
f. Substantial Completion Fee	\$10 million
g. Schedule Incentive	\$40 million

Energy Probe submits that, on the existing evidence, the aggregate \$60 million is the best estimate of the minimum amount that OPG spent because it could not terminate Strabag.

31. Against this amount would be the additional cost to OPG of using DBB procurement initially rather than the DB procedure that it adopted. Energy Probe accepts OPG's evidence that the sequential procurement under DBB "likely would have increased overall cost" (Exh. D1/Tab2/Sch 1/p.23). However, as the RFP process for the DB was preliminarily set at \$10 million (*ibid.*), it is reasonable to assume that the DBB process would have cost another \$10 million.

32. On this basis, Energy Probe submits that the minimum cost of OPG's inability to terminate Strabag was approximately \$50 million and that this amount should be deducted from the \$1,452.8 million increase in the rate base due to the Niagara Tunnel Project.

Issue 4.10 (Primary): Are the proposed test period capital expenditures associated with the Darlington Refurbishment Project reasonable?

33. Energy Probe agrees with the Board staff submission on this issue in its view that the Board should not make a finding on the reasonableness of the proposed capital expenditures as most of the costs associated with these projects will not go into service in the test year.

9. DEFERRAL AND VARIANCE ACCOUNTS

Issue 9.8 (Secondary): Is the proposal to discontinue the Hydroelectric Incentive Mechanism Variance Account appropriate?

34. Energy Probe does not support the discontinuance of the Hydroelectric Incentive Mechanism Variance Account for the same reasons as provided by Staff in their submissions. Energy Probe adopts the London Property Management Association (LPMA) position that the account should be maintained and it should continue to operate as it does now.

Issue 9.9 (Primary) (reprioritized): What other deferral accounts, if any, should be established for OPG?

35. Energy Probe had the opportunity to review the submissions of LPMA in respect of this issue and supports their position that the Board should establish two new deferral accounts for OPG.

36. The first being in respect of the potential gross revenue charge ("GRC") holiday discussed in Exhibit L, Tab 6.1 Schedule 13 LPMA-011. In that interrogatory response, OPG indicates that it has not proposed a variance account related to the potential deduction allowed under Ontario Regulation 124/02 for eligible capacity of new, redeveloped, or upgraded stations. LPMA submitted that the Board should credit a variance account to record all amounts that should flow back to ratepayers. LPMA noted that this could amount to around \$20 million per year and even if no decision is received from the MNR during the test period, the deduction could be applied retroactively to when OPG files the application.

37. The second account that LPMA submits should be established would be for the Board approving a cash basis for pension and OPEB costs. This variance account would track the difference between forecast cash payments included in the revenue requirement and actual cash payments made.

COSTS

Energy Probe has participated actively in the prehearing and hearing stages of this proceeding and has managed its time in an efficient manner in cooperation with other intervenors.

Accordingly, we request that the Board grant a Cost Award to reimburse 100% of our legitimately incurred costs.

Respectfully Submitted at Toronto this 26th Day of August 2014.

Energy Probe Research Foundation