Hydro One Networks Inc.
8th 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, 2010

Ms. Kirsten Walli
Secretary Ontario Energy Board
Suite 2700, 2300 Yonge Street
Toronto, ON.
M4P 1E4

Dear Ms. Walli:

EB-2009-0425 – Hydro One Networks' Section 92 – Toronto Midtown Transmission Reinforcement Project – Responses to Interrogatory Questions

I am attaching a text-searchable Acrobat electronic version of the Hydro One Networks' interrogatory responses to questions from OEB Staff, Toronto District School Board, North Rosedale Ratepayers Association and Energy Probe.

Also attached is additional evidence to the application that was filed with the Board on December 23, 2009 as well as an update to Exhibit B, Tab 1, Schedule 2 and a Letter of Endorsement submitted by One Shaftesbury Community Association (Exhibit B, Tab 6, Schedule 2).

The additional evidence is the Customer Impact Assessment for Midtown Transmission System Reinforcement Project dated March 10, 2010 (Exhibit B, Tab 6, Schedule 4).

The electronic copy of the responses and the evidence has been filed using the Board's Regulatory Electronic Submission System (RESS) and the proof of successful submission slip is attached. Three (3) paper copies of the responses will be sent to the Board on Monday, March 22, 2010.

Sincerely,

ORIGINAL SIGNED BY SUSAN FRANK

Susan Frank

Attach.

c. EB-2009-0425 Intervenor

Ontario Energy Board (Board Staff) INTERROGATORY #1 List 1

Interrogatory

Reference:
1) Exhibit B/Tab 1/Schedule 4/Page 1
2) Exhibit B/Tab 1/Schedule 4/Page 4 and 5/Paragraph 3

Preamble:
There is an inconsistency in references 1 and 2 in the way the line L14W is shown. Reference 1 shows the line between Birch Junction as dotted (underground), whereas reference 2 shows it as solid (overhead).

Question/Request:
a) Please indicate which is correct and
b) Provide a corrected map or schematic as appropriate.

Response

a) Hydro One assumes that the question refers to the section of line between Birch Junction and Bridgman TS, which is an overhead line (L14W).

b) Please see the Blue Page update of Exhibit B, Tab 1, Schedule 2.

Ontario Energy Board (Board Staff) INTERROGATORY #2 List 1

Interrogatory

Reference:

1) Exhibit B/Tab 1/Schedule 4
2) Exhibit B/Tab 6/Schedule 5/Page 17

Preamble:

In regard to the need for the development part of the project, Reference 1, page 4 indicates that: "the load forecast is the latest load forecast information from Toronto Hydro…[CDM programs] are contingent upon funding…such CDM initiatives in the Midtown area will not entirely alleviate the overloading and address future long-term load growth in the area."

The summary table (reference 2) on key issues indicates that: "while Toronto is conserving electricity…the proposed undertaking is still necessary…Energy conservation would not be enough to solve the capacity issue".

Question/Request:

a) Provide a copy of Toronto Hydro's CDM impact study on load in the Midtown area.
b) Provide the relevant factor inputs for reference 1, page 5 "Table 1_ Area Load Forecast" from Toronto Hydro's study.
c) Indicate the degree of certainty of implementation of these CDM projects, and the degree of certainty /confidence that 27MW of capacity deficiency by 2018 will be attributed to CDM. Also indicate whether more load growth could be met by conservation and/or energy efficiency initiatives.
d) For each of the years 2004 through 2009 please provide a table similar to Table 1- Area Load Forecast with the actual load detail and the allowance for extreme weather and add rows indicating the number of hours during which the corridor limit was exceeded, and the number of times the corridor limit was exceeded.
e) What is the date of the most recent THESL load forecast study that is being used, and does it reflect the economic downturn? Please provide this report.
f) Indicate what reliability was achieved for supply to the Dufferin and Bridgman Transformer Stations?
    a. How many times and for what duration has a single contingency occurred in the period 2004 to 2009?
    b. How many of those times was the loading exceeded on the Leaside or Wiltshire interface, or any of the components as a result of such contingencies?
g) Are the terminals at Leaside and Wiltshire equally rated on each of the circuits L13, L14 and L15? What is each of their ratings?

Response

a) The following response was provided by Toronto Hydro.

Toronto Hydro performed a forecast of the impact of CDM on the peak demand in the Midtown Toronto area.

The forecast process was as follows:

1. Segment both municipal and transformer station loads in the Midtown area into load classes
2. Estimate the CDM participation rate for each of the load classes
3. Estimate the average CDM reduction rate for each of the load classes
4. Calculate the reduction in peak demand for each load class by multiplying the size of the load class by the participation rate and the reduction rate
5. Sum the estimated reduction in peak demand for each affected station to determine the impact on the Midtown area.

Toronto Hydro estimated that approximately 13MW of reduction due to CDM would be possible over a period of 9 years (from 2010 to 2018). Note that the participation rates for the load classes, assumes that targeted incentives will be offered.

The table below shows the forecast of CDM peak demand reductions possible for the transformer stations and subsidiary municipal stations in the Midtown area.

			CDM Estimates		
	Load Class	Load Class kW	CDM % Participation	Avg % Reduction	CDM Reduction in kW
Dufferin TS	<50kW	80,164	50%	10%	4,008
	50kW-200kW	12,063	40%	15%	724
	200kW-1000kW	13,527	30%	20%	812
	>1000kW	3,998	30%	20%	240
		109,752			5,783
Dufferin MS	<50kW	4,626	50%	10%	231
	50kW-200kW	1,092	40%	15%	66
	200kW-1000kW	1,870	30%	20%	112
	>1000kW	0	30%	20%	0
		7,588			409
College MS	<50kW	4,187	50%	10%	209
	50kW-200kW	620	40%	15%	37
	200kW-1000kW	0	30%	20%	0
	>1000kW	0	30%	20%	0
		4,806			247
High Level (13.8 kV) MS	<50kW	13,604	50%	10%	680
	50kW-200kW	13,184	40%	15%	791
	200kW-1000kW	26,074	30%	20%	1,564
	>1000kW	11,696	30%	20%	702
		64,558			3,737
High Level MS	<50kW	21,956	50%	10%	1,098
	50kW-200kW	3,093	40%	15%	186
	200kW-1000kW	2,202	30%	20%	132
	>1000kW	2,960	30%	20%	178
		30,212			1,593
Bridgman TS	<50kW	7,136	50%	10%	357
	50kW-200kW	5,154	40%	15%	309
	200kW-1000kW	5,643	30%	20%	339
	>1000kW	4,524	30%	20%	271
		22,457			1,276
All Stations					**13,046**

b) The relevant input factors may be found in the 'Assumptions and Comments' notes to the Toronto Hydro load forecast, found at page 6 of this response.

c) The following response was provided by Toronto Hydro.

> Toronto Hydro is working with the OPA on the CDM program for 2011-2014 to meet the mandated MW/MWH targets for LDCs. There will be three levels of CDM programs. Tier 1 programs are for provincial deployment. Tier 2 programs are for small groups of LDCs. Tier 3 programs are for LDCs to address their specific needs.
>
> The programs for Tier 1, 2, and 3 have not yet been defined, but the CDM potential for the Midtown area to reduce 13MW is reasonable.
>
> The CDM impact would only reduce the load demand of new load growth, it would not be able to cover the load requirement for all new load growth.

d) The actual and extreme summer peak MW for Bridgman TS and Dufferin TS are given below.

(i) MW Loads Actual

Station	2004	2005	2006	2007	2008	2009**
Bridgman	151	167	171	163	159	163
Dufferin	93	131	131	118	112	123
Total	244	299	302	281*	271*	286

**Please note these values replace the Dufferin TS actual summer load values shown in Table 1 in Exhibit B, Tab 1, Schedule 4 page 5.*

***Please note that the 2009 actual of 286 MW differs from the 2009 actual shown in the THESL load forecast of 273MW (154MW for Bridgman and 119MW for Dufferin) because the THESL actuals exclude station-to-station load transfers per Note 9 to theTHESL forecast, whereas the actuals used by Hydro One reflect the actual measured loads.*

(ii) MW Loads Adjusted for Extreme Weather

Station	2004	2005	2006*	2007	2008	2009
Bridgman	165	171	166	167	169	172
Dufferin	101	135	128	121	119	129
Total	266	306	294	288	288	301

**Note that the 2006 extreme peak load is lower than the actual observed peak load. This is because 2006 had a few very hot days, hotter than normal extreme peak.*

The number of hours during which loading on the corridor exceeded the limit and the number of days this happened is given below.

(iii) MW Loads Adjusted for Extreme Weather

Corridor exceeded Limit	2004	2005	2006	2007	2008	2009
Hours	0	89	37	21	0	8
Number of Times (days)	0	19	5	6	0	1

Please note that 2005 and 2006 summers were more typical of extreme weather whereas the recent 2008 and 2009 summer were normal weather. If extreme weather had occurred, the loading would have been higher as shown in the Extreme Loads table above.

e) Toronto Hydro's load forecast (Nov. 30, 2009) for Bridgman TS and Dufferin TS has been used in the study to develop the extreme weather load forecast provided in Exhibit B, Tab 1, Schedule 4, Table 1. A copy of the Toronto Hydro forecast is included on page 6. Please note that this forecast is not weather-normalized nor adjusted for extreme weather. It therefore differs from the load forecast included in Table 1 of Exhibit B, Tab1, Schedule 4 of the pre-filed material, which reflects those adjustments.

Toronto Hydro believes the effect of the economic downturn is reflected in Table 1 as the actual observed summer 2009 loads, when the economic downtown was already in progress, were used as the starting point. Please see the response to Energy Probe Interrogatory 4 for additional detail regarding the impact of the recession on the load forecast.

TORONTO HYDRO ELECTRIC SYSTEM LIMITED
2010-2038 BRIDGMAN TS and DUFFERIN TS LOAD FORECAST (MW)

Date: November 30, 2009

STATION / BUS	YEAR																														
	2009*	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Summer																														
BRIDGMAN TS (MW)	154	154	156	157	159	160	162	163	165	167	168	170	172	174	175	177	179	181	182	184	186	188	190	192	194	196	197	199	201	203
DUFFERIN TS (MW)	119	119	120	121	123	124	125	126	128	129	130	131	133	134	135	137	138	140	141	142	144	145	147	148	150	151	153	154	156	157
Winter																														
BRIDGMAN TS (MW)	139	139	140	142	143	145	146	148	149	151	152	154	155	157	158	160	161	163	165	166	168	170	171	173	175	176	178	180	182	184
DUFFERIN TS (MW)	119	119	120	121	123	124	125	126	128	129	130	131	133	134	135	137	138	140	141	142	144	145	147	148	150	151	153	154	156	157

* Actual 2009 Summer & Winter Peaks

Assumptions and Comments

1. No weather correction factor was applied to the above station load forecast. THESL only determines weather correction factor at bus level, not at station level.
   For transmission line load forecast, weather correction factor needs to be applied at Station level. THESL do not forecast load on transmission line.
2. There is no planned station to station load transfers to occur in 2010 and 2011 for both Bridgman TS and Dufferin TS.
3. For new customer loads, a 0% growth rate is used for the first two years (2010 and 2011) of the forecast period.
   This is due to the customer load build-up is shown in the service connection request.
   If there is no customer specific data then 70% of the total load is estimated in the first year with the remaining 30% estimated in the second year.
4. A station load growth rate of 1% has been utilized from 2012 onwards.
5. Summer station peak load of Bridgman TS and Dufferin TS occurred on August 17, 2009 when THESL system peak load occurred in summer (during Jun 1 to Aug 31).
6. Winter station peak load of Bridgman TS and Dufferin TS occurred on January 14, 2009 when THESL system peak load occurred in winter (during Dec 1 to Feb 28)
7. The summer Power Factor for the Bridgman TS is 0.902 and for the Dufferin TS is 0.933. Power Factor is obtained when the station peak load occurred.
8. The winter Power Factor for Bridgman TS is 0.939 and for Dufferin TS is 0.972.
9. The station peak load for Bridgman TS and Dufferin TS as shown above are obtained by selecting the maximum value from a series of station peaks after removing all station to station load transfers.

1

f) The attached table shows the various forced outages that occurred between January 1, 2004 and December 31, 2009.

Forced Outages

Circuit	Date	Outage Duration (Minutes)	Time of Outage	Loading Exceeded
L14W	27-May-09	1011	20:49	No
L13W	07-Dec-08	4262	11:18	No
L15W	04-Oct-08	3	20:54	No
L13W	01-Feb-07	1043	17:43	No
L15W	20-Jul-06	111	09:44	No
L13W	31-Mar-06	344	14:08	No
L13W	16-Jan-06	8184	02:22	No
L13W	30-May-05	5	17:59	No
L13W	03-May-05	10	02:26	No
L15W	11-Mar-05	67	11:50	No
L15W	08-Apr-04	3	15:43	No
L15W	07-Apr-04	10	13:47	No

a. There have been 12 forced contingencies where one of the three circuits has been out of service over the past 5 years (2005-2009).
b. Loading was not exceeded as the outages did not occur during the peak period.

g) The terminals are not equally rated. The terminal breakers for circuits L13W, L14W and L15W at Wiltshire TS are rated 1200A. The terminal breakers at Leaside TS are rated at 1600A.

Please refer to the Exhibit B, Tab 6, Schedule 3, SIA page 13, for the line ratings of the different line sections.

Ontario Energy Board (Board Staff) INTERROGATORY #3 List 1

Interrogatory

Reference:

1. Exhibit B/ Tab 6/Schedule 3/SIA dated August 11, 2009, with IESO cover letter dated February 2, 2010 granting conditional approval
2. Exhibit B/ Tab 6/Schedule 3/SIA Addendum dated January 25, 2010.
3. Exhibit B/Tab 1/Schedule 4 page 8, lines 9-13.

Preamble:

The IESO in reference 2 at page 1 advises that

1. "under extreme weather peak loads forecasts for years 2010-2025 the loadings with all elements in service on the Leaside to Wiltshire circuits remain well below their continuous ratings", and that
2. with one element out of service "the loadings remain below the long term emergency thermal ratings for up to and including the year 2025."
3. Under extreme weather peak load forecasts and with two Leaside to Wiltshire circuits our of service, resulting from single element contingencies when one circuit is out of service … A possible mitigating measure to the overloading of the circuits is to open LV breakers …."

Questions/Request:

a) Please reconcile these statements with the statements made at Reference 3 that the need to relieve the overload of facilities makes this project non-discretionary.
b) Does Hydro One acknowledge that the need for this project arises after 2025?

Response

a) The IESO statements in Reference 3, summarize the result of their analysis after the Transmission Reinforcement work has been completed (not for the existing system), as can be noted in Exhibit B, Tab 6, Schedule 3, *System Impact Assessment Addendum* dated January 25th, 2010, page 1, paragraph 2:

> "The purpose of this addendum is to analyze the effects of the proposed connection arrangement on the reliability of the IESO controlled grid…"

b) No, Hydro One does not acknowledge that the need for this project arises after 2025, the need is immediate. As shown in Exhibit B, Tab 1, Schedule 4, the transmission reinforcement is needed to ensure that load is not curtailed under single contingency. The immediate need is demonstrated by the actual load and the forecast load being in excess of the corridor limit as shown in Table 1 of the above referenced exhibit.

The IESO statement refers to the fact that with the new facilities provided, the system should be adequate to 2025, as indicated in Exhibit B, Tab 6, Schedule 3, Attachment 2, page 1 bullet (5):

> "Under the proposed system configuration, future load growth may result in post-contingency overloading of the L13W circuit by year 2013: following the loss of the new circuit, L13W will carry the entire Dufferin TS load."

Ontario Energy Board (Board Staff) INTERROGATORY #4 List 1

Interrogatory

Reference: Exhibit B/Tab 3/Schedule 1/Page 3 and 4
Table 1: Evaluation of Option for Section 1
Table 2: Evaluation of Option for Section 2

Preamble:
The above mentioned tables provide a single term e.g. high, moderate, and low in the evaluation of the alternative

Question/Request:

a) Please provide, where available, quantitative data that corresponds to and supports the qualitative entries in the mentioned tables
b) Please describe more fully the methodology, scales, formulas used to derive these numbers and/or assessments.

Response

a)

Table 1: Evaluation of Option for Section 1 Leaside TS x Bayview Jct.

The S1-1 option is an overhead line replacement along the section between Leaside TS and Bayview Junction. The assessment in Table 1 indicates that it will be the least expensive and easiest to construct. There are two major contributing factors to this assessment; the first is the fact that we already have an existing easement for a line that does not require purchasing and negotiating easements other than island easements around towers. The second contributing factor is the knowledge from historic and expert opinion that overhead lines are generally 1/7 the cost of underground lines. Our proposed overhead option will have less impact on traffic, business, other infrastructure and the environment.

S1-2, underground cable on rail corridor on this section, is much more expensive than S1-1 since we would need to purchase an easement from CPR and other private landowners where CPR space is unavailable. Purchase of any lands in this area was estimated at the current market value of $858k/acre. The estimated land cost would be $2.2M (1700m distance x 6m wide minimum easement for trench = 10,200m2 or 2.52 acres x $858k = $2.2m). As we investigated easement for trenching it became apparent that we would face many construction challenges along the rail corridor. CPR traffic/business would be impacted by train traffic outages. Working in proximity could affect construction efficiency up to 50% due to frequent work stoppages to accommodate train traffic. In addition, there would also be CPR

flagging and on-site project engineer costs as required by CPR. Trenching as compared to tunneling, would cause more infrastructure interference which is very congested along the CPR, with buried telecommunications and signaling, some of which would require relocating.

With either tunneling or trenching, there would be more trucking of spoils through the community than with an overhead line. Trenching would cause much more interference of other infrastructure which is very congested along the CPR with buried telecommunications and signaling, some of which would require relocating. Cost would be the main factor in not tunneling between Leaside TS and Bayview Jct. The cost of extending the tunnel to Leaside would be approximately $30M more than the overhead option for this section.

S1-3, underground cable on road allowance, was considered as well but we were unable to find a clear direct route for trenching. Trenching would cause considerable detour and disruption to the Leaside and Rosedale communities. It may be possible to find a route under public road allowance for a tunnel but it would not be the most direct route which would result in higher costs than the rail corridor for an overhead line (S1-1).

Table 2: Evaluation of Option for Section 2: Bayview Jct. x Birch Jct.

S2-1, underground cable on rail corridor, was looked at since it was the most direct route from Bayview Jct. to Birch Jct. As we investigated easement needs for trenching it became apparent that we would face many construction challenges along the rail corridor. CPR traffic/business would be impacted by train traffic outages. Working in proximity to CPR could affect construction production by up to 50%. There would be similar impact on CPR traffic and infrastructure interference as noted in S1-2 above.

S2-2, underground cable on road allowance, was considered as well but we were unable to find a clear direct route for trenching without major detour and major disruption for up to 3 years in the Rosedale community. It may be possible to find a route under public road allowance for a tunnel but it would not be the most direct route which would cost more than the rail corridor.

As a result the preferred option was selected due to lower costs and easier constructability.

b) We developed these numbers and assessments using Project Management tools and techniques including expert judgment, analogous estimating and parametric estimating. Estimates were influenced by variables such as labour rates, material costs, risk factors such as the train corridor challenges. Expert judgment was used to compile historical information from prior similar projects and experience including

the experience of external trenching and tunneling contractors. Analogous estimating used historical information and expert judgment as well as assessing the impact of risks. Parametric estimating was used to take historical unit costing such as cable and conductor pricing, concrete, soil disposal etc. and to apply those costs to the current project quantities. As the project is further developed including detailed engineering bottom-up estimating will improve accuracy.

Ontario Energy Board (Board Staff) INTERROGATORY #5 List 1

Interrogatory

Reference:
Exhibit B/Tab 3/Schedule 1

Preamble:
Board staff is seeking more information about the tunnelling and trenching options.

Question/Request:

a) Why is it now not possible to trench across Yonge Street when it was possible just two years ago when the project was included in the EB-2008-0272 rate application? What has changed since the former proposal to make it impossible?
b) Please indicate the reason for tunnelling to a depth of 60 metres and contrast that with the John x Esplanade tunnel which was constructed in downtown Toronto (EB-2004-0436) where the depth was 20 metres.
c) What is the depth profile for the tunnel i.e. what would be the depth at various points along the route?
d) What would be the depth of the tunnel under Yonge Street?
e) What is the additional cost for having the tunnel at a 20 metre depth rather than the 60 metres proposed? What complications would a tunnel less deep than 60 metres introduce?
f) Please provide the cost per km for trenching along the CPR line and the cost per km of tunnelling under it.
g) Would the cable used in underground trenching be the same cable type as used in the underground tunnel? What is the length of cable that would have to be ordered for the two methods? Please identify the cable types and indicate the difference in cable costs for the two alternatives.
h) Please complete the following table to clarify where the increase in cost estimate arises:

	Original Proposal	Current Proposal	% Increase	Main drivers for increase
Real Estate Costs				
Contingency				
Trench Vs. Tunnel				
Construction cost escalation				
Interest				
Overhead charges				
Total Project cost	$56.6 m	$104.9M		

Response

a) In EB-2008-0272 the assumption was to trench down Shaftesbury Ave. and across Yonge Street. Since that time, Hydro One has gained more information on the existing below-ground infrastructure and found that the congestion in these ROWs at the depth required for a cable trench rendered this route infeasible.

b) The depth of the Midtown tunnel will be approximately 60m due to the depth required to reach the top of rock in this area. Tunneling through rock is the preferred method for safety reasons as the rock provides greater soil stability and therefore reduces the risk of potential loss of ground above the tunnel during construction. The average depth of the John x Esplanade rock tunnel was 30m because the rock was not as deep in that area.

c) Hydro One is still gathering geotechnical and geophysical information at this time but it appears that the proposed tunnel would be at a depth between 45m at Birch Junction to 65m at Bayview Junction. We are still investigating the potential feasibility of a shallower soft ground tunnel in the section between the east side of Carstowe Ave. and Bayview Junction to see if a suitable dense cohesive soil layer exists within the overburden above rock (area between the rock and the surface) for this entire segment. The soft ground tunnel option is not feasible at the Birch end due to geotechnical confirmation of the existing overburden at that location.

d) The depth of the tunnel crossing Yonge St would be in the order of 45m.

e) It is typically slightly more expensive to tunnel through soft ground compared to rock and there is as well a longer construction period.

Since there are 2 deep valleys to cross the minimum depth of tunnel would be 40m. Complications/increased risks would be related to poor soil stability due to the presence of water-bearing cohesion-less soil which has the potential to cause loss of ground above the tunnel resulting in settlement of soils which could ultimately be reflected to the surface. It appears that the soil conditions between Birch Junction and Carstowe Ave. are not conducive to soft ground tunneling.

As the costs for tunneling and trenching are similar and the tunnel provides advantages with respect to lower community disruption, reduced interference with CPR traffic and better construction efficiency, tunneling was chosen as the preferred option.

f) The cost per kilometer for trenching along the CPR line is $12.3M/km versus the cost for tunneling of $12.5M/km. As a result of the similar cost, tunneling is proposed as the recommended option for the reasons described in e) above.

g) The same type of cable has been assessed for either trench or tunnel. Estimates are based on 115kV XLPE Cable (2000mm^2) and a length of 8,280m per circuit. The tunnel option would have an additional length in the order of 360m per circuit due to the vertical riser sections at each end between the tunnel and ground surface.

h)

	Original Proposal $M	**Current Proposal $M**	**% Increase**	**Main drivers for increase**
Real Estate Costs	2.0	9.9	395%	See Note (1) below
Contingency	4.2	16.4	290%	See Board Staff IR 12c
Construction Costs	42.4	59.6	41%	See Note (2) below
Construction cost escalation	Escalation on various elements between 3% and 5 %			No change in escalation rates but total amount escalated is increased due to increases in direct costs compared with original.
Interest	1.9	8.9	368%	Higher project costs, longer construction time and higher interest rates result in the increase in costs
Overhead charges	6.1	10.1	66%	Overhead allocation charges are increased due to higher project costs.
Total Project cost	$56.6	$104.9	85%	

NOTES:

(1) Real estate costs are significantly higher than anticipated in 2007, as the current proposal is based on an in-depth assessment of easement requirements and land values compared with the 2007 estimate, which was preliminary in nature. As well real estate values in Toronto have generally increased since 2007.

(2) Construction costs are significantly higher due to several technical and physical complexities/constraints, including the need now to tunnel across Yonge St. (see part a) above).

Ontario Energy Board (Board Staff) INTERROGATORY #6 List 1

Interrogatory

Reference: Exhibit B/Tab 3/Schedule 1

Preamble:
The options considered for sections S1 and S2 include either a trench or a tunnel. Board staff requests consideration of a hybrid option.

Question/Request:
a) Please reconstruct the options tables and provide an assessment of an additional hybrid option which would involve trenching in all sections except for the crossing under Yonge Street. For crossing Yonge Street this proposal would involve vertical shafts on either side of Yonge Street (or as close to it as practical), and joining the bottom of the shafts through conventional mining techniques. The depth of the shafts would be of the order of 20 metres. Alternative means could be proposed by Hydro One.
b) Provide an estimate of the total cost of the project for the hybrid option. Provide a comparison table for significant elements of the tunnel, trench and hybrid options, from Leaside TS to Bridgman TS.
c) Provide a comparison of public disruption and safety by completing the following table, using qualitative and where possible quantitative descriptors:

	Tunnel	Trench & Soft Ground Tunnel across Yonge	Hybrid
Quantity and extent of Permanent easement required.			
Surface Road length and area disrupted			
Duration of disruption			
Outages, duration and difficulty in scheduling			
Access, exit and entry ports to tunnel/trench			
Nature of neighbourhood noise effects			
Duration of noise effects			
Trucking and machinery requirements and presence			
Worker and public safety			

d) Provide information which will assist the Board in understanding the effects on neighbourhood which might need to be considered in justifying incurring additional costs for the more expensive options.

Response

a) The requested hybrid option is the same as the trench option with a soft ground tunnel crossing Yonge Street, which is included in the options assessed. The soft ground tunnel across Yonge Street was required to be approximately 250m at an additional cost of $6M and required the purchase of some private developer lands which are not required for the proposed tunnel option. As has been indicated, the project costs (excluding land) of both options are similar.

b) The cost of the requested hybrid option is what we have presented as the trench since there was no possibility of crossing Yonge without tunneling. The total cost of the hybrid option is estimated to be $104.0M versus $104.9M for the tunnel option. The two estimates are considered essentially the same for comparison purposes and in selecting a preferred option.

The cost of the overhead sections of the line from LeasideTS to Bayview Junction and from Birch Junction to Bridgman TS is exactly the same in the two options. For the underground section between Bayview Junction and Birch Junction, the hybrid option (trench) is estimated to be less than $1M, which accounts for the difference in the total costs between the options.

c) Please note that the table does not include a column for the requested “Hybrid” option since, as noted in parts a) and b) above, the “Hybrid” option is the same as the option involving trenching and tunneling under Yonge St., as there was no possibility of crossing Yonge St. without tunneling.

	Tunnel	**Trench & Soft Ground Tunnel across Yonge**
Quantity and extent of permanent easement required.	4m width x 2400m length primarily along CPR and road allowance	9m width x 2400m length would require easements from many private homeowners, land developers and CPR
Surface road length and area disrupted	Access to shaft locations which are on Hydro One and City of Toronto land	Access to CPR ROW, shaft at east side of Yonge on either park land or private up to 6 months
Duration of disruption	6 months at exit and intermediate shaft locations and 2 years at main construction shaft compound	Concrete duct bank would be installed in sections and backfilled for about 2 years prior to cable installation for about 6 months
Outages, duration and difficulty in scheduling	No railway outages, no scheduling issues with CPR	Extremely difficult to schedule work to accommodate CPR trains, project duration would be extended, CPR grants construction time frame in their project queue which could delay project a few years
Access, exit and entry ports to tunnel/trench	Access to up to 5 shaft locations via public roads	Access to CPR corridor along the entire route required from private home owners, CPR, and through ravines & parks
Nature of neighbourhood noise effects	Auger, crane, concrete trucks and heavy equipment at the shaft locations	Trenching by backhoe and hydrovac (sucker truck), concrete trucks along the entire route
Duration of noise effects	Duration over the construction period; however, noise will be limited to the areas of shafts only	There will be noise along each section as construction progresses along the route
Trucking and machinery requirements and presence	Cranes, auger, concrete trucks and heavy equipment at shaft locations only	Backhoe, hydrovac, concrete trucks and heavy equipment along route and in the backyard of homeowners, along the entire route
Worker and public safety	Public would be protected by fences around shaft areas, workers protected by procedures	Public would be protected by fences around shaft areas, workers protected by procedures

1

d) Both options have similar costs. The effects of trenching are much more disruptive to the community and have a fair amount of schedule risk due to the possible need for expropriation and due to CPR-related delays.

Ontario Energy Board (Board Staff) INTERROGATORY #7 List 1

Interrogatory

Reference:
Exhibit B/Tab 6/Schedule 1/Page 3

Preamble:
The reference indicates that the Environmental Summary Report ("ESR") will be provided in January 2010.

Question/Request:
Please

a) Provide a copy of the ESR report which is indicated as being submitted in January 2010.
b) Indicate if there are issues identified which might affect the application.

Response

a) The draft ESR is provided on the Project website: http://www.hydroone.com/Projects/Midtown/Pages/MidtownProject%e2%80%94ReviewApprovals.aspx
The ESR was issued on March 8, 2010 to initiate a 45-day public review and comment period as part of the Class EA process.

b) At this point, Hydro One cannot identify any issues that might affect the application. During the 45-day review period, Hydro One will respond to and make best efforts to resolve any issues raised by concerned parties. If no concerns are expressed, the ESR will be finalized and filed with the Ministry of the Environment (MOE), and at that point the project will be considered acceptable by the MOE. Hydro One will issue the final ESR with a summary of all comments raised during the review period and Hydro One's responses and/or actions required or pending.

Hydro One will post the final ESR on the project website, http://www.hydroone.com/Projects/Midtown/Pages/Default.aspx, once filed with the MOE and highlight any issues identified during public review

Ontario Energy Board (Board Staff) INTERROGATORY #8 List 1

Interrogatory

Reference:

1. Exhibit B/Tab 6/Schedule 1/Pages 3 /Paragraph 4
2. Exhibit B/Tab 6/Schedule 1/Page 4 /Paragraph 7

Preamble:

Board staff is seeking information on the Environmental Summary Report. Reference 1 indicates that "Hydro One will confirm the completion of the EA process with the Board once the ESR is filed".

Reference 2 indicates that "… additional requirements may be identified during the EA process…there are also other approvals and permits that may be required as part of the construction process".

Question/Request:

a) Please provide a copy of the ESR when submitted.
b) Please provide an update on the status of the consultation process for the Draft ESR, indicating whether concerns were expressed by any of the stakeholders.
c) Please indicate whether at this stage additional requirements on the provincial or federal level have been identified.
d) Please indicate when Hydro One expects the ESR to be finalized and filed with the MOE.

Response

a) The draft ESR is provided on the Project website: http://www.hydroone.com/Projects/Midtown/Pages/MidtownProject%e2%80%94ReviewApprovals.aspx

b) With respect to the status of the consultation process, Chapter 4 and Appendix E of the draft ESR provide the detailed consultation process. Hydro One identified and consulted with potentially affected and interested parties, including government agencies, City of Toronto, elected officials, interest groups, affected area residents and businesses, First Nations communities and the general public.

Table 4-2 in the draft ESR summarizes key issues expressed by stakeholders and Hydro One responses.

Those stakeholders who have expressed concerns are:

- Municipal officials

- Residents' Associations:
  - Bennington Heights Residents' Association
  - Moor Park Ratepayers' Association
  - North Rosedale Ratepayers' Association
  - Leaside Property Owners Association Executive Committee
  - Summerhill Residents' Association
  - Governor's Bridge Residents' Association
  - Shaftsbury Community Association
  - Rathnally Area Residents' Association

- Government Agencies and interested groups:
  - Transport Canada
  - Ministry of Environment
  - City of Toronto
  - Toronto and Region Conservation Authority

- Other Stakeholder Groups
  - Toronto District School Board
  - Toronto Catholic District School Board
  - Toronto Board of Health, Toronto Public Health, and the Medical Officer of Health
  - Task Force to Bring Back the Don
  - Rosedale Main Street Business Improvement Area Board
  - Property Owners adjacent to Birch and Bayview Junctions
  - Canadian Pacific Railway
  - NAV Canada
  - Loblaws

c) At this stage, no additional requirements on the provincial and federal level have been identified.

d) The draft ESR review and comment period is open to the public from March 8 to April 21, 2010. If no higher level of assessment (i.e., Part II Order) for the Class EA project is requested by any affected parties, the project is considered acceptable. Hydro One will issue the final ESR with a summary of all comments raised during the review period and Hydro One's responses and/or actions required or pending. The final ESR is expected to be finalized and filed with the MOE in May 2010.

Ontario Energy Board (Board Staff) INTERROGATORY #9 List 1

Interrogatory

Reference: Exhibit B/Tab 6/Schedule 4/Page 1

Preamble:
Schedule 4 indicates that "the CIA document will be filed by mid-February 2010".

Question/Request:
Please provide a copy of the CIA.

Response

Please refer to Exhibit B, Tab 6, Schedule 4, which presents the Final CIA dated March 10, 2010, which is being filed at the same time as the interrogatory responses.

Ontario Energy Board (Board Staff) INTERROGATORY #10 List 1

Interrogatory

Reference:

4. Exhibit B/ Tab 6/Schedule 3/SIA dated August 11, 2009, with IESO cover letter dated February 2, 2010 granting conditional approval
5. Exhibit B/ Tab 6/Schedule 3/SIA Addendum dated January 25, 2010.

Preamble:

The documents indicate certain recommendations have been made and that certain information has been requested.

Questions/Request:

c) Please confirm that Hydro One will accept and fulfill those recommendations and
d) Please confirm that the requested information will be provided.

Response

c) Hydro One confirms that it will accept and fulfill the recommendations.

d) Hydro One confirms that the requested information will be provided.

Ontario Energy Board (Board Staff) INTERROGATORY #11List 1

Interrogatory

Reference:

1. Exhibit B/Tab 3/Schedule 1/Page 3 and 4 (Table 1&2)
2. Exhibit B/Tab 4/Schedule 2
3. Exhibit B/Tab 4/Schedule 3/Page 2/line 23

Preamble:

Board staff seeks further information and clarification regarding the required contribution of Capital from Toronto Hydro.

Question/Request:

a) Was Toronto Hydro a partner in determining the aspects for which they are required to contribute to the project?
b) Please provide, through Toronto Hydro Electrical System Limited ("THESL"), the information which was submitted by THESL to the Board regarding this project in their most recent Rate Application.
c) Please confirm that the incremental cost for the tunnel option is of the order of $36 million as derived from reference 2.
d) Given the implication of the tunnel option on costs as described in reference 3, please indicate why the tunnel cost is apparently being assigned to the Line Connection pool instead of (partly or fully) as a cost to THESL.
e) For the section between Bayview Junction and Birch Junction, there are two cables in the tunnel, one for new capacity and one for replacement at end-of-life. How has it been determined that all of the cost of the tunnel should be assigned to the Line Connection pool? Why isn't at least a portion of the tunnel assigned to the customer?
f) If there were no requirement to increase the capacity for load growth, would Hydro One still build the $30m dollar tunnel? Would it be cost justified on the basis of System or Local area reliability? Or any other basis?
g) Please summarise and provide any records of discussion and communications with THESL regarding the cost split between THESL and Hydro One and the respective roles and responsibilities for this project.
h) Please indicate if the cost responsibility on THESL has been identified in any of the public information centre material or displays, or in bill inserts or newsletters, by either Hydro One or THESL. Please provide such material.
i) Has the public in the area being served by THESL been made aware of the additional cost consequences of the tunnelling option? Please provide such material.
j) If a percentage of the cost of the tunnel were to have to be borne by THESL please indicate what would be the HONI cost and the THESL contribution if the percentage assigned to THESL was i) 33% ii) 50% iii) 100%?

k) Please provide any references and decisions of the Board or Code references on which the Application depends for assigning the costs of the tunnel and cable to the Network Pool.

Response

a) Hydro One and Toronto Hydro have had an ongoing working relationship on the Midtown project since the joint study performed in 2006, which initially identified the need for the project. Toronto Hydro is a customer of Hydro One and as such, Hydro One has had discussions with Toronto Hydro concerning the project's capital contribution requirements under the applicable Transmission System Code provisions.

b) Please refer to EB-2009-0139, Exhibit D2, Tab1, Schedule 1, which is Toronto Hydro's latest rate application on capital contribution for the Midtown (Leaside-Birch) project.

c) It is not clear how the $36M incremental cost referred to in the question is derived from Reference 2. If it is meant to refer to the change in cost between the current application of $104.9M and the cost of the project submitted in EB-2007-0272 of $56.6M (a difference of $48.3M), the reasons for that increase in cost are provided in the paragraph below. If the reference is to the incremental cost of tunneling compared to trenching, there is very little incremental cost increase due to the tunnel option versus the trench option. This is indicated in the response to Board Staff Interrogatory 5(f).

The estimated costs of the project have increased from the 2007 rate filing following a detailed assessment of technical, real-estate, and CPR restrictions along with physical and environmental issues. Original plans were based on assumptions of following the CPR corridor with a trench and duct bank installation with minimal restrictions during construction.

d) As noted in the response to Board Staff Interrogatory 5(f), the costs of tunneling and trenching the section from Bayview Junction to Birch Junction are similar. Accordingly, there is no "implication" of the tunnel option on costs as referred to in the question.

The costs of the tunnel option are proposed to be shared for cost responsibility purposes between the Line Connection Pool and Toronto Hydro, based on the project's mix of capacity and reliability/replacement needs, as indicated in Exhibit B, Tab 4, Schedule 3, page 2, lines 23-29 and page 3, lines 1-6. The cost of the cable for the additional capacity in the tunnel is being assigned to THESL, based on the capacity need, and the costs of the replacement cable and of the construction of the tunnel are being assigned to the line connection pool. The replacement cable and the

cost of the tunnel are assigned to the pool based of end-of-life considerations of the existing cable and because the tunnel option involves no upsizing of the tunnel to accommodate the additional cable (i.e., a standard-sized 3-meter tunnel is being constructed which can accommodate both the replacement cable and the additional cable, and also makes provision for a future additional cable).

e) Please see the response to part (d).

f) It is unclear where the reference to the "$30m dollar tunnel" comes from. The EOL cables must be replaced as they serve one of the most densely populated and growing areas in the province. There are physical challenges today to build transmission in an urban environment as well as expensive real estate costs. The trenching option has several challenges and would still require tunneling under Yonge Street along with disturbing a large landscape and park land along the trench route including in the backyards of many homes.

If there was no requirement to increase capacity for load growth, Hydro One would still build the tunnel. This is because the tunnel option as noted elsewhere is cost effective and has other construction advantages.

Hydro One believes that maintaining supply and reliability to an area such as Midtown is cost justified as part of the TSC and IESO requirements.

g) Hydro One's initial discussions with THESL were based on a presentation indicating principles, preliminary estimates and contributions. See Exhibit C-1-11 Attachment 1.

Later Hydro One provided THESL with a draft working copy of the section 92 application, prior to filing.

h) Toronto Hydro has not released any information on the project's cost responsibility at any of Public Information Centers, in any newsletters, in any bill inserts, or at any public displays.

In Hydro One's public information centers neither the cost nor the cost responsibility on THESL, were major issues. The attendees were more interested in burying all the overhead facilities along the corridor and to the south of the railway track than the costs of doing so.

However, in discussions with some rate payers Hydro One has indicated that THESL has to pay a significant portion of the cost that will impact its rate payers. For example Leaside Property Owners Association (LPOA) requested Hydro One to consider tunneling from Leaside TS to Bayview Jct. We have indicated to them that as a transmitter we have to recommend a reasonable and cost effective solution. In

addition, if this portion of the line is to be buried then it must be done at the request of THESL and THESL will have to pay 100% of the incremental cost, which would impact rates for THESL customers.

i) As noted elsewhere, the additional cost of the tunneling option compared with trenching is minor, and tunneling offers several advantages with respect to constructability and community impact. Please see part h) above for information concerning discussions with the public regarding cost consequences.

j) Based on the percentages requested in the question, the following table summarizes the Hydro One cost and the THESL contribution.

Cost Responsibility for Transmission Line Facilities *(in $ million, excluding taxes)*

% of Tunnel Cost Allocated to Customer	Cost Responsibility		Capital Contribution[2]
	Customers[1]	Pool	
0% (As filed)	39.8 *39%*	61.0 *61%*	43.7
33%	54.3 *54%*	46.5 *46%*	60.6
50%	61.6 *61%*	39.2 *39%*	69.1
100%	83.4 *83%*	17.4 *17%*	94.5

1. Tunnel cost is for cost to build tunnel and one new circuit for capacity addition purposes
2. Capital contribution(s) exceeds the customer's cost responsibility as it includes recovery of OM&A.

k) The assignment of costs between the Line Connection Pool and the customer is based on a mix of capacity and replacement needs, as noted in the evidence at Exhibit B, Tab 4, Schedule 3, page 2. This approach to assigning costs has been approved by the Board in EB-2009-0079 (Woodstock East Transmission Line Upgrade Project) and EB-2008-0023 (Vanessa-Norfolk Transmission Reinforcement Project), and is consistent with the Transmission System Code s. 6.7.2 with respect to replacement costs and s. 6.3.5 concerning capacity additions.

Filed: March 19, 2010
EB-2009-0425
Exhibit C-1-17
Attachment 1

Midtown Project

Midtown Electricity Infrastructure Renewal Project

Cost Allocation

hydro one

toronto hydro electric system

Transmission Alternatives

- Route Option #1 (preferred): Combination of overhead and underground duct/tunnel predominantly following CPR Corridor
- Route Option #2: Underground cable following existing cable route from Leaside TS to Birch Jct. through David A. Balfour Park
- Route Option #3: Combination of overhead (Leaside TS to Bayview Jct.) and underground using Douglas Drive and other road allowance
- Route Option #4: Combination of overhead (Leaside TS to Bayview Jct.) and underground along using Heath St. and other road allowance

For costing/cost allocation, only Option 1 was further assessed

Costs

	Option 1a (O/H plus U/G trench)			Option 1b (O/H plus tunnel)		
	Total Cost	Hydro One	THES	Total Cost	Hydro One	THES
Bridgman TS * Birch Jct	$7.2	$0.0	$7.2	$7.2	$0.0	$7.2
Leaside TS * Bayview Jct	$24.5	$4.9	$19.6	$24.5	$4.9	$19.6
Bayview * Birch	$72.6	$57.0	$15.6	$73.5	$57.0	$16.5
Total	**$104.3**	**$61.9**	**$42.4**	**$105.2**	**$61.9**	**$43.3**
		O/M Cost:	$9.5			$9.5
		Total THES Contribution:	**$51.9**			**$52.8**

Real Estate Cost (included in the cost above)		
	Option 1a	**Option 1b**
O/H Portion	$10.3	$10.3
U/G Portion	$11.0	$9.9
Subtotal	**$21.3**	**$20.2**

Option 1a – cable in duct bank

Option 1b – cable in tunnel

Preferred Tx Option is 1b – Existing Route with cable portion in Tunnel

Ontario Energy Board (Board Staff) INTERROGATORY #12 List 1

Interrogatory

Reference:

Exhibit B/Tab 4/Schedule 2/Page 1, line 24

Preamble:

Contingencies have been proposed at 25% of the total project cost including the tunnel section. Board staff seeks additional information on the contingency allowance.

Question/Request:

a) Please confirm that the contingency for the $44.7 million John x Esplanade project (EB-2004-0436) was $4 million.
b) Please confirm that the project for the John x Esplanade tunnel was estimated at $44.7 million and that it was actually completed at $38 million.
c) What experiences in the John X Esplanade, or any similar tunnelling project, contribute to the decision to increase the contingency for the proposed project?
d) What is the total project cost when a 10% contingency is used?
e) Confirm that the rate base on which Hydro One will be applying for rate increases will be based on the full amount of the project including the contingency
f) Does Hydro One expect future rate increases which are sought as a result of this project to occur on the basis of when the project is placed in service i.e. "used and useful"?
g) Confirm that, if rates are granted on a basis which does not require that the project be used and useful, that ratepayers would be contributing the full amount of the project including the proposed contingency, even if the contingency amount is not required, and that there is no means whereby this would be recovered from the shareholders.
h) Please provide a justification for the use of a 25% contingency. Compare this contingency level with that of the John x Esplanade figure.

Response

a) Yes, the contingency for the John x Esplanade project was $3.8 million (EB-2004-0436, Exhibit B, Tab 5, Schedule 2, Table 4)

b) Yes, the actual costs for this project were $38.2 million (EB-2004-0436 Post Construction Report April 17, 2009)

c) Many lessons learned from John x Esplanade were used in helping determine this project's contingency. There was a large variance between bidders on the John x Esplanade project, $6.3M between high and low bids for tunnel construction and

$4.1M difference in bids for electrical supply/install, thus we needed to consider the competition at the time of bidding in this estimate. We experienced sections of unstable rock (at Front St. and Yonge St., and at Front St. and Simcoe St) in the construction of the John x Esplanade tunnel which required extra shoring and had considerable impacts on the schedule. There had been other tunnels in the vicinity of John x Esplanade that provided more confidence in rock elevations for that project, which allowed a smaller contingency at the time that that estimate was prepared. We do not have the same comparisons in this area of the city. If the soil testing results confirm soil assumptions and when contractor bids are known then the full amount of contingency may not be required.

As a result of this experience the contingency for the Midtown Project was increased to approximately 25% of the direct project costs.

d) Total project cost would be $95.4M if 10% contingency is used.

e) Hydro One has forecast the Midtown project to go into service in 2013. Hydro One will be applying for transmission rates for test years 2011 and 2012 (EB-2010-0002) later this year. The capital costs for this project will not be included in that application's rate base. When transmission rates for 2013 are set in a future proceeding, the most recent project cost forecast will be included in rate base, including any contingencies (assuming the project has not finished construction by the time rates are set). These forecast costs will be included in rate base and in rates until the next rate resetting, at which time actual project costs will be included in rate base for rate-making purposes, based on standard rate-making methodology.

f) Yes, as indicated above, the project will only be included in rate base when it is deemed "used and useful". As indicated in the load forecast and in the IESO, SIA the project facilities will be used and be useful immediately after being in-service.

g) Hydro One is not requesting recovery of costs before the project is used and useful, as indicated above the facilities will be "used and useful" immediately after being in-service. Hydro One will confirm that the assumptions in Board Staff's scenario are correct.

h) Please see the response to part c) above for a comparison of the contingency required for these two projects. There is also a risk of real estate uncertainty which we did not have on John x Esplanade. John x Esplanade was all under road allowance with no real estate costs.

The estimated contingency for the Midtown project (23.6%, rounded up to 25%) is based on the project's direct costs (excludes AFUDC, overhead and contingency). The estimated contingency for the John x Esplanade project, as a percentage of total project cost, is 10%, or 12.7% of direct costs.

Ontario Energy Board (Board Staff) INTERROGATORY #13 List 1

Interrogatory

Reference:

Exhibit B/Tab 4/Schedule 3/Page 3/line 17

Preamble:

Board staff is not clear why the replacement of a radial line seen as necessary for the reliability of the Transmission System.

Question/Request:

a) Please confirm that the disconnect switches in lines L13W, L14W and L15W are normally operated in the open position.
b) Please explain why the reliability of a radial line is seen as affecting the Transmission System, rather than as a local reliability issue?
c) If the reliability is a local issue is it not more appropriate that the costs be borne by the local utility rather than being assigned to the line pool?
d) Please provide information on any reliability issues affecting the current configuration of the lines which contributes to justifying the proposal, including situations where mandatory reliability statistics and measures are not met.

Response

a) Yes, the L13W, L14W and L15W circuits are normally operated open at Wiltshire TS. Bridgman TS and Dufferin TS are supplied from Leaside TS and Wiltshire TS is supplied from Manby TS.

b) The reinforcement of the Leaside x Bridgman Transmission corridor helps the network by allowing load transfers between the Richview/Manby area in the west and the Cherrywood/ Leaside area in the east.

During certain system conditions (examples of this may be outages at Claireville TS, outages on the Richview TS x Manby TS circuits, outages of the Manby 230/115kV autotransformers) there may be a need to reduce loading on the transmission facilities in the Richview TS and Manby TS area. One way to accomplish that is to transfer Wiltshire TS from Manby TS supply to Leaside TS supply.

However, with increased loading at Dufferin TS and Bridgman TS and the limited transmission capacity of Leaside x Bridgman circuits it is now becoming increasingly difficult to pick up Wiltshire TS from Leaside TS.

c) The reliability aspects of the project are driven by the need to replace the end-of-life underground cable on the Bayview Jct. to Birch Jct. section and by the need to replace the end-of-life overhead conductor on the Leaside TS to Bayview Jct. section. These two aspects are discussed in Exhibit B, Tab 4, Schedule 3, page 2, lines 14-29. Replacement of existing facilities is provided at no cost to the customer per s. 6.7.2 of the TSC. Accordingly, none of the cost of the replacement work has been assigned to Toronto Hydro. However, the capacity-addition-related work of the project has been assigned to Toronto Hydro, consistent with s. 6.3.13 of the TSC, which specifies that the cost of new or modified facilities required to serve new load is a customer responsibility.

d) As stated in Exhibit B, Tab 1, Schedule 4, page 3 lines 14-18, there is concern that the L14W circuit in its present state may not be able to handle the increased loading expected in the future and particularly if one of the other circuits L13W or L15W is out of service. If the L14W circuit fails under this condition, the remaining in-service circuit (either L13W or L15W) would trip and result in a complete outage of load supplied from Bridgman TS and Dufferin TS.

Ontario Energy Board (Board Staff) INTERROGATORY #14 List 1

Interrogatory

Reference: Exhibit B/Tab 6/Schedule 6/Page 2/Paragraph 1.3

Preamble:
The referenced paragraph indicates that "additional temporary construction and working rights will be required…when encroaching on private landowner property…access shafts for tunnel rights-of-way may be located on Hydro One or private land pending final engineering design".

Question/Request:
a) According to the proposed design, please indicate whether Hydro One foresees any land issues with private landowners. If yes, please describe measures anticipated for dealing with these?
b) Please indicate the status of easement requirements
c) Please indicate the difference in effort for the proposed routing, the trenching routing and the hybrid option.

Response

a) All affected landowners have been contacted regarding the proposed Toronto Midtown Transmission Reinforcement Project. During this process, all Hydro One's proposed land tenure requirements e.g., easements, permits by Hydro One, have been discussed with affected landowners. To date, we are not aware of any major land issues, however, formal negotiations have not yet commenced and therefore, at this time it is unclear what issues may arise from dealings with private landowners.

b) The requirement for land includes transmission line easements, permits, and access/construction easements. In some cases, the proposed transmission route may require new or amended easements or permits from present affected landowners where existing land tenure agreements already cross their properties.

Hydro One has recently received two requests, to move existing towers to different locations. Pending the outcome of these assessments, new easements /permits may be required.

Another area of recent interest is where the new proposed transmission line crosses through Balfour Park (owned by the City of Toronto). There is some question concerning whether Hydro One's existing 115 KV line easement will accommodate the new transmission line or if a new easement is required across these lands. It would appear from our review to date that a new easement will be acquired for the

new transmission line. In conjunction with this matter, discussions have also revolved around this location with respect to the City's Official Plan issues.

c) As indicated in our response to Board Staff Interrogatory 6, the trenching option considered is a hybrid option with a short tunnel near Yonge St. The major advantage of the proposed tunnel option with respect to effort of construction and need for land are as follows:

- it will significantly reduce the number of affected landowners, both during construction and from a maintenance point of view in subsequent years

- it will eliminate the need to re-trench to accommodate an additional circuit for future end-of-life replacement, as the tunnel option makes provision for an additional future circuit as indicated in the evidence in Exhibit B, Tab 4, Schedule 3, page 3, lines 4-6.

To use trenching as the construction method a great deal of additional rights would be required due to the proximity to the CPR tracks. There would also be an unknown cost associated to the trench method for business loss, signal personnel and limited work hours on CPR lands.

Ontario Energy Board (Board Staff) INTERROGATORY #15 List 1

Interrogatory

Reference:
Letter of comment from Mr. Steven A. Zakem of Loblaws Properties Ltd. ("Loblaws") to Mr. Jim Goodfellow, Project Manager Hydro One Networks Inc., dated January 13, 2010

Preamble:
There has been some communication between Loblaws and Hydro One requesting that (a) particular tower(s) be relocated.

Questions/Requests:
Please
a) Indicate discussions which have been held in regard to reference 1 and provide copies of such;
b) Indicate reasons why Hydro One has not been able to accommodate this request;
c) Indicate any alternative proposals which have been made, and
d) Indicate the latest status of this matter.

Response

a) There have been discussions with Loblaws regarding their request for relocation of one particular tower. Hydro One has been assessing the relocation as it involves more than one property owner and new easements along with additional costs.

b) See above.

c) See above. To this date, no alternative proposals have been made to Loblaws.

d) Hydro One plans to a meet with affected landowners and Loblaws in the near future.

Ontario Energy Board (Board Staff) INTERROGATORY #16 List 1

Interrogatory

Reference:
Letter of March 4, 2010 from Mr. C. Robert Vernon to the Board Secretary, copied to Hydro One

Preamble:
The letter writer has expressed concerns about traffic issues and neighbourhood impact, and has suggested that the tower nearest 400 Summerhill Avenue be removed.

Question/Request:
a) Has Hydro One responded to this letter, and if so, please provide the Board a copy of this response.
b) If Hydro One has not responded to the letter, please provide Hydro One's comments on the concerns and proposals within the letter.

Response

a) Yes, Hydro One responded to Mr. Vernon on March 15, 2010. Please see Attachment 1.

b) Not applicable

Hydro One Networks Inc.
483 Bay Street
South Tower, 8th Floor
Toronto, Ontario M5G 2P5
www.HydroOne.com

Tel: 416.345-5892
Fax: 416-345-6984

Enza Cancilla
Manager
Public Affairs

March 15, 2010

Mr. Robert Vernon
B.Com, J.D., LL.M
Barrister & Solicitor
400 Summerhill Ave.
Toronto, ON M4W 2E4

Dear Mr. Vernon:

Re: Hydro One Networks Inc. Toronto Midtown Transmission Reinforcement Project – OEB File EB-2009-0425

Thank you for your letter of March 4, 2010, regarding your concerns about the Midtown Project. We welcome the opportunity to clarify our construction process and address your concerns. We were also glad that we had the opportunity to meet with you and Mr. Mierins of the North Rosedale Ratepayers' Association on March 8th to further discuss these matters.

Hydro One understands that any construction activity can be disruptive to local residents and businesses, and we are committed to minimizing nuisance effects on the local community. Since the start of the project, we have been communicating with the North Rosedale Ratepayers' Association, Moore Park Residents' Association and the local councillors about the project, and it is our intention to continue this process along with regular updates to area residents.

We have addressed the issues raised in your letter as per the numbering you provided.

1. TRAFFIC RESTRICTIONS FOR HEAVY TRUCKS

Hydro One and its contractor will obey all municipal bylaws and traffic rules. Accordingly, trucks will use only allowable routes from the various construction sites. It is our intention to keep construction traffic off residential streets to the extent possible, and as such, we are developing a traffic plan that would restrict vehicles to Carstowe Road. Hydro One will apply to the City of Toronto to allow Carstowe Road to be used as a two-way street during certain hours for the duration of construction.

The spoil/rock debris that will be removed from the tunnel will be clean fill, but the destination of this material will be determined by our selected contractor.

Hydro One's agreements with the general contractor will include restrictions on trucks entering and leaving the main construction site as per the permit, as well as instructions to use Carstowe Road and Mount Pleasant Road.

2. MINIMIZING THE IMPACT ON THE NEIGHBOURING RESIDENTIAL AREAS

a.) The work site at Carstowe Road will be approximately 30 m x 60 m[1], and we plan to install a temporary 12-foot sound barrier fence around the perimeter. We have been advised by an experienced tunnel contractor that this type of fence can reduce noise by up to 60%. Once the project is complete, permanent fencing will be installed, and our landscape architect will work with the community to develop a landscape plan that is in keeping with the local environment and address concerns.

b.) Hours of construction will be between 7:00 a.m. and 7:00 p.m., Monday to Friday, but there is the possibility that some work may require some weekend work, in which case the contractor will be required to comply with City by-laws. In addition, we will make best efforts to ensure that any work outside the regular work hours will be kept to a minimum and that the community will be notified.

c.) Hydro One plans to undertake several mitigation measures (as documented in the draft Environmental Study Report) to ensure that the community is not adversely affected by nuisance effects associated with construction or that they are kept to minimum. In addition, we plan to provide regular project updates through both the ratepayers' associations and our website. We will also establish a community liaison committee during construction, with representation from the ratepayers' associations. Norm Mierins of the NRRA indicated that he played this role for the recent Summerhill footbridge construction and would be pleased to act in this capacity during the Midtown Project construction for your community.

d.) There will be no blasting at the site. There will, however, be a requirement for some pile driving in order to provide safe support for the shaft perimeter. This pile driving will be through soft ground rather than rock and should take less than 8 weeks.

e.) All *Occupational Health and Safety Act* rules and regulations will be followed for the use and storage of hazardous materials.

f.) Hydro One will encourage the use of car pooling and public transit by construction crews. In addition, Hydro One has followed up on your suggestion that temporary parking be established on the road allowance along Carstowe Road for the construction crews. We have contacted the City of Toronto and they have indicated their support for this plan. Once we have more details, we will update you and Mr. Mierins once we have heard from the City.

g.) The storage of some equipment and materials is essential for effective operation of the project. However, the 12-foot fence around the perimeter of the work site should help to screen the work site. We will also need to stockpile the spoil/rock debris excavated from the tunnel for a period of time before transporting it from the site. The stockpiling allows the spoil to dry, allowing us to better control the schedule of trucks accessing Carstowe Road and less dirty water leakage from the trucks onto city streets. However, we will keep the stockpiling to a minimum.

[1] Please note that this is the correct dimension of the construction staging area. A 10 m x 30 m site was incorrectly communicated on March 8, 2010.

h.) Direct lighting will be used only to illuminate the construction site. If there are any concerns from the community, we will work to mitigate these issues.

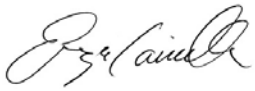
i.) As indicated above, as part of our agreement with our contractor, we plan to restrict truck traffic to Carstowe Road and Mount Pleasant and will propose that access for large trucks occur between 9 a.m. and 3 p.m. to avoid the school commute times. There will be some large deliveries (e.g., cable reel, delivery of large equipment and other oversized loads) that will occur outside of the 7:00 am – 7 p.m. period and normally with a police escort, but we will try not to schedule these during the walk to and from school time periods. Advance notice would also be provided of such events, which might also involve temporary road closures.

3. REMOVING THE EXISTING HYDRO TOWER LINE

While the existing tower line on the south side of the CP tracks is more than 50 years old, condition assessments indicate that it is in good condition and does not need to be replaced in the foreseeable future. Burying these lines would be extremely costly and not an economical option.

We hope that this addresses your concerns. In addition, Hydro One is committed to establishing a community liaison committee that would be our main point of contact during construction. Please do not hesitate to contact me at 416-345-5892 if you require further clarification.

Sincerely,



Enza Cancilla
Manager, Public Affairs

Ontario Energy Board (Board Staff) INTERROGATORY #17 List 1

Interrogatory

Reference: Exhibit B/Tab 6/Schedule 5/Page 12-18/Paragraph 5

Preamble: Various community concerns have been identified.

Question/Request:
According to the summary of key issues, community concerns have been noted in relation to construction disruption, traffic, noise, vibration, road repairs, please provide further clarification on how Hydro One plans to mitigate these adverse effects, including length of time and quantifiable impact.

Response

Please see Exhibit 2, Tab 1, Schedule 16 for impacts in the Carstowe Road area. Exhibit C, Tab 2, Schedule 2 discusses impact throughout the project area.

In addition there will be construction impact at Bayview Junction and Birch Junction where the intermediate shaft locations are located within residential and commercial/residential areas and overhead line construction will occur.

The construction hours of operation, safety practices and mitigation measures as described for our Carstowe Road site would apply to construction at all our sites. However, the scale of operation would be much smaller.

The construction of the exit and intermediate shafts would involve excavation, pile driving, spoil/rock debris removal by trucks, and concrete lining of the shaft,

- Construction of the exit shafts at Bayview and Birch Junctions as well as intermediate shafts is expected to last up to 6 months
- Overhead line construction should take approximately 18 months but will likely not be done consecutively but in sections due to system outage requirements
- Work hours would be consistent: 7 am to 7 pm, Monday to Friday, with the possibility of construction on the weekend in accordance with all municipal by-laws
- Dust would be controlled by watering sites and access roads as necessary at exits of junctions
- Noise attenuation fence will be constructed around tunnel shaft locations at Bayview Junction, Birch Junction and at the Carstowe Ave. main shaft during construction

- Landscape plans will be developed for station sites in consultation with area residents following completion of construction

Ontario Energy Board (Board Staff) INTERROGATORY #18 List 1

Interrogatory

Reference: Exhibit B/Tab 6/Schedule 5/page 3/3.2 First Nations & Métis Consultation

Preamble:
The referenced pages indicate aboriginal consultations which have taken place.

Question/Request:

a) Please provide a status update on consultations with Aboriginal communities with regard to the following points:

i) Identify all of the Aboriginal communities that have been contacted in respect of this application.

ii) Indicate

- i) how the Aboriginal communities were identified;
- ii) when contact was first initiated;
- iii) the individuals within the Aboriginal community who were contacted, and their position in or representative role in the community;
- iv) a listing, including the dates, of any phone calls, meetings and other means that may have been used to provide information about the project and hear any interests or concerns of Aboriginal communities with respect to the project.

b) Provide relevant information gathered from or about the Aboriginal community concerning their treaty rights, or any filed and outstanding claims or litigation concerning their treaty rights or treaty land entitlement or Aboriginal title or rights, which may potentially be impacted by the project.

c) Provide any relevant written documentation regarding consultations, such as notes or minutes that may have been taken at meetings or from phone calls, or letters received from, or sent to, Aboriginal communities.

d) Identify any specific issues or concerns that have been raised by Aboriginal communities in respect of the project and, where applicable, how those issues or concerns will be mitigated or accommodated.

e) Explain whether any of the concerns raised by Aboriginal communities with respect to the applied-for project have been discussed with any government department or agencies, and if so, identify when contacts were made and who was contacted.

f) If any of the Aboriginal communities who were contacted either support the application or have no objection to the project proceeding, identify those groups and provide any available written documentation of their position. Also, indicate if their positions are final or preliminary or conditional in nature.

g) Provide details of any know Crown involvement in consultations with Aboriginal communities in respect of the applied-for project.

Response

a)

i) As indicated at Exhibit B, Tab 6, Schedule 5, page 3 of the pre-filed material, Hydro One identified the following Aboriginal Groups who may have an interest in, or may be potentially affected by, the Project. All of these groups have been contacted.

- Six Nations of the Grand River Territory First Nation
- Mississaugas of the New Credit
- Mississaugas of Scugog First Nation

ii)

i) Prior to submitting the Application, Hydro One undertook a due diligence exercise to determine which Aboriginal Groups may have an interest in, or may be potentially affected by, the Project. In addition to its own internal work, Hydro One also received information from Indian and Northern Affair Canada (INAC) and Ministry of Aboriginal Affairs (MAA). Hydro One received a response from the INAC – Specific Claims Branch with respect to any specific claims in the area of interest, along with a list of First Nations communities in the general vicinity of the Project. Please see Attachment 1 for INAC and MAA inquiry consultation.

ii) Hydro One sent correspondence to all of the identified Aboriginal Groups providing them with information regarding the Project and inviting them to express any concerns or issues they might have directly to Hydro One.

Attachment 2 lists all of Hydro One's correspondence with First Nations groups, including the Notice of Commencement, Notice of PIC #2 and Notice of Completion, Contacts with Aboriginal Communities and any responses received from these communities. The contact was first initiated by Notice of Commencement letters to Six Nations of the Grand River Territory First Nation, Mississaugas of the New Credit and, Mississaugas of Scugog First Nation on February 9, 2009.

iii) The Chiefs and associated First Nations communities who were contacted during the consultation process are shown in the table below:

Contact Name	Organization
Chief Tracy Gauthier	Mississaugas of Scugog First Nation
Chief William Montour	Six Nation of the Grand River Territory
Chief Bryan Laforme	Mississaugas of the New Credit First Nation

In addition to the Chiefs, other representatives of the identified First Nations were also contacted. These were: Terry Bomberry, liaison between the Six Nations Confederacy and Elected Council; Margaret Sault, Director of Research, Lands and Membership, Mississaugas of the New Credit First Nation; and Carole Hill, Six Nations of the Grand River, Council Secretary. Former Chiefs A. MacNaughton and D.M. General were also contacted throughout the Class EA process.

iv) In addition to written communication, follow-up phone calls were made, on August 17, 2009, to all three identified First Nations to hear any interests or concerns with respect to the Project and to inquire if they wished to meet with Hydro One. Also, another follow-up phone call was made to Margaret Sault on September 25, 2009. Because the identified First Nations had not expressed an interest or concern with respect to the Project, no meetings were requested on behalf of the three First Nations.

b) As noted in response (a) to this interrogatory, Hydro One has been in communication with applicable government ministries and agencies with respect to the identification of Aboriginal Groups whose interests may be potentially affected by the Project and in respect of the consultation process.

Consultations with the identified First Nation Groups were subsequently initiated by Hydro One. Notice of Project Commencement, Invitation to Public Information Centre, and Notice of Project Completion of Draft Environmental Study Report (ESR) were sent out. Telephone contact with the First Nations was made in August 17, 2009. No Specific concerns regarding their treaty rights were raised at that time or throughout the duration of the project.

c) Attachment 2 provides a list of all the Hydro One's notifications, including Notice of Commencement, Notice of PIC and Notice of Completion of Draft ESR, to all the identified First Nation groups, along with a record of Project Aboriginal Correspondence. No responses from the First Nations contacted were received.

Hydro One is committed to continuing to engage with the Aboriginal Groups to continue to share Project-related information, understand and, where possible, address their issues and concerns regarding the Project and to continue to engage with them both before the OEB hearing process and after any approvals are issued and throughout the construction and operation phases of the Project.

d) No Specific concerns regarding their treaty rights were raised by First Nation Groups at this time. Telephone contacts with the First Nations were made in August of 2009. No specific concerns regarding their treaty rights were raised at that time.

Hydro One welcomes the involvement of any of the other Aboriginal communities and groups having an interest in the Project.

e) No concerns were raised and as such no government department or agency was contacted regarding concerns raised by Aboriginal Groups. Hydro One has kept INAC and MAA informed on the progress of the project.

f) At this time, Hydro One is not aware of Aboriginal Groups who expressly support or have no objection to the Project. All the identified First Nations have not expressed any specific concerns regarding this project.

g) Please refer to response e) above, regarding the Crown's involvement. Hydro One is not aware of activities that the Crown may have undertaken in respect of its duty to consult.

Hydro One Networks Inc.
483 Bay Street
TCT12, North Tower
Toronto, Ontario, M5G 2P5
mccormick.bj@hydroone.com

Tel: 416-345-6597
Fax: 416-345-6919
Cell: 416-525-1051

Brian McCormick
Manager, Environmental Services and Approvals

August 29, 2008

«First_Name» «Last_Name», «Position_Title»
«Organization»
«Department»
«Address_1»
«Address_2»
«Address_City», «Province» «Postal_Code»

RE: Leaside TS to Birch Junction Transmission Reinforcement – First Nations and Métis Inquiry

Dear «First_Name» «Last_Name»:

Hydro One Networks Inc. (Hydro One) is about to commence a Class Environmental Assessment for a proposed reinforcement of a 115 kV transmission line running from Leaside TS to Birch Jct, within the City of Toronto. Please refer to the enclosed map for the project study area.

As a part of our First Nations and Métis consultation, we would request your input with respect to any possible First Nations claims that occur within the general vicinity of the project area. If possible, we would also appreciate it if you could provide us with a map of the traditional territories and/or areas under specific or comprehensive claims.

If you have any questions or concerns regarding this matter, please feel free to contact me at 416-345-6597, or Yu San Ong at 416-345-5031.

Sincerely,

Brian McCormick
Manager, Environmental Services & Approvals

Cc:
Fred Hosking, Ontario Research Team Lead (Indian and Northern Affairs Canada)
Kevin Clement, Acting Director (Indian and Northern Affairs Canada)
Jonathan Allen, Litigation Team Leader for Ontario (Indian and Northern Affairs Canada)

Hydro One Networks Inc.
483 Bay Street Tel: 416-345-6597
TCT12, North Tower Fax: 416-345-6919
Toronto, Ontario, M5G 2P5 Cell: 416-525-1051
mccormick.bj@hydroone.com

Brian McCormick
Manager, Environmental Services and Approvals

February 9, 2009

Chief William K. Montour
Six Nations of the Grand River Territory First Nation
1695 Chiefswood Road
P.O. Box 5000
Ohsweken, ON
N0A 1M0

RE: Midtown Electricity Infrastructure Renewal Project
Class Environmental Assessment

Dear Chief Montour:

Hydro One Networks Inc. (Hydro One) is initiating a Class Environmental Assessment (EA) for the proposed replacement of an aging cable and addition of transmission capacity in the Midtown area within the City of Toronto.

The proposed Midtown Project involves the replacement of an aging 115 kV underground cable between Bayview Junction (Jct) and Birch Jct, construction of an additional 115 kV circuit between Leaside Transformer Station (TS) and Birch Jct, use of an existing 115 kV overhead circuit between Birch Jct and Bridgman Jct, and installation of new equipment at Leaside TS, Bayview Jct, Birch Jct and Bridgman Jct. The Study Area for the proposed facilities is shown on the attached map.

The need for the proposed undertaking was identified by Hydro One and Toronto Hydro-Electric System Limited. The proposed project will increase reliability and capacity of the high voltage system in the Midtown transmission corridor, where load growth has been steadily increasing despite gains from energy conservation.

The proposed Project is subject to provincial *Environmental Assessment Act* in accordance with the "Class EA for Minor Transmission Facilities". The construction of the additional circuit is also subject to "Leave to Construct" approval from the Ontario Energy Board (OEB). Contingent on the outcome of the Class EA and OEB processes, construction could begin 2010 with the new facilities in-service as early as spring 2012.

The Class EA will involve the identification and comparative evaluation of alternative technology options in order to select a preferred technology (overhead, trench, or tunnel) for the transmission facilities in the Midtown area. The Class EA will also examine the potential effects, mitigation measures and range of alternative routes to best upgrade the existing facilities within the Study Area. All

pls scan

Affaires indiennes et du Nord Canada
Indian and Northern Affairs Canada

www.ainc-inac.gc.ca

Votre référence - Your file

Notre référence - Our file

SEP 19 2008

B 8260-12

Brian McCormick
Manager
Environmental Services
& Approvals
483 Bay Street
TCT12, North Tower
TORONTO ON M5G 2P5

Dear Mr. McCormick:

Re: Leaside TS Birch Junction Transmission Reinforcement – First Nations and Métis Inquiry

I am writing in response to your letter of August 29, 2008, addressed to Don Boswell regarding possible First Nation claims in the above noted area.

We have conducted a brief search of our records and determined that no specific claim has been submitted by First Nations in the vicinity of the area of interest.

However, there are other First Nations in the vicinity of your area of interest. You may wish to contact these First Nations to advise them of your intentions. They can be reached at:

Mississaugas of the New Credit First Nation
2789 Mississauga Road, R.R. #6, HAGERSVILLE, ON N0A 1H0
(905) 768-1133

Six Nations of the Grand River
PO Box 5000, OHSWEKEN, ON N0A 1M0
(519) 445-2201

For more information, you may wish to consult a "Public Information Status Report" on all claims which have been submitted to date. This information is available to the public on the Indian and Northern Affairs Canada (INAC) website and can be found at http://www.ainc-inac.gc.ca/ps/clm/pis_e.html.

.../2

It should be noted that the reports available on the INAC website are updated quarterly and therefore, you may want to check this site at regular intervals for updates. In accordance with legislative requirements, confidential information has not been disclosed.

Please rest assured that it is the policy of the Government of Canada as expressed in *Outstanding Business: A Native Claims Policy* that "in any settlement of specific native claims the government will take third party interests into account. As a general rule, the government will not accept any settlement which will lead to third parties being dispossessed."

We can only speak directly to claims filed under the Specific Claims Policy in the Province of Ontario. We cannot make any comments regarding potential or future claims, or claims filed under other departmental policies. This includes claims under Canada's Comprehensive Claims Policy or legal action by a First Nation against the Crown. You may wish to contact INAC's Negotiations East Branch at (819) 994-7521 and its Litigation Management and Resolution Branch at (819) 934-2185 directly for more information. In addition, you may wish to consult the Assessment and Historical Research Unit at (819) 994-6453, and the Consultation and Accommodation Unit at (613) 944-9313.

You may also wish to visit http://www.ainc-inac.gc.ca/nr/iss/acp/acp-eng.asp on the INAC website for information regarding the Federal Action Plan on Aboriginal Consultation and Accommodation.

To the best of our knowledge, the information we have provided you is current and up-to-date. However, this information may not be exhaustive with regard to your needs and you may wish to consider seeking information from other government and private sources (including Aboriginal groups). In addition, please note that Canada does not act as a representative for any Aboriginal group for the purpose of any claim or the purpose of consultation.

I hope this information will be of assistance to you. I trust that this satisfactorily addresses your concerns. If you wish to discuss this matter further please contact me at (819) 953-3170.

Sincerely,

Marie-Laurence Daigle
Claims Analyst
Ontario Research Team
Specific Claims Branch

mitigation and restoration activities will follow Hydro One's "Environmental Guidelines for Construction and Maintenance of Transmission Facilities".

Hydro One recognizes the need to begin consultation in the preliminary stages of project planning and has initiated consultation with regional and municipal representatives, as well as government agencies. A public consultation process will be undertaken, seeking local input to assist the Project Team in determining options for upgrading the transmission facilities.

Our first series of Public Information Centres (PICs) are scheduled for February 17, 18 and 24, 2009. The PICs will provide interested parties with the opportunity to learn more about the Project, provide their input on Project options, and discuss any issues or concerns with our Project Team. Please see the enclosed newspaper ad for details.

For our records, please complete and return the attached **Fax Back Form** indicating the appropriate contact person. We would be pleased to arrange a meeting to gather your input and feedback, and discuss with you the areas of interest and/or concern regarding this Project. Stantec Consulting Ltd. (Stantec) has been retained to provide assistance to Hydro One in the Class EA process. Shawna Peddle, Senior Project Manager with Stantec, may be in touch to discuss your interest and gather relevant information for this Project.

If you have any questions regarding the Midtown Project please feel free to contact me at (416) 345-6597, or Yu San Ong, Environmental Planner, at (416) 345-5031. Further information can also be found on the Project Website at www.HydroOneNetworks.com/newprojects

Sincerely,

Brian McCormick
Manager, Environmental Services & Approvals

Hydro One Networks Inc.
483 Bay Street Tel: 416-345-6597
TCT12, North Tower Fax: 416-345-6919
Toronto, Ontario, M5G 2P5 Cell: 416-525-1051
mccormick.bj@hydroone.com

Brian McCormick
Manager, Environmental Services and Approvals

February 9, 2009

Chief Bryan LaForme
Mississaugas of New Credit First Nation
2789 Mississauga Road R.R. #6
Hagersville,, ON
N0A 1H0

RE: Midtown Electricity Infrastructure Renewal Project
Class Environmental Assessment

Dear Chief LaForme:

Hydro One Networks Inc. (Hydro One) is initiating a Class Environmental Assessment (EA) for the proposed replacement of an aging cable and addition of transmission capacity in the Midtown area within the City of Toronto.

The proposed Midtown Project involves the replacement of an aging 115 kV underground cable between Bayview Junction (Jct) and Birch Jct, construction of an additional 115 kV circuit between Leaside Transformer Station (TS) and Birch Jct, use of an existing 115 kV overhead circuit between Birch Jct and Bridgman Jct, and installation of new equipment at Leaside TS, Bayview Jct, Birch Jct and Bridgman Jct. The Study Area for the proposed facilities is shown on the attached map.

The need for the proposed undertaking was identified by Hydro One and Toronto Hydro-Electric System Limited. The proposed project will increase reliability and capacity of the high voltage system in the Midtown transmission corridor, where load growth has been steadily increasing despite gains from energy conservation.

The proposed Project is subject to provincial *Environmental Assessment Act* in accordance with the "Class EA for Minor Transmission Facilities". The construction of the additional circuit is also subject to "Leave to Construct" approval from the Ontario Energy Board (OEB). Contingent on the outcome of the Class EA and OEB processes, construction could begin 2010 with the new facilities in-service as early as spring 2012.

The Class EA will involve the identification and comparative evaluation of alternative technology options in order to select a preferred technology (overhead, trench, or tunnel) for the transmission facilities in the Midtown area. The Class EA will also examine the potential effects, mitigation measures and range of alternative routes to best upgrade the existing facilities within the Study Area. All

mitigation and restoration activities will follow Hydro One's "Environmental Guidelines for Construction and Maintenance of Transmission Facilities".

Hydro One recognizes the need to begin consultation in the preliminary stages of project planning and has initiated consultation with regional and municipal representatives, as well as government agencies. A public consultation process will be undertaken, seeking local input to assist the Project Team in determining options for upgrading the transmission facilities.

Our first series of Public Information Centres (PICs) are scheduled for February 17, 18 and 24, 2009. The PICs will provide interested parties with the opportunity to learn more about the Project, provide their input on Project options, and discuss any issues or concerns with our Project Team. Please see the enclosed newspaper ad for details.

For our records, please complete and return the attached **Fax Back Form** indicating the appropriate contact person. We would be pleased to arrange a meeting to gather your input and feedback, and discuss with you the areas of interest and/or concern regarding this Project. Stantec Consulting Ltd. (Stantec) has been retained to provide assistance to Hydro One in the Class EA process. Shawna Peddle, Senior Project Manager with Stantec, may be in touch to discuss your interest and gather relevant information for this Project.

If you have any questions regarding the Midtown Project please feel free to contact me at (416) 345-6597, or Yu San Ong, Environmental Planner, at (416) 345-5031. Further information can also be found on the Project Website at www.HydroOneNetworks.com/newprojects

Sincerely,

Brian McCormick
Manager, Environmental Services & Approvals

Hydro One Networks Inc.
483 Bay Street Tel: 416-345-6597
TCT12, North Tower Fax: 416-345-6919
Toronto, Ontario, M5G 2P5 Cell: 416-525-1051
mccormick.bj@hydroone.com

Brian McCormick
Manager, Environmental Services and Approvals

February 9, 2009

Chief Tracy Gauthier
Mississaugas of Scugog First Nation
22521 Island Road
Port Perry, ON
L9L 1B6

RE: Midtown Electricity Infrastructure Renewal Project
Class Environmental Assessment

Dear Chief Gauthier:

Hydro One Networks Inc. (Hydro One) is initiating a Class Environmental Assessment (EA) for the proposed replacement of an aging cable and addition of transmission capacity in the Midtown area within the City of Toronto.

The proposed Midtown Project involves the replacement of an aging 115 kV underground cable between Bayview Junction (Jct) and Birch Jct, construction of an additional 115 kV circuit between Leaside Transformer Station (TS) and Birch Jct, use of an existing 115 kV overhead circuit between Birch Jct and Bridgman Jct, and installation of new equipment at Leaside TS, Bayview Jct, Birch Jct and Bridgman Jct. The Study Area for the proposed facilities is shown on the attached map.

The need for the proposed undertaking was identified by Hydro One and Toronto Hydro-Electric System Limited. The proposed project will increase reliability and capacity of the high voltage system in the Midtown transmission corridor, where load growth has been steadily increasing despite gains from energy conservation.

The proposed Project is subject to provincial *Environmental Assessment Act* in accordance with the "Class EA for Minor Transmission Facilities". The construction of the additional circuit is also subject to "Leave to Construct" approval from the Ontario Energy Board (OEB). Contingent on the outcome of the Class EA and OEB processes, construction could begin 2010 with the new facilities in-service as early as spring 2012.

The Class EA will involve the identification and comparative evaluation of alternative technology options in order to select a preferred technology (overhead, trench, or tunnel) for the transmission facilities in the Midtown area. The Class EA will also examine the potential effects, mitigation measures and range of alternative routes to best upgrade the existing facilities within the Study Area. All

mitigation and restoration activities will follow Hydro One's "Environmental Guidelines for Construction and Maintenance of Transmission Facilities".

Hydro One recognizes the need to begin consultation in the preliminary stages of project planning and has initiated consultation with regional and municipal representatives, as well as government agencies. A public consultation process will be undertaken, seeking local input to assist the Project Team in determining options for upgrading the transmission facilities.

Our first series of Public Information Centres (PICs) are scheduled for February 17, 18 and 24, 2009. The PICs will provide interested parties with the opportunity to learn more about the Project, provide their input on Project options, and discuss any issues or concerns with our Project Team. Please see the enclosed newspaper ad for details.

For our records, please complete and return the attached **Fax Back Form** indicating the appropriate contact person. We would be pleased to arrange a meeting to gather your input and feedback, and discuss with you the areas of interest and/or concern regarding this Project. Stantec Consulting Ltd. (Stantec) has been retained to provide assistance to Hydro One in the Class EA process. Shawna Peddle, Senior Project Manager with Stantec, may be in touch to discuss your interest and gather relevant information for this Project.

If you have any questions regarding the Midtown Project please feel free to contact me at (416) 345-6597, or Yu San Ong, Environmental Planner, at (416) 345-5031. Further information can also be found on the Project Website at www.HydroOneNetworks.com/newprojects

Sincerely,

Brian McCormick
Manager, Environmental Services & Approvals

Hydro One Networks Inc.
483 Bay Street Tel: 416-345-6597
TCT12, North Tower Fax: 416-345-6919
Toronto, Ontario, M5G 2P5 Cell: 416-525-1051
mccormick.bj@hydroone.com

Brian McCormick
Manager, Environmental Services and Approvals

February 9, 2009

Chief A. MacNaughton
Six Nations of the Grand River Territory First Nation
1695 Chiefswood Road
P.O. Box 5000
Ohsweken,, ON
N0A 1M0

RE: Midtown Electricity Infrastructure Renewal Project
Class Environmental Assessment

Dear Chief MacNaughton:

Hydro One Networks Inc. (Hydro One) is initiating a Class Environmental Assessment (EA) for the proposed replacement of an aging cable and addition of transmission capacity in the Midtown area within the City of Toronto.

The proposed Midtown Project involves the replacement of an aging 115 kV underground cable between Bayview Junction (Jct) and Birch Jct, construction of an additional 115 kV circuit between Leaside Transformer Station (TS) and Birch Jct, use of an existing 115 kV overhead circuit between Birch Jct and Bridgman Jct, and installation of new equipment at Leaside TS, Bayview Jct, Birch Jct and Bridgman Jct. The Study Area for the proposed facilities is shown on the attached map.

The need for the proposed undertaking was identified by Hydro One and Toronto Hydro-Electric System Limited. The proposed project will increase reliability and capacity of the high voltage system in the Midtown transmission corridor, where load growth has been steadily increasing despite gains from energy conservation.

The proposed Project is subject to provincial *Environmental Assessment Act* in accordance with the "Class EA for Minor Transmission Facilities". The construction of the additional circuit is also subject to "Leave to Construct" approval from the Ontario Energy Board (OEB). Contingent on the outcome of the Class EA and OEB processes, construction could begin 2010 with the new facilities in-service as early as spring 2012.

The Class EA will involve the identification and comparative evaluation of alternative technology options in order to select a preferred technology (overhead, trench, or tunnel) for the transmission facilities in the Midtown area. The Class EA will also examine the potential effects, mitigation measures and range of alternative routes to best upgrade the existing facilities within the Study Area. All

mitigation and restoration activities will follow Hydro One's "Environmental Guidelines for Construction and Maintenance of Transmission Facilities".

Hydro One recognizes the need to begin consultation in the preliminary stages of project planning and has initiated consultation with regional and municipal representatives, as well as government agencies. A public consultation process will be undertaken, seeking local input to assist the Project Team in determining options for upgrading the transmission facilities.

Our first series of Public Information Centres (PICs) are scheduled for February 17, 18 and 24, 2009. The PICs will provide interested parties with the opportunity to learn more about the Project, provide their input on Project options, and discuss any issues or concerns with our Project Team. Please see the enclosed newspaper ad for details.

For our records, please complete and return the attached **Fax Back Form** indicating the appropriate contact person. We would be pleased to arrange a meeting to gather your input and feedback, and discuss with you the areas of interest and/or concern regarding this Project. Stantec Consulting Ltd. (Stantec) has been retained to provide assistance to Hydro One in the Class EA process. Shawna Peddle, Senior Project Manager with Stantec, may be in touch to discuss your interest and gather relevant information for this Project.

If you have any questions regarding the Midtown Project please feel free to contact me at (416) 345-6597, or Yu San Ong, Environmental Planner, at (416) 345-5031. Further information can also be found on the Project Website at www.HydroOneNetworks.com/newprojects

Sincerely,

Brian McCormick
Manager, Environmental Services & Approvals

Hydro One Networks Inc.
483 Bay Street Tel: 416-345-6597
TCT12, North Tower Fax: 416-345-6919
Toronto, Ontario, M5G 2P5 Cell: 416-525-1051
mccormick.bj@hydroone.com

Brian McCormick
Manager, Environmental Services and Approvals

February 9, 2009

Chief D. M. General
Six Nations of the Grand River Territory First Nation
1695 Chiefswood Road
P.O. Box 5000
Ohsweken, ON
N0A 1M0

RE: Midtown Electricity Infrastructure Renewal Project
Class Environmental Assessment

Dear Chief General:

Hydro One Networks Inc. (Hydro One) is initiating a Class Environmental Assessment (EA) for the proposed replacement of an aging cable and addition of transmission capacity in the Midtown area within the City of Toronto.

The proposed Midtown Project involves the replacement of an aging 115 kV underground cable between Bayview Junction (Jct) and Birch Jct, construction of an additional 115 kV circuit between Leaside Transformer Station (TS) and Birch Jct, use of an existing 115 kV overhead circuit between Birch Jct and Bridgman Jct, and installation of new equipment at Leaside TS, Bayview Jct, Birch Jct and Bridgman Jct. The Study Area for the proposed facilities is shown on the attached map.

The need for the proposed undertaking was identified by Hydro One and Toronto Hydro-Electric System Limited. The proposed project will increase reliability and capacity of the high voltage system in the Midtown transmission corridor, where load growth has been steadily increasing despite gains from energy conservation.

The proposed Project is subject to provincial *Environmental Assessment Act* in accordance with the "Class EA for Minor Transmission Facilities". The construction of the additional circuit is also subject to "Leave to Construct" approval from the Ontario Energy Board (OEB). Contingent on the outcome of the Class EA and OEB processes, construction could begin 2010 with the new facilities in-service as early as spring 2012.

The Class EA will involve the identification and comparative evaluation of alternative technology options in order to select a preferred technology (overhead, trench, or tunnel) for the transmission facilities in the Midtown area. The Class EA will also examine the potential effects, mitigation measures and range of alternative routes to best upgrade the existing facilities within the Study Area. All

mitigation and restoration activities will follow Hydro One's "Environmental Guidelines for Construction and Maintenance of Transmission Facilities".

Hydro One recognizes the need to begin consultation in the preliminary stages of project planning and has initiated consultation with regional and municipal representatives, as well as government agencies. A public consultation process will be undertaken, seeking local input to assist the Project Team in determining options for upgrading the transmission facilities.

Our first series of Public Information Centres (PICs) are scheduled for February 17, 18 and 24, 2009. The PICs will provide interested parties with the opportunity to learn more about the Project, provide their input on Project options, and discuss any issues or concerns with our Project Team. Please see the enclosed newspaper ad for details.

For our records, please complete and return the attached **Fax Back Form** indicating the appropriate contact person. We would be pleased to arrange a meeting to gather your input and feedback, and discuss with you the areas of interest and/or concern regarding this Project. Stantec Consulting Ltd. (Stantec) has been retained to provide assistance to Hydro One in the Class EA process. Shawna Peddle, Senior Project Manager with Stantec, may be in touch to discuss your interest and gather relevant information for this Project.

If you have any questions regarding the Midtown Project please feel free to contact me at (416) 345-6597, or Yu San Ong, Environmental Planner, at (416) 345-5031. Further information can also be found on the Project Website at www.HydroOneNetworks.com/newprojects

Sincerely,

Brian McCormick
Manager, Environmental Services & Approvals

Hydro One Networks Inc.
483 Bay Street
TCT12, North Tower
Toronto, Ontario, M5G 2P5
mccormick.bj@hydroone.com

Tel: 416-345-6597
Fax: 416-345-6919
Cell: 416-525-1051

Brian McCormick
Manager, Environmental Services and Approvals

February 9, 2009

Mr. Trevor Bomberry
Haudenosaunee/Six Nations Coordinator

Sent via email to: tbomberry12@hotmail.com

RE: Midtown Electricity Infrastructure Renewal Project
Class Environmental Assessment

Dear Mr. Bomberry:

Hydro One Networks Inc. (Hydro One) is initiating a Class Environmental Assessment (EA) for the proposed replacement of an aging cable and addition of transmission capacity in the Midtown area within the City of Toronto.

The proposed Midtown Project involves the replacement of an aging 115 kV underground cable between Bayview Junction (Jct) and Birch Jct, construction of an additional 115 kV circuit between Leaside Transformer Station (TS) and Birch Jct, use of an existing 115 kV overhead circuit between Birch Jct and Bridgman Jct, and installation of new equipment at Leaside TS, Bayview Jct, Birch Jct and Bridgman Jct. The Study Area for the proposed facilities is shown on the attached map.

The need for the proposed undertaking was identified by Hydro One and Toronto Hydro-Electric System Limited. The proposed project will increase reliability and capacity of the high voltage system in the Midtown transmission corridor, where load growth has been steadily increasing despite gains from energy conservation.

The proposed Project is subject to provincial *Environmental Assessment Act* in accordance with the "Class EA for Minor Transmission Facilities". The construction of the additional circuit is also subject to "Leave to Construct" approval from the Ontario Energy Board (OEB). Contingent on the outcome of the Class EA and OEB processes, construction could begin 2010 with the new facilities in-service as early as spring 2012.

The Class EA will involve the identification and comparative evaluation of alternative technology options in order to select a preferred technology (overhead, trench, or tunnel) for the transmission facilities in the Midtown area. The Class EA will also examine the potential effects, mitigation measures and range of alternative routes to best upgrade the existing facilities within the Study Area. All mitigation and restoration activities will follow Hydro One's "Environmental Guidelines for Construction and Maintenance of Transmission Facilities".

Hydro One recognizes the need to begin consultation in the preliminary stages of project planning and has initiated consultation with regional and municipal representatives, as well as government agencies. A public consultation process will be undertaken, seeking local input to assist the Project Team in determining options for upgrading the transmission facilities.

Our first series of Public Information Centres (PICs) are scheduled for February 17, 18 and 24, 2009. The PICs will provide interested parties with the opportunity to learn more about the Project, provide their input on Project options, and discuss any issues or concerns with our Project Team. Please see the enclosed newspaper ad for details.

For our records, please complete and return the attached **Fax Back Form** indicating the appropriate contact person. We would be pleased to arrange a meeting to gather your input and feedback, and discuss with you the areas of interest and/or concern regarding this Project. Stantec Consulting Ltd. (Stantec) has been retained to provide assistance to Hydro One in the Class EA process. Shawna Peddle, Senior Project Manager with Stantec, may be in touch to discuss your interest and gather relevant information for this Project.

If you have any questions regarding the Midtown Project please feel free to contact me at (416) 345-6597, or Yu San Ong, Environmental Planner, at (416) 345-5031. Further information can also be found on the Project Website at www.HydroOneNetworks.com/newprojects

Sincerely,

Brian McCormick
Manager, Environmental Services & Approvals

Hydro One Networks Inc.
483 Bay Street
TCT04, South Tower
Toronto, Ontario, M5G 2P5
mccormick.bj@hydroone.com

Tel: 416-345-6597
Fax: 416-345-6919
Cell: 416-525-1051

Brian McCormick
Manager, Environmental Services and Approvals

November 20, 2009

Chief William K. Montour
Six Nations of the Grand River Territory First Nation
1695 Chiefswood Road
P.O. Box 5000
Ohsweken, ON N0A 1M0

RE: Midtown Electricity Infrastructure Renewal Project
Public Information Centre #2

Dear Chief Montour:

As a part of the Class Environmental Assessment, we will be holding a second Public Information Centre to inform the public of the preferred route for the proposed transmission facilities in Midtown Toronto area. Please see enclosed newspaper ad for details.

If you have any questions regarding this project please feel free to contact me at (416) 345-6597, or Yu San Ong at (416) 345-5031. Information regarding this project is also available on our website at www.HydroOneNetworks.com\newprojects

Sincerely,

Brian J. McCormick, Manager
Environmental Services & Approval

Hydro One Networks Inc.
483 Bay Street
TCT04, South Tower
Toronto, Ontario, M5G 2P5
mccormick.bj@hydroone.com

Tel: 416-345-6597
Fax: 416-345-6919
Cell: 416-525-1051

Brian McCormick
Manager, Environmental Services and Approvals

November 20, 2009

Chief Bryan LaForme
Mississaugas of New Credit First Nation
2789 Mississauga Road
R.R. #6
Hagersville, ON N0A 1H0

RE: Midtown Electricity Infrastructure Renewal Project
Public Information Centre #2

Dear Chief LaForme:

As a part of the Class Environmental Assessment, we will be holding a second Public Information Centre to inform the public of the preferred route for the proposed transmission facilities in Midtown Toronto area. Please see enclosed newspaper ad for details.

If you have any questions regarding this project please feel free to contact me at (416) 345-6597, or Yu San Ong at (416) 345-5031. Information regarding this project is also available on our website at www.HydroOneNetworks.com\newprojects

Sincerely,

Brian J. McCormick, Manager
Environmental Services & Approval

Hydro One Networks Inc.
483 Bay Street
TCT04, South Tower
Toronto, Ontario, M5G 2P5
mccormick.bj@hydroone.com

Tel: 416-345-6597
Fax: 416-345-6919
Cell: 416-525-1051

Brian McCormick
Manager, Environmental Services and Approvals

November 20, 2009

Chief Tracy Gauthier
Mississaugas of Scugog First Nation
22521 Island Road
Port Perry, ON L9L 1B6

RE: Midtown Electricity Infrastructure Renewal Project
Public Information Centre #2

Dear Chief Gauthier:

As a part of the Class Environmental Assessment, we will be holding a second Public Information Centre to inform the public of the preferred route for the proposed transmission facilities in Midtown Toronto area. Please see enclosed newspaper ad for details.

If you have any questions regarding this project please feel free to contact me at (416) 345-6597, or Yu San Ong at (416) 345-5031. Information regarding this project is also available on our website at www.HydroOneNetworks.com\newprojects

Sincerely,

Brian J. McCormick, Manager
Environmental Services & Approval

Hydro One Networks Inc.
483 Bay Street
TCT04, South Tower
Toronto, Ontario, M5G 2P5
mccormick.bj@hydroone.com

Tel: 416-345-6597
Fax: 416-345-6919
Cell: 416-525-1051

Brian McCormick
Manager, Environmental Services and Approvals

November 20, 2009

Chief A. MacNaughton
Six Nations of the Grand River Territory First Nation
1695 Chiefswood Road
P.O. Box 5000

Ohsweken, ON N0A 1M0

RE: Midtown Electricity Infrastructure Renewal Project
Public Information Centre #2

Dear Chief MacNaughton:

As a part of the Class Environmental Assessment, we will be holding a second Public Information Centre to inform the public of the preferred route for the proposed transmission facilities in Midtown Toronto area. Please see enclosed newspaper ad for details.

If you have any questions regarding this project please feel free to contact me at (416) 345-6597, or Yu San Ong at (416) 345-5031. Information regarding this project is also available on our website at www.HydroOneNetworks.com\newprojects

Sincerely,

Brian J. McCormick, Manager
Environmental Services & Approval

Hydro One Networks Inc.
483 Bay Street
TCT04, South Tower
Toronto, Ontario, M5G 2P5
mccormick.bj@hydroone.com

Tel: 416-345-6597
Fax: 416-345-6919
Cell: 416-525-1051

Brian McCormick
Manager, Environmental Services and Approvals

November 20, 2009

Chief D. M. General
Six Nations of the Grand River Territory First Nation
1695 Chiefswood Road
P.O. Box 5000
Ohsweken, ON N0A 1M0

RE: Midtown Electricity Infrastructure Renewal Project
Public Information Centre #2

Dear Chief General:

As a part of the Class Environmental Assessment, we will be holding a second Public Information Centre to inform the public of the preferred route for the proposed transmission facilities in Midtown Toronto area. Please see enclosed newspaper ad for details.

If you have any questions regarding this project please feel free to contact me at (416) 345-6597, or Yu San Ong at (416) 345-5031. Information regarding this project is also available on our website at www.HydroOneNetworks.com\newprojects

Sincerely,

Brian J. McCormick, Manager
Environmental Services & Approval

Hydro One Networks Inc.
483 Bay Street
TCT 4, South Tower
Toronto, Ontario, M5G 2P5
mccormick.bj@hydroone.com

Tel: 416-345-6597
Fax: 416-345-6919
Cell: 416-525-1051

Brian McCormick
Manager, Environmental Services and Approvals

Chief William Montour
Six Nations of the Grand River Territory
1695 Chiefswood Road
P.O. Box 5000
Ohsweken, Ontario
N0A 1M0

March 4, 2010

RE: Class EA - 30 Day Review Period for the Draft ESR
Midtown Toronto Electricity Infrastructure Renewal

Dear Chief Montour:

Hydro One Networks Inc. has prepared a Class Environmental Assessment (EA) - Draft Environmental Study Report (ESR) for the proposed Midtown Toronto Electricity Infrastructure Renewal ("Midtown Project"). This Class EA - Draft ESR was completed in accordance with the process described in Hydro One's *Class Environmental Assessment for Minor Transmission Facilities*.

Hydro One is proposing to add new circuits and replace an aging cable in Midtown Toronto in order to meet the growing electricity needs of the area. Please refer to the enclosed newspaper ad for further details.

A copy of the Draft ESR for the project and a CD are enclosed for your review and comment. The Draft ESR for this project is also available on the Hydro One project website: www.hydroone.com/projects/midtown.

The 45-day review period required under the Class EA begins March 8, 2010 and ends April 21, 2010.

If you have any questions or concerns regarding this project, please feel free to contact me at 416-345-6597 or Ms. Yu San Ong, Environmental Planner, at 416-345-5031.

Sincerely,

Brian J. McCormick, Manager
Environmental Services & Approvals

Hydro One Networks Inc.
483 Bay Street
TCT 4, South Tower
Toronto, Ontario, M5G 2P5
mccormick.bj@hydroone.com

Tel: 416-345-6597
Fax: 416-345-6919
Cell: 416-525-1051

Brian McCormick
Manager, Environmental Services and Approvals

Chief Bryan LaForme
Mississaugas of New Credit First Nation
2789 Mississauga Road
R.R. #6
Hagersville, Ontario
N0A 1H0

March 4, 2010

RE: Class EA - 30 Day Review Period for the Draft ESR
Midtown Toronto Electricity Infrastructure Renewal

Dear Chief LaForme:

Hydro One Networks Inc. has prepared a Class Environmental Assessment (EA) - Draft Environmental Study Report (ESR) for the proposed Midtown Toronto Electricity Infrastructure Renewal ("Midtown Project"). This Class EA - Draft ESR was completed in accordance with the process described in Hydro One's *Class Environmental Assessment for Minor Transmission Facilities*.

Hydro One is proposing to add new circuits and replace an aging cable in Midtown Toronto in order to meet the growing electricity needs of the area. Please refer to the enclosed newspaper ad for further details.

A copy of the Draft ESR for the project and a CD are enclosed for your review and comment. The Draft ESR for this project is also available on the Hydro One project website: www.hydroone.com/projects/midtown.

The 45-day review period required under the Class EA begins March 8, 2010 and ends April 21, 2010.

If you have any questions or concerns regarding this project, please feel free to contact me at 416-345-6597 or Ms. Yu San Ong, Environmental Planner, at 416-345-5031.

Sincerely,

Brian J. McCormick, Manager
Environmental Services & Approvals

Hydro One Networks Inc.
483 Bay Street
TCT 4, South Tower
Toronto, Ontario, M5G 2P5
mccormick.bj@hydroone.com

Tel: 416-345-6597
Fax: 416-345-6919
Cell: 416-525-1051

Brian McCormick
Manager, Environmental Services and Approvals

Chief Tracy Gauthier
Mississaugas of Scugog First Nation
22521 Island Road
Port Perry, Ontario
L9L 1B6
March 4, 2010

RE: Class EA - 30 Day Review Period for the Draft ESR
Midtown Toronto Electricity Infrastructure Renewal

Dear Chief Gauthier:

Hydro One Networks Inc. has prepared a Class Environmental Assessment (EA) - Draft Environmental Study Report (ESR) for the proposed Midtown Toronto Electricity Infrastructure Renewal ("Midtown Project"). This Class EA - Draft ESR was completed in accordance with the process described in Hydro One's *Class Environmental Assessment for Minor Transmission Facilities*.

Hydro One is proposing to add new circuits and replace an aging cable in Midtown Toronto in order to meet the growing electricity needs of the area. Please refer to the enclosed newspaper ad for further details.

A copy of the Draft ESR for the project and a CD are enclosed for your review and comment. The Draft ESR for this project is also available on the Hydro One project website: www.hydroone.com/projects/midtown.

The 45-day review period required under the Class EA begins March 8, 2010 and ends April 21, 2010.

If you have any questions or concerns regarding this project, please feel free to contact me at 416-345-6597 or Ms. Yu San Ong, Environmental Planner, at 416-345-5031.

Sincerely,

Brian J. McCormick, Manager
Environmental Services & Approvals

Toronto District School Board (TDSB) INTERROGATORY #1 List 1

Interrogatory

Reference:
• Exhibit A/Tab 1/Schedule 1/Page 1/ Paragraph 2(b)

Preamble:
• Exhibit A/Tab 1/Schedule 1/Page 1/ Paragraph 2(b): references the new above ground transmission line between Leaside TS and Bridgman TS. This new line will cut across TDSB property (Bennington Heights Public School) raising concerns of increased Electro Magnetic Field ("EMF") levels on TDSB property.

Question/Request:
a) Will the new above ground transmission line between Leaside TS and Bridgman TS increase EMF levels at Bennington Heights Public School and the surrounding area?

Response

The subject matter will be dealt more fully within the scope of the *Class Environmental Assessment* which is approved by the Ontario Ministry of Environment under the *Ontario Environmental Assessment Act*.

Hydro One issued a Draft ESR in March 8, 2010 which initiated a 30-day public review and comment period. EMF issues are addressed in Section 7.2.9. of that report.

The draft ESR is available on Hydro One's website, at the attached link.

http://www.hydroone.com/PROJECTS/MIDTOWN/Pages/MidtownProject%e2%80%94ReviewApprovals.aspx.

EMF modeling has been conducted along Hydro One facilities, including an area near Bennington Heights PS. The modeling information indicates that EMF levels along the proposed transmission line will be lower than current levels.

Toronto District School Board (TDSB) INTERROGATORY #2 List 1

Interrogatory

Reference:
• Exhibit A/Tab 1/Schedule 1/Page 2/ Paragraph 3(b)
• Exhibit A/Tab 1/Schedule 1/Page 3/ Paragraph 5

Preamble:
• Exhibit A/Tab 1/Schedule 1/Page 2/ Paragraph 3(b): refers to the construction of an underground tunnel between Bayview Junction and Birch Junction. This raises two concerns. The first concern relates to the effect of any vibrations produced during tunnelling on the infrastructure of the school (Bennington Heights Public School). The second concern relates to conventional safety concerns for staff/students/community members resulting from Hydro One's use of large equipment and construction materials close to, or on, TDSB property.
• Exhibit A/Tab 1/Schedule 1/Page 3/ Paragraph 5: refers to Hydro One's request to obtain temporary access rights to construct proposed facilities. The use of heavy equipment and construction materials through TDSB property raises safety concerns for staff, students, parents and community members. Thus, appropriate safety procedures must be established.

Question/Request:
a) Has Hydro One conducted any safety assessments/studies/plans within or around Bennington Heights Public School? What has been the outcome of those studies?
b) If no safety assessments have been conducted, can Hydro One provide an overview of how it intends to address any safety related issues within or around Bennington Heights Public School?
c) What safety measures have been put in place to address vibrations produced during tunnelling?
d) What safety measures have been put in place to protect students/staff/community members during the use of heavy equipment and construction materials on TDSB property?
e) Can Hydro One please provide copies of all information pertaining to any safety plans or any studies on safety related-issues within or around the Bennington Heights Public School to the TDSB and W&W Radiological and Environmental Consultant Services, Inc.? Copies of any safety documents/plans should be sent to the following individuals:
• Neda Ebrahimzadeh: neda.ebrahimzadeh@tdsb.on.ca
• David Agnew: david.agnew@rogers.com
• Murray Walsh: murraywalsh@rogers.com

Response

Hydro One has responded to Mr. Agnew, a representative of TDSB, at the Toronto District School Board on March 15, 2010. The letter and attachment is filed as Attachment 1 to this response.

a) Hydro One has not conducted any safety assessment/studies/plans within or around Bennington Heights Elementary School at this time. Hydro One has met with various representatives at TDSB and understands the concern. Hydro One will consult with the TDSB when developing its safety plan in the vicinity of Bennington Heights Elementary School.

   Construction of a temporary access road will impact the pedestrian stairway on Bayview Avenue, which we understand may be used by staff and students to access the school. In addition, Hydro One and its contractor may need to cross or come in close proximity to TDSB lands at Bennington Heights Elementary School to access the Bayview Junction and two transmission towers. As such, we will ensure all necessary safety measures are undertaken and do not anticipate any major problems in ensuring the safety of staff/students/community.

b) Some of the measures that Hydro One will take to address safety related issues around Bennington Heights Elementary School are:
   - Build a temporary road from Bayview Avenue to access Bayview Junction and the overhead tower line. This will allow Hydro One to avoid using residential streets for construction and equipment vehicles
   - Fence-in the construction site at Bayview Junction to ensure that children will not be able to access the area or the construction equipment
   - Enclose the construction site at Carstowe Road with a 12 ft high wall
   - Work with the City of Toronto to permit 2-way traffic on Carstowe Road to keep trucks out of residential areas
   - Restrict heavy truck traffic between 9 a.m. and 3 p.m. along Carstowe Road to avoid the school commute period

   The Environment Study Report (see link in Exhibit C, Tab 1, Schedule 7) also addresses safety concerns in Chapters Sections 7 and 8.

c) Vibration from the tunnel excavation will not be an issue because the tunnel will be so deep. There will be no vibration from shaft excavation as this will be in soft ground.

d) Please refer to Attachment 1 to view the letter written to Mr. Agnew.

e) At the conceptual design stage, Hydro One has not yet developed any safety plans except for the proposal to direct traffic away from residential streets (see letter to Mr. Agnew for more detail). This plan will be developed and available for review by the TDSB and stakeholder representatives following project approvals and selection of a successful contractor which is expected to be in the fall of 2010. Hydro One will forward the safety documents/plans for the vicinity around Bennington Heights Elementary School to the contact persons requested.

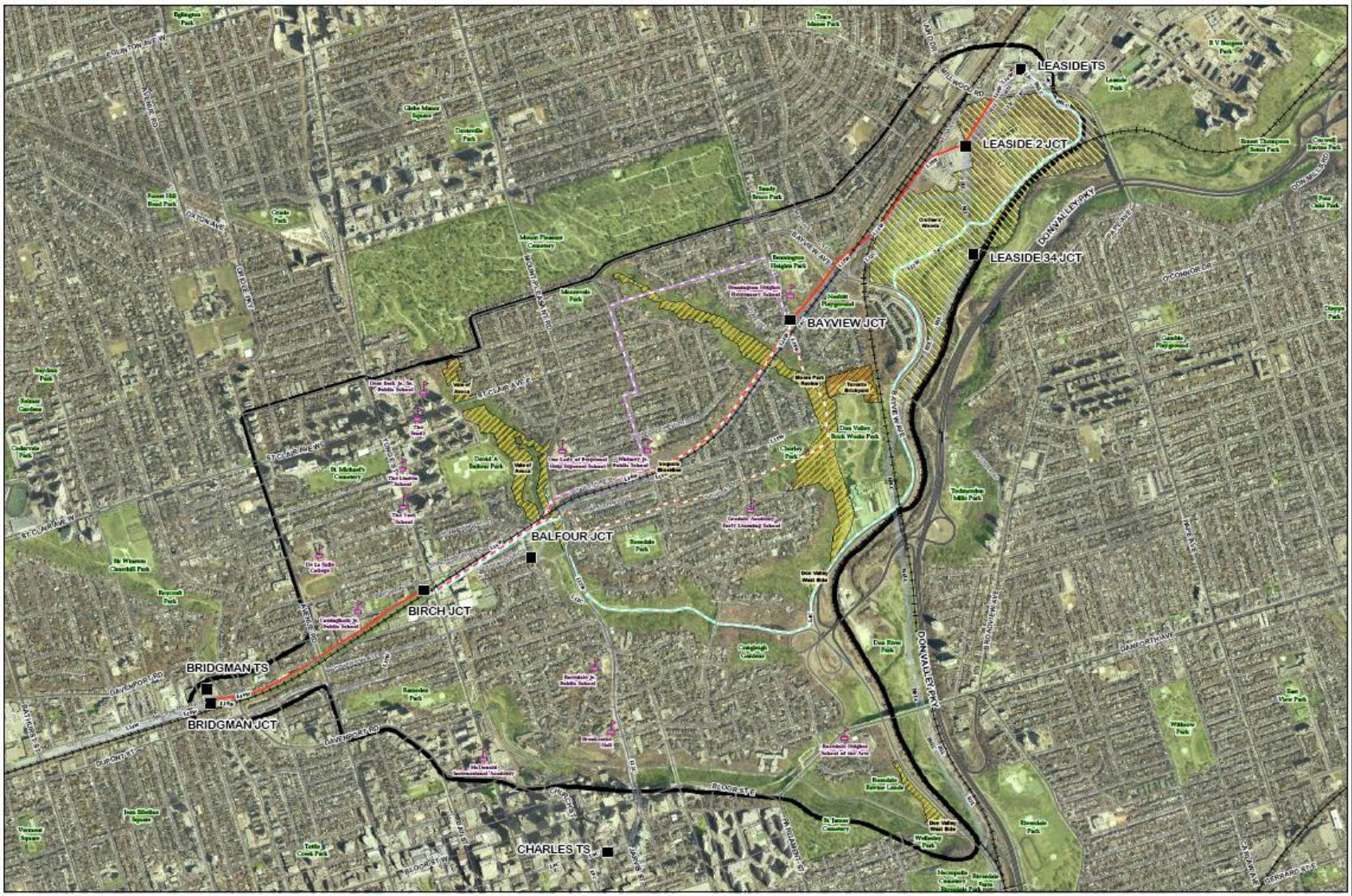
Midtown Project

Midtown Electricity Infrastructure Renewal Project

hydro one

toronto hydro electric system

Study Area and Route Options



Route Options

- Corridor along the CPR rail selected as the most appropriate
  - Existing right-of-way (ROW) already used by utilities including Hydro One
  - Least amount of disruption to residents, businesses and environment
- Two construction methods discussed for underground portion between Leaside Jct. and Birch Jct.:
  - Hard rock tunnel (60-75 metre depth)
  - Shallow trench (1-2 metre depth) generally follows along CPR

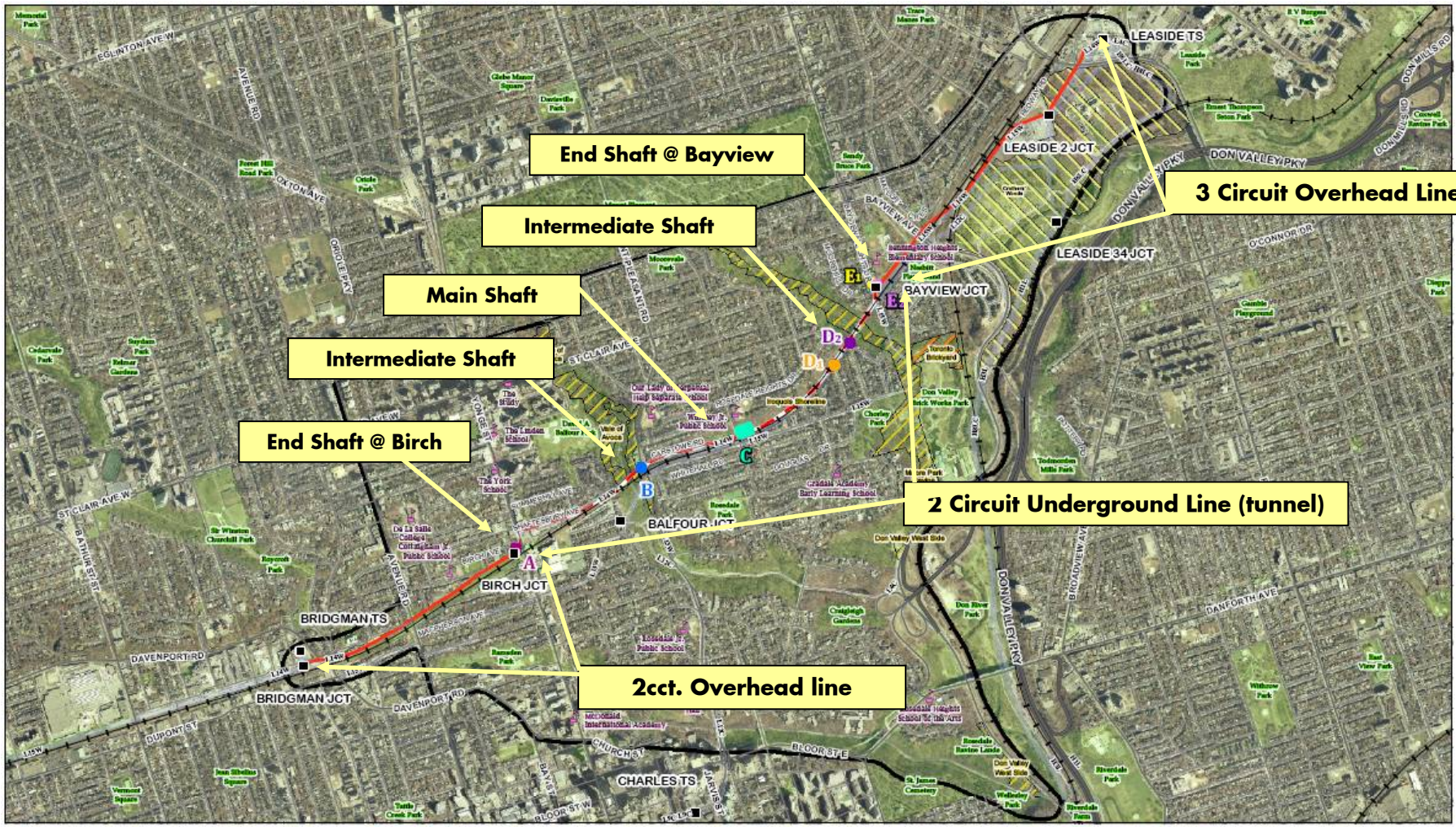
Trench Option

- Underground ducts along the CPR track, using combination of CPR, Hydro One owned land, private land and road allowance
- Disruptive to community and the environment
- Would require private and public easements
- Significant risk with in-service date

Tunnel Option

- 60-75m deep tunnel through bedrock with main shaft at Hydro One owned land at Carstowe Rd. and four smaller shafts for cable and personnel access
- Disruption to communities significantly reduced
- Better defined in-service date
- Similar approach recently used in the Toronto downtown core
- No measurable EMF from cables in the tunnel

CPR Corridor - Tunnel

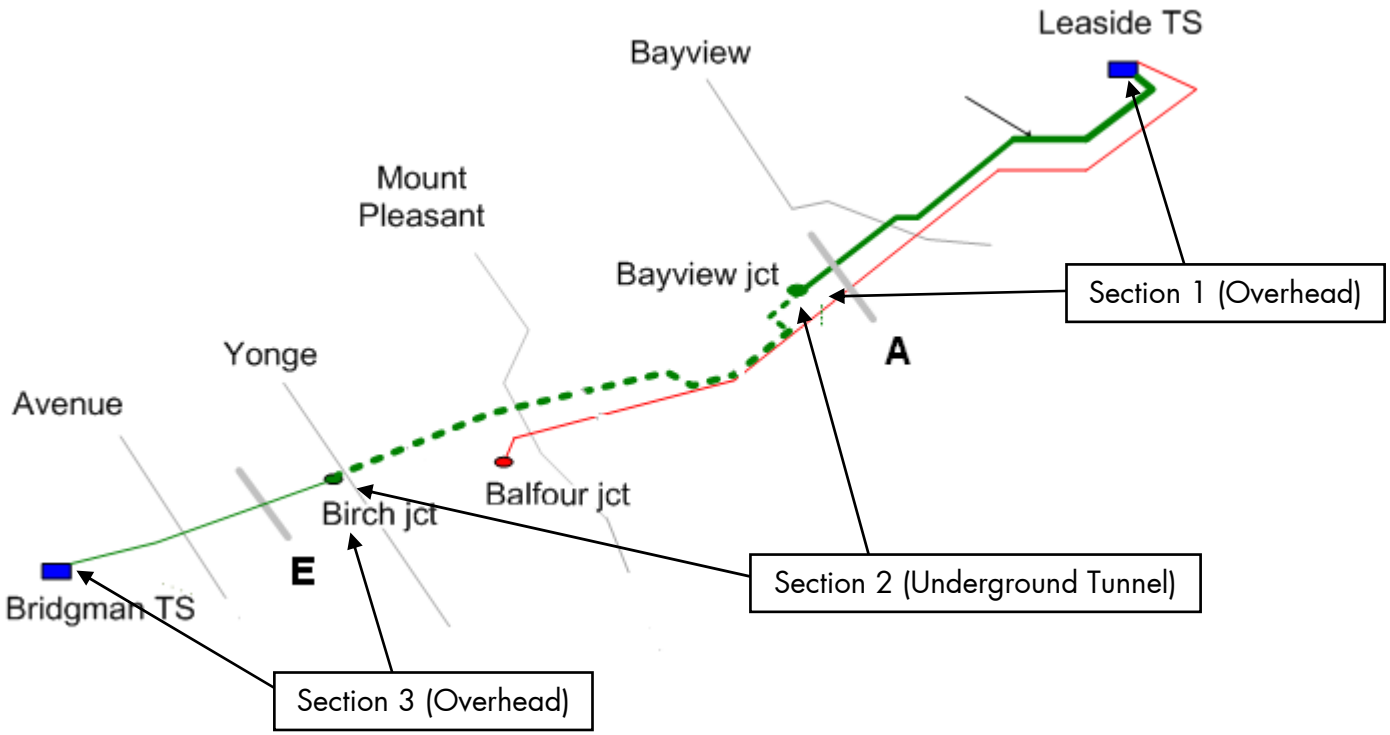


Overhead Sections

- **Leaside TS to Bayview Jct.:**
  - Existing 2 cct. towers to be replaced with 3 cct. towers
- **Birch Jct. to Bridgman TS:**
  - Existing 2 circuit overhead line with one spare circuit to be used
  - Conductors (wires) on both circuits will be replaced for additional capacity

EMF Modeling for Overhead Line Sections

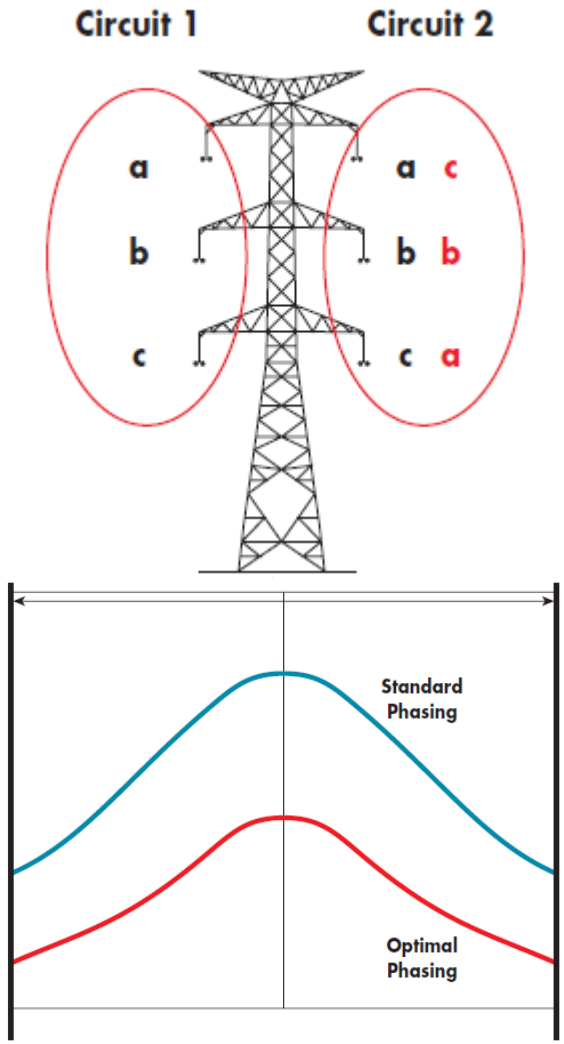
- Leaside TS to Bayview Jct. (Section 1)
- Birch Jct. to Bridgman TS (Section 3)



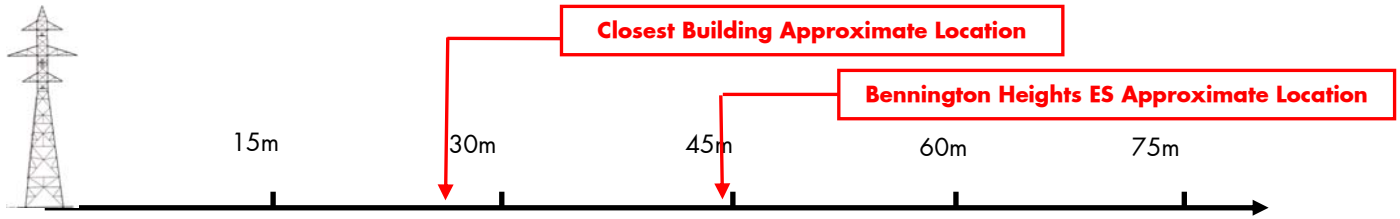
No measurable EMF from underground line section between Bayview Jct. and Birch Jct. (deep-rock tunnel at approximately 60-75m depth)

Low EMF Design

- Optimal phasing to reduce magnetic fields
- By changing the order in which conductors are strung on a tower, the magnetic fields from one circuit will offset the magnetic field from the adjacent circuit.



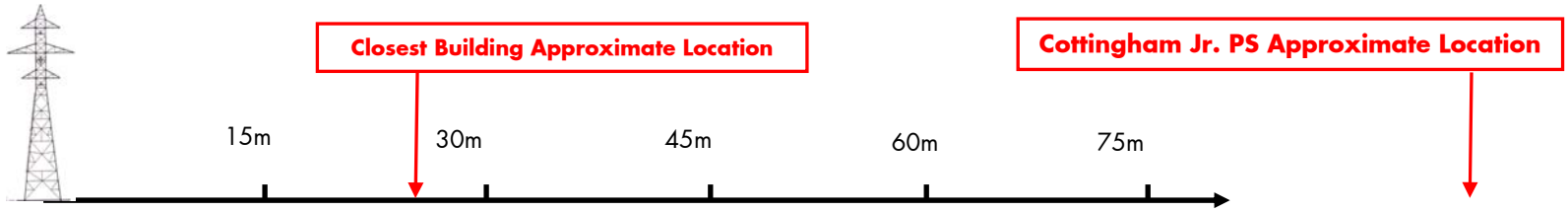
EMF Modeling (Section 1)
Leaside TS to Bayview Jct. Section (Low EMF Design-Optimal Phasing)



50%	**12.6/2.6**	9.5/2.9	5.3/1.8	3.2/1.1	2.1/0.7	(mG)
85%	**16.5/3.4**	12.4/3.6	6.9/2.3	4.1/1.4	2.7/0.9	(mG)
99%	**21.5/4.2**	16.2/4.5	9.2/2.9	5.5/1.8	3.6/1.1	(mG)

Note:
- Distances are measured perpendicular to the north tower line (L14W, L15W).
- Percentages indicate the percent of time when magnetic field is lower than shown.
- Before/after the construction

EMF Modeling (Section 3)
Birch Jct. to Bridgman TS Section (Low EMF Design-Optimal Phasing)



50%	**4.1/1.6**	1.9/0.36	0.97/0.1	0.57/0.05	0.37/0.04	(mG)
85%	**5.3/2**	2.4/0.47	1.2/0.14	0.73/0.07	0.47/0.05	(mG)
99%	**6.6/2.5**	3/2.3	1.9/0.18	0.91/0.09	0.6/0.06	(mG)

Note:
- Distances are measured perpendicular to the tower line.
- Percentages indicate the percent of time when magnetic field is lower than shown.
- Before/after the construction

EMF – Measured Values

Location: Cottingham St. and Gange Ave. (West of Birch Jct.)

Distance from the centerline in meters	1m	2m	4m	6m	8m	10m	12m	14m	16m	18m	20m	26m	30m	34m	40m
mG Reading	4.2	4.2	3.9	3.8	4.1	3.9	3.6	3.4	3.2	3	2.8	2.2	2	1.6	1.4

Notes:

1. Approximate loading at the time of the measurement was 440A and 414A. This represents normal, every day loading of this line
2. Measurements taken at the location in Section 3

Questions?

hydro one

inergi

Date: February 16, 2010
Map06-88-Leaside_Bayview_Access_Roads_Oct09_11x17_Ortho_Phase3
Produced By: Inergi LP (GIS Services)

- Existing Hydro One Towers
- Proposed Tower Replacements
- Existing Transformer Stations/Junctions
- Proposed Junction Expansions
- Access Road to Towers 8 & 9
- Crane Setup Path
- Crane Locations
- Lay-down Area for Tower
- Bayview Junction Shaft

Existing Transmission Lines (115kV)

- Overhead
- Underground

Proposed Route

- Overhead Line Rebuild
- Tunnel
- Study Area
- Property Boundaries

- Railway
- Expressway
- Major Road
- Local Road
- Parkland

Midtown Project

Phase 3: Towers 8 & 9 Construction Access

0 30 60 90 m

North Rosedale Ratepayers Association (NRRA) INTERROGATORY #1 List 1

Interrogatory

Reference:
Exhibit B, Tab 6, Schedule 1, Section 3.0 and Exhibit B, Tab 6, Schedule 5 (Stakeholder and Community Consultation)

1. TRAFFIC RESTRICTIONS FOR HEAVY TRUCKS

We were informed that Hydro One will be asking the City of Toronto to permit west-bound traffic on Carstowe Road, between the hours of 9:00 a.m. to 3:00 p.m. or weekdays, for the duration of the Project in order to facilitate heavy truck traffic carrying the "spoil" (earth and rock) removed from the main shaft, one or more ventilation and access shafts and the 2.2 km tunnel. With the exception of a maximum of 18 flat-bed over-sized trailer units delivering enormous spools of heavy duty cable which must be moved in late-evening or early-morning hours because of traffic constraints, there will be no vehicles entering or leaving the Site at other hours. Left turns will be prohibited from Carstowe Road onto Mount Pleasant Road with the result that all truck traffic leaving the Site will head north on Mt. Pleasant Road. Mr. Goodfellow undertook to ensure that all contracts and sub-contracts for work on the Project (the "Contracts") expressly provide that the foregoing provisions be adhered to and that, with the exception of vehicles requiring access to the ventilation and access shaft(s), no truck traffic shall use any street in Rosedale or Moore Park other than Mount Pleasant Road, Carstowe Road and the portion of MacLennan Avenue immediately adjacent to the Site.

2. WORK-FORCE TRANSPORTATION AND PARKING

The Rosedale Bus, from Rosedale Subway Station, stops at the corner of Summerhill and MacLennan Avenues. Workers should be encouraged to access the work-site by public transportation, since there are no public parking lots in the area and only very limited short-term, on-street parking. We were informed that, to address this concern, Hydro One will also be asking the City of Toronto to permit Hydro One to create and maintain, for the duration of the Project, an off-street parking area for the exclusive use of the Project work-force on the road allowance on the south side of Carstowe Road immediately west of MacLennan Avenue. The Contracts will require that such parking area be used by all workers driving to the Site.

3. MINIMIZING THE IMPACT ON THE NEIGHBOURING RESIDENTIAL AREAS

A number of issues of serious concern to the Association were addressed by Mr. Goodfellow and Ms. Cancilla in a very constructive fashion and the following assurances were given to us at the meeting:

(a) **The physical boundaries of the work-site and the enclosure thereof**

The Site will be rectangular in configuration, with dimensions of approximately 10 metres on MacLennan Avenue by 30 metres on the north side of the CPR right-of-way. It will be totally enclosed by a solid, twelve-foot high insulated, sound-attenuating fence having a finished plywood exterior and a single, similarly constructed gate on the MacLennan Avenue frontage. A walkway will be constructed and maintained along the north side of the enclosure fence in order to provide continued public access to the area east of the Site. Similar fencing will enclose the locations of all ventilation and access shafts.

This fence is essential to minimize construction noise and control dust and debris throughout the term of the Project, although we appreciate that some noise, such as the sound of the crane, is inevitable in a project such as this. Outdoor storage of equipment and material should be kept to an absolute minimum.

(b) Hours and days of work

Since the Site is in an established residential neighbourhood, Hydro One's activities, and any work for which it is responsible, will be confined to week-days (excluding public holidays) between the hours of 7:00 a.m. and 7:00 p.m.

(c) Noise, dust, vibration and other environmental factors

These must be effectively controlled and prevented from adversely affecting day to day life in our community. We were informed that there will be assigned to this Project a full-time Hydro One "Contractor Monitor" who will ensure that noise, dust, vibration and other environmental factors are constantly monitored and addressed on a timely and appropriate basis. His/her name and contact phone number will be prominently displayed on Project signage.

(d) Traffic control and pedestrian safety

We are particularly concerned about children on their way to and from Our Lady of Perpetual Help, Whitney and Deer Park Schools as well as traffic safety generally. We were assured that flag-men/women be on duty at any time that motor vehicles are entering or leaving the Site.

(e) Nature of construction activities

We were informed that Hydro One studies indicate that the shafts will hit solid rock at a depth of about 45 metres and that the tunnel will be located between 3 and 6 metres into

the rock. The tunneling will be by means of electric and hydraulic boring machines, the 7 metre diameter main shaft will be dug by back-hoe and the ventilation and access shafts will be bored from the surface. Accordingly, we were assured that there would be no blasting with explosives and that there would be no pile-driving into rock.

(f) Post-Construction Landscaping

We were informed that, after the Project has been completed, there will be permanent access facilities constructed to close and secure the tops of the shafts. The balance of the main-shaft and construction staging area will be appropriately re-landscaped under the direction of a landscape architect.

Response

For the most part Hydro One confirms that the submission of the NRRA interrogatory concerning discussions between NRRA and Hydro One regarding local impact of the project, and mitigations thereto, is reasonably accurate. However, there are certain parts of the submission that do not appear to conform to our discussions, and Hydro One expects that these areas of difference will be addressed as part of its ongoing consultation with the NRRA.

Please see the attached letter Hydro One has provided to the NRRA (Attachment 1).

Hydro One Networks Inc.
483 Bay Street
South Tower, 8th Floor
Toronto, Ontario M5G 2P5
www.HydroOne.com

Tel: 416.345.5892
Fax: 416-345-6984

Enza Cancilla
Manager
Public Affairs

Mr. Normunds Mierins
Director, North Rosedale Ratepayers' Association
ScotiaMcLeod
PO Box 402
40 King St. West, 15th Floor
Toronto, Ontario
M5H 3Y2

March 18, 2010

Dear Mr. Mierins:

Re: Midtown Project Interrogatories Filed by the North Rosedale Ratepayers' Association

Thank you for your letter of March 9, 2010, regarding your concerns about the Midtown Project. We were very pleased to meet with you and Mr. Vernon of the North Rosedale Ratepayers' Association on March 8th to clarify issues regarding the proposed construction plan for the Midtown Project.

Consulting with the area ratepayers' associations has generated excellent feedback which has helped us to better understand and respond to the various community interests and has provided an important vehicle to communicate information about the project. I think we all agree that the project is necessary to ensure a reliable supply of power for the City of Toronto and that it must be constructed with the residents in mind.

Hydro One is committed to continuing to work with the North Rosedale Ratepayers' Association and other community stakeholders in a fair, open and transparent manner, and our goal is to minimize any nuisance effects on the local community. We plan to continue to provide regular updates to area residents as we move through the approvals and construction phases.

Since the start of the project, we have been consulting with the North Rosedale Ratepayers' Association. As discussed, we hope that you will be able to represent your community on the Construction Liaison Committee with Hydro One that would operate during construction and would be a means to identify and address issues and to share project information and schedules with residents.

We have reviewed your summary of our March 8th meeting, and we agree with the vast majority of the information presented, though there are a few points that bear correction.

1. TRAFFIC RESTRICTIONS FOR HEAVY TRUCKS

Hydro One has had discussions with the City of Toronto and will apply to the City to allow Carstowe Road to be used as a two-way street during certain hours of the day for the duration of construction. It is our intention to keep construction traffic off residential streets, so we plan to require our contractors (and to require them to require their subcontractors) to use Carstowe Road and Mt. Pleasant and the portion of MacLennan Avenue immediately adjacent to our main site at Carstowe Road ("construction site").

The regular work hours will be 7:00 a.m. to 7:00 p.m., Monday to Friday. We will restrict heavy trucks accessing our Carstowe construction site to the hours of 9 a.m. to 3 p.m., which should avoid interference with the school and after-work commute hours.

We did indicate at the meeting that there will be some occasions when oversized vehicles will need to access the construction site for deliveries (e.g., cable reel) and it may not be possible to always arrange these during the regular work hours. At this early stage in the planning, we cannot commit to limit these occasions to eighteen. We will make best efforts to ensure that all activities occur within regular work hours, but there may be some unforeseen situations where this will not be possible, in which cases we will provide you and the community with advance notice.

As you noted, construction vehicles will also be required to access the intermediate shafts on Astley Avenue and at the Rosehill Pumping Station. We will need to explore the specific access plan for these sites in more detail, but our objective will be the most direct route to and from the site in order to minimize impacts on residential streets.

2. WORKFORCE TRANSPORTATION AND PARKING

Hydro One will encourage the use of car pooling and public transit by construction crews. In addition, Hydro One has followed up on your suggestion to establish temporary parking for construction crews on the road allowance along Carstowe Road, and the City has indicated its support for this plan. We will provide you an update when we have more details.

3. MINIMIZING THE IMPACT ON THE NEIGHBOURHOOD RESIDENTIAL AREAS

a.) The physical boundaries of the work site and the enclosure thereof

We can confirm that the work site at Carstowe Road will be approximately 30 m x 60 m[1] on the north side of the CP track. The size of the site perimeter was incorrectly communicated to you on March 8th, and we apologize for this error. We plan to install a temporary 12- foot plywood and Styrofoam sound barrier fence around the perimeter of the site, which will remain in place until construction is completed. We have been advised by an experienced tunnel contractor that this type of fence can reduce noise by up to 60%.

At the main entrance at MacLennan Avenue, a gate will be constructed, and a flag person will always be present to guide trucks entering and leaving the site. Once the project is complete, permanent fencing will be installed, and our landscape architect will work with the community to

[1] Please note that this is the correct dimension of the construction staging area. A 10 m x 30 m site was incorrectly communicated on March 8, 2010.

develop a landscape plan that is in keeping with the local environment and addresses local concerns.

The storage of some equipment and materials is essential for effective operation of the project, but we believe that the 12-foot fence around the perimeter of the work site should help to screen the work site and provide sound attenuation.

(b) Hours and days of work

Hours of construction will be between 7:00 a.m. and 7:00 p.m., Monday to Friday (except public holidays), but there is the possibility that some work may need to occur on weekends. We will make best efforts to ensure that any work outside the regular work hours will be kept to a minimum and that the community will be notified.

(c) Noise, dust, vibration and other environmental factors

Hydro One will work to ensure that your community is not adversely affected by nuisance effects associated with construction. As such, we plan to implement necessary mitigation measures that are documented in the draft Environmental Study Report. We will water the driveway exiting the construction site, and water will also be used to control dust from the stockpile of spoil/rock debris from the tunnel excavation. Noise will be reduced by the sound attenuation wall installed around the perimeter of the site. Vibration from the tunnel excavation will not be an issue at the surface, because shaft excavation will be in soft ground.

A contract monitor employed by Hydro One will be at the site full-time. Typically for construction projects, we provide our Community Relations Number (416-345-6799) as the main point of contact for area residents. This number will be published on community notices and on the Midtown Project website, as well as at the work site. We would be happy to provide the contract monitor's number to members of our Construction Liaison Committee members and to the ratepayer representatives.

d.) Traffic control and pedestrian safety

Employee and public safety is a top priority for Hydro One. We are aware that there are a number of elementary schools in the vicinity of our construction site and traffic route. As such, we will be very vigilant about safety in these areas. Hydro One can confirm that a flag person will be present to guide vehicles in and out of the construction site at Carstowe during site operation hours. Depending on the traffic plan for Carstowe Road, a flag person may also be assigned.

e.) Nature of Construction Activities

The shaft will be approximately 55 metres deep at the Carstowe site. We expect to hit rock at a depth of approximately 45 metres.

We can confirm that there will be no blasting with explosives at the Carstowe site, but we will need to insert pilings into soft ground until we reach the rock elevation at a depth of approximately 45 metres. This should not create any major noise disturbance, because it is much easier to drive piles through soft ground than through rock.

f.) Post-construction Landscaping

A shaft similar to the one in the photo shown below will remain at Carstowe Road once construction is complete. There may also be a requirement for a one-storey structure to house an elevator to access the tunnel. We will provide you with more details as we move throughout the process.

Hydro One will also landscape around the shaft entry building and restore the lay-down yard to a park-like setting similar to the existing landscape. We will be glad to work with members of your community to develop this landscaping plan.

We trust that the mitigation measures outlined will address your concerns. Please let us know if you require any further clarification.

Sincerely,

Enza Cancilla
Manager, Public Affairs

Photo of shaft cover at Hydro One's Esplanade Station in downtown Toronto.

Energy Probe Research Foundation INTERROGATORY #1 List 1

Interrogatory

Ref: Exhibit B, Tab 1, Schedule 2

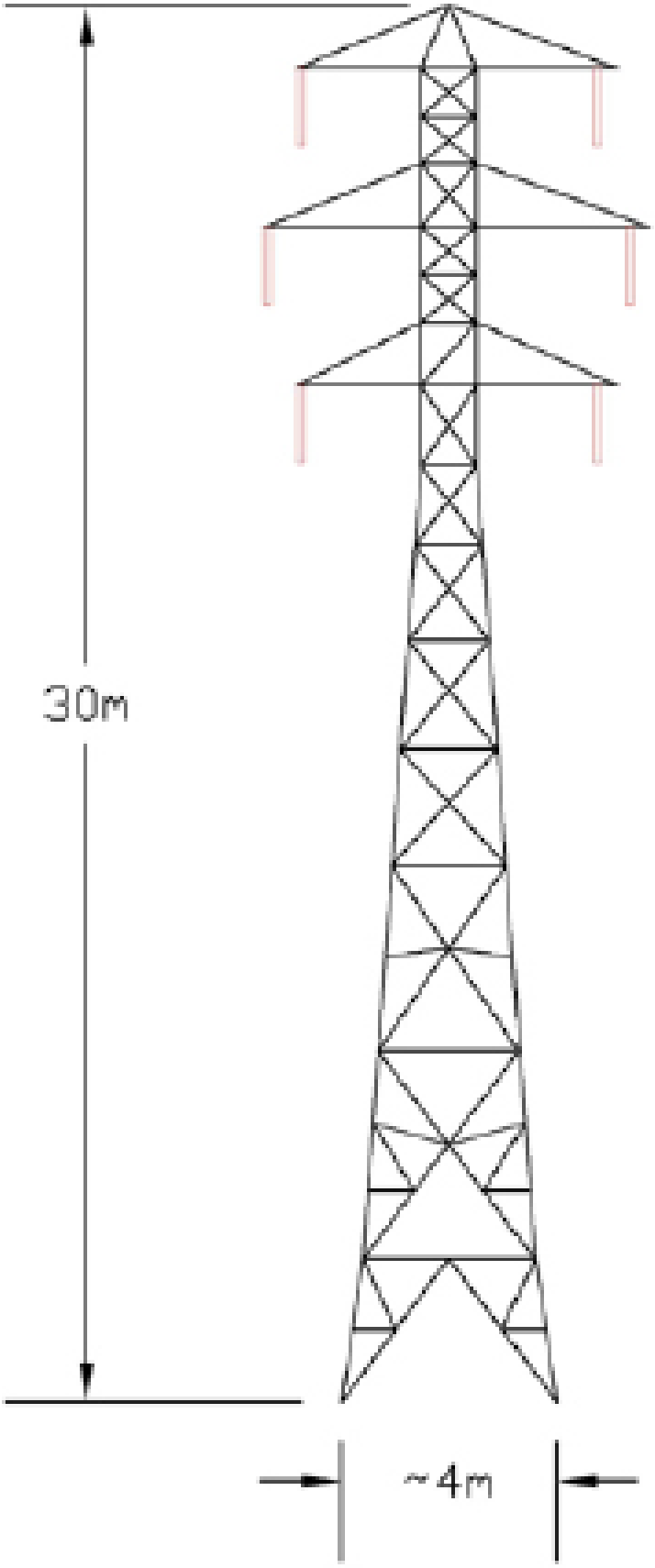
The map of existing facilities shows the three circuits L13W, L14W and L15W. Please provide diagrams showing the tower type and conductor arrangement for each of the tower lines.

Response

As indicated in Exhibit B, Tab 1, Schedule 2 and moving from west to east, the conductor arrangements are as follows:

- From Leaside TS to Bayview Jct., two circuits L14W and L15W are the overhead lines;
- From Bayview Jct to Birch Jct., L14W and L15W are underground cables;
- From Birch Jct. to Bridgman TS, L14W is a double-circuit overhead line;
- From Leaside TS to Bridgman Jct., L13W is underground cable and not a part of the Midtown project.

The typical existing tower type is the same on both the Leaside TS to Bayview Jct. and Birch Jct to Bridgman Jct. sections. Attachments 1 and 2 to this exhibit show the typical existing tower type and conductor arrangement for the two sections of the overhead lines.


30m
~4m

Energy Probe Research Foundation INTERROGATORY #2 List 1

Interrogatory

Ref: Exhibit B, Tab 1, Schedule 3

The schematic on this schedule shows an idle circuit on part of the L14W tower line.

a) Please explain why this section is idle.

b) Are the underground portions of the three circuits in ductbanks? If yes, please provide a cross sectional view of the duct structures.

c) If there are existing duct structures please explain why replacement of the underground portion of L14W cannot be done in those duct structures.

Response

a) This section of was part of the old 25Hz system supplying the City. As part of the standardization program with the system conversion to 60Hz in the 1950's, the 25Hz system was retired. One circuit on the line was used for L14W. The other has remained idle and connectivity has not been required till now.

b) The underground cables are direct buried and not in ductbanks.

c) As answered in part b) above, these cables are not in ductbanks.

Energy Probe Research Foundation INTERROGATORY #3 List 1

Interrogatory

Ref: Exhibit B, Tab 1, Schedule 4, page 5

Table 1 on this page shows the corridor limit at 272 MW.

a) What size and type of conductor is used on the overhead portion of the circuits?

b) What size and type of cable is used on the underground portion of the circuits?

c) If larger conductor and cable were installed, would the corridor limit be higher than 272 MW on the overhead portion? If not, why not? If yes, how much higher a limit than 272 MW would be possible with reconductoring and recabling?

d) Is conductor sag a limiting factor for the existing circuits? If yes, would retensioning of the existing conductors provide a higher load limit? If not, why not? If yes, how much higher a limit than 272 MW would retensioning the circuits provide?

Response

a) The overhead sections of the circuits are as follows:

Circuit Designation	Overhead Section	Conductor Size
L13W	None. This is an underground circuit between Leaside TS & Bridgman TS.	----
L14W	Leaside TS x Bayview JCT Birch Jct. x Bridgman TS	605 kcmil and 795 kcmil 795 kcmil
L15W	Leaside TS x Bayview JCT	605 kcmil and 795 kcmil

b) The existing size and cable types for the underground portion of the circuits are as follows:

Circuit Designation	Underground Section	UG Cable Type	Cable Size
L13W	Leaside TS x Balfour JCT	HPLF Pipe Type	2250 kcmil
	Balfour JCT x Bridgman TS	HPLF Pipe Type	2250 kcmil
L14W	Bayview JCT x Joint Bay 1*	SCLP	1380 kcmil
	JB 1 x Birch JCT	SCLP	1750 kcmil
L15W	Bayview JCT x Balfour JCT	SCLP	1750 kcmil
	Balfour JCT x Bridgman TS	HPLF Pipe Type	2250 kcmil

* Joint Bay 1, is in proximity to the former Shaftesbury Junction where L14W was relocated to a new junction approximately 20 years ago

c) The corridor limit is limited by the rating of the underground sections of the corridor circuits. Changing to a larger size conductor on the overhead portion does not affect the limit.

d) Please see 3c. The overhead section is not a limiting factor,

Energy Probe Research Foundation INTERROGATORY #4 List 1

Interrogatory

Ref: Exhibit B, Tab 1, Schedule 4, page 5

Table 1 on this page shows the load forecast for the corridor circuits declining from a 2006 high of 302 MW to 286 MW in 2009.

a) What caused the decline in load from 2006 to 2009?

b) Why does Hydro One think that this trend will be reversed and follow an upward trend for the years 2010 to 2018?

c) Is the 2010 load of 290 MW a forecast or actual figure? If forecast, please provide the 2010 actual load.

d) Area load is expected to grow by about 3MW per year according to the evidence in this chart. What are the principal driving factors behind this expected load growth?

e) Has Hydro One analyzed the impact of the current recession on these factors to determine whether lower load growth should be expected? If yes, please provide the analysis. If no, please explain why such an analysis is not necessary.

Response

a) The drop in load since 2006 can be explained by cooler summer temperatures and the recession. These short-term factors do not affect the long-term load forecast. Hence, the need for the capacity increase.

b) Please note that the load forecast and its underlying assumptions were produced by THESL. For reference, the THESL forecast (dated November 30, 2009) is provided at page 6 of the response to Board Staff Interrogatory 2. This forecast is not weather-normalized nor adjusted for extreme weather. It therefore differs from the load forecast included in Table 1 of Exhibit B, Tab1, Schedule 4 of the pre-filed material, which reflects those adjustments.

Actual loads of the corridor increased from 271MW in 2008 to 286 MW in 2009, an increase of 15 MW, as indicated in part d) of the response to Board Staff Interrogatory 2. (Please note that the 2009 actual of 286 MW given above differs

from the 2009 actual shown in the THESL load forecast of 273MW (154MW for Bridgman and 119MW for Dufferin) because the THESL actuals exclude station-to-station load transfers per Note 9 to the forecast, whereas the actuals used by Hydro One reflect the actual measured loads.) Notwithstanding the large increase in load from 2008 to 2009, THESL expects that load growth over the longer term will return to its historic growth rate of about 1% per year. It is forecast that this trend will continue based on the "organic" load growth rate of the area. The "organic" load growth rate of the Midtown area is based on historical load data over many years which show the peaks and valleys of economic cycles. This area is expected to see growth in multi unit dwellings.

c) The 2010 load of 290 MW in Table 1 is a forecast figure. The actual load data for 2010 will be available after the summer months.

d) THESL have advised that the principal driving factors of the load growth forecast are:
- Rate of "organic" load increase based on historical actual loads
- New Customers' loads (e.g. new multi unit condo developments)
- Increase of existing customers' loads (e.g. smaller old houses being replaced with larger houses)
- Possible load transfers from adjacent area stations to this area's stations (to provide flexibilities for sustainment projects, and to optimize distribution system loading/capacity).

e) Please refer to the responses to parts b) and d) above. Toronto Hydro has advised that it did not produce a separate study on the economy's impact on the load forecast. However, the load forecast was updated in late 2009 to capture the changes in economic conditions. Since the area served is mostly residential, the load forecast is likely to be less affected by the recession than an area with significant industrial or commercial load.

In addition, please note that a major portion of the work for this project, replacement of the aging L14W cable, is driven by end-of-life considerations. This work is therefore needed to be able to continue to meet the existing load. The existing load is already above the load-meeting capability of the corridor and since as noted above this is mostly a residential area with a steady increase of multiunit high rise dwellings, the load is not expected to decrease below the corridor limit.

Energy Probe Research Foundation INTERROGATORY #5 List 1

Interrogatory

Ref: Exhibit B, Tab 2, Schedule 1, page 1

This schedule describes the work proposed.

a) Will the construction of the new 3 cct overhead tower line require taking L14W and/or L15W out of service during construction? If yes, how will supply to Bridgman TS be maintained during the construction period? If no, why is a single cct. steel pole line to provide a third cct., not an alternative?

b) The overhead work between Birch Jct. and Bridgman TS consists of reconductoring existing L14W and the idle section. How will supply to Bridgman TS be maintained while reconductoring is taking place?

Response

a) Yes, the L14W and L15W line will have to be taken out of service during construction. Both Bridgman TS and Dufferin TS will be supplied from Wiltshire TS. Also, the L13W will remain in-service from Leaside and will be used to pick up load as required.

A new pole line can not be installed in this corridor due to space restrictions.

b) See 5a) above.

Energy Probe Research Foundation INTERROGATORY #6 List 1

Interrogatory

Ref: Exhibit B, Tab 3, Schedule 1

This schedule describes the alternatives considered.

a) Was a low voltage solution considered? For example, would it be possible to build a 2-cct 44 kV overhead and underground line between Leaside TS and Bridgman TS to provide the needed capacity? If not, why not. If yes, please explain why the option was discarded.

b) Open cut trenching and deep tunneling were the options considered for the underground portions of the new cable ccts. Was directional boring considered? If not, please explain why this technology was not considered. If yes, please explain why the option was discarded.

Response

a) A 13.8kV distribution voltage option was considered by THESL but it would have only provided a short term solution. The distribution solution would also not address the need to replace the aging L14W circuit.

No, it would not be practical to build 2 cct 44kV overhead and underground transmission in the area. It would require 230/44kV transformation at the Leaside station and 44/13.8kV transformation at the Bridgman and Dufferin ends. Apart from the cost and limited capacity provided by this option, there is no space to install this amount of transformation at the terminal stations.

b) Directional boring is something that we always consider for crossing creeks, roads, railways or below other utilities where space permits. Directional boring requires more space because of limited accuracy in placing multiple circuits and the difficulty in ensuring adequate heat dissipation. Directional boring was not considered for this project as the corridor space is limited and the required ampacity could not be guaranteed.

Energy Probe Research Foundation INTERROGATORY #7 List 1

Interrogatory

Ref: Exhibit B, Tab 4, Schedule 2, page 1

This schedule states at lines 26-28 that tunneling is the only option for crossing Yonge St. Please explain how Hydro One arrived at this conclusion?

Response

Hydro One can not cross Yonge Street close to the surface either by trench or directional drilling due to existing infrastructure congestion including the subway. We investigated crossing the existing railway bridge but all options were rejected by CPR. We also found that a developer has purchased subsurface rights below the railway between Yonge St. and David Balfour Park which restricted our options as well.

Energy Probe Research Foundation INTERROGATORY #8 List 1

Interrogatory

Ref: Exhibit B, Tab 4, Schedule 2, page 2

Table 2 on this schedule shows estimated construction costs and lists AFUDC (allowance for funds used during construction). The entries for this budget are based on Hydro One's long term debt rates.

a) Please explain why construction could not be financed at lower short term rates and then converted to long term debt at the end of the project.

b) How much less would AFUDC costs be if short term rates were applied?

Response

a) For construction work in progress (CWIP or AFUDC), Hydro One Transmission capitalizes interest at the All Corporate Mid-Term Average Weighted Bond Yield as per the methodology approved by the Board in its letter dated November 28, 2008 in proceeding EB-2006-0117.

Note that footnote *** in Exhibit B, Tab 4, Schedule 2, page 2, Table 2 is incorrect. It should read:

> *The AFUDC amount is derived by applying Hydro One Networks Transmission forecast of the DEX Mid-Term Corporate Bond Index Yield charged to CWIP to in-service date of capital.*

The AFUDC rates are correct as presented.

b) As Hydro One is following Board methodology, this question is not applicable

Energy Probe Research Foundation INTERROGATORY #9 List 1

Interrogatory

Ref: Exhibit B, Tab 4, Schedule 2, pages 3 and 4

This schedule lists risks and contingencies.

a) Does Hydro One intend to have the overhead and underground work in this application done by contractors?

b) If yes, why is adverse weather (listed as a risk in this schedule) not a contractor risk?

c) "unexpected surface conditions" is listed as a risk on page 4. Should this have read "unexpected *subsurface* conditions"? If not, please explain what sort of surface conditions would not be obvious?

d) Lines 6-16 list possible risks that are not included in the 25% contingency. These include risks associated with a lack of engineering being completed on the tunneling project. Please provide an estimate of the potential error in the tunneling cost estimate that could result from this lack of engineering.

Response

a) Underground work including tunnel design, tunnel construction and electrical installation will be done under tendered contracts. Overhead and stations work will be done by Hydro One Construction work groups.

b) Adverse weather should not affect the underground work unless it becomes unsafe to work in or around the shafts. Overhead work could be impacted by adverse weather if it is hazardous to climb tower steel or if there is lightning in proximity.

c) This should have read "unexpected sub-surface conditions".

d) As indicated in Exhibit B, Tab 4, Schedule 2 certain potential risks were not included in the project contingency, which is 18.5% of the total cost (not 25% as indicated in the question). Now that we have confirmed by the depth of rock and underground conditions by geotechnical and geophysical study we can now remove the risk associated with lack of tunnel engineering. Accordingly, lines 8 to 14 are no longer applicable. Lines 15 and 16 still remain applicable with the cost impact of line 16 being less than $1M.

Again, these costs were never included in the project costs of $104.9 million.

Energy Probe Research Foundation INTERROGATORY #10 List 1

Interrogatory

Ref: Exhibit B, Tab 4, Schedule 3, page 3

This schedule refers to the tunnel as "a standard size 3 meter diameter tunnel" on lines 1-2.

a) Please explain why a 3 meter diameter tunnel is the standard size of tunnel.

b) Are there other standard sized tunnels that could have been used? If yes how did Hydro One decide on the 3 meter diameter tunnel?

Response

a) There are standard sizes of cutter heads for tunnel boring machines. 3m is the smallest size we could consider to allow room for installation and thermal cooling considerations. We installed 2 – 230kv circuits in our 3m John TS x Esplanade TS tunnel and this tunnel size provides physical room for at least 1 future circuit.

b) Yes, there are smaller and larger sizes from a range of about 2m to over 10m. The next size larger than 3m is 3.6m. As noted above, 3 meters is the minimum size of tunnel required for the work.