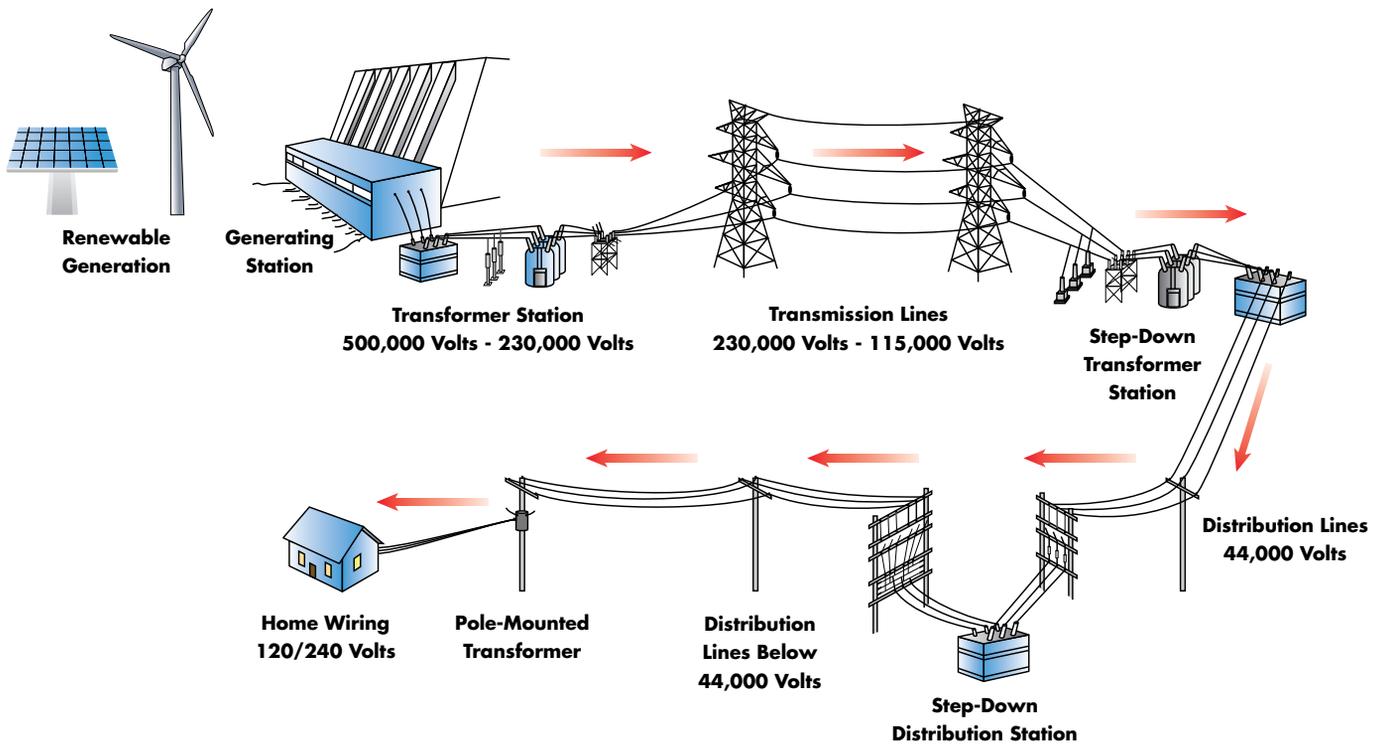


Welcome to our Public Information Centre

Electricity Flow Diagram



Key Organizations



- **Hydro One Networks Inc.** builds, owns, operates and maintains transmission and distribution facilities across the province of Ontario



- The **Ontario Power Authority (OPA)** develops plans to ensure electricity needs are met for the benefit of Ontario both now and in the future



- **Ontario Power Generation (OPG)** is an Ontario-based electricity generation company whose principal business is the generation and sale of electricity in Ontario

Need for New Transmission Facilities in GTA, including Durham Region

- OPG's Pickering Nuclear Generating Station (NGS) is approaching its final years of operation and will be retired between 2015 – 2020
- Pickering NGS currently supplies the GTA (including Durham Region) with more than 25 per cent of its peak electricity demand
- When Pickering NGS 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
- The OPA has recommended that Hydro One build a new transformer station in the east GTA to ensure there is an adequate power supply and improved reliability for the Pickering, Ajax, Whitby, Oshawa and Clarington areas
- The proposed station, **Clarington Transformer Station (TS)** will enable power flow from the 500 kV network to the 230 kV network to offset the loss of 3,000 MW of supply lost from Pickering NGS' output

*1 MW is the equivalent of approximately 250 average residential users

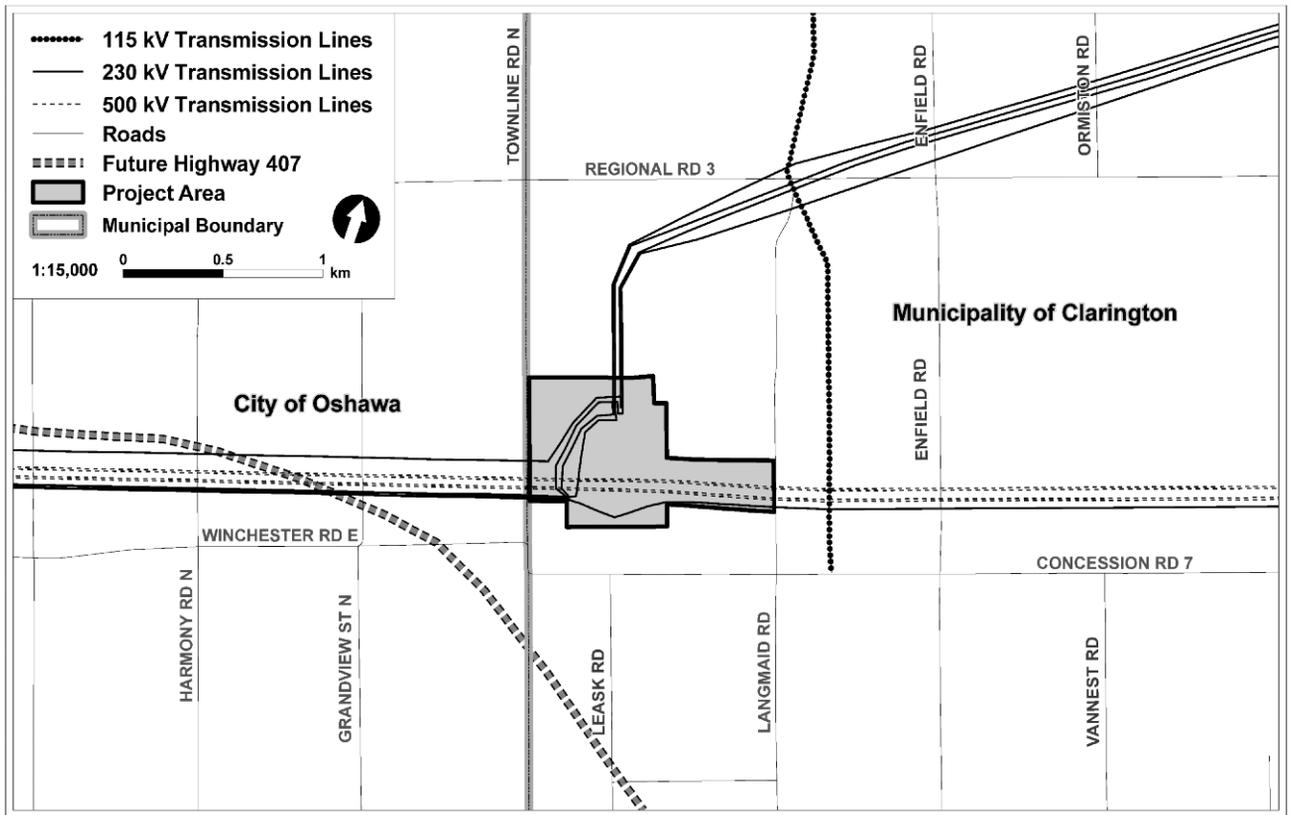
Options Investigated

- 1) Do Nothing: without offsetting the 3,000 MW from Pickering NGS, overloading could occur at Cherrywood TS, which would necessitate significant load shedding (ie, power interruptions for area customers)
- 2) Expand existing stations by installing two additional transformers:
 - Cherrywood TS – Technically not feasible due to station equipment limitations
 - Parkway TS – does not have adequate 230 kV line connections to provide the required support to the 230 kV system
 - Both these options do not meet the long-term supply and reliability needs for east GTA
- 3) Other greenfield sites: not cost-effective and not consistent with the Provincial Policy Statement (2005) of using existing infrastructure corridors before exploring greenfield sites

Site Selection Rationale

- Site is owned by Hydro One, eliminating the need to acquire land rights for the proposed station
- Site was purchased 30 years ago with the foresight to build a station to handle future electrical needs
- Site is where the existing 500 kV and 230 kV lines cross, eliminating the need to acquire land rights for new lines
- Site provides adequate space, meets technical requirements and is the most cost-effective option
- Consistent with the Provincial Policy Statement (2005)

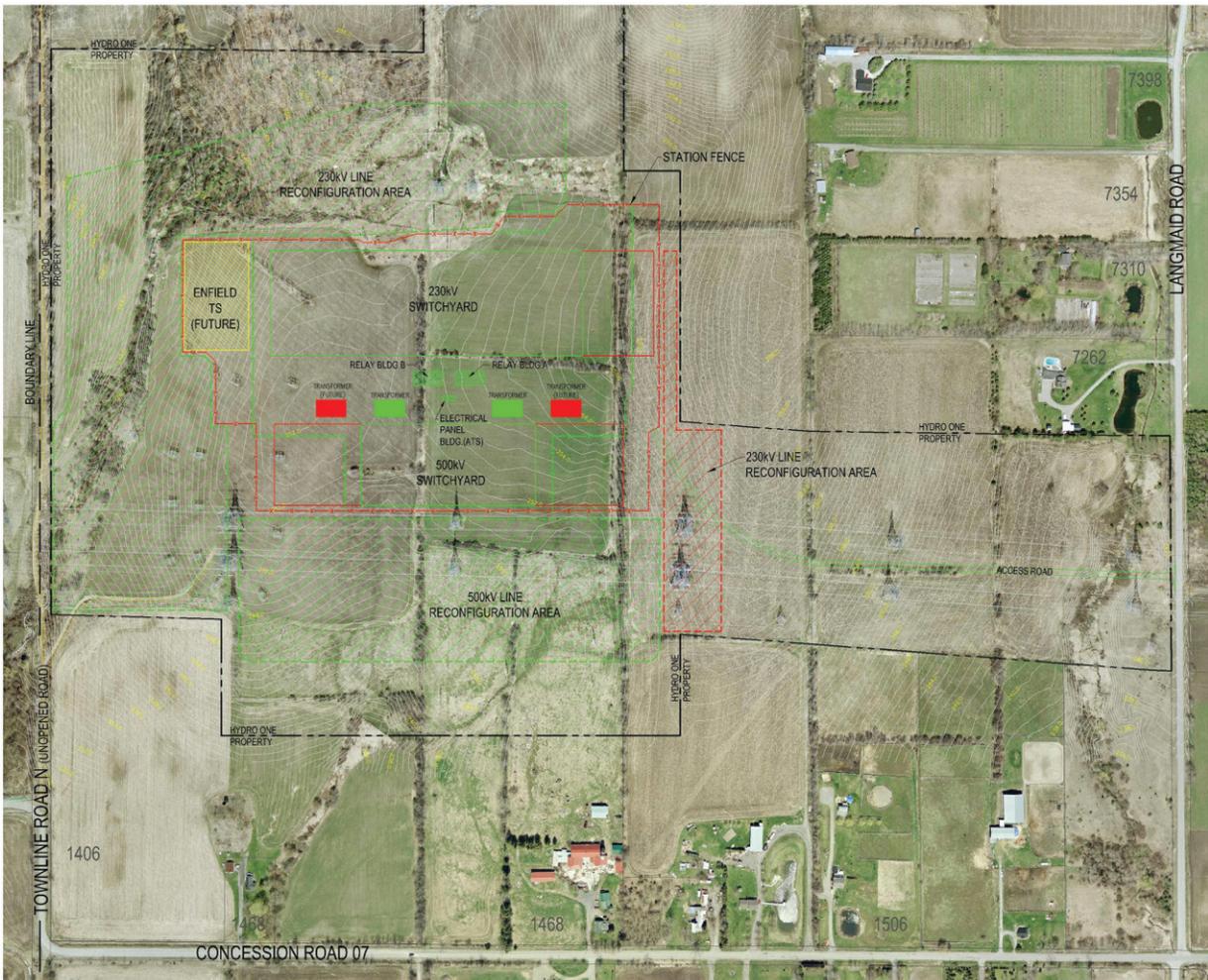
Clarington TS



Features of the Clarington TS Project

- The station will include two 500/230 kV transformers, appropriate fencing, access road, lightning protection, grounding, and storm water management
- Three buildings that will house protection and control equipment
- Necessary switchgear including 500 kV and 230 kV breakers
- New towers would be installed to connect the existing 500 kV and 230 kV lines to the proposed station and some may be taller than what currently exists
- Associated distribution lines
- Clarington TS will have sufficient space to accommodate two additional 500/230 kV transformers and associated equipment when required
- Enfield TS (approved 2008) can be installed if required by local demand

Proposed Station Layout



**CLARINGTON TS
CONCEPTUAL LAYOUT**

LEGEND:

	FENCE		LINES RECONFIGURATION AREA		STATION SWITCHYARD
	FENCE -FUTURE		LINES RECONFIGURATION AREA -FUTURE		STATION SWITCHYARD -FUTURE

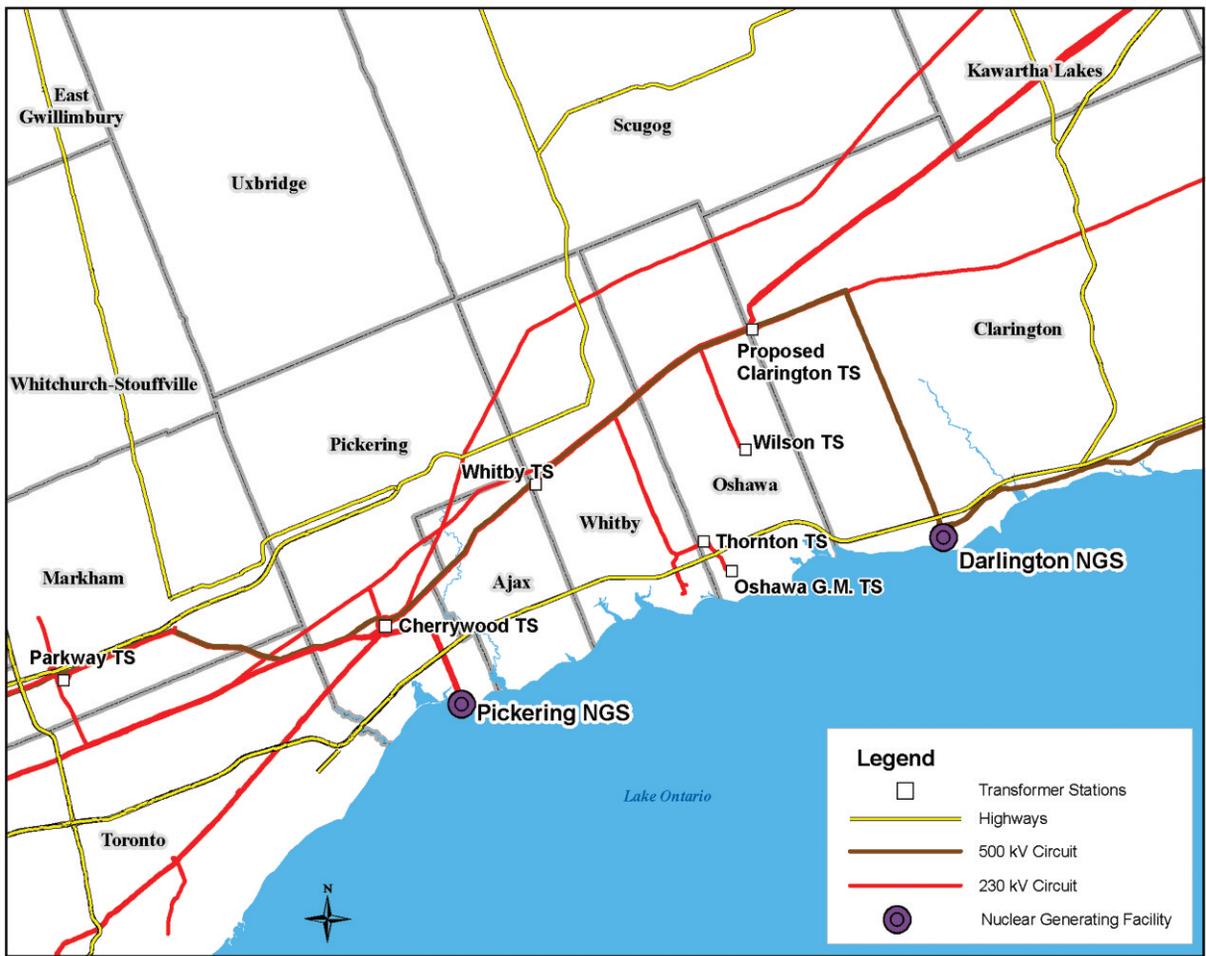
MAY 2012



Photo of a Similar Looking Transformer Station



Hydro One Transmission System in East GTA



Map12-02_ClaringtonTS_ppt_v2

Environmental Planning Process

During project planning and design, Hydro One will identify potential project effects related to:

- Property owners in the vicinity of the project area
- Existing land uses and infrastructure
- Community recreational resources
- Built heritage resources
- Archaeological resources
- Cultural heritage landscape (including visual resources)
- Natural heritage features of Oak Ridges Moraine and Green Belt protected areas
- Biodiversity and habitat
- Environmentally significant areas
- Storm water management

Typical Construction Activities

- Access road to be installed to facilitate heavy vehicle access
- Selective removal of vegetation for access roads, work area and site development
- Site area grading
- Installation of necessary site drainage components
- Erection of towers
- Installation of transformers and associated equipment

Environmental Mitigation Measures

Measures to prevent or mitigate potentially adverse environmental effects during design, construction and operation include:

- Work with adjacent land owners to minimize effects
- Vegetation clearing outside of migratory bird breeding season
- Protection of cultural heritage resources
- Assessment of visual appearance of station
- Assessments of claims for crop losses during construction
- Adherence to erosion and sediment plan
- Control of noise, mud, dust, traffic disturbances and other nuisance effects during construction
- Environmental management during construction and operation

Approval Requirements

Ontario Environmental Assessment Act

- These facilities are subject to provincial *Environmental Assessment Act* approval in accordance with the *Class Environmental Assessment for Minor Transmission Facilities*, as a precursor to any other separate approvals

Other

- Hydro One will meet all other legislative and permitting requirements

Class EA Process

- In 1978, a *Class EA for Minor Transmission Facilities* was developed and approved by the Ontario Ministry of the Environment (MOE) and implemented by Ontario Hydro (now Hydro One). The Class EA was updated in 1992.
- The Class EA process is an effective way of ensuring that minor transmission projects that have a predictable range of effects are planned and carried out in an environmentally-acceptable manner
- Following the consultation process, a draft Environmental Study Report (ESR) will be available for public, First Nation and Métis communities, and stakeholder review and comment

Class EA Process

(continued)

- If no concerns are expressed during the review period, the project is considered acceptable. Hydro One will file the final ESR with the Ontario Ministry of the Environment
- If concerns are expressed during the review period, Hydro One will attempt to resolve them in order to complete the Class EA process
- If stakeholders are dissatisfied with the process or Hydro One's project recommendations, a higher level of assessment referred to as a Part II Order can be requested by writing to the Minister of the Environment

Next Steps

Public Information Centre #2	Summer/Fall 2012
30 Day Draft ESR Review Period	Fall 2012
Submit Final ESR	Winter 2012/13
Begin Construction	Spring 2013
Station In-service	Spring 2015

Your Input is Important to Us

Thank you for attending our Public Information Centre

Please fill out a comment form before you leave,
or send us your comments afterward

For project information, please contact us at:

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Information Line: 1-877-345-6799

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