

**KLIPPENSTEINS**

**BARRISTERS & SOLICITORS**

160 JOHN STREET, SUITE 300,

TORONTO, ONTARIO M5V 2E5

TEL: (416) 598-0288

FAX: (416) 598-9520

February 22, 2008

**BY COURIER (10 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 Interrogatories – Part 1  
EB-2007-0050 – Hydro One – Bruce-Milton Transmission  
Reinforcement Project**

Pursuant to the Board's oral decision on February 21, 2008, please find enclosed Pollution Probe's first set of written interrogatories to Hydro One for this matter.

Yours truly,

Basil Alexander

  
For  
Basil Alexander

BA/ba

Encl.

cc: Applicant and Intervenors per Procedural Order #4

**Pollution Probe's Interrogatories for Hydro One – Part 1**

February 22, 2008

**Interrogatory No. 1**

**Ref. Exh. B / T 1 / S 1**

**Issue Number 1.0**

**1.0 Issue:** Project Need and Justification

**Request**

For each month from January 1984 to the present, please state:

- a) the installed capacity at the Bruce Nuclear Station;
- b) the total monthly output (MWh) of the Bruce Nuclear Station;
- c) the peak hour output (MW) of the Bruce Nuclear Station; and
- d) the average capacity factor of the Bruce Nuclear Station.

**Interrogatory No. 2**

**Ref. Exh. B / T 1 / S 1 /**

**Issue Number 1.0**

**1.0 Issue:** Project Need and Justification

**Request**

For each year from 1984 to the present, please state:

- a) the annual output (MWh) of the Bruce Nuclear Station;
- b) the peak hour output (MW) of the Bruce Nuclear Station;
- c) the average annual capacity factor of the Bruce Nuclear Station; and
- d) the average annual capacity factor for each unit of the Bruce Nuclear Station.

### **Interrogatory No. 3**

**Ref.** Exh. B / T 1 / S 1 and Exh. B / T 4 / S 4

#### **Issue Number 1.0**

**1.0 Issue:** Project Need and Justification

#### **Request**

For each year from 2012 to 2036 inclusive, please provide the OPA's estimates of the total generation (MWh) for the Bruce Area. Please also break-out these estimates by the following generation types:

- a) existing Bruce A nuclear reactors;
- b) existing Bruce B nuclear reactors;
- c) re-built Bruce B nuclear reactors;
- d) new Bruce nuclear reactors;
- e) existing wind generation;
- f) committed wind generation;
- g) uncommitted wind generation; and
- h) other.

### **Interrogatory No. 4**

**Ref.** Exh. B / T 1 / S 1 and Exh. B / T 4 / S 4

#### **Issue Number 1.0**

**1.0 Issue:** Project Need and Justification

#### **Request**

For each year from 2012 to 2036 inclusive, please provide the OPA's estimates of the total effective generation capacity (MW) in the Bruce Area at the time of Ontario's province-wide system peak. Please also break-out these estimates by the following generation types:

- a) existing Bruce A nuclear reactors;
- b) existing Bruce B nuclear reactors;
- c) re-built Bruce B nuclear reactors;
- d) new Bruce nuclear reactors;
- e) existing wind generation;
- f) committed wind generation;
- g) uncommitted wind generation; and
- h) other.

**Interrogatory No. 5****Ref. Exh. B / T 1 / S 1****Issue Number 1.0****1.0 Issue: Project Need and Justification****Request**

For each year from 2012 to 2036 inclusive, please provide the OPA's estimates of the Bruce Area's annual electricity consumption (MWh).

**Interrogatory No. 6****Ref. Exh. B / T 1 / S 1****Issue Number 1.0****1.0 Issue: Project Need and Justification****Request**

For each year from 2012 to 2036 inclusive, please provide the OPA's estimates of the Bruce Area's demand (MW) at the time of Ontario's province-wide system peak.

**Interrogatory No. 7****Ref. Exh. B / T 1 / S 1, Exh. B / T 4 / S 4, and Exh. KT.1****Issue Number 1.0****1.0 Issue: Project Need and Justification****Request**

If the proposed Bruce to Milton high-voltage transmission line is not approved, please provide the OPA's estimates of the Bruce Area's locked-in energy (MWh) for each year from 2012 to 2036 inclusive under each of the following scenarios:

- a) The implementation of Hydro One's near-term measures (i.e. dynamic and static reactive resources and upgrading the Hanover to Orangeville line);
- b) The implementation of Scenario A plus the expansion of the Bruce special protection system;
- c) The implementation of Scenario B plus the installation of series capacitors;
- d) The implementation of Scenario C if the Bruce B nuclear reactors are not re-built at the end of their service lives and no new nuclear capacity is installed in the Bruce Area; and
- e) The implementation of Scenario C if the Bruce B nuclear reactors are not re-built at the end of their service lives, no new nuclear capacity is

installed in the Bruce Area, **and** the average annual capacity factor of the Bruce Nuclear Station is 10% lower than the OPA's current estimate.

Please also break-out these annual locked-in energy estimates by the following generation categories:

- a) existing Bruce A nuclear reactors;
- b) existing Bruce B nuclear reactors;
- c) re-built Bruce B nuclear reactors;
- d) new Bruce nuclear reactors;
- e) existing wind generation;
- f) committed wind generation;
- g) uncommitted wind generation; and
- h) other.

### **Interrogatory No. 8**

**Ref.** Exh. B / T 1 / S 1, Exh. B / T 4 / S 4, and Exh. KT.1

#### **Issue Number 1.0**

**1.0 Issue:** Project Need and Justification

#### **Request**

If the proposed Bruce to Milton high-voltage transmission line is not approved, please provide the OPA's estimates of the Bruce Area's locked-in effective capacity (MW) at the time of Ontario's province-wide system peak for each year from 2012 to 2036 inclusive under each of the following scenarios:

- a) The implementation of Hydro One's near-term measures (i.e. dynamic and static reactive resources and upgrading the Hanover to Orangeville line);
- b) The implementation of Scenario A plus the expansion of the Bruce special protection system;
- c) The implementation of Scenario B plus the installation of series capacitors;
- d) The implementation of Scenario C if the Bruce B nuclear reactors are not re-built at the end of their service lives and no new nuclear capacity is installed in the Bruce Area; and
- e) The implementation of Scenario C if the Bruce B nuclear reactors are not re-built at the end of their service lives, no new nuclear capacity is installed in the Bruce Area, **and** the average annual capacity factor of the Bruce Nuclear Station is 10% lower than the OPA's current estimate.

Please also break-out these estimates of the annual locked-in effective capacity by the following generation categories:

- a) existing Bruce A nuclear reactors;
- b) existing Bruce B nuclear reactors;

- c) re-built Bruce B nuclear reactors;
- d) new Bruce nuclear reactors;
- e) existing wind generation;
- f) committed wind generation;
- g) uncommitted wind generation; and
- h) other.

### **Interrogatory No. 9**

**Ref.** Exh. B / T 1 / S 1, Exh. B / T 4 / S 4, and Exh. KT.1

#### **Issue Number 1.0**

##### **1.0 Issue: Project Need and Justification**

#### **Request**

If the proposed Bruce to Milton high-voltage transmission line is not approved, please provide the OPA's estimates of the net present value (in 2007\$) of Bruce Area's locked-in electricity for each year from 2012 to 2036 inclusive under each of the following scenarios:

- a) The implementation of Hydro One's near-term measures (i.e. dynamic and static reactive resources and upgrading the Hanover to Orangeville line);
- b) The implementation of Scenario A plus the expansion of the Bruce special protection system;
- c) The implementation of Scenario B plus the installation of series capacitors;
- d) The implementation of Scenario C if the Bruce B nuclear reactors are not re-built at the end of their service lives and no new nuclear capacity is installed in the Bruce Area; and
- e) The implementation of Scenario C if the Bruce B nuclear reactors are not re-built at the end of their service lives, no new nuclear capacity is installed in the Bruce Area, **and** the average annual capacity factor of the Bruce Nuclear Station is 10% lower than the OPA's current estimate.

If the OPA's discount rate is not the same as the discount rate used by Hydro One to calculate the net present value of the cost for the proposed Bruce to Milton transmission line, please provide the OPA's net present value calculations using:

- a) the OPA's discount rate; and
- b) Hydro One's discount rate.

With respect to these net present value calculations, please provide all of the OPA's input and other assumptions, and please break-out the net present values for each year from 2012 to 2036 inclusive by the following generation categories:

- a) existing Bruce A nuclear reactors;
- b) existing Bruce B nuclear reactors;
- c) re-built Bruce B nuclear reactors;

- d) new Bruce nuclear reactors;
- e) existing wind generation;
- f) committed wind generation;
- g) uncommitted wind generation; and
- h) other.

Please also provide an electronic copy of the OPA's discounted cash flow model which will allow the Board and intervenors to vary the input and other assumptions and re-calculate these net present values.

### **Interrogatory No. 10**

**Ref. Exh. KT.1**

#### **Issue Number 1.0**

**1.0 Issue:** Project Need and Justification

#### **Request**

Please provide OPA's estimate of the net present value (in 2007\$) of expanding the Bruce special protection system.

If the OPA's discount rate is not the same as the discount rate used by Hydro One to calculate the net present value of the cost for the proposed Bruce to Milton transmission line, please provide the OPA's net present value calculations using:

- c) the OPA's discount rate; and
- d) Hydro One's discount rate.

With respect to these net present value calculations, please provide all of the OPA's input and other assumptions, and please break-out the net present values by each year.

Please also provide an electronic copy of the OPA's discounted cash flow model which will allow the Board and intervenors to vary the input and other assumptions and re-calculate these net present values.

**Interrogatory No. 11****Ref. Exh. KT.1****Issue Number 1.0****1.0 Issue: Project Need and Justification****Request**

Please provide OPA's estimate of the net present value (2007\$) of installing series capacitors.

If the OPA's discount rate is not the same as the discount rate used by Hydro One to calculate the net present value of the cost for the proposed Bruce to Milton transmission line, please provide the OPA's net present value calculations using:

- e) the OPA's discount rate; and
- f) Hydro One's discount rate.

With respect to these net present value calculations, please provide all of the OPA's input and other assumptions, and please break-out the net present values by each year.

Please also provide an electronic copy of the OPA's discounted cash flow model which will allow the Board and intervenors to vary the input and other assumptions and re-calculate these net present values.

**Interrogatory No. 12****Ref. As Applicable****Issue Number – As Applicable****Request**

For all of Pollution Probe's interrogatories that ultimately require responses or other information from the OPA, please provide Hydro One's responses to these interrogatories if the OPA cannot provide the responses or other information.



**Interrogatory No. 13****Ref.** As Applicable**Issue Number – As Applicable****Request**

For all of Pollution Probe's interrogatories that ultimately require responses or other information from the OPA, please state if Hydro One does not agree with some or all of the OPA's responses or other information. If so, please also identify the areas of disagreement and provide Hydro One's alternative responses.