

December 1, 2006

BY COURIER (5 COPIES) AND EMAIL

Ms. Kirsten Walli
Board Secretary
Ontario Energy Board
P.O. Box 2319
2300 Yonge Street, Suite 2700
Toronto, Ontario M4P 1E4
Fax: (416) 440-7656
Email: boardsec@oeb.gov.on.ca

Dear Ms. Walli:

**Re: Pollution Probe – Written Submissions on Draft Report of the Board
EB-2006-0207 – OPA’s IPSP and Procurement Processes**

Pollution Probe thanks the Board for the opportunity to provide comments on its *Draft Report*,¹ and Pollution Probe’s submissions focus on the need to use closely related historical experience and market data when analyzing and reviewing nuclear power and the need for the OPA to present an alternative plan for comparison purposes that uses non-nuclear resources to the fullest extent practically possible.

I. The Need to Use Closely Related Historical Experience and Market Data When Analyzing and Reviewing Nuclear Power

For issues involving nuclear power, particularly with respect to cost-effectiveness and economic prudence, Pollution Probe submits that Board require such analyses and reviews to use input assumptions that are closely related to:

- a) Ontario’s historical experience with CANDU reactors; and
- b) market data with respect to the risk-adjusted cost of capital for nuclear power projects.

Several options exist to meet Ontario’s future baseload electricity needs, including:

- energy efficiency investments;
- biomass power;
- water power from Ontario;
- water power imports from other provinces;
- natural gas-fired combined heat and power; and
- nuclear power.

¹ *Draft Report of the Board on the Review of, and Filing Guidelines Applicable to, the Ontario Power Authority’s Integrated Power System Plan and Procurement Processes* released November 16, 2006.

In addition, while Energy Minister Duncan capped the amount of nuclear power that the OPA could procure at 14,000 MW in his supply mix directive to the Ontario Power Authority (“OPA”),² he did not establish any procurement caps with respect to the other baseload power options noted above.

The OPA’s *Discussion Paper 7: Integrating the Elements – A Preliminary Plan*³ provides insights into the probable OPA IPSP proposal, and Pollution Probe accordingly believes that the OPA will be proposing a power system plan which would obtain 14,000 MW of nuclear power for Ontario in the earliest practical time frame. Pollution Probe also believes that the OPA will assert that acquiring 14,000 MW of nuclear power is the lowest-cost, practical option to meet Ontario’s baseload needs.

However, Pollution Probe submits that the OPA’s nuclear cost analysis is based on a number of very problematic assumptions, including:

- a) very optimistic assumptions about the capital costs of refurbishing or building green field nuclear reactors;
- b) unreasonably low assumptions with respect to the required rate of return on capital for nuclear power projects; and
- c) unreasonably high assumptions with respect to the annual capacity factors of nuclear reactors.

An illustrative example is the OPA’s analysis of the annual capacity factors of nuclear reactors. The OPA’s analysis assumes that Ontario’s existing and new nuclear reactors will have annual capacity factors of 89-90% in 2025.⁴ However, Ontario’s fleet of nuclear reactors has *never* had average capacity factors that approached this level in any year during the past quarter century. In fact, according to the Government of Ontario’s *Direction For Change* white paper, the average annual capacity factors of Ontario’s nuclear fleet actually fell from 80% between 1980-83 to 65% between 1990-96.⁵

Pollution Probe accordingly submits that the Board require analyses and reviews involving nuclear power to use input assumptions that are more closely related to:

- a) Ontario’s historical experience with CANDU reactors; and
- b) market data with respect to the risk-adjusted cost of capital for nuclear power projects.

² Dated June 13, 2006 and available online at http://www.energy.gov.on.ca/english/pdf/electricity/1870_IPSP-June132006.pdf.

³ Released November 15, 2006 and available online at http://www.powerauthority.on.ca/Storage/32/2734_DP7_IntegratingTheElements.pdf.

⁴ See *Discussion Paper 7: Integrating the Elements – A Preliminary Plan*, *supra* note 3 at page 81.

⁵ See page 7 of white paper, which was released in November 1997.

II. The Need for the OPA to Present an Alternative Plan for Comparison Purposes That Uses Non-Nuclear Resources to the Fullest Extent Practically Possible

In light of the probable OPA IPSP proposal involving substantial nuclear power, Pollution Probe submits that the Board require the OPA to present, for comparison purposes, an alternative plan that uses non-nuclear resources to the fullest extent practically possible.

Pollution Probe believes that the rigorous analyses and reviews discussed above would reveal that the OPA's proposed heavy reliance on nuclear power is actually not the least-cost or the economically prudent option for Ontario when compared to other practical potential options.

As the Board correctly notes in its *Draft Report*, its legislative mandate is to ensure that the OPA's proposed plan is "as a whole, economically prudent and cost effective."⁶ However, "economically prudent" and "cost effective" are both *relative*, not absolute, concepts. Pollution Probe therefore submits that, in order to fulfill its mandate, the Board must be able to compare (and subsequently contrast) the OPA's likely proposal to meet our future baseload electricity needs with approximately 14,000 MW of nuclear capacity with an alternative plan that seeks to meet our future baseload needs with non-nuclear resources to the fullest extent practically possible.

Pollution Probe accordingly submits that the Board require the OPA, as part of its IPSP and procurement processes, to present an alternative plan for comparison purposes that meets Ontario's future baseload electricity needs to the fullest extent practically possible from the following options:

- energy efficiency;
- end-use fuel switching from electricity to renewable energy (e.g. geothermal, hybrid solar/electric water heaters) and natural gas;
- biomass power;
- domestic water power;
- water power imports from Quebec, Manitoba and/or Labrador;
- and natural gas-fired combined heat and power plants.

⁶ See page 3.

III. Costs

Pollution Probe respectfully requests reimbursement for 100% of its reasonably incurred costs for participating in this proceeding in accordance with the Board's letters, and cost claims will be filed in due course. As the Board is aware, Pollution Probe is a registered charity that has no pecuniary interest in the outcome of this proceeding, and its membership includes thousands of electricity consumers.

Yours truly,

A handwritten signature in cursive script, appearing to read "B. Alexander", written in black ink.

Basil Alexander

BA/ba