

# **Welcome to our Public Information Centre**

## **Purpose of Public Information Centre #2**

- Provide you with an update on Hydro One's Supply to Essex County project
- Present the rationale for the selection of the preferred transmission plan
- Obtain your input on possible station sites in the Leamington area and the alternative routes to connect it to the transmission system
- Outline the next steps for this project and how you can be involved

# 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

# The Ontario Power Authority (OPA)

Established in 2004, the OPA is responsible for ensuring a long-term supply of electricity for the province of Ontario. The OPA's mandate includes:

- leading and coordinating electricity conservation initiatives
- ensuring required investments are made in new electricity supply resources
- preparing a comprehensive and integrated long-term power system plan
- facilitating a commercial structure for Ontario's electricity industry.



# Hydro One Networks Inc. (Hydro One)

Hydro One, a successor company to the former Ontario Hydro, is an electricity transmission and distribution company. It owns, operates and maintains Ontario's high-voltage transmission system and is responsible for:

- implementing transmission solutions identified by the Ontario Power Authority
- conducting public consultation and seeking environmental and regulatory approvals for specific projects
- coordinating the engineering, design and construction of new or upgraded transmission facilities.



Partners in Powerful Communities

# Transmission Alternatives Considered

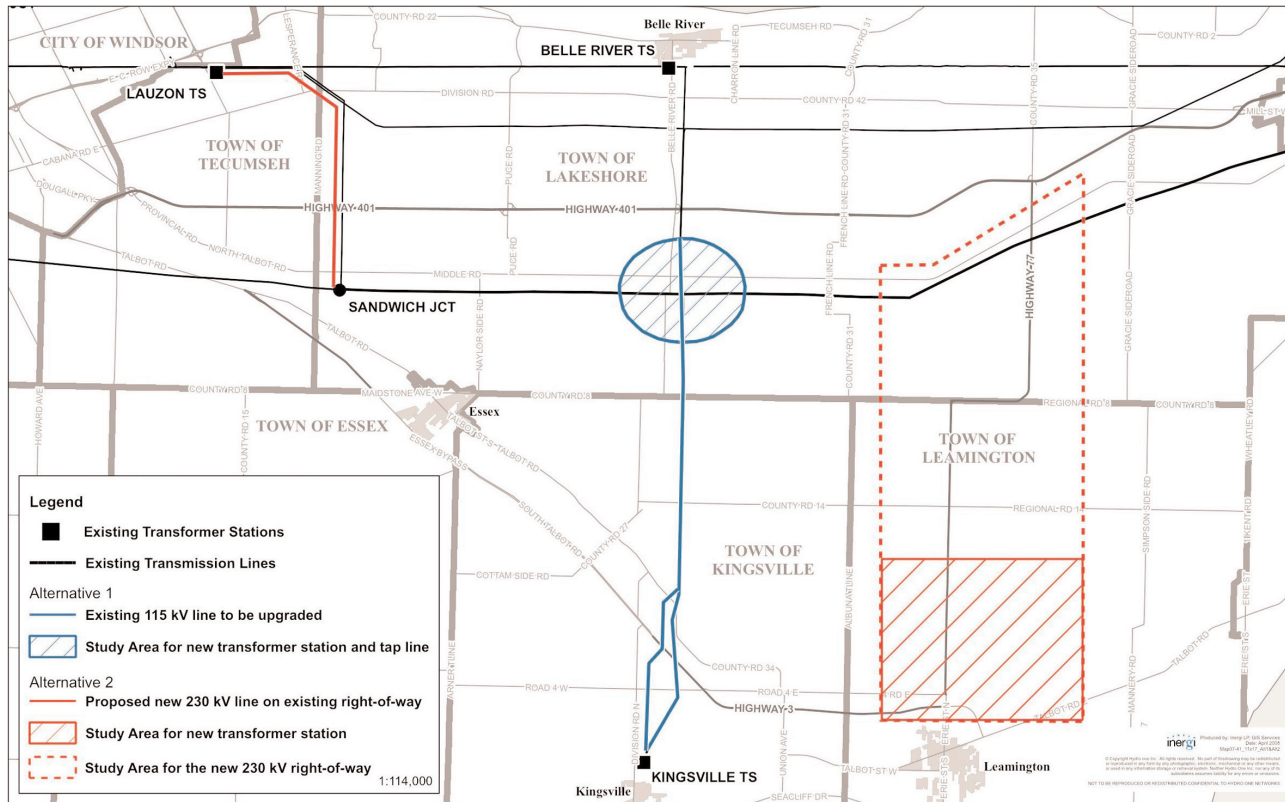
## Alternative #1:

- A new 24-acre transformer station (TS) in the Woodslee area (Depending on growth in electricity demand, an additional transformer station could be required in this area within the next 10 years)
- Replace existing conductor (wires) and wood poles on the two existing 115 kV lines that supply Kingsville TS

## Alternative #2:

- A new 8-acre TS in the Leamington area connected by a new 230 kV transmission line on a new corridor to the existing 230 kV lines that run east-west, south of Hwy 401
- An additional 230 kV line on the existing transmission corridor between Sandwich Junction and Lauzon TS

# Alternatives 1 and 2



## Preferred Transmission Plan – Alternative #2

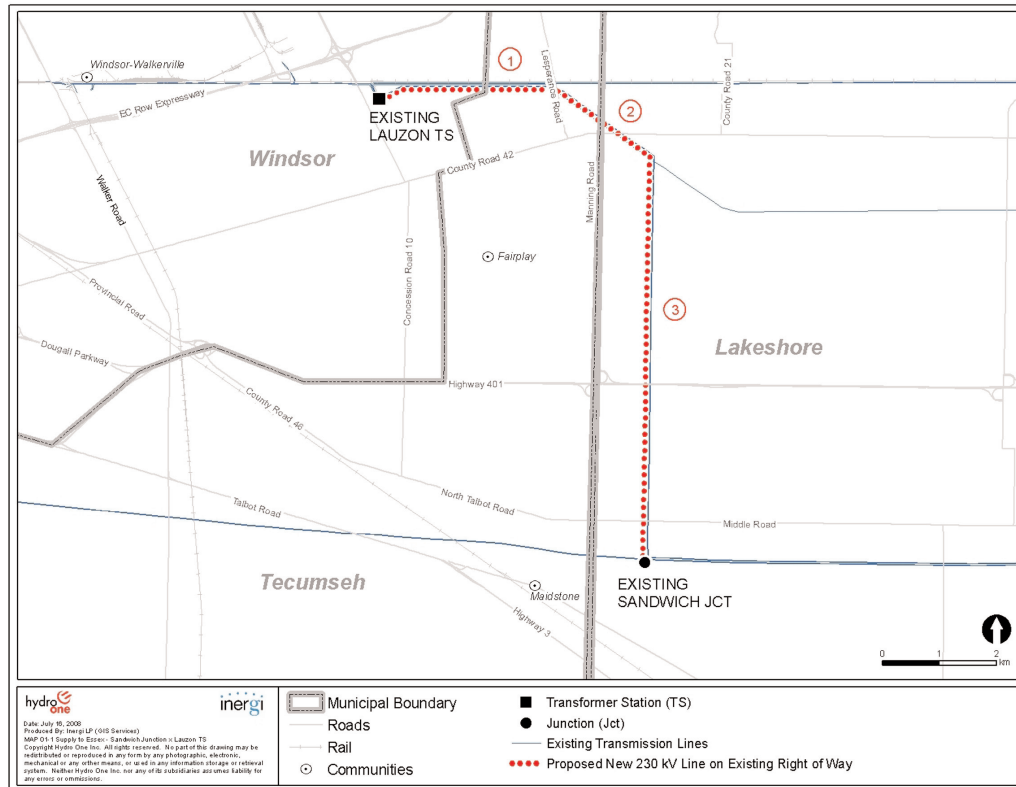
Based on an analysis of technical merits, project economics, environmental and social factors, and public and stakeholder feedback, Alternative #2 is preferred because:

- it has superior ability to improve the reliability of the transmission system by providing greater diversity of supply
- it has superior ability to improve power quality, reliability and diversity of the distribution system in eastern Essex County by locating a transformer station in the Leamington area
- it utilizes the full potential of an existing transmission corridor (Sandwich Junction x Lauzon TS)
- it is \$10 – \$20 million less expensive
- it enhances opportunities to incorporate generation in the area.

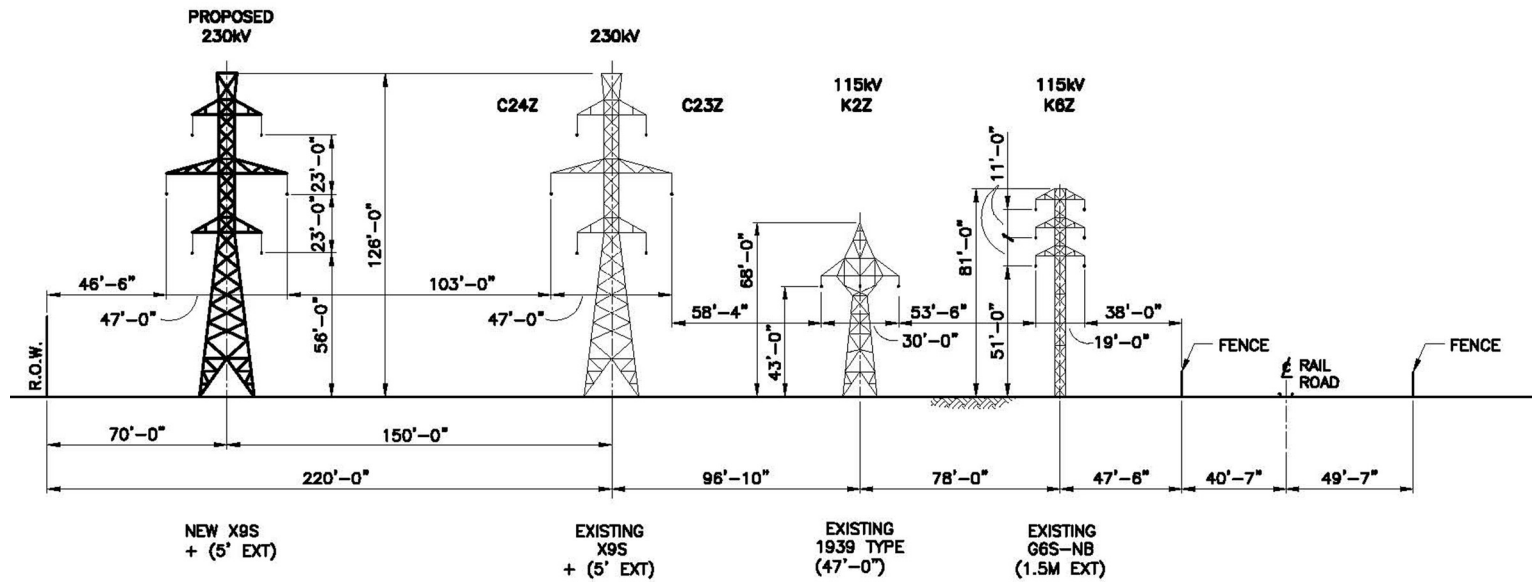


# Preferred Alternative

## Sandwich Jct to Lauzon TS

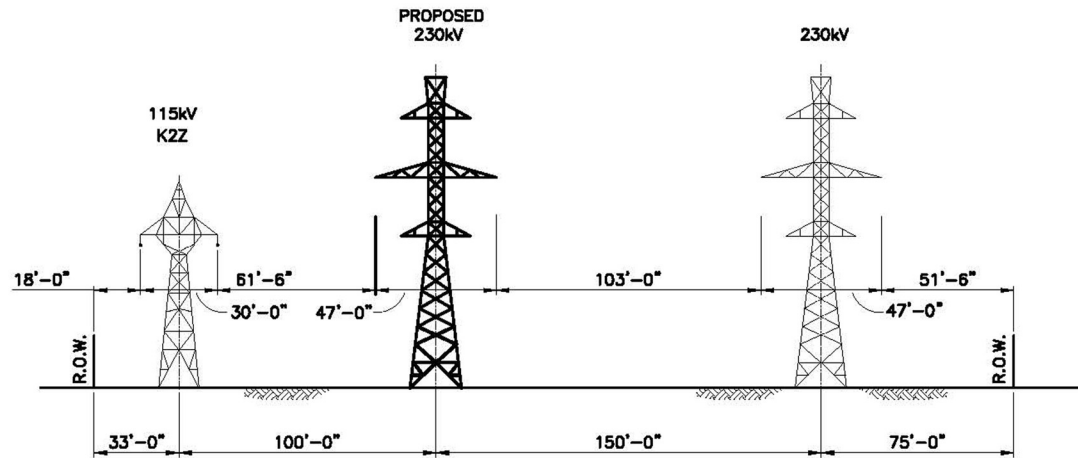


# Proposed Right-of-Way Cross Section 1



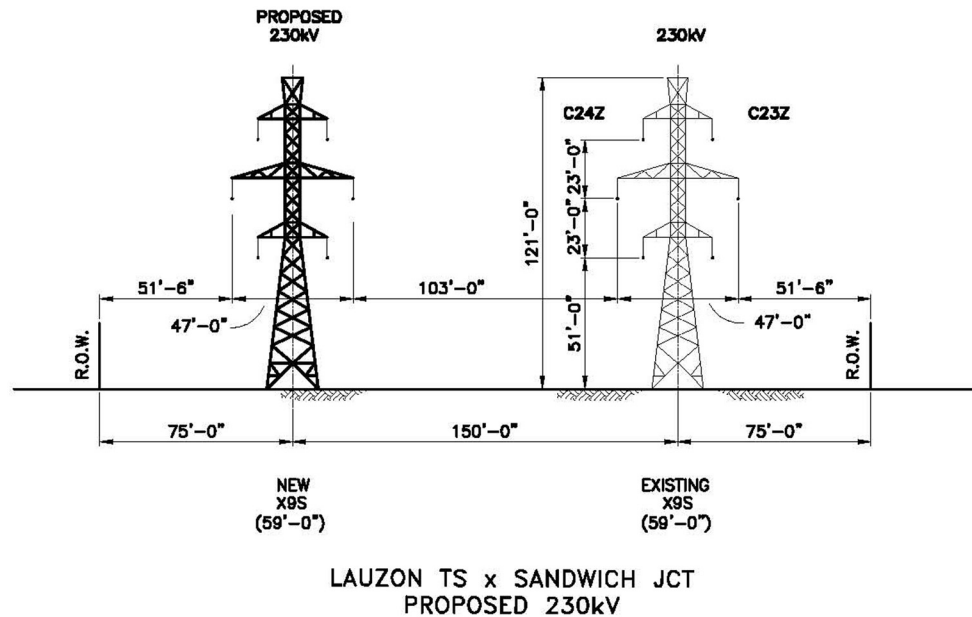
LAUZON TS x SANDWICH JCT  
PROPOSED 230kV

# Proposed Right-of-Way Cross Section 2



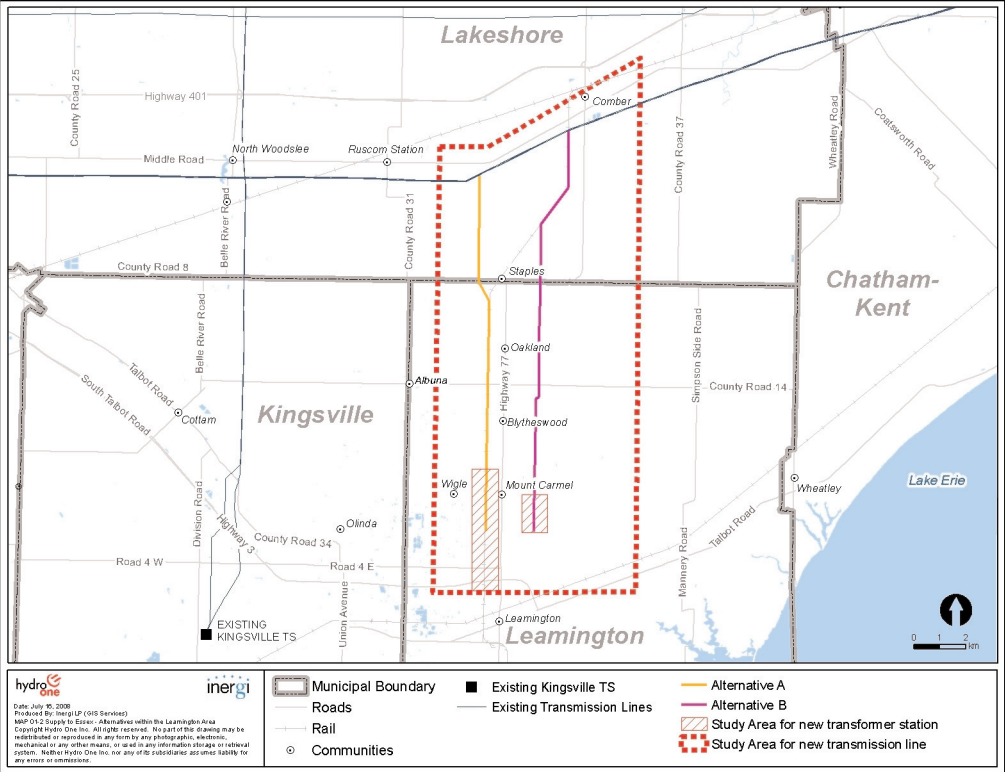
LAUZON TS x SANDWICH JCT  
PROPOSED 230kV

# Proposed Right-of-Way Cross Section 3

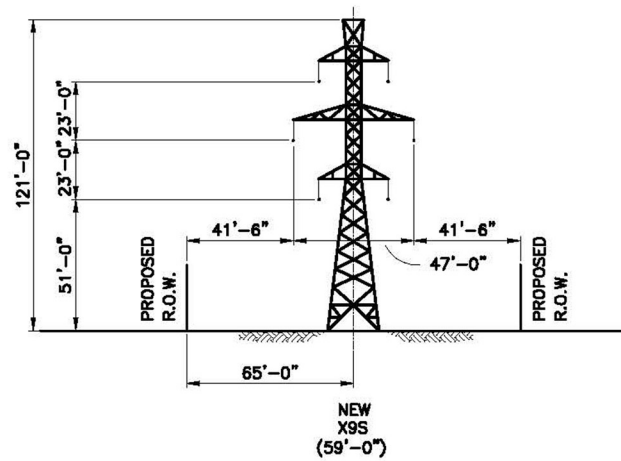


# Preferred Alternative

## Leamington/Lakeshore area



# Proposed Cross Section for New Right-of-Way



LEAMINGTON JCT x LEAMINGTON TS  
PROPOSED 230kV

# Proposed Leamington Transformation Station

The proposed TS would be equipped with:

- outdoor 230 kV switchyard with two incoming overhead circuits and two transformer disconnect switches
- two 50/83 MVA autotransformers
- outdoor 27.6 kV switchyard with breakers, disconnect switches, capacitor bank and outgoing feeders
- protection and control building for all AC and DC station services
- appropriate fencing, landscaping, road access, grounding, environmental controls, station service and communication facilities.

# Environmental Planning Process

The potential effects of the project will be identified during project planning and design, as part of the Class Environmental Assessment (EA) process, including potential effects related to:

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



# Route Selection Evaluation Criteria

When comparing alternative transmission line routes, the following factors will be measured and weighed, with a preference toward minimizing 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

# 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
- be 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)

# Environmental Mitigation Measures

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

- Spill containment and storm-water management
- Minimization of 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 landuses

# 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*

## **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

## 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

## Next Steps

Identify and announce recommended transmission alternative	July 2008
Identify preferred TS site (Leamington) and transmission line route	Fall 2008
Draft Environmental Study Report (ESR) available for public/stakeholder review & comment	Fall 2008
Anticipated OEB filing	Fall 2008
Anticipated EA & OEB approvals	Spring 2009
Start of construction	2010
Project in-service	2012



## 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)