July 4, 2008

VIA EMAIL & VIA 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-2007-0050 Hydro One Networks Inc.
Leave to Construct Application
Energy Probe Argument

Attached, please find 10 hard copies of the Argument of Energy Probe Research Foundation (Energy Probe) in this proceeding. An electronic version of this communication will be forwarded in PDF format.

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

Yours truly,

David S. MacIntosh
Case Manager

cc: Glen MacDonald, Hydro One Networks Inc. (By email)
Gordon Nettleton, Osler, Hoskin and Harcourt LLP (By email)
Peter Faye, Counsel to Energy Probe (By email)

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EB-2007-0050

Ontario Energy Board

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

AND IN THE MATTER OF an Application by Hydro One Networks Inc. pursuant to section 92 of the Act, for an Order or Orders granting leave to construct a transmission reinforcement project between the Bruce Power Facility and Milton Switching Station, all in the Province of Ontario.

Final Argument On Behalf Of

Energy Probe Research Foundation

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How these Matters came before the Board

1. On March 29, 2007, Hydro One Networks Inc. (the "Applicant" or "Hydro One"), at the urging of the Ontario Power Authority (the "OPA"), filed a Leave to Construct application with the Ontario Energy Board (the "Board") seeking an Order of the Board to construct some 180 kilometres of double-circuit 500 Kilovolt ("kV") electricity transmission line adjacent to the existing transmission corridor (500 kV and/or 250 kV) extending from the Bruce Power Facility in Kincardine Township to Hydro One's Milton Switching Station in the Town of Milton (the "Bruce-Milton Transmission Reinforcement Project") at an estimated cost of some $635 million dollars. The Board assigned File No. EB-2007-0050 to this application.

2. The Board assigned File No. EB-2007-0051 to the Bruce to Milton Early Access to Land Prior to Approval of the Bruce-Milton Transmission Reinforcement Project application seeking an Order to provide early access to land related to the leave to construct application.

3. The Board issued a Notice of Hearing on April 12, 2007, for both EB-2007-0050 and EB-2007-0051.

4. Energy Probe Research Foundation ("Energy Probe") reviewed prefiled evidence submitted by Hydro One and, on becoming aware that no party with a close affiliation with ratepayers other than affected landowners had intervened in these proceedings, filed a Notice of Intervention on June 14, 2007 seeking status as a late intervenor. Confirmation of Energy Probe's requested status was issued by letter dated June 18, 2007.

Argument Overview

5. Other than Issue 6, Aboriginal Peoples Consultations, Energy Probe has conducted itself as an all issues intervenor throughout this proceeding.

6. Of all the parties taking part in this proceeding, Board and Board staff excepted, it has become apparent at least to Energy Probe that it was the only party without a clear, preconceived position on the project's need. Energy Probe wished to challenge the evidence of Hydro One and intervenors, but its focus was on protecting the public interest and the interest of ratepayers. It has remained open to be convinced on the need for the project.

7. 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.

Project Need and Justification

Issue 1.1 Has the need for the proposed project been established?

8. The evidence of need for a new 500 kV double circuit transmission line between the Bruce Power complex and Milton Switching station appears to Energy Probe to rely principally on unproven expectations that significant new generation will be developed in the Bruce area that will exceed the carrying capacity of the existing transmission network.

9. The most significant source of this new generating capacity is the expected refurbishment of two Bruce A nuclear units that will add 1500 MW to the current nuclear capacity. However, because other Bruce units will be removed concurrently with the return of the refurbished Bruce A units, the existing transmission system will be capable of delivering all Bruce Nuclear output until 2013. At that time, all eight nuclear units are forecast to be operating comprising a total generating capacity of about 6400 MW which would exceed the existing transmission capacity.

10. An under capacity transmission situation will exist for approximately 5 years, from 2013 until 2018, when the Bruce B units reach the end of their useful lives. (See Exhibit B, Tab 3, Schedule 1, Figure 1 for a graph depicting the generation and transmission capacity over the relevant timeframe.)

11. A decision to refurbish the Bruce B units has yet to be made. Therefore, there is a risk that, should these units not be refurbished, the requested new transmission line will only be useful for the 5 years during which both the Bruce A and Bruce B plants are both operating. After that the proposed transmission line will be stranded because the existing network will be capable of carrying all of the nuclear capacity in the area.

12. Energy Probe submits, if a much lower cost alternative to the proposed line is available, it should be implemented at least until a decision is made on the future refurbishment of the Bruce B units.

13. The second contribution to generating capacity in the Bruce area is the committed and forecasted wind generation. Currently, the OPA has committed to 700 MW of wind which is included in the analysis at nameplate capacity.

14. Energy Probe finds the inclusion of full nameplate capacity for intermittent wind generation unrealistic. Although it is true that any individual wind farm could generate at nameplate capacity on any given day, no evidence was led that widely separated wind farms would be likely to simultaneously generate at nameplate.

15. The Applicant's argument that factoring wind generation for diversity is tantamount to planning for congestion (see Tr. 3:p. 28, line 16 to p. 30, line 10) is unconvincing to Energy Probe. Firstly, it assumes that the Bruce A units will be refurbished and perform reliably; secondly, that the Bruce B units will also be refurbished starting in 2018; and thirdly, that geographically dispersed wind generators will be generating at full nameplate capacity simultaneously.

16. Until the Bruce refurbishment events are more certain and evidence is produced that dispersed wind generators typically experience similar wind conditions simultaneously, it seems to Energy Probe that rejecting any of the committed wind generation will not be needed.

17. The Applicant also cites the OPA's forecast that an additional 1000 MW of wind generation is possible in the Bruce area and this is also included at nameplate capacity. In addition to the problem cited above about not factoring for diversity of wind generation sources, Energy Probe finds it problematic that speculative generation should be used to substantiate a costly transmission line.

18. In Energy Probe's submission, other assumptions used by the applicant to model the effect of wind generation on the transmission system are similarly unrealistic. In cross examination, the Applicant's witnesses asserted that the 1000 MW of prospective wind generation was modeled by injecting it at the Bruce station on the 500 kV system (Tr.3: p. 20, lines 7-10). This assumption maximizes the required capacity away from the Bruce complex but is only valid if the wind farms end up in close proximity to the Bruce complex. The OPA's analysis of potential wind generation sites does not conclude that they will all be close to the Bruce complex. Therefore, injecting the entire 1000 MW at the Bruce station overstates the required transmission capacity away from the Bruce complex.

19. In cross examination, the Applicant conceded that some wind generation was connected at distribution voltage and serves local load. (Tr.3:p. 20, lines 5-16). Energy Probe submits that any generation that serves local load does not require transmission capacity, so including it in the total capacity that needs to be moved away from the Bruce overstates the required transmission capacity. Despite the complicated rationalization that appears in the transcript to include distribution facilities in the network analysis, Energy Probe finds the argument unnecessarily complicated and unconvincing.

20. The Applicant admits that prospective wind generation will require enabler lines either at transmission, sub transmission or distribution voltages. In Energy Probe's submission, how these generators are connected to the distribution or transmission system will determine their impact, if any, on the required transmission capacity away from the Bruce Complex. The evidence of the Applicant does not analyze connection alternatives that could minimize the requirement for additional transmission capacity. This has the effect of overstating the transmission capacity required.

Issue 1.4 Is the project suitably chosen and sufficiently scalable so as to meet all reasonably foreseeable future needs of significantly increased or significantly reduced generation in the Bruce area?

21. The evidence for the transmission line alternative is that it will accommodate all foreseeable generation additions in the Bruce. Because of the uncertainties associated with the successful refurbishment of Bruce A units, the potential refurbishment of the Bruce B units and with uncommitted wind generation, there is a real possibility that the new line may not be required. However, once built, it is not scalable to accommodate reductions in generation and the cost of building the line will be stranded.

22. Energy Probe submits that it would be more prudent to postpone the decision to build this line until the prospective additions to generation capacity are more certain.

Issue 2.5 Is the project a better project than the reasonable alternatives?

23. The competing alternative to the transmission line is the installation of series compensation combined with the Bruce special rejection scheme. Energy Probe does not claim technical competence to evaluate this alternative but finds the evidence of the Saugeen Ojibway Nations ("SON") expert, Mr. Whitfield Russell more convincing than that of the Applicant.

24. Accordingly, Energy Probe supports the conclusions reached by Mr. Russell that the compensation and rejection scheme alternative will be capable of providing the necessary transmission capacity in the near and mid-term.

Issue 2.6 Are the project's rate impacts and costs reasonable for:

- **The transmission line;**
- **The station modifications; and**
- **The Operating, Maintenance and Administration requirements.**

25. Energy Probe acknowledges that the Applicant is not required to evaluate the rate impacts of its proposal in the context of rate pressures from other sources. However, in other applications before the Board from OPG, Hydro One Distribution and municipal distributors, it is clear that electricity rates will have to be significantly increased if all of the applicants' revenue requirements are approved. Energy Probe submits the Board needs to consider the customer impact from all contributing sources in its decisions to ensure that customer interests are protected.

In Conclusion

26. In respect of Issue 1.1, Board staff have suggested, at Page 4, second paragraph of their Submission dated July 2, 2008, that parties address their comments in respect of "whether there is some uncertainty regarding the refurbishment of the Bruce B site, and if so, how the Board might incorporate that uncertainty into an order."

27. Energy Probe notes that Board staff, on Page 4 of their Submission, has referenced the June 16, 2008 announcement from Infrastructure Ontario concerning Ontario Government nuclear plans:

> **As part of Ontario's energy plan to maintain 14,000 MW of nuclear generation capacity, the Bruce Site will continue to provide approximately 6,300 MW of baseload electricity through either refurbishment of the Bruce B units or new units at Bruce C. A joint assessment will be undertaken to determine which option delivers the best value for Ontarians.**

28. Proponents of the Application might point to that announcement as definitive proof of certainty, and yet, this is an announcement by still another crown corporation. Energy Probe notes that the Ministry of Infrastructure disappeared into a joint Ministry of Energy and Infrastructure within one week of that announcement. The Minister responsible for Infrastructure has been assigned to the Ministry of Health and Long-Term Care. The Energy Minister has been assigned no Portfolio. The Minister of Health and Long-Term Care has been assigned the Ministry of Energy and Infrastructure.

29. Energy Probe submits that there is a level of uncertainty that the Board needs to take into consideration when determining its Decision. Before the time that the Bruce site assessment is completed, the government will have picked the technology for new nuclear development. Depending on that decision, it may determine that the Bruce Power Inc. site is not the new build location.

30. Certainly, Energy Probe believes that the Applicant put forward a well-presented and convincing Application for the need for this Project should either the refurbishment of the Bruce B units or new units at Bruce C be ordered by the government. Without that final piece, the Project lacks a compelling basis for approval.

31. It is submitted that the Board should not rely on calculation of generation based solely on nameplate capacity, neither for nuclear generation, nor for wind power. In the past when the Bruce facility had all 8 units operational, it seldom achieved power generation at nameplate capacity, and then only briefly. Its normal power generation operational level was below 80% of nameplate.

32. The Submission of Board staff, at Page 7, second paragraph, in discussing nuclear generation, notes that during the years that all 8 Bruce units were operational, it was only during a 3 month period in 1991 that 100% of name plate capacity was achieved. Energy Probe has discussed wind generation in Paragraphs 13 to 20 above and will not repeat its argument in respect of the use of nameplate capacity in evaluating transmission requirements.

33. Energy Probe does note that the Board is presently in the midst of a regulatory process in respect of the funding of transmission line connections to generation projects: Review of Cost Responsibility Policies for Connection to Electricity Transmission Systems (EB-2008-00030). The outcome of this process may impact wind generation projects in the Bruce peninsula.

34. The evidence of the expert witness for SON, Whitfield Russell, was insightful both in the area of a series capacitor based alternative near-term approach allowing time to resolve uncertainty, and in the area of net present value analysis of alternatives.

35. It is the concluding submission of Energy Probe that the Board approve the Application subject to two Conditions of Approval in addition to those proposed by Board staff. First, authorization for Leave to Construct is made dependant upon the Ontario Government ordering either the refurbishment of the Bruce B units or the construction of new units at Bruce C. Second, Bruce Power Inc. has successfully completed the Environmental Assessment and licensing processes under federal statutes and the Canadian Nuclear Safety Commission, in compliance with the Canadian Environmental Assessment Act, in response to either order. Energy Probe notes that in the interim, Hydro One is capable of taking near and mid-term initiatives without the direction of the Board.

Costs

36. Energy Probe submits that it participated responsibly in this proceeding. Energy Probe requests the Board award 100% of its reasonably incurred costs.

ALL OF WHICH IS RESPECTFULLY SUBMITTED

July 4, 2008

Peter Faye, Counsel to Energy Probe Research Foundation