

# **Welcome to our Public Information Centre**

Partners in Powerful Communities



## **Purpose of the Public Information Centre**

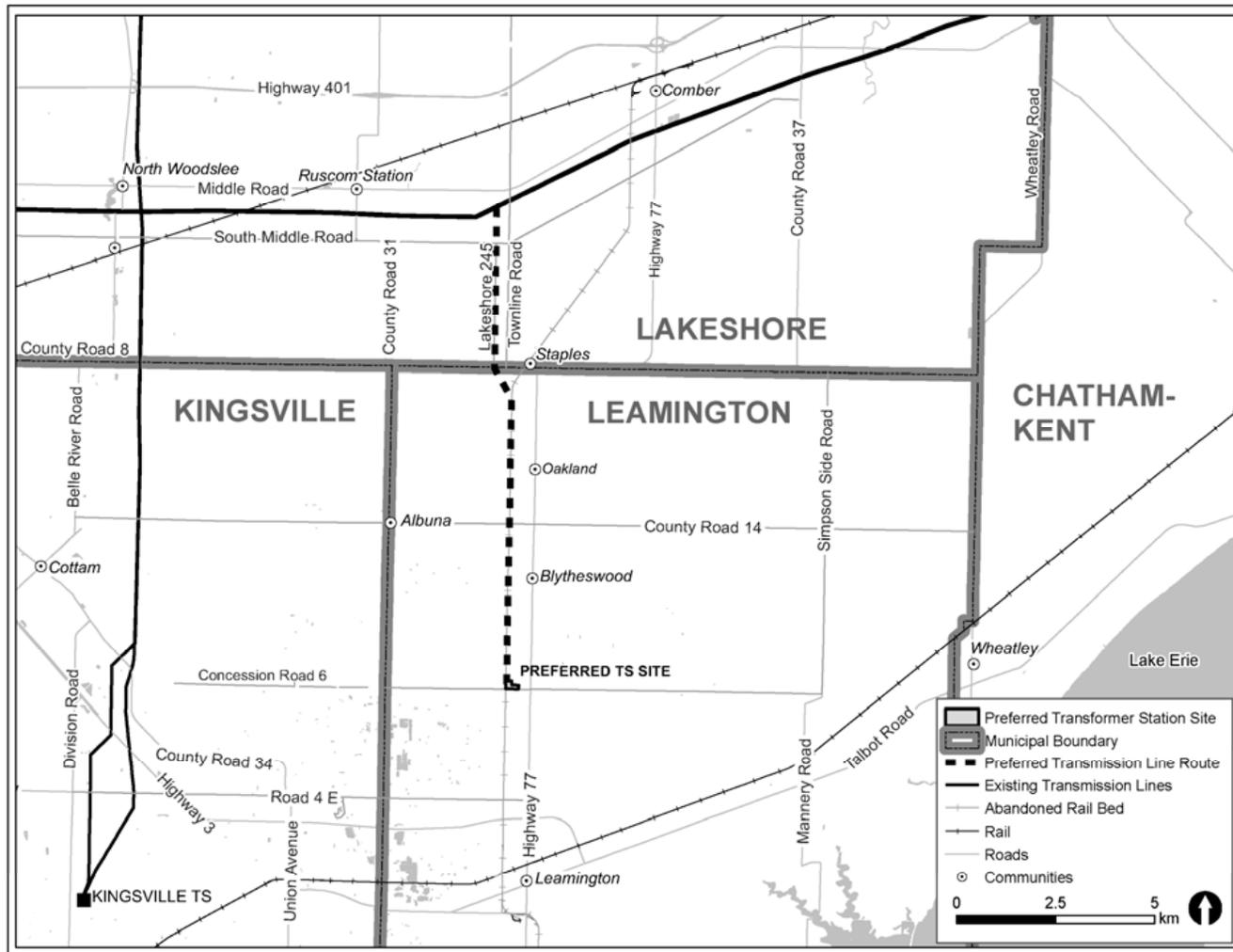
- Provide you with information about Hydro One's proposed project
- Give you the opportunity to review display panels and maps and speak directly to members of our project team
- Outline the next steps and timelines for project planning, approvals and implementation

# The Need for Transmission Reinforcement

The Ontario Power Authority, in consultation with local distribution companies and Hydro One, has confirmed the need to reinforce the electricity transmission system in the Windsor – Essex area to:

- Ensure an adequate supply of electricity to meet future needs in the Towns of Lakeshore, Kingsville and Leamington, part of the Town of Essex, and the Township of Pelee
- Improve overall security and reliability of power supply for Windsor and Essex County
- Reduce transmission congestion in transferring power from generating plants in Windsor to Ontario's transmission grid

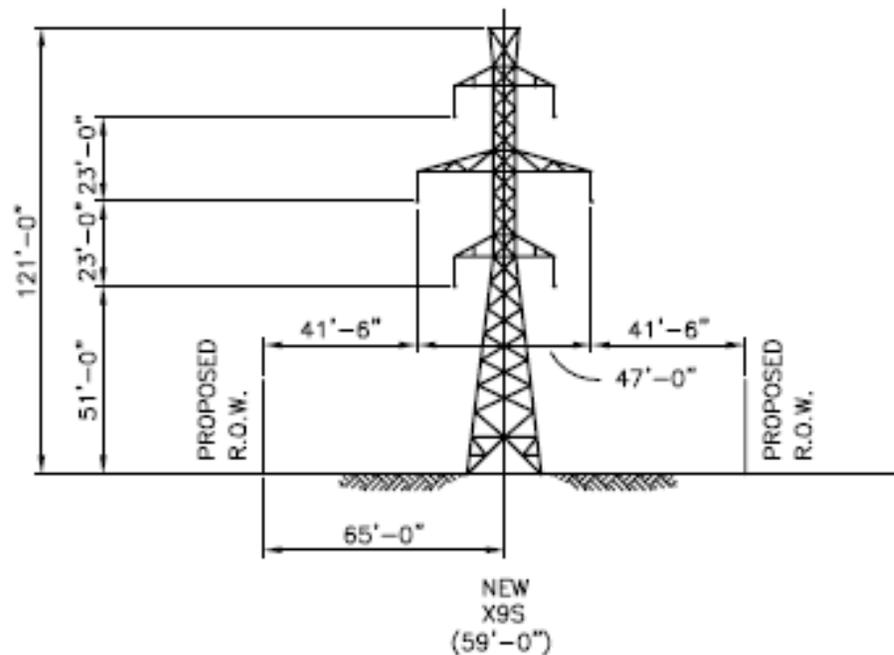
# Map of Proposed Facilities Leamington / Lakeshore



## Proposed Facilities

- A new 230 kilovolt (kV) to 27.6 kV step-down transformer station (TS) in the Municipality of Leamington
- A new 230 kV transmission line on a new right-of-way to connect the proposed TS to the existing 230 kV line running south of Hwy 401 (Leamington TS x Leamington Junction)
- A new 230 kV transmission line on the existing provincially owned right-of-way between Lauzon TS in Windsor and Sandwich Junction near Maidstone

# Proposed Cross Section for Right-of-Way



LEAMINGTON JCT x LEAMINGTON TS  
PROPOSED 230kV

# Proposed Leamington Transformer Station

Leamington TS would be equipped with:

- Outdoor 230 kV switchyard with two incoming overhead circuits and two transformer disconnect switches
- Two 75/125 MVA autotransformers
- Outdoor 27.6 kV switchyard with breakers, disconnect switches, capacitor bank and outgoing feeders
- Protection and Control building housing all the AC and DC station services
- Appropriate fencing, landscaping, road access, grounding, environmental controls, station service and communication facilities

# Preferred Site for Leamington TS



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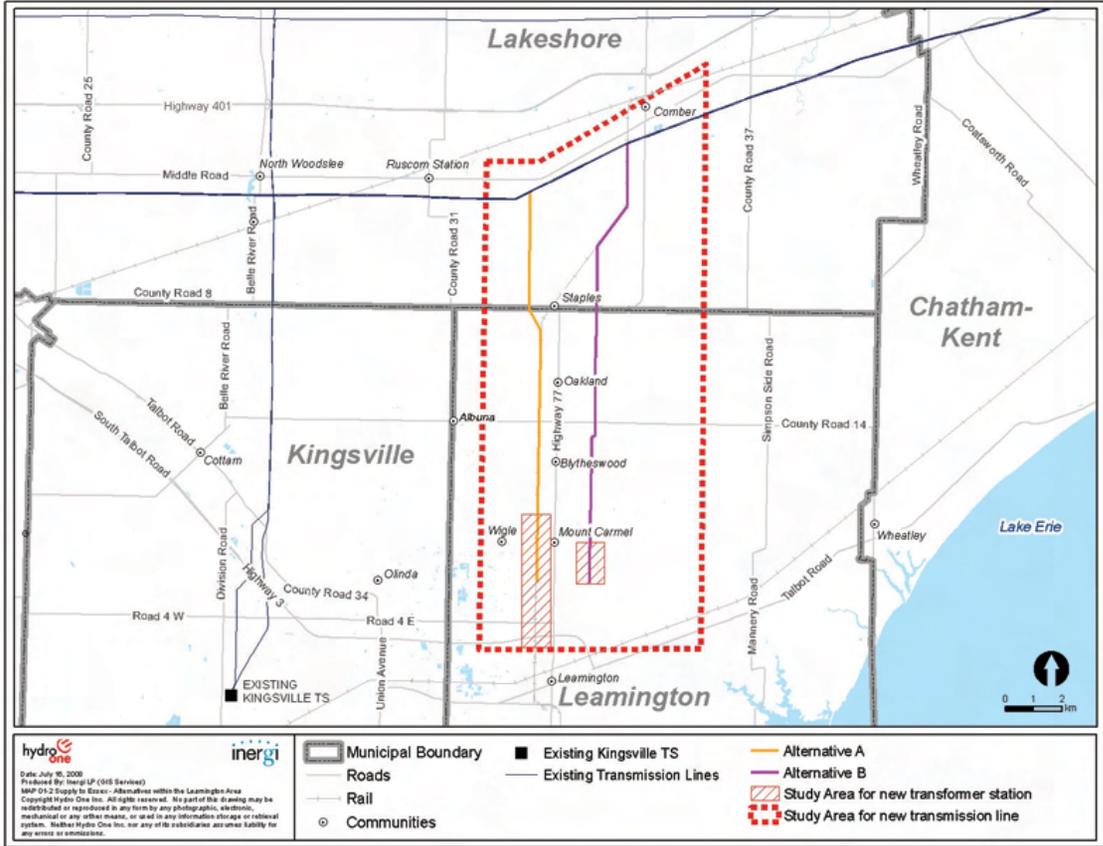


# Environmental Planning Process

The potential effects of the project are identified during project planning and design as part of the Class Environmental Assessment (EA) process. Considerations include potential effects on:

- Business and residential property owners
- Existing and planned land uses and existing infrastructure
- Biodiversity and Habitat (terrestrial and aquatic)
- Agricultural lands and productivity
- Archaeological and heritage resources
- Forestry and mineral resources
- Recreational resources and landscape appearance
- Storm-water management

# Transmission Line Route Alternatives Leamington / Lakeshore



# Route Selection Evaluation Criteria

When comparing alternative transmission line routes, the following factors will be measured and weighed, with a preference toward minimizing the impacts on the social and natural environment:

- new routes vs. following existing infrastructure corridors
- homes close to the proposed transmission line
- significant woodlots potentially impacted
- significant watercourses crossed
- petroleum wells
- turns in the transmission line route
- class 1-3 agricultural lands impacted

## Comparison of Alternative Routes

<b>Factors</b>	<b>Alternative Transmission Line Routes</b>	
	<b>A*</b>	<b>B</b>
<b>Natural Environment</b>		
Potential terrestrial habitat/wildlife effects	P	P
Potential aquatic habitat effects	P	P
<b>Social Environment</b>		
Proximity to area residents	P	
Potential effects on agriculture	P	
Potential effects on archaeological sites	P	P
Potential to parallel existing infrastructure	P	
<b>Cost/Technical</b>		
Cost	P	
Technical/constructability/maintenance considerations	P	

P is the preferred alternative based on the assessment of potential effects; if potential effects are similar both alternatives are shown as preferred

\* Alternative A is the preferred route

# Transformer Station Site Criteria

An optimal site in the Leamington area would:

- have a footprint of 150m x 150m (approx. 8 acres)
- be within 250m of a road to facilitate vehicle access
- close to multiple municipal roads to allow construction of distribution lines
- be centrally located within the electrical demand area and close to the proposed transmission line route
- have a setback from homes
- avoid drains, petroleum wells, watercourses and environmentally sensitive areas (including species at risk and significant woodlots)

## Comparison of Alternative Sites

Factors	Potential Transformer Station Sites								
	A1	A2	A3	A4	A5	A6	A7	A8	A9*
<b>Natural Environment</b>									
Potential terrestrial habitat/wildlife effects	P		P	P	P	P	P	P	P
Potential aquatic habitat effects	P				P				P
<b>Social Environment</b>									
Proximity to area residents						P	P		
Potential effects on agriculture	P	P	P	P	P	P	P	P	P
Potential effects on archaeological sites	P	P	P	P	P	P	P	P	P
<b>Technical</b>									
Cost								P	P
Technical/constructability/maintenance considerations	P	P	P	P	P	P	P	P	P

P is the preferred alternative based on the assessment of potential effects; if potential effects are similar both alternatives are shown as preferred

\*A9 is the preferred site

# Environmental Mitigation Measures

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

- Spill containment and storm-water management
- Minimizing erosion and soil compaction
- Protecting electrical equipment from fire hazards
- Environmental management during construction and operation
- Minimizing effects on prime agricultural lands and vegetation
- Controlling mud, dust, and traffic disturbances during construction
- Controlling noise and appearance of the site after construction
- Protecting archaeological resources
- Minimizing effects on land owners and existing and planned land uses

# Approval Requirements

## **Ontario Environmental Assessment (EA) Act**

The 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.

## **Ontario Energy Board (OEB) Act**

“Leave to Construct” approval is required under Section 92 of the *Ontario Energy Board Act*

## **Other**

Hydro One will meet all other legislative and permitting requirements for individual projects

# Class EA Process

- In 1978, a *Class EA for Minor Transmission Facilities* was developed and approved by the Ontario Ministry of the Environment 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 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, and approval is granted.
- 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, they can request that the Minister of the Environment bump-up the project to an individual EA

## Next Steps

Present preferred TS site (Leamington) and transmission line route	July 2009
Draft Environmental Study Report (ESR) available for public/stakeholder review & comment	Fall 2009
Anticipated OEB filing	Fall 2009
Anticipated EA approval	Late 2009
Anticipated OEB approval	Spring 2010
Start of Detailed Engineering Design and Construction	2010
Project in-service	2012

# 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:

Website: [www.HydroOneNetworks.com/newprojects](http://www.HydroOneNetworks.com/newprojects)

Email: [Community.Relations@HydroOne.com](mailto:Community.Relations@HydroOne.com)

Information Line: 1-877-345-6799 or 416-345-6799

Fax: 416-345-6984

# Electric and Magnetic Fields (EMFs)

- EMFs are invisible forces that surround electrical equipment, power cords, and power lines. You cannot see or feel EMFs
- Every time you use electricity and electrical appliances, you are exposed to EMFs at extremely low frequencies. EMFs produced by both power lines and use of electrical appliances, belong to this category
- EMFs are strongest when close to the source. As you move away from the source, the strength of the fields fades rapidly

# Health Canada's Position on EMFs

- There is no compelling scientific evidence that EMF in living and school environments, regardless of locations from power transmission lines, cause ill health such as cancer. This position is consistent with the overall opinions from most national and international scientific bodies
- Health Canada does not consider guidelines for EMF exposure necessary, because scientific evidence is not strong enough to conclude that typical exposures cause problems

Source: Health Canada submission to the British Columbia Environmental Assessment Office on the Vancouver Island Transmission Reinforcement Project; 2006. [www.hc-sc.gc.ca](http://www.hc-sc.gc.ca)