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Vice President and Chief Regulatory Officer  
Regulatory Affairs



BY COURIER

March 26 2008

Mr. David MacIntosh  
Case Manager  
Energy Probe Research Foundation  
225 Brunswick Ave  
Toronto ON M5S 2M6

Dear Mr. MacIntosh:

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

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I am attaching a paper copy of an update to C-6-14 which corrected minor formatting errors.

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

Sincerely,

Susan Frank

c. Ms. Kirsten Walli, Ontario Energy Board

**Energy Probe INTERROGATORY #14 List 2**

**Interrogatory**

Ref: Exh. B/T 4/S 2

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

- a) At the bottom of page 3 of the schedule reference is made to "zero incremental network load". Please provide the analysis that led to this conclusion.
- b) Has Hydro One considered the Transmission rate impact of the Bruce B units being laid up when they reach the end of their useful design life? If so, please provide the analysis. If not, please explain why this would not be a relevant consideration in evaluating the application.

**Response**

- (a) Hydro One assumes that the intended reference was to Exhibit B, Tab 4, Schedule 3.

The analysis leading to the inclusion of "zero incremental network load" for the proposed Bruce to Milton line was based on the forecast in Table 2 below prepared by Hydro One. This forecast shows the expected increase in Hydro One Transmission's Network pool peak demand from the in-service date of the new line at the end of 2011 over a 25-year forecast period ending in 2036. The Extreme column in Table 2, for example, indicates that the Network pool peak load is forecast to increase by about 1,551 MW or 6.4% over the period, for a 0.2% increase per annum. This forecast reflects the impacts of provincially mandated CDM reductions. Given the minor expected increase in demand, the evidence in Exhibit B, Tab 4, Schedule 3 indicated at page 3 that "provincial Network pool peak load is forecast to remain essentially flat over the 25-year evaluation period, after mandated provincial CDM reductions. Accordingly, while the Bruce to Milton line will carry significant load from the refurbished nuclear and new wind generators located or expected to locate in the Bruce area, that load will not represent additional load to the pool, as it will replace load currently supplied from other generation sources in the province. To be consistent with the pool view, the DCF analysis takes a conservative approach and attributes zero load and revenue to the Bruce to Milton line. "

While a conservative approach was taken in attributing zero load growth (and hence zero incremental transmission revenue) to the Bruce to Milton project, the benefits of the Project (in terms of avoided undelivered energy costs and reduced losses, if the

line is built) are considerable. The dollar value of these benefits, as shown below in Table 1, is adapted from the results provided in the response to Pollution Probe Interrogatory 10.

The dollar amounts in the response to Pollution Probe Interrogatory 10 reflect the undelivered energy and losses if the Bruce to Milton line is not built (and assuming the near-term measures and expanded Bruce Special Protection scheme are in place). As such, they represent the costs of the “do-nothing” alternative, where “do-nothing” means implementing the short-term options to improve system capability but none of the long-term alternatives. At the same time, the amounts in response to Pollution Probe Interrogatory 10 also measure the undelivered energy and losses that would be avoided if the line is built, and as such they represent the benefits of building the line, measured against the same “do-nothing” alternative.

The Net Present Value of these benefits, in terms of avoided costs, is approximately \$1,605 million as shown in Table 1. When compared with the new line’s estimated capital cost of up to \$645 million, the Project is anticipated to provide a net benefit of approximately \$960 million, as shown below:

NPV of Avoided Undelivered Energy and Losses	\$ 1,605 M
Less: Cost of Bruce to Milton Line	<u>\$ 645 M</u>
Net Benefit/(Cost)	\$ 960 M

The results in Table 1 have been adjusted from the amounts included in the response to Pollution Probe Interrogatory 10 to include undelivered energy and losses from 2012 to 2030 (instead of from 2009) in order to conform with the line’s in-service date at the end of 2011, when the avoided costs will start to be realized. The amounts from the response provided to Pollution Probe Interrogatory 10 have also been discounted to the 2012 starting point of the study period, using OPA’s same 4% discount rate.

- (b) The rate impact analysis of the project included in Exhibit B, Tab 4, Schedule 4, pages 3 and 4, assumes that the new transmission facilities will continue to be used and useful over the 25 year study horizon. This assumption is consistent with the expectation that the additional transfer capability provided by the new facilities will provide benefits to the grid, such as additional margin to cover operating variations, in the event that Bruce B refurbishment does not occur. Please see the response to Pollution Probe Interrogatory 15 for more details.

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**Table 1**  
**Net Present Value of Undelivered Energy and Losses**  
**With New Line (OPA Discount Rate)**  
**(With Near-Term Measures + Expansion of BSPS)**

Year	Undiscounted Benefits (M\$)		Discounted Benefits to 2012 (M\$)		
	LIE	Losses	LIE	Losses	Total
2012	\$ 3	\$ 20	\$ 3	\$ 20	\$ 24
2013	\$ 88	\$ 24	\$ 85	\$ 23	\$ 107
2014	\$ 138	\$ 22	\$ 127	\$ 21	\$ 148
2015	\$ 164	\$ 23	\$ 146	\$ 21	\$ 167
2016	\$ 164	\$ 23	\$ 140	\$ 20	\$ 160
2017	\$ 163	\$ 23	\$ 134	\$ 19	\$ 153
2018	\$ 31	\$ 26	\$ 25	\$ 20	\$ 45
2019	\$ 2	\$ 19	\$ 1	\$ 15	\$ 16
2020	\$ 2	\$ 19	\$ 1	\$ 14	\$ 15
2021	\$ 2	\$ 19	\$ 1	\$ 13	\$ 15
2022	\$ 2	\$ 19	\$ 1	\$ 13	\$ 14
2023	\$ 31	\$ 25	\$ 20	\$ 17	\$ 37
2024	\$ 159	\$ 22	\$ 99	\$ 14	\$ 113
2025	\$ 158	\$ 22	\$ 95	\$ 13	\$ 108
2026	\$ 158	\$ 22	\$ 91	\$ 13	\$ 104
2027	\$ 158	\$ 22	\$ 88	\$ 12	\$ 100
2028	\$ 158	\$ 22	\$ 85	\$ 12	\$ 96
2029	\$ 158	\$ 22	\$ 81	\$ 11	\$ 93
2030	\$ 158	\$ 22	\$ 78	\$ 11	\$ 89
Sum	\$ 1,899	\$ 419	\$ 1,303	\$ 301	\$ 1,605

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**Table 2**  
**Forecast of Hydro One Transmission Peak-Load**  
**Network Pool (MW)**

		Year	Weather-Normal	Extreme
Line In-Service		2008	23312	24711
		2009	23082	24466
		2010	22828	24197
		2011	22861	24233
	1	2012	22904	24279
	2	2013	22948	24325
	3	2014	22993	24372
	4	2015	23039	24422
	5	2016	23087	24472
	6	2017	23136	24524
	7	2018	23187	24578
	8	2019	23239	24633
	9	2020	23292	24689
	10	2021	23347	24747
	11	2022	23403	24807
	12	2023	23460	24867
	13	2024	23519	24930
	14	2025	23579	24993
	15	2026	23640	25058
	16	2027	23703	25125
	17	2028	23767	25193
	18	2029	23832	25262
	19	2030	23898	25332
	20	2031	23966	25404
	21	2032	24035	25478
	22	2033	24106	25552
	23	2034	24178	25628
24	2035	24250	25705	
25	2036	24325	25784	
<b>2012-2036</b>				
		- Increase (MW)	1,463	1,551
		- Increase (%)	6.4%	6.4%
		- Increase (p.a.)	0.2%	0.2%