

HYDRO ONE
Midtown Electricity Infrastructure
Renewal Project

Class Environmental Assessment
Environmental Study Report

June, 2010

Report No: 10-1
Hydro One Networks Inc.
Environmental Services and Approvals
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Toronto, ON, M5G 2P5
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EXECUTIVE SUMMARY

Introduction and Proposed Undertaking

Hydro One Networks Inc. (Hydro One) is proposing to reinforce its electricity transmission facilities in the midtown Toronto area. A joint utility study carried out by Hydro One and Toronto Hydro Electric Systems Ltd. (Toronto Hydro) identified a need to refurbish the existing 115 kilovolt (kV) transmission infrastructure which serves midtown Toronto and areas to the west.

Hydro One is proposing to:

- Rebuilding of the existing overhead double-circuit (L14W/L15W) transmission line as a three circuit line along the Hydro One ROW and CPR corridor between Leaside Transformer Station (TS) and Bayview Junction (Jct) utilizing new lattice or steel pole structures (approximate distance of 1.7 km);
- Replacing the existing aging underground cable (L14W) and installation of a second new circuit between Bayview Jct and Birch Jct (approximate distance of 2.2 km) by means of rock tunnelling method which involves the construction of three shafts. The tunnel would underlie Hydro One and CPR property, and City property/road allowance. The terminal exit shafts will be located at Bayview Jct and Birch Jct and will be used as cable exits to connect the electrical supply cables to the junctions. One main shaft (approximately 10 m in diameter) will be located immediately south of Rosehill Pumping Station on Mount Pleasant Road. During construction, this shaft will be used to lower and raise the tunnel boring machine (TBM) in and out of the shaft as well as to remove rock debris during boring operations. Several 6 inch temporary boreholes will be installed to align the tunnel along the tunnel route. The locations of the temporary boreholes are to be determined. The main shaft will also serve as the main access point for future maintenance requirements; The Hydro One property east of Carstowe Road will be used for temporary worker's personal car parking during construction;

- Refurbishment of the existing overhead double-circuit (circuit L14W/idle circuit) transmission line between Birch Jct and Bridgman TS by re-stinging the conductors and activating the idle circuit (approximate distance of 1.4 km); and
- Installation of associated equipment at Leaside TS, Bayview Jct, Birch Jct and Bridgman TS.

The proposed Midtown Electricity Infrastructure Renewal Project (Midtown Project) falls within the definition of the projects covered by the *Class Environmental Assessment for Minor Transmission Facilities* (Class EA) which is approved under the Ontario *Environmental Assessment Act (EA Act)*. This Final Environmental Study Report (ESR) has been prepared in compliance with the requirements of the *EA Act* and it describes the Class EA process that has been carried out for the Midtown Project.

Project Need and Schedule

The midtown power corridor which runs between Leaside TS and Bridgman TS was originally built in the 1920s and the first underground cable was laid in the 1950s. The midtown area has experienced steady load growth as the result of land use intensification and redevelopment. An underground transmission cable located on the transmission corridor is nearing its end of life and the added growth in the area is putting a strain on this important infrastructure and thereby on the reliable supply of power.

The need for the Midtown Project has also been confirmed by the Independent Electricity System Operator and recognized by the Ontario Power Authority. The Ontario Energy Board approved the need in its decision regarding Hydro One's 2007/2008 Transmission Revenue Requirement and Rate Application. An upgraded electrical supply system is essential to maintain reliable service to homes and businesses in the area.

Class EA Process

The Class EA process for the Midtown Project included an assessment of the existing environment and its sensitivity to the proposed Project, prediction of potential effects, identification of mitigation requirements and public/agency consultation.

The recommended undertaking offers the lowest environmental effects compared to other available options. No significant adverse effects are predicted on the natural environment or to the local community.

Public and Agency Consultation

Since November 2008, Hydro One has conducted extensive public and government agency consultations to inform stakeholders about the Midtown Project, as well as identify and mitigate potential concerns. Provincial ministries, City of Toronto, ratepayers associations, and the Toronto and Region Conservation Authority (TRCA) were consulted. First Nations, affected area residents, businesses, and other interest groups were also consulted by way of meetings and/or written or telephone communications.

Two sets of Public Information Centres (PIC) were held for the Project on February 17, 18 and 24, 2009 and December 1 and 2, 2009, respectively. The local residents and key interest groups were notified about the project and the PICs by way of admail, newspaper advertisements and direct mail. A dedicated Project contact was assigned for those who wished to call to obtain further information on the project or to offer their comments.

A Project webpage was also created on Hydro One's website to keep the public and stakeholders informed about the status of the Midtown Project:

www.hydroone.com/Projects/midtown/Pages/default.aspx.

Public Review and Comment Period

A Draft ESR was made available for public review and comment from March 8, to June 25, 2010. During the review period, comments and issues from stakeholders regarding the proposed project were addressed, responded to, and documented in this Report. No requests to elevate this Class EA to an Individual EA were received.

Through filing this Final ESR with the MOE, Hydro One has complied with the EA Act for the Midtown Electricity Infrastructure Renewal Project. Hydro One will proceed with the undertaking outlined in the report. Hydro One will seek any required approvals, licenses, and

permits, as necessary. Detailed engineering will be completed and construction is expected to commence in September of 2010 with a projected in-service date of April 2013.

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Acronyms and Measurement Units

Acronyms

a.m.	Ante meridiem (before noon)
ANSI	Area of Natural and Scientific Interest
ASI	Archaeological Services Inc.
BIA	Business Improvement Area
CDM	Conservation Demand Management
CEAA	Canadian Environmental Assessment Act
C-of-A	Certificate-of-Approval
Class EA	Class Environmental Assessment for Minor Transmission Facilities
CLI	Canada Land Inventory
CPR	Canadian Pacific Railway
COSEWIC	Committee on the Status of Endangered Wildlife in Canada
e.g.	For example (exempli gratia)
EA	Environmental Assessment
EAAB	Environmental Assessment and Approvals Branch
EA Act	Environmental Assessment Act
EA Guide	Guide to Environmental Assessment Requirements for Electricity Projects
EMF	Electric and magnetic field
EMS	Emergency Medical Services
EPA	Environmental Protection Act
ESA	Environmentally Significant Area
ESR	Environmental Study Report

etc.	And so on (et cetera)
FN	First Nations
FPTRPC	Federal Provincial Territorial Radiation Protection Committee
GDP	Gross Domestic Product
HVTS	High Voltage Transformer Station
Hydro One	Hydro One Networks Inc.
i.e.	That is (id est)
IESO	Independent Electricity System Operator
Jct	Junction
LDC	Local Distribution Company
MOC	Ontario Ministry of Culture
MOE	Ontario Ministry of the Environment
MOH	Medical Officer of Health
MP	Member of Parliament
MPP	Member of Provincial Government
NHIC	Natural Heritage Information Centre
NIEHS	National Institute of Environmental Health Sciences
NPC	Noise Pollution Control
NWPA	Navigable Waters Protection Act
OEB	Ontario Energy Board
OEB Act	Ontario Energy Board Act
OMMAH	Ontario Ministry of Municipal Affairs and Housing
OMNR	Ontario Ministry of Natural Resources
OPA	Ontario Power Authority

O.Reg.	Ontario Regulation
OWRA	Ontario Water Resources Act
Pers. comm.	Personal Communication
PIC	Public Information Centre
p.m.	Post meridiem (afternoon)
PPS	Provincial Policy Statement
PTTW	Permit to take water
ROW	Right-of-way
RPS	Rosehill Pumping Station
SAR	Species at Risk
TBM	Tunnel Boring Machine
TFBBD	Task Force to Bring Back the Don
TPH	Toronto Public Health
TRCA	Toronto and Region Conservation Authority
TS	Transformer Station
WSC	Water Survey of Canada

Measurement Units

cm	centimetre
ha	hectare
km	kilometre
kV	kilovolt
L/s	litre per second
m	metre
mG	milli-gauss
MW	megawatt
VAR	volt-amperes reactive