Hydro One Networks Inc.

8<sup>th</sup> Floor, South Tower 483 Bay Street Toronto, Ontario M5G 2P5 www.HydroOne.com Tel: (416) 345-5700 Fax: (416) 345-5870 Cell: (416) 258-9383 Susan.E.Frank@HydroOne.com

Susan Frank

Vice President and Chief Regulatory Officer Regulatory Affairs



### BY COURIER

March 19, 2008

Mr. Basil Alexander Klippensteins Barristers & Solicitors 160 John St., Suite 300 Toronto ON M5V 2E5

Dear Mr. Alexander:

EB-2007-0050 – Hydro One Networks' Section 92 Bruce - Milton Transmission Reinforcement Application – Hydro One Networks' Response to Interrogatory Questions from Pollution Probe List 2 Update

I am attaching a paper copy of an update to C-2-18. Hydro One indicated in the response to this Interrogatory filed on May 17<sup>th</sup> that the information related to part (b) was still being prepared. This information has now been completed.

A text searchable Acrobat file is being emailed to you and all other Intervenors including the Ontario Energy Board today. The revised response will be available for download from the Hydro One Networks regulatory website.

Sincerely,

ORIGINAL SIGNED BY ANDREW PORAY FOR SUSAN FRANK

Susan Frank

Kirsten Walli, Ontario Energy Board
EB-2007-0050 Intervenors (by email)
M. Heinz, Ontario Power Authority (by email)

Updated: March 19, 2008 EB-2007-0050 Exhibit C Tab 2 Schedule 18 Page 1 of 4

# Pollution Probe INTERROGATORY #18 List 2

1	
2	
3	

### **Interrogatory**

Issue Number: 1.0

6 Issue: I

Issue: Project Need and Justification

Ref B/Tab 1/Sch 1, page 3, "Other alternatives considered" Please provide the following information:

For the potential use of Bruce area generation rejection schemes, please provide the following requested information or answers:

a) Any and all documents or analyses developed by Hydro One or the OPA concerning the historical and forecasted future use of generation rejection schemes at the Bruce site.

b) What are the historical levels of forced outages on the 500 kV transmission system in the Ontario Southwest Area? Please provide all documentation or studies that address the actual level of forced outages that have been experienced with the transmission system in this region. Please also include both the number and duration of outages by year.

#### Response

a. Please refer to the response to OEB Staff Interrogatory 1.4 for information regarding the Bruce generation rejection scheme and its historical usage. With respect to forecast future use of the scheme, a forecast is not prepared. However, it is reasonable to assume that usage (i.e., arming of the scheme) will increase over time as generation in the Bruce area increases, in the event the proposed Bruce to Milton line is not built.

b. The historical data pertaining to forced outages on the 500 kV transmission system in Southwestern Ontario is provided in the attached Table 1 and Table 2 as follows. The circuit identifications in these tables refer to circuits' connecting terminal points identified in Exhibit C-3-8.

• Table 1 provides a summary of the overall outage indices for each circuit, including the number of momentary and sustained outages per year; the average rate and duration of such outages per year; average duration of sustained outage in hours per outage per year; and the average circuit unavailability in hours per year.

 Updated: March 19, 2008

EB-2007-0050

Exhibit C

Tab 2

Schedule 18

Page 2 of 4

• Table 2 provides a summary of the outage frequency and duration for each circuit by year. (*Note: For any circuit that did not have an outage in any year, the entry for that year is not shown in the Table 2*).

4 5 6

1

2

3

Table 1: Summary of Outage Indices for 500 KV Circuits in SWO for the Period January 1990 to February 2008

7 8

Circuit	In Service Date	No.	Average	No. of	Average	Average Duration	Average
ID	of the Circuit	Momentary	Rate of	Sustained	Rate of	of Sustained	Circuit
		outages	Momentary	Outages for	Sustained	Outage	Unavailability
		For Circuit	Outages/year	Circuit	Outages/year	Hours/Outage/year	in hours/year
B562L	Nov 22, 1990	10	.5788	8	.4631	12.1563	5.6292
B563L	Nov 22, 1990	6	.3473	8	.4631	9.0313	4.1821
B569B	Oct 1, 1980	1	.0550	0	0	0	0
M585M	June 22, 1990	6	.3392	11	.6218	8.5667	5.3265
N580M	June 22, 1990	1	.0565	9	.5087	5.2722	2.6820
N581M	Nov 22, 1993	1	.0654	4	.2618	2.1375	.5596
N582L	Aug 22, 1991	2	.1141	4	.2282	25.0083	5.7069
V586M	June 17, 1994	2	.1360	4	.2720	.60	.1632
B560V	June 24, 1994	7	.4767	8	.5447	137.30	74.7873
B561M	July 1, 1980	7	.3853	10	.5504	63.795	35.1128

## 10 Notes:

- 1. Outage data covers the period Jan 1990 to Feb 2008
- 2. Momentary outages last less than one minute
- 3. Sustained outages last one minute or more
- 4. All outages regardless of their durations are considered
  - 5. Circuit unavailability = Average rate of sustain outages x Average duration of sustain outage

15 16

9

11

12

13

Table 2: Summary of Frequency and Duration of Circuits By Year for the Period January 1990 to February 2008

		Outage		
Circuit	Year	Frequency	Duration (Minutes)	
	1991	1	1119	
	1995	1	6	
	1996	2	54	
	1997	2	0	
	1999	1	11	
B562L	2000	1	0	
D302L	2003	1	0	
	2003	1	4509	
	2004	4	126	
	2005	2	10	
	2006	1	0	
	2007	1	0	
	1991	1	1229	
	1995	3	77	
	1999	1	0	
	2000	3	0	
B563L	2002	1	1	
	2003	2	1587	
	2004	1	0	
	2007	1	1441	
	2008	1	0	
B569B	1992	1	0	
	1990	1	0	
	1991	2	1026	
	1992	1	66	
	1994		0	
	1994	2	1690	
M585M	1995	1	0	
	1999	1	0	
	2001	1	4	
	2002	3	823	
	2003	1	0	
	2005	2	779	
	2007	1	694	

Updated: March 19, 2008 EB-2007-0050

EB-2007-005 Exhibit C Tab 2 Schedule 18 Page 4 of 4

		Ou	Outage		
Circuit	Year	Frequency Duration (Minutes			
	1990	1	158		
	1991	2	2		
N580M	1994	2	910		
NOOOW	1998	1	1122		
	2002	3	645		
	2005	1	10		
	1997	2	302		
N581M	2006	1	0		
	2007	2	211		
	1991	1	5932		
	1998	1	3		
N582L	2000	1	0		
	2001	2	16		
	2003	1	51		
	1998	1	0		
	2000	1	0		
V586M	2002	1	7		
V DOOLVI	2003	1	65		
	2004	1	15		
	2008	1	57		
	1994	2	1515		
	1996	2	24463		
	1997	1	0		
	1998	2	29		
	1999	1	0		
B560V	2000	1	114		
	2001	2	39411		
	2002	1	0		
	2004	1	0		
	2005	1	0		
	2006	1	372		
	1991	2	513		
	1992	5	2894		
	1993	2	1526		
	1994	1	0		
B561M	1996	1	24392		
DOUTIN	1997	1	1491		
	1998	2	6480		
	2000	1	0		
	2004	1	0		
	2008	1	981		

1