



Need

HYDRO ONE NETWORKS INC. (HYDRO ONE) HAS A RESPONSIBILITY TO ALL ENERGY CONSUMERS IN THE PROVINCE OF ONTARIO TO DELIVER POWER IN A SAFE AND RELIABLE MANNER. To that end, the Ontario Power Authority (OPA) has recommended that Hydro One builds a new transformer facility on Hydro One property in the Municipality of Clarington. To ensure the continued power delivery in the east Greater Toronto Area (GTA), the OPA has advised Hydro One that Pickering Nuclear Generating Station (NGS) is approaching its final years of operation and will be retired between 2015 and 2020. Pickering NGS is the largest generation facility in the east GTA and supplies as much as 25 per cent of the east GTA's electricity demand. When the generating station is removed from service, its 3,000 megawatts of capacity must be replaced by a corresponding amount of power through Hydro One's transmission system.

General Station Information

- Proposed location is on Hydro One's property, northeast of Concession Road 7 and the unopened Townline Road North, in the Municipality of Clarington
- The proposed project is a 500/230 kilovolt (kV) transformer station and falls within the class of project defined in the Ontario Hydro (1992) "Class Environmental Assessment (EA) for Minor Transmission Facilities" approved by the Ministry of the Environment (MOE) under the EA Act.
- Clarington Transformer Station (TS) will connect to the 230 kV and 500 kV transmission lines which already exist on the site
- The proposed station footprint is approximately 280 x 600 metres (m)
- It will include four transformers (two in the initial phase)

Key Dates

- Initial Public Notification **May 3, 2012**
- Public Information Centre #1 **May 23, 2012**
- Community Information Meeting
September 11, 2012
- Public Information Centre #2 **November 8, 2012**
- Draft Environmental Study Report (ESR) Review Period
November 15, 2012 – December 17, 2012
- 56 Part II Order requests were received during the draft ESR Review Period
- Part II Order request response letters were sent out
March, 2013

Clarington Transformer Station

Questions and Answers

THE COMMUNITY HAS EXPRESSED A NUMBER OF CONCERNS REGARDING THE PROPOSED STATION AND ITS POTENTIAL EFFECTS ON THE ENVIRONMENT. BELOW IS A SUMMARY OF THE FREQUENTLY ASKED QUESTIONS.

Why this site?

The proposed site for Clarington TS is located on Hydro One-owned property. The property was purchased in 1978 with the foresight to support the eventual electricity demand in the area. The Provincial Policy Statement (2005) states that “the use of existing infrastructure and public service facilities should be optimized, wherever feasible, before consideration is given to developing new infrastructure and public service facilities.”

This property is the only reasonable location to accommodate the proposed station because it meets the size requirement, it is where the 500 kV lines and 230 kV lines meet and it is owned by Hydro One.

Siting Clarington TS elsewhere would require Hydro One to acquire new land rights for the station as well as a new transmission corridor.

Why is the Clarington TS project not subject to an Individual Environmental Assessment?

The proposed project, a 500/230 kV transformer station, falls within the class of project defined in the Ontario Hydro (1992) “Class EA for Minor Transmission Facilities” approved by the MOE under the *EA Act*.

Transmission facilities that exceed these criteria, such as 230 kV lines longer than 50 kilometres (km) or a new 500 kV (or greater) line more than 2 km in length, fall outside of the Class EA definition and are automatically categorized as an Individual EA.

How can you build on the Oak Ridges Moraine? What will you do to ensure the integrity of the Oak Ridges Moraine is not compromised?

Hydro One’s projects are designed to respect the natural environment while still ensuring the safe and reliable delivery of electricity in Ontario. The proposed site for

Clarington TS is zoned as Agriculture and designated as Utility within the Municipality of Clarington Official Plan (1996, April 2012 Office Consolidation). This allows for the development of transmission facilities providing the need is demonstrated and all reasonable alternatives have been explored. Similarly, the Oak Ridges Moraine Conservation Plan (ORMCP) (2002), and the Greenbelt Plan (2005) also allow for utility infrastructure in all land use designations provided that the need is demonstrated and all reasonable alternatives have been addressed. Where the proposed project is situated on the Oak Ridges Moraine, Hydro One is required to conform to Section 41 of the ORMCP.

The proposed project, as defined under the ORMCP, is not development or site alteration but is an infrastructure/utility use. To conform to the requirements of the ORMCP under Section 41, Hydro One has demonstrated the need for the project and there is no reasonable alternative. Hydro One has also demonstrated that the following requirements as outlined in Section 41 of the ORMCP will be undertaken for the proposed project:

1. The area of construction disturbance will be kept to a minimum. Right of way widths will be kept to the minimum that is consistent with meeting other objectives, such as stormwater management, and with locating as many infrastructure and utility uses within a single corridor as possible.
2. The project will allow for wildlife movement. Lighting will be focused downward and away from Natural Core Areas.
3. The planning, design and construction practices adopted will keep any adverse effects on the ecological integrity of the Plan Area to a minimum.
4. The design practices will maintain, and where possible improve or restore, key ecological and recreational linkages.
5. The landscape design will be adapted to the circumstances of the site and use native

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plant species as much as possible, especially along rights of way.

6. The long-term landscape management approaches adopted will maintain, and where possible improve or restore, the health, diversity, size and connectivity of the hydrologically sensitive feature.

Hydro One will conform to its requirements as infrastructure/utility as set out under Section 41 of the ORMCP.

Why is Hydro One proposing to build this station on a site it deemed unacceptable to build on in the past?

In the 2008 Class EA for Enfield TS, four potential sites were considered that were within the current development area.

Site 2 was outside the Hydro One property (south of the transmission corridor bordered by Winchester Road and Townline Road to the south and southwest) and is not under consideration to build Clarington TS.

In comparison with the other options, it was not the preferred due to the grade, which would necessitate excavating the side of the hill.

How will you ensure that groundwater will not be contaminated?

Hydro One has undertaken geo-technical testing to ensure that the site is suitable for construction. Hydro One's property is situated on land with a deep overburden of glacial till (10 to over 30 m) which has very low permeability. The site is not in a significant groundwater recharge area which means that water does not pass through very easily and is classified as having low aquifer vulnerability to contamination from human and natural impact (Central Lake Ontario Conservation Authority [CLOCA], 2011). Based on station design, available information, field data and consultation with regulatory agencies, Hydro One does not believe that the proposed project will have any effect on the wells in the community. We have constructed transmission facilities throughout the province and have yet to find a case where our facilities have negatively affected well water quality or quantity.

Station drainage will be subject to an Environmental Compliance Approval (ECA) under the *Environmental Protection Act (EPA)*. The drainage design of the station will ensure that the pre- and post-construction area drainage is not significantly altered. Hydro One has installed monitoring wells at the site that will monitor the groundwater depth and quality.

Groundwater Levels at the Site

Within the proposed station, the near surface groundwater varies from approximately 0.8 m below ground surface (BGS) to over 15 m BGS based upon our geotechnical assessment undertaken in 2012. A review of the MOE water well records in the immediate area supports this variation. Of the 20 wells reviewed, three were shallow (< 2.4 m BGS), eight were considered as intermediate (<9.1 m BGS) and the remaining nine were up to 49 m BGS. The overlying burden consists of Newmarket till in which sand lenses occur. The sand lenses generally coincide with both the intermediate and deep wells.

There are no problems anticipated with the proposed construction and operation of the station.

Will there be any soil contamination at the site?

The construction and operation of Clarington TS will not include the use of any Polychlorinated biphenyls (PCBs), lead, cadmium, or mercury. Historically it was an acceptable government practice to use PCBs in electrical equipment and transformers, up until the late 1970s. As a result, soil contamination has been found at some of our older stations. It should be noted that cadmium, lead and mercury contamination was very rare and not typically associated with transformer stations. Hydro One has a program in place that focuses on cleaning up these old sites.

Today, all of Hydro One's transformer stations use mineral insulating oil in electrical equipment, which is in the same category as the oils used in food, food packaging, cosmetics and pharmaceuticals.

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Is there any leniency on the timeline for the Environmental Assessment process?

Following the direction from OPA, Hydro One initiated the steps to plan and execute a Class EA. Since this time, Hydro One has conducted a Class EA which has included rigorous field studies and testing, as well as extensive consultation with the community. Hydro One's project team is confident that we have dedicated the appropriate resources, research and time to satisfy the requirements set out by the Class EA process. In addition, we have consulted extensively with the community and this consultation has included:

- Initial Notification and Final Notification of the project
- Two Public Information Centres (PIC)
- Community Information Meeting
- Interest group meetings
- Notification and consultation via public notices, letters, emails, telephone and meetings
- Project website
- Dedicated project contact person
- Draft ESR Review Period
- Responding to all Part II Order Requests

Hydro One has consulted extensively with the community during this Class EA process through meetings, letters and phone calls, and we are committed to continue to work with them throughout the construction phase of the project.

How will you ensure that in the event of transformer failure there will not be a spill?

Hydro One takes our commitment to the environment very seriously, and wants to assure the community that we have reliable and secure spill containment systems. All transformers will be equipped with spill containment and oil/water separation facilities designed to prevent any loss of transformer insulating oil from entering the surrounding environment. The system is designed to capture and store the oil in precast concrete holding tanks in the event of an oil release from a transformer. The only source of station discharge will be runoff from precipitation.

The station will be continually monitored and operated remotely from Hydro One's grid control centre.

Maintenance personnel will make periodic site inspections and will be dispatched to the station in the event of an emergency, or for occasional maintenance.

The containment and drainage systems are subject to an ECA under the *EPA*. The approval covers not only the proposed facilities but also the Emergency Response Plan. Hydro One has obtained several hundred such approvals demonstrating that effects can be readily managed through conventional controls.

What is the status of the Part II Order requests?

Under the *EA Act*, if any interested person feels as though any issues have not been sufficiently addressed they can request a higher level of assessment called a Part II Order Request.

Hydro One sent Part II Order request response letters throughout March, 2013. Hydro One will continue to make best efforts to respond to additional inquiries. The Minister of the Environment will make a decision on the Part II Order requests.

Are there any plans to mediate the impact of construction and operation?

From our field assessments, Hydro One is confident there will be no residual or long term effects from constructing and operating the station. Having said this, Hydro One recognizes that construction activities can be disruptive to residents, and we are committed to mitigating these effects as much as possible.

Hydro One will hold a pre-construction PIC to address community concerns and to provide information on what they can expect during this phase of the project.

Some of the mitigation activities Hydro One will implement during construction include dust control measures and waste management policies and procedures. Hydro One has also extended an offer to landowners adjacent to the property to have their wells tested for water quality and water level. The well water testing would be conducted prior to, during and after construction for comparison purposes.