

SUPPLY TO ESSEX COUNTY TRANSMISSION REINFORCEMENT PROJECT

CLASS ENVIRONMENTAL ASSESSMENT (EA)

HYDRO ONE WORKSHOP ON TRANSMISSION LINE ROUTE
ALTERNATIVES

OCTOBER 29, 2009
COMBER COMMUNITY CENTRE



November 30, 2009

Final Workshop Report

Prepared by Lura Consulting
for Hydro One Networks Inc.



This workshop summary report was prepared by Lura Consulting. Lura provided third-party facilitation services for Hydro One's Supply to Essex County Transmission Reinforcement Project Class Environmental Assessment property owner workshop on route alternatives. If you have any questions or comments regarding this report, please contact:

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1. INTRODUCTION

This report summarizes the discussion and outcomes at the Hydro One workshop held on October 29, 2009 from 7 – 9 p.m. at the Comber Community Centre where company representatives discussed transmission line route alternatives with potentially affected property owners in the Municipality of Leamington and Town of Lakeshore.

1.1. Overview of the Supply to Essex County Class Environmental Assessment (EA)

Hydro One is nearing completion of a Class Environmental Assessment (EA) to reinforce the electricity transmission system that supplies Essex County and Windsor. The Class EA was initiated in 2008 after the Ontario Power Authority, in consultation with Hydro One and Local Distribution Companies serving Essex County determined that new transmission facilities in Essex County are needed to ensure an adequate and reliable supply of electricity for the future.

Hydro One follows the *Class EA for Minor Transmission Facilities*, in conformance with the *Environmental Assessment Act*. This specific Class EA process was developed and approved by the Ontario Ministry of the Environment and implemented by Hydro One's predecessor Ontario Hydro in 1978, and subsequently updated in 1992. Over the years, the Class EA process has proven itself to be an effective way to ensure that minor transmission projects with a predictable range of effects are planned and carried out in an environmentally-acceptable manner.

Public involvement is an integral part of the Class EA process. Hydro One has conducted an extensive communications program with government officials, First Nations, and interested groups and individuals. The consultation program has included three series of Public Information Centres at which Hydro One introduced the project and the need for new facilities and then discussed and sought input on transmission alternatives to meet the identified electricity needs of Windsor and Essex County.

1.2. Project Progress to Date: Background on the Transmission Line Route Alternatives

Based on an analysis of technical, environmental and socio-economic factors, and public and stakeholder feedback, Hydro One is proposing to construct the following facilities:

- a new transformer station (TS) on Concession Road 6 adjacent to the municipal utility corridor in the Municipality of Leamington, and a new double circuit 230 kilovolt (kV) transmission line on a new corridor to connect the station to the existing 230 kV lines south of Highway 401 in the Town of Lakeshore; and
- an additional double circuit 230 kV transmission line on the existing transmission corridor between Sandwich Junction near Maidstone and Lauzon TS in the City of Windsor.

At Public Information Centre #3 held in Leamington on July 16, 2009, Hydro One presented the proposed site for a new transformer station in the Municipality of Leamington and a proposed route

for a new 230 kilovolt (kV) transmission line to connect the station to the existing transmission lines. The route proposed by Hydro One would parallel the 50-foot wide municipal utility corridor, utilizing the corridor as part of the 130 foot right-of-way required for the transmission line, north from the proposed Leamington Transformer Station to just south of Staples. It would then divert to the west and head north along the east side of Lakeshore Road 245 to connect with the existing transmission lines south of Hwy 401. This is the red route shown on the attached map.¹

At the Public Information Centre, Hydro One was asked to consider alternative routes north of County Road 8 between Lakeshore Roads 243 and 245 that would follow existing property lines, if possible. Hydro One representatives advised that a route in this area had been investigated but was discounted because of land use conflicts with proposed wind turbines. Nevertheless, the company agreed to reinvestigate, and committed to hold a workshop with potentially affected property owners and interested parties if a route alternative(s) in the area were determined to be technically feasible.

Following the Public Information Centre, Hydro One identified two alternative routing options, shown in yellow and blue on the map. Hydro One also met with Brookfield Renewable Power to ensure that the company's original turbine locations were still planned. It was confirmed that a route located at mid-concession (the yellow line) would not be feasible; however, changes in Brookfield Power's plans now allowed for the route shown in blue to be technically viable. This alternative route would also change the way properties between Leamington Concession 11 and County Road 8 are crossed.

2. WORKSHOP ON ROUTE ALTERNATIVES

2.1. Purpose of the Workshop

The purpose of the workshop was to discuss two potential transmission routes (the blue and red lines shown on the map¹) under consideration with potentially-affected property owners in the immediate area. Specifically, the workshop objectives were to:

- Outline the Class EA process and the criteria Hydro One uses to evaluate alternative routes
- Obtain feedback on the strengths and weaknesses of the alternatives presented
- Confirm information on local environmental and physical features, such as drain locations, etc.
- Develop a list of prioritize evaluation criteria used to assess the alternatives
- Review next steps in the route evaluation process leading to the identification of a preferred route.

2.2. Notification of Potentially Affected Property Owners and Interested Parties

The owners of approximately 50 properties within the area shown in green on the map in Appendix B were invited to the workshop.¹ This area roughly extends from the existing transmission lines south of Highway 401 south to Concession Road 11, Municipality of Leamington, and between Rochester Town Line and Lakeshore Road 243. The Municipality of Leamington and the Town of Lakeshore provided the addresses of property owners and invitations were mailed two weeks prior to the workshop. Follow up calls and/or emails were made by Hydro One where possible to confirm receipt of the invitation and intent to participate. Invitations were also sent to government agencies and First Nations, and interest groups that may have an interest in a change of route in this area.

In total, 17 participants attended the workshop, of which 13 were potentially affected property owners. Two representatives of the Essex County Federation of Agriculture, one representative from the Walpole Island First Nation, and a representative from Brookfield Renewable Power were also in attendance. Representing Hydro One were: Ajay Garg, Manager, Transmission Load Connections; John Sabiston; Manager, Transmission Planning; Patricia Staite, Environmental Assessment Coordinator; Carrie-Lynn Ognibene, Senior Advisor, Corporate Relations; Rick Poppe, Real Estate Coordinator; Paul Dalmazzi, Assistant Environmental Planner; and Thomas Fu, Design Engineering Specialist, Transmission Structures.

2.3. Workshop Format and Agenda

Facilitator Susan Hall from Lura Consulting opened the workshop shortly after 7 p.m. by welcoming everyone and reviewing the agenda, workshop workbook and supporting materials which included Frequently Asked Questions and copy of the map of the study area.² Ms. Hall then proceeded with a round of introductions, asking participants to indicate whether or not they had previously attended a Public Information Centre for this project. The majority replied that they had been previously involved and were familiar with the project.

The workshop was designed to provide participants with an opportunity to achieve a common level of understanding about the alternative transmission routes being considered and rationale for their inclusion, an overview of the review and approval processes for the project. It was further intended to allow participants to provide feedback on the strengths and weakness of each route and on the evaluation criteria to be used by Hydro One to compare the route alternatives and select a preferred route.

¹ See Appendix A for a copy of the Workshop Invitation.

² See Appendix C for the Workshop Agenda.

As such, the format for the evening included:

- Presentations by Hydro One outlining background on the project, the Class Environmental Assessment process, and the current task at hand, including the need to identify a preferred transmission line route.³;
- Facilitated discussion sessions led by Susan Hall, guided by the following key questions found within the workshop workbook :⁴ The round table discussions lasted approximately one hour and were followed by the entire group reconvening to report back on their findings.

2.4. Hydro One Presentations

John Sabiston, Manager, Transmission Planning, initiated the Hydro One presentation. He first thanked participants for attending the workshop and then reviewed the project background and current status before discussing the two alternative transmission routes: red and blue. Mr. Sabiston explained the basic process for projects such as this (identified in Section 1.2) and indicated that the feedback received during previous consultation resulted in the identification of the transmission line route (the red route) presented by Hydro One at its July 16, 2009 Public Information Centre in Leamington. He also explained that both the red and blue routes are technically feasible.

Patricia Staite, EA Coordinator for this project, then outlined the Class Environmental Assessment process as well as next steps in the environmental and Ontario Energy Board approvals processes for this project. She noted that both the Class EA and Ontario Energy Board processes include opportunities for public input and involvement. She provided a sketch of the proposed tower design and dimension and also explained the sequence of design and construction activities that are typical for the installation of a transmission line of this type. Ms. Staite reiterated that Hydro One was here to listen and that comments from this workshop would assist the project team in making a decision on a preferred route.

Ms. Hall subsequently led a brief question and answer period.

Questions and Answers

Q1: What is a double circuit transmission line?

A1: A double circuit transmission line means that two circuits comprising a set of three wires (conductor) each are located on a single tower; one circuit on each side of the tower held in place by tower arms and insulators.

Q2: What is the width of the transmission right-of-way for a double circuit 230 kilovolt (kV) line being proposed by Hydro One?

³ See Appendix D for a copy of the Hydro One Workshop Presentation.

⁴ See Appendix E for the Workshop Workbook to Guide Discussions.

A2: A 230 kV transmission line on standard lattice towers normally requires a 130-foot wide right-of-way to provide adequate space for the tower, overhang of wires, and clearance for wires to swing due to wind.

Q3: Is it possible for the transmission corridor to be narrower than 130 feet?

A3: The standard width of the right-of-way could be reduced by positioning the towers closer together which would keep the swing of the wires within a narrower corridor. A 130 foot right-of-way is needed if the towers are spaced 750 feet apart. However, if the towers are positioned 500 feet apart, the right-of-way width could possibly be reduced to about 100 feet. A right-of-way width less than 100 feet for a 230 kV transmission line is rare.

Q4: What impact would there be on homes if the transmission line were to continue on the municipal utility corridor through Staples?

A4: Hydro One did previously evaluate an overhead option through Staples. It was not considered feasible due to both the number of residences that would be affected and insufficient right-of-way width.

Q5: Could the transmission line not be built underground through Staples?

A5: The underground option through Staples was previously examined and discarded due to cost, as it would add approximately \$13 million to the cost of the project.

Q6: What is Hydro One's priority with respect to the effects on a transmission line route on individual properties and communities?

A6: Hydro One uses a broad range of criteria to guide the evaluation and assessment of route alternatives, and we'll be discussing these tonight. Your input will help us understand which criteria are most important to you and your community.

3. SUMMARY OF WORKSHOP DISCUSSIONS

3.1. Strengths and Weaknesses of the Two Alternative Line Transmission Routes

Ms. Hall asked the participants to gather in three groups for discussion of the strengths and weaknesses of the two alternative transmission line routes (red and blue). The following table summarizes the discussion. In general, few if any strengths were vocalized regarding the red route. Alternatively, while the blue route was not generally supported, it was preferred as it was farther from the residences.

Table 1: Strengths and Weaknesses of the Two Alternative Transmission Line Routes

| Route Alternatives | Strengths | Weaknesses |
|--------------------|---|---|
| Red | <ul style="list-style-type: none"> • None. * | <ul style="list-style-type: none"> • Closer to houses.* • Possible problems: health, electronic disruptions, noise.* • Visual impact. • Drainage tile locations. • Property devaluation. • Impacts on existing organic farms. • Crosses one property diagonally that owner wishes to develop as a future subdivision. |
| Blue | <ul style="list-style-type: none"> • Farther from houses.* • Visual impact moved to the rear of homes. • One group indicated that this alternative did not have any strengths. | <ul style="list-style-type: none"> • Disruptive to farming operations (especially if located in the middle of the field). • The location of where the line may dissect the farm could potentially create other issues (e.g. can't put greenhouses below transmission route; diagonal division on a lot impacts a larger area). • Impact on ability to designate as organic farm in the future. • Severely impacts one property that the owner wishes to develop as a future subdivision. • Divides parcel of land. |

* **denotes** issues mentioned by more than one group.

3.2. Criteria for Evaluating the Two Alternative Transmission Line Routes

Hydro One provided a preliminary list of criteria it considered most relevant for evaluating these two alternative transmission line routes. Participants were asked to identify any additional criteria they wished to add to the list and then prioritize the importance of each criterion.

This interactive activity had participants place dots on each specific criterion they felt were important to them. By counting the number of dots associated with the criterion, each was ranked from high to low importance. The following table lists the criteria in order of importance.

Table 2: Prioritization of Route Evaluation Criteria

| Importance | Criteria | Considerations |
|-------------------|--|---|
| High | Landscape and Visual Assessment. (10 dots) | Front views are more important than back views (e.g. property owners would prefer to see the transmission line in their back yard as opposed to their front yard). |
| | Proximity to Residential Dwellings. (10 dots) | Property owners would prefer that the transmission line be located as far as possible from residences for various reasons, including potential electric and magnetic field effects, noise (buzzing of conductor in certain conditions), and potential interference with electronic equipment. |
| | Health / Noise effects from transmission line. [†] | Potential health impacts are considered more important than noise impacts. However, it was noted that noise can affect health. |
| Middle | Tiled fields. (6 dots) | Property owners would prefer minimizing the area of drainage tile affected by the route. |
| | Electronic Interference from transmission lines. [†] (5 dots) | Potential electronic interference should be mitigated. |
| | Line Orientation. (5 dots) | If the transmission line crosses a field diagonally, it would have a greater impact on the property than if it crosses the field on a straight line. |
| | Tower base. (5 dots) | Linked to whether the right-of-way was in the middle of a field or on a fence line (preferred). |
| Low | Affected Properties. (3 dots) | Minimizing the number of properties over which the proposed hydro line right-of-way crosses. (Hydro One noted that the blue route crosses five more properties than the red route.) |
| | Specific crops. (2 dots) | There were two organic farmers present at the workshop. |
| | Paralleling Infrastructure. (2 dots) | Property owners felt that it does not matter whether the transmission route runs parallel to the road, gas pipeline or drainage ditch. |
| | Landscape and Visual Assessment. (3 dots) | The impacts on the view of the landscape while driving down the road does not matter. |

[†] denotes new criteria suggested by participants.

3.3 Additional Considerations

Following the discussion on route evaluation criteria, Ms. Hall asked if there were any other issues raised during the small group discussions. The following main issues were raised:

- Concerns such as property devaluation, potential change in zoning of property and fear that property taxes will go up as a result of a transmission line.

- Property compensation paid by Hydro One is not similar to compensation being offered by Wind Project Developers and Telecommunications Companies. Also land owners would prefer annual rather than lump-sum payments and mentioned that they would prefer long-term easements (e.g. 40 years) rather than an easement in perpetuity.
- Property compensation packages negotiated by Hydro One should be updated to reflect modernized farming methods with larger and more sophisticated equipment. Farming around towers is more difficult for a modern farming operation. The trend toward more organic farming also needs to be recognized, as these operations do not use pesticides or herbicides.

3.4 Workshop Outcomes and Conclusions

High level recommendations and considerations that resulted from the workshop were as follows:

1. Using the strengths and weaknesses discussion and the evaluation criteria developed at the workshop, the blue route was preferred over the red route.
2. The participants considered the following evaluation criteria most important:
 - a. Landscape and Visual Assessment,
 - b. Proximity to Residential Dwellings, and
 - c. Impact on Health / Noise from Transmission lines.
3. Additional considerations raised by participants included:
 - a. Recommendation that an alternative transmission route following the municipal utility corridor (underground or overhead) through the community of Staples should be reconsidered.

Hydro One reiterated that this option was previously considered and discounted for the reasons previous explained, and that it will not be re-evaluated as an option for the proposed transmission line.
 - b. Compensation for property rights is a critical factor for landowners and needs to address the valuation of a property resulting from the installation of transmission towers or a right-of-way on private property. Participants recommended that Hydro One consider comprehensive and annual payments in the range of \$6,000 - \$10,000 similar to what is offered by wind developers.

Hydro One's Real Estate Coordinator explained that each property affected by a transmission line is appraised by an independent accredited appraiser, and that this up-to-date appraisal forms the basis for negotiating a property compensation

package. Hydro One understands that compensation is important and the concerns and recommendations raised here this evening regarding annual rental/lease payments instead of lump-sum payments, and shorter term easements, and concerns about potential increases in property taxes will be expressed to senior officials at Hydro One.

- c. Alternative tower types, such as narrow-based towers, should be considered for this transmission line.

Hydro One noted that it is proposing a standard 230 kV tower as outlined in Hydro One's presentation, but will attempt to place towers on fence lines as much as possible so that the tower base does not pose a significant disruption to farm operations.

In addition, Hydro One stated that it will outline the incremental cost of using narrow-based towers in its application (not yet submitted) to the Ontario Energy Board (OEB) seeking leave to construct the proposed transmission facilities. All interested parties and potentially affected property owners will have the opportunity to participate in the OEB's public hearing for this project and to state their preference for narrow-base towers at that time. The public hearing and details on how to participate will be advertised in local papers when the OEB is ready to proceed.

4. NEXT STEPS

Ms. Staite thanked everyone for participating in the workshop. She then reviewed the 'next steps' for this project, and told participants that Hydro One would make its decision on the preferred route by the end of November. This decision and a copy of the workshop report will be mailed to all participants as well as those who had been invited to participate in the workshop. A copy of the workshop report will also be sent to the Mayor and Councils of the Municipality of Leamington and the Town of Lakeshore.

Ms. Staite also noted that the draft Environmental Study Report (ESR) will be completed and made available for public review in December 2009 or January 2010 for a period of 30 days. The draft ESR documents the transmission alternatives considered for new or upgraded facilities, the process followed to determine the preferred location of the facilities, and the public feedback received. A copy of the workshop report will be included as an appendix in the draft ESR. A notice regarding the timing of the publication of the draft ESR and the public review period will be advertised in local papers, and workshop participants would also be notified directly.

Susan Hall adjourned the workshop at 9:00 p.m. and thanked everyone for participating.

Appendix A
Workshop Invitation

Supply to Essex County Transmission Reinforcement Project

**Invitation to Workshop on Route Alternatives
Thursday, October 29, 7 - 9 p.m., Comber Community Centre**

Working to improve electricity supply in Essex County

Hydro One is nearing completion of the Class Environmental Assessment (EA) to reinforce the transmission system that supplies Essex County and Windsor to ensure an adequate and reliable supply of electricity for the future.

At Public Information Centre #3 held in Leamington on July 16, 2009, Hydro One presented a proposed site for a new transformer station in Leamington and a proposed route for a new 230 kilovolt (kV) transmission line to connect the station to the existing transmission lines south of Highway 401. North of County Road 8, Hydro One's proposed route would travel along the east side of Lakeshore Road 245. This route is shown in red on the attached map.

Possible Transmission Line Route Alternatives

At the Public Information Centre, Hydro One was asked to consider alternative routes north of County Road 8 between Lakeshore Roads 243 and 245 that would follow existing property lines, if possible. As a result, Hydro One investigated two alternative routing options, shown in yellow and blue on the map. We have confirmed that a route located at mid-concession (the yellow line) is not feasible due to the proposed location of turbines for Brookfield Renewable Power's future Comber Wind Project. However, the route shown in blue is a technically-viable alternative. This alternative route would also change the way properties between Leamington Concession 11 and County Road 8 are crossed.

Purpose of the Workshop

We're inviting all potentially-affected property owners and interested parties to participate in a workshop with the following objectives in mind:

- Outline the Class EA process and the criteria Hydro One uses to evaluate alternative routes
- Obtain your input on the evaluation criteria to understand which are most important to you
- Confirm information on local environmental and physical features, such as drain locations, etc.
- Review next steps in the route evaluation process leading to the identification of a preferred route.

Your Participation is Important

Public consultation is an important part of this project and we hope you are able to participate at the workshop on October 29, from 7 - 9 p.m., at the Comber Community Centre. The workshop will be led by an independent facilitator to ensure that everyone has an opportunity to contribute fully and to make the best use of your time. A draft agenda is attached.

Please RSVP your attendance at the workshop to:

Tel: 1-877-345-6799

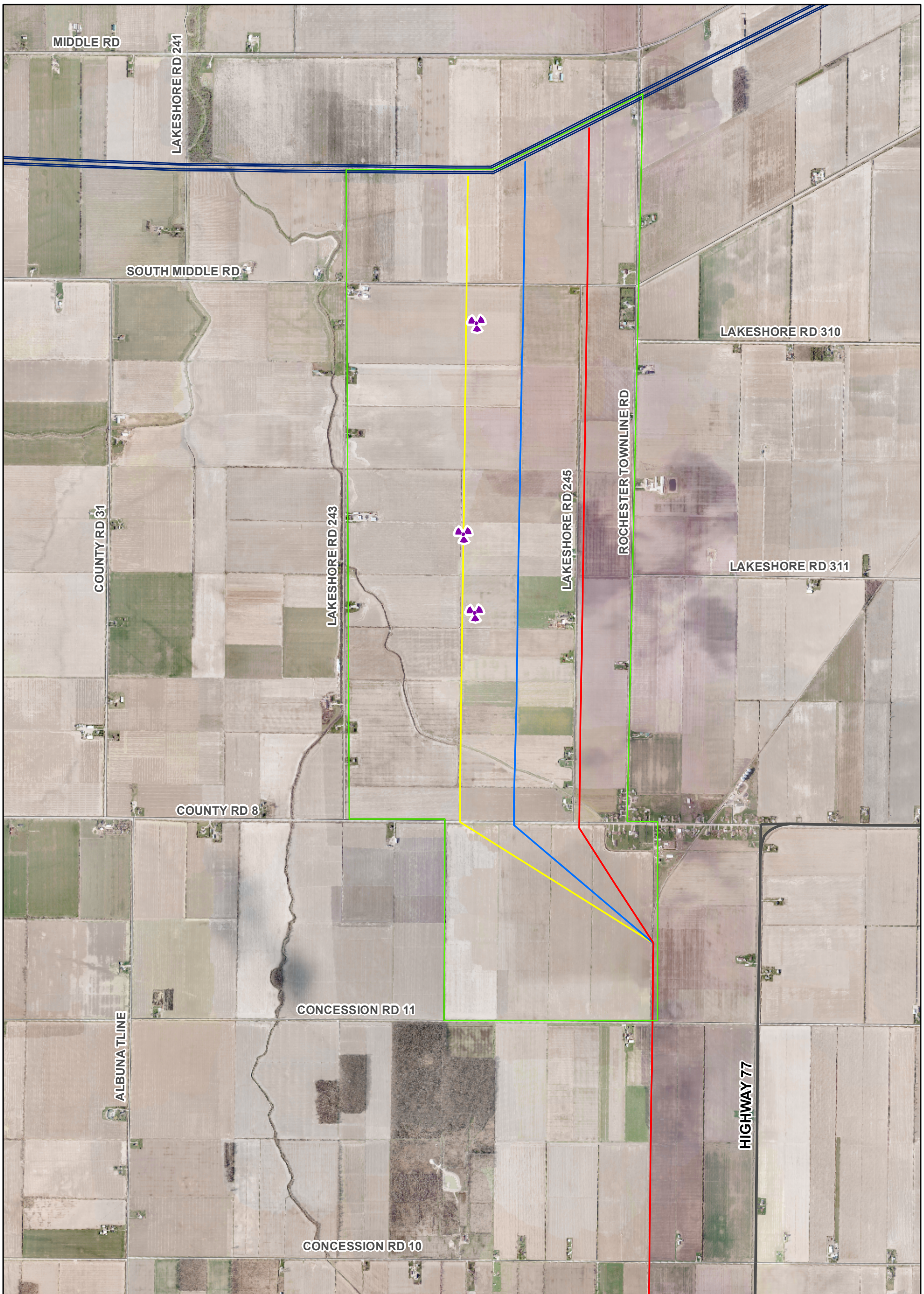
Email: Community.Relations@HydroOne.com



Partners in Powerful Communities

Appendix B

Map of Route Alternatives and Notification Area



**Supply to Essex County:
Transmission Line
Route Alternatives**

Existing Transmission Lines
 230 kV
Roads
 Highways
 Major Roads

Proposed Location of Brookfield Wind Turbines
 Route Alternative Presented at PIC #3
 Route Suggested at PIC #3
 Route Suggested at PIC #3 (not feasible)
 Area within which landowners have been invited to the workshop



Date: August 2009
 Map09-49_TurbineLocationMap_2_workshop
 Produced By: Inergi LP (GIS Services)

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Appendix C
Workshop Agenda



Workshop on Route Alternatives
Thursday, October 29, 2009, 7:00 p.m. – 9:00 p.m.
Comber Community Centre

Agenda

- 7:00 – 7:10 p.m. **Welcome & Introductions**
- Susan Hall, Workshop Facilitator, LURA Consulting
- 7:10 – 7:40 p.m. **Background Presentations**
1. John Sabiston, Manager, Transmission Planning, Hydro One
2. Patricia Staite, Environmental Coordinator, Hydro One
- 7:40 – 8:30 p.m. **Discussion of Key Issues and Identification of Additional Route Evaluation Criteria**
- led by Susan Hall
- 8:30 – 9:10 p.m. **Discussion of Route Evaluation Criteria**
- led by Susan Hall
- 9:10 – 9:15 p.m. **Next Steps and Closing Remarks**
- Susan Hall and Patricia Staite
- 9:15 p.m. **Adjourn**

Appendix D
Hydro One Presentation

Supply to Essex County Class Environmental Assessment Workshop Oct. 29, 2009

John Sabiston
Manager Transmission Planning
Asset Management

Patricia Staite
Environmental Specialist
Engineering and Construction Services

Facilitation by Susan Hall, Lura Consulting



Agenda for this evening

- 7:00 – 7:10 p.m. **Welcome & Introductions**
Susan Hall, Workshop Facilitator, LURA Consulting
- 7:10 – 7:40 p.m. **Background Presentations**
John Sabiston, Manager, Transmission Planning, Hydro One
Patricia Staite, Environmental Coordinator, Hydro One
- 7:40 – 8:30 p.m. **Discussion of Key Issues and Identification of Additional
Route Evaluation Criteria**
-led by Susan Hall
- 8:30 – 9:10 **Discussion of Route Evaluation Criteria**
- led by Susan Hall
- 9:10 – 9:15 p.m. **Next Steps and Closing Remarks** -
Susan Hall and Patricia Staite
- 9:15 p.m. **Adjourn**

Overview of the Supply to Essex County

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

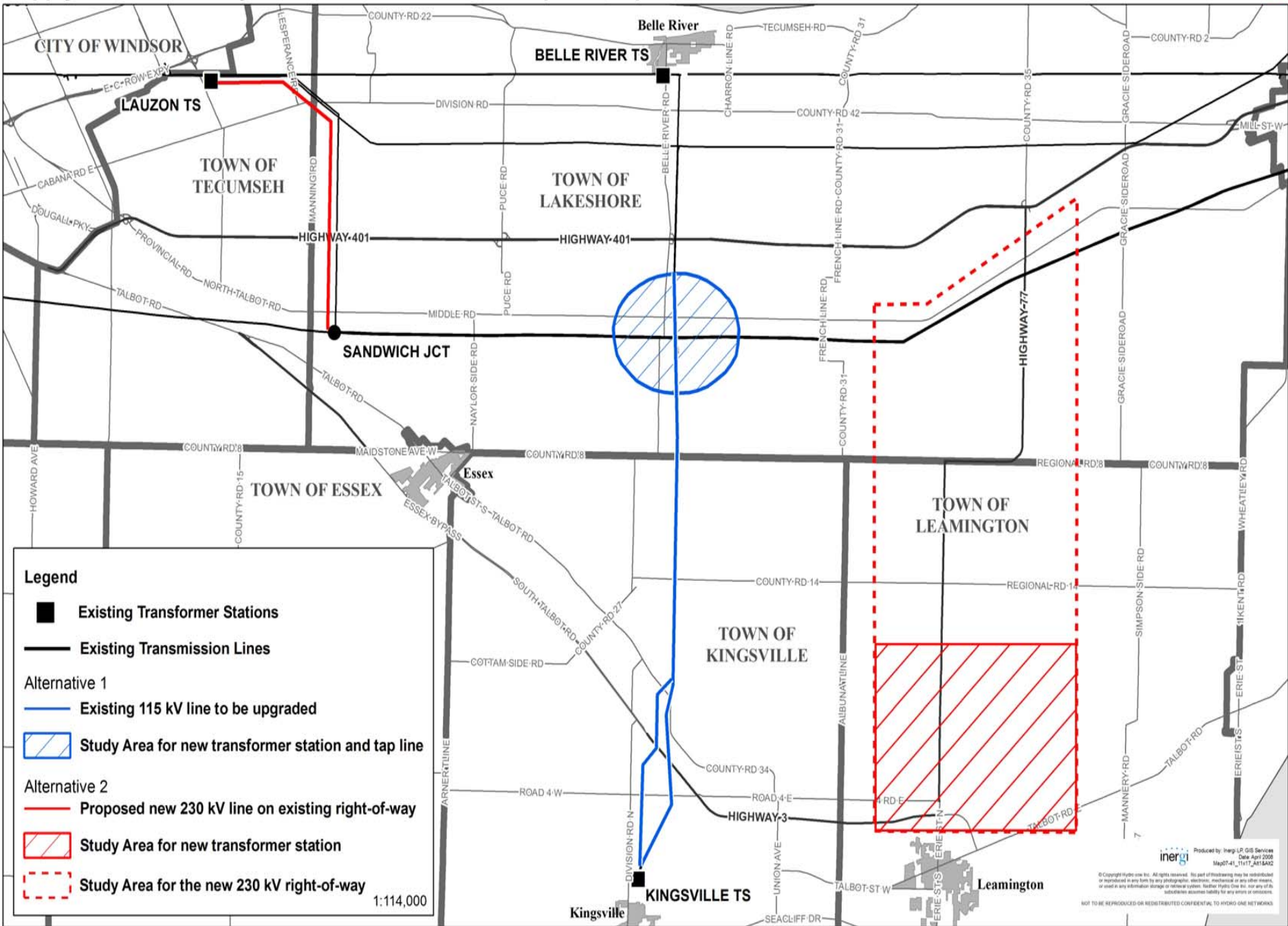
- Ensure an adequate supply of electricity to meet future needs in the eastern part of Essex County, including the Towns of Lakeshore, and the Municipality of Leamington
- Improve overall security and reliability of power supply for Windsor and Essex County

Planning Process

For all large transmission projects Hydro One must do the following:

- Assess the need and develop alternatives to fulfill the needs
- Collect technical and environmental information on the alternatives
- Obtain Public and Stakeholder input
- Compare alternatives
- Fulfill the legislative requirements

Supply to Essex County: Alternative Transmission Options, April 2008



Legend

- Existing Transformer Stations
- Existing Transmission Lines
- Alternative 1
- Existing 115 kV line to be upgraded
- Study Area for new transformer station and tap line
- Alternative 2
- Proposed new 230 kV line on existing right-of-way
- Study Area for new transformer station
- Study Area for the new 230 kV right-of-way

1:114,000

Environmental Planning Process

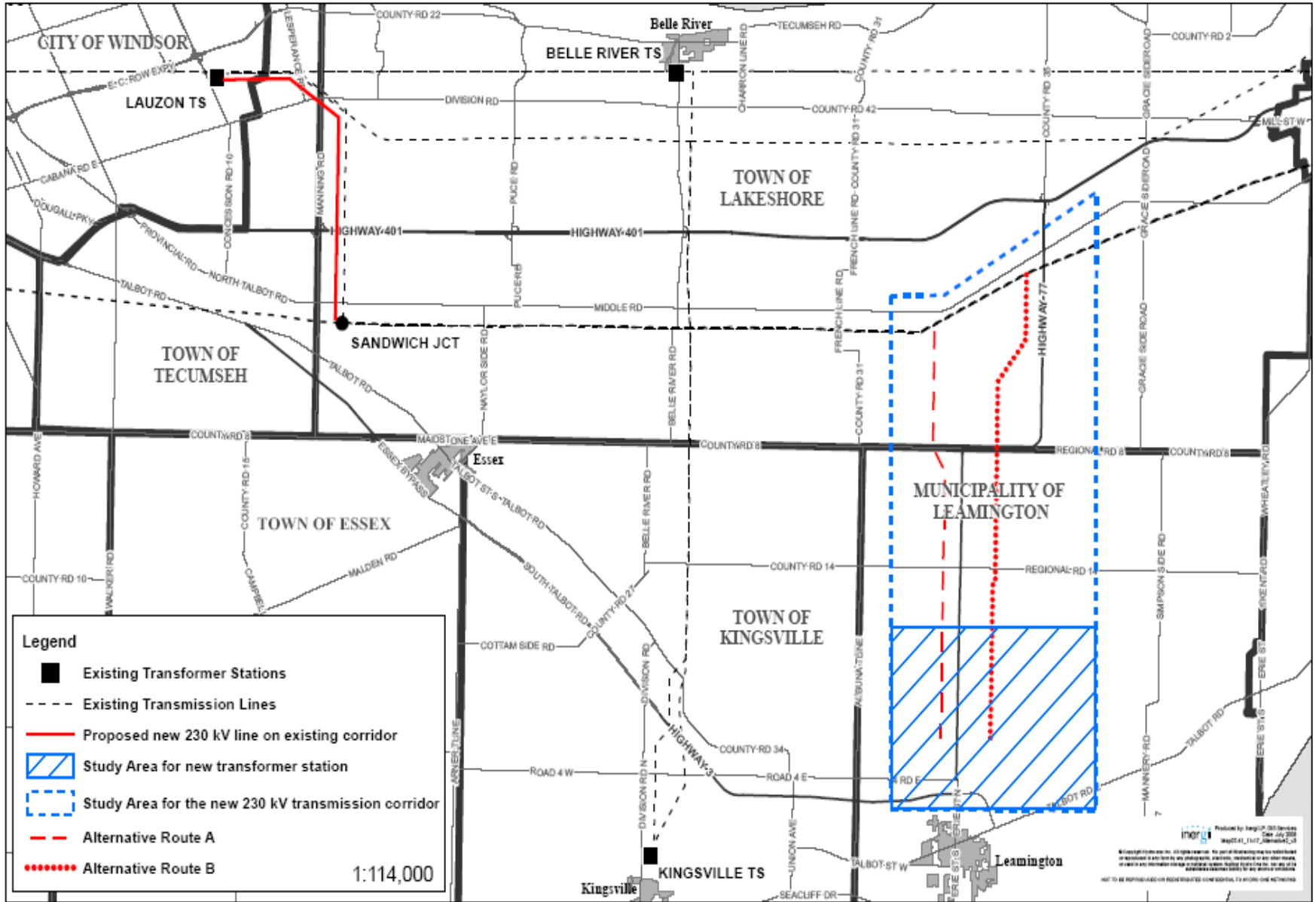
The potential effects of the two alternatives were assessed using the following factors:

- Natural environment
- Cultural factors
- Agricultural criteria
- Socio-economic information
- Technical and cost considerations

Preferred Transmission alternative- Alternative 2

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

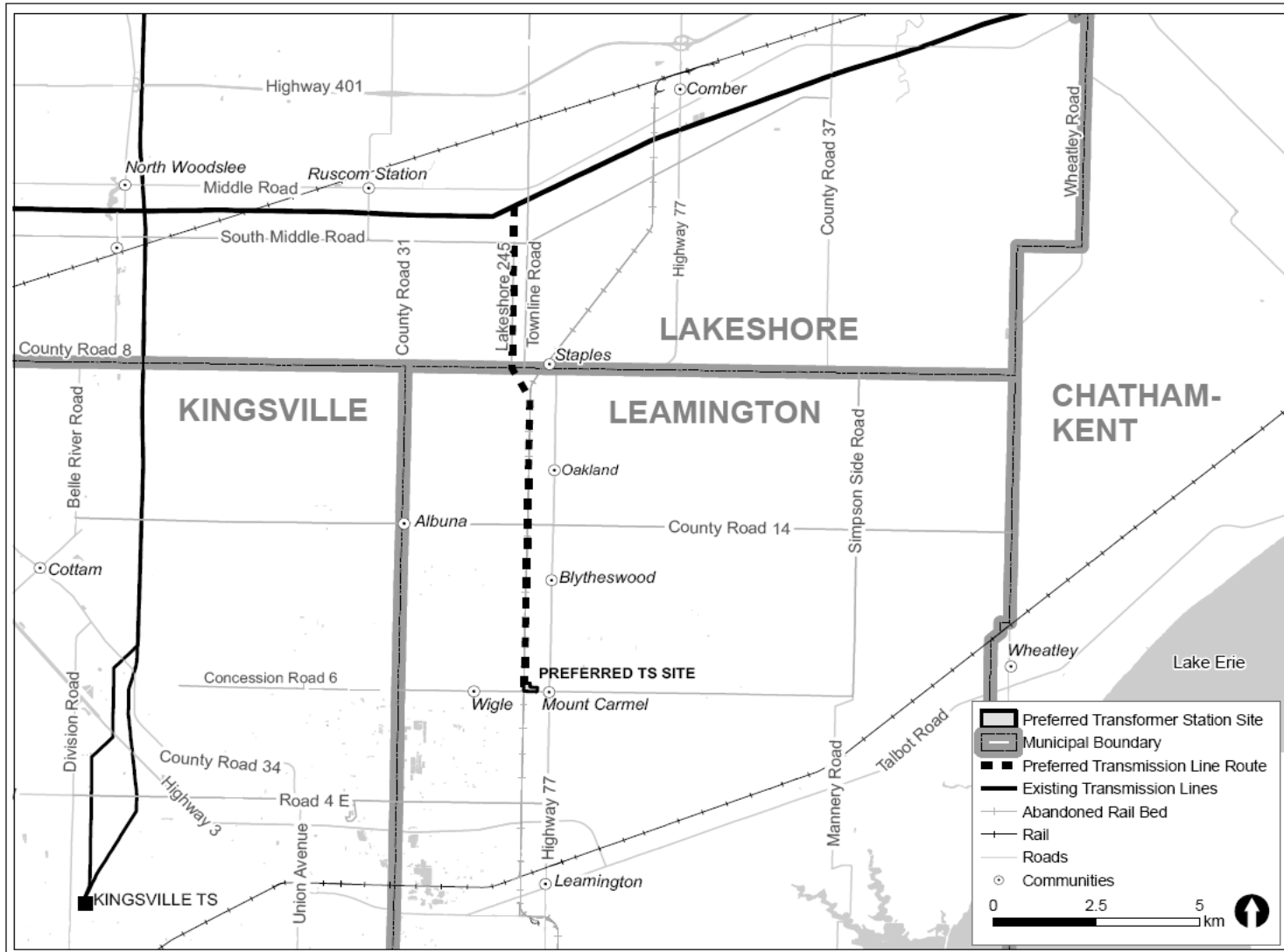
Supply to Essex County: Preferred Transmission Alternative



Preferred Transmission alternative– Alternative A

- Based on an analysis of technical merits, and social factors and public and stakeholder feedback, Alternative A which follows the municipal utility corridor north from the proposed transformer station site in the Leamington area, and then diverts west around the community of Staples.

Recommended transmission alternative



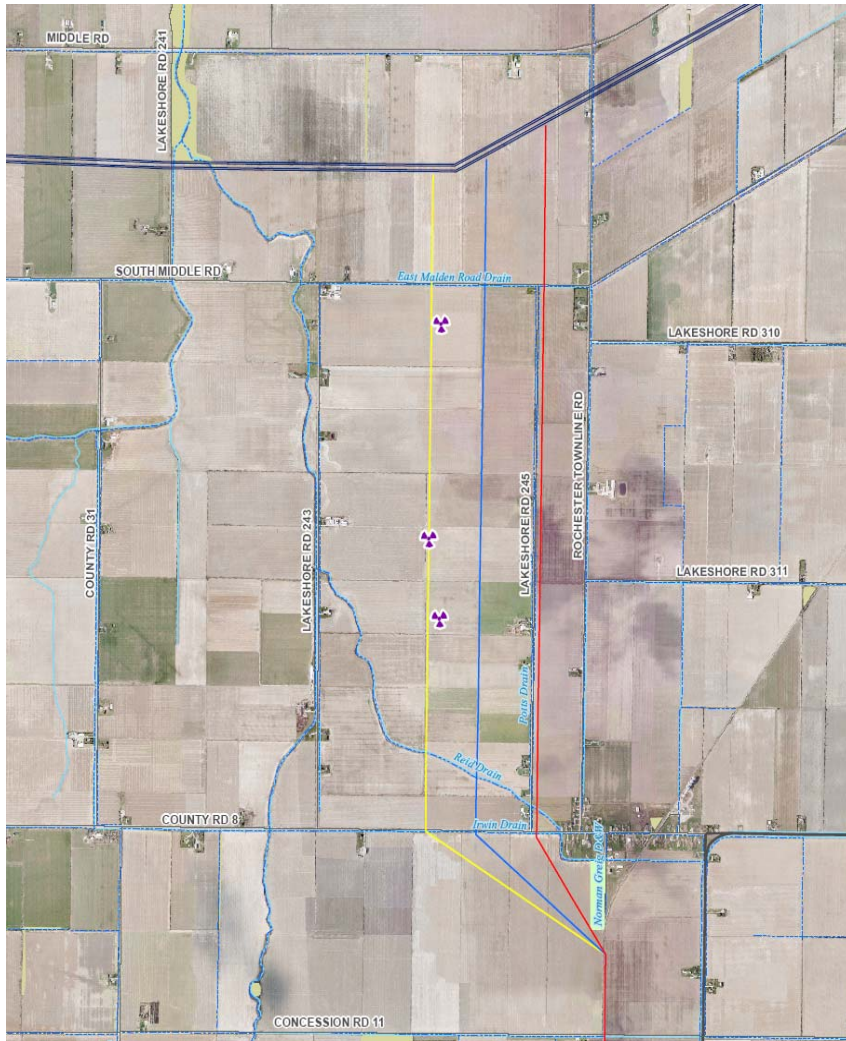
Standard double circuit 230 kV towers



Public Consultation

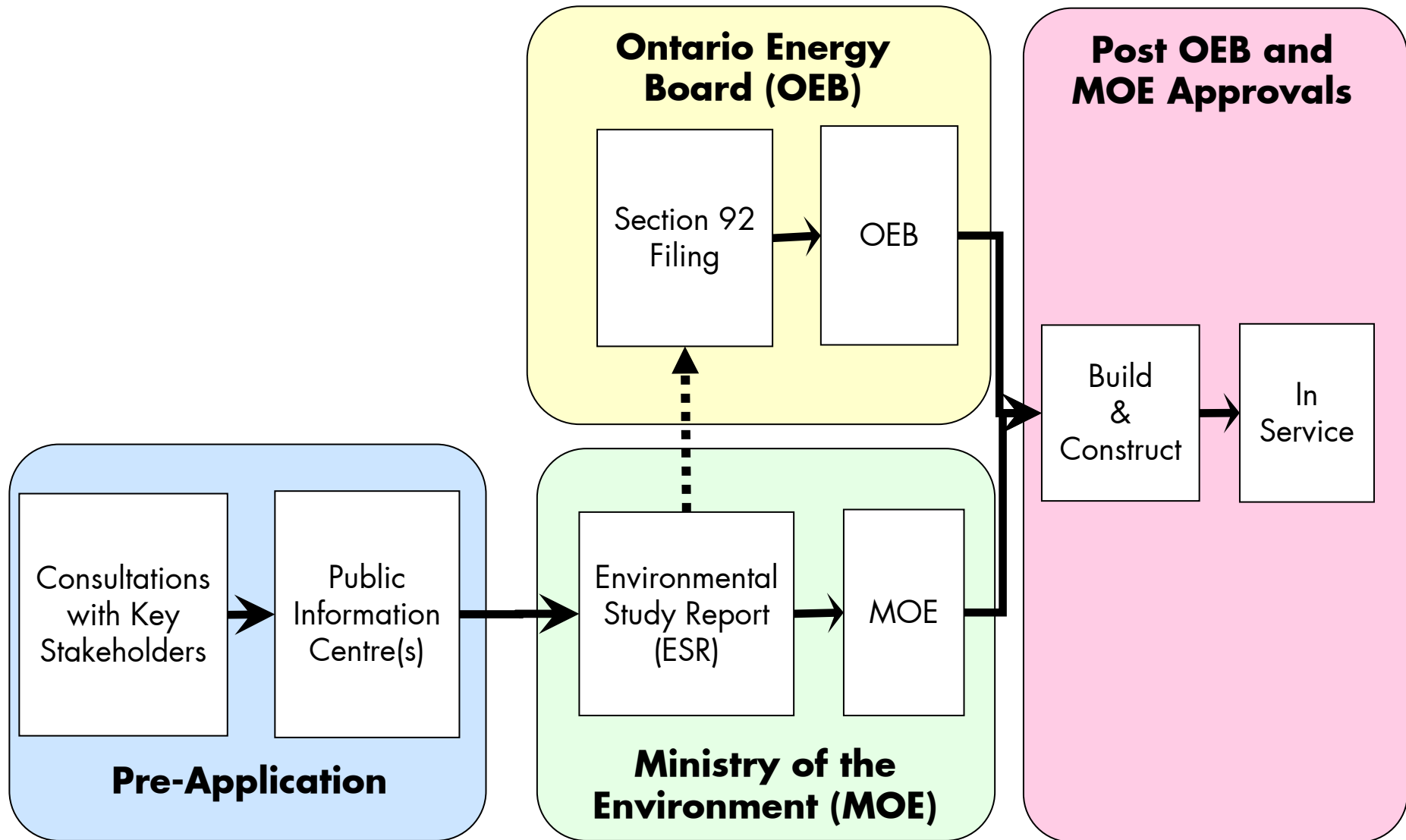
- At the Public Information Centre #3, held in Leamington, Hydro One was asked to look at the technical feasibility of two other transmission routes west of Staples. Originally 5 wind turbines were planned in this area
- Hydro One met with Brookfield and found that two of the wind turbines were no longer proposed and thus there was one viable route

Proposed Transmission Route Alternatives



- The red is the original proposed route
- The blue route is a viable alternative and
- The yellow is not feasible due to approved wind turbine locations

Project approvals process



Target project timelines

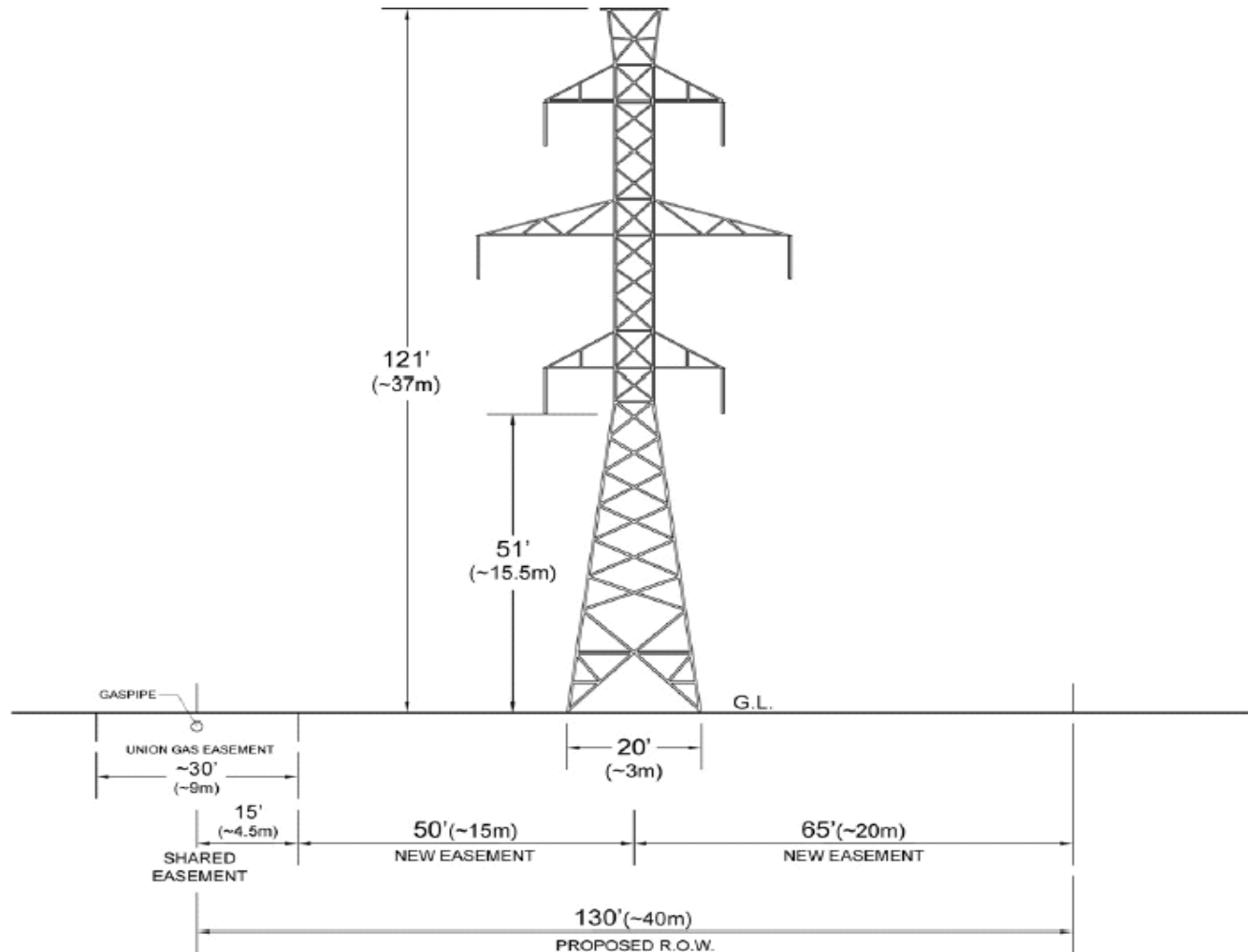
| Next Steps | Dates |
|--|-------------------------|
| Project team to make a decision on route and will communicate back to workshop attendees | Nov. 30, 2009 |
| Draft Environmental Study Report (ESR) available for public/stakeholder review & comment | Dec. 2009- Jan. 2010 |
| Anticipated OEB filing | Dec. 2009 |
| Anticipated EA & OEB approvals | Spring 2010 |
| Start of design & construction | Summer 2010 |
| Project in-service | Dec. 31, 2012 |

Design and construction of a transmission line

Once approvals have been obtained the following are the major steps

- Property negotiations
- Surveys
- Tower and access route layouts
- Tower construction
- Restoration

Proposed tower profile



LEAMINGTON JCT X LEAMINGTON TS - BASED ON TYPICAL 230 kV R.O.W.
(NORTH OF STAPLES)

NOTE: Tower height and footing distance may vary depending on terrain

Design activities: legal survey



Geotechnical survey



Access road footprint: aerial view



Foundation: augering



Assembly of towers



Stringing conductor: pulling conductor under tension



Restoration of the right-of-way: Removina access road



Restoration: “carpet sweeping” the remaining gravel



In-service transmission line



Criteria that appear similar between alternatives

| Factors | Criteria | Comparison |
|---------------------|--------------------------|-------------------|
| Agriculture | Soil capability | Similar |
| | Line length | Similar |
| | Impact on farm operation | Similar |
| Cultural Heritage | Archaeological potential | Same |
| | Built heritage | None |
| Technical and Cost | Line length and turns | Similar |
| | Access | Similar |
| Natural Environment | Env. Sensitive Areas | None |
| | Forest Resources | None |
| | Wildlife | Similar |
| | Aquatic features | Similar |

Preliminary ideas for applicable route assessment criteria

| Factors | Criteria | Consideration |
|-------------|------------------------------------|--|
| Agriculture | Tiled fields | Size of area tiled |
| | Specialty crops | Organic etc. |
| | Line orientation | Crossing field on diagonal |
| | Tower base | On or near fence line |
| | | |
| Social | Affected properties | Number of properties which will be crossed |
| | Paralleling Infrastructure | Whether the pipeline parallels road, has, pipeline or drainage ditch |
| | Proximity to residential dwellings | |
| | Landscape and visual assessment | Impacts to view while driving on a road |
| | | Impacts to view from property eg. from the front or back yard |
| | | |

YOUR input is important to us

- Hydro One has not made a decision on the preferred route in this area and is soliciting information from you and other stakeholders

Discussion Questions

- What are the strengths, issues or concerns associated with the Red alternative? Blue Alternative?
- What additional criteria should be considered?
- Are there other points you wish to discuss?

Appendix E

Workshop Workbook to Guide Discussions

Hydro One Networks Workshop

Supply to the Essex County Transmission Lines: Route Alternatives

October 29, 2009

- I. In the following matrix, please identify the strengths and issues or concerns of the two alternative transmission routes: Red and Blue.

| | Red Route | Blue Route |
|---|-----------|------------|
| What are the Strengths? | | |
| What are the Issues or Concerns? | | |

Hydro One Networks Workshop
Supply to the Essex County Transmission Lines: Route Alternatives

2. In addition to the table below, what **additional criteria** should be considered? *Note: These criteria will be used to help in the process of choosing the preferred transmission route alternative. To be effective, criteria need to be able to distinguish one route for another.*

| Criteria | Considerations / Examples |
|------------------------------------|---|
| Tiled Fields | Size of drainage tile area. |
| Specific Crops | Organic, etc. |
| Line Orientation | Line crossing the field on a diagonal. |
| | Line crossing the field on a straight line. |
| Tower Base | Whether the tower is on or near the fence line. |
| Affected Properties | Number of properties over which the proposed hydro line right-of-way crosses. |
| Paralleling Infrastructure | Whether the transmission route runs parallel to the road, gas pipeline or drainage ditch. |
| Proximity to Residential Dwellings | Distance of the transmission route from homes. |
| Landscape and Visual Assessment | Impacts to the view while driving down the road. |
| | Impacts to the view from the property (e.g. from the front or back yard). |

| Additional Criteria or Considerations |
|---------------------------------------|
| |
| |
| |
| |
| |
| |
| |

3. Criteria Prioritization

a. On the posted criteria, identified by the Hydro One team and by participants, please identify those criteria that are most important to you by using the dots provided. Please place ONE green dot beside each criterion that you feel is important in selecting a preferred route. You can select as many criteria as you like.

b. If you are leaving early or need more time to reflect on the discussions held at today's workshop, please identify your top three criteria in order of priority.

- 1. _____
- 2. _____
- 3. _____

4. What **other advice** do you have for the team?

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Please return your comments this evening, or by November 6, 2009 via e-mail or post to:

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| | |
|-----------------------------|--|
| Your Name (Optional) | |
|-----------------------------|--|

Appendix F

Frequently Asked Questions about the Project

FREQUENTLY ASKED QUESTIONS

Supply to Essex County Transmission Reinforcement Project Class Environmental Assessment (EA)

1. Why are new electricity transmission facilities needed in Essex County?

The Ontario Power Authority (OPA), in consultation with Hydro One and local distribution companies serving Essex County, has confirmed the need to reinforce the electricity transmission system in Windsor and Essex County to:

- ensure an adequate supply of electricity to meet future needs in the eastern part of Essex County, including the Towns of Lakeshore and the Municipality of Leamington; and
- improve overall security and reliability of power supply for Windsor and Essex County.

2. What facilities is Hydro One proposing as part of the transmission reinforcement project?

As a result of consultation with local distribution companies, municipal and community leaders, government agencies and the public, Hydro One identified a preferred transmission alternative that would include:

- a new transformer station (TS) in the Municipality of Leamington;
- a new 230 kilovolt (kV) transmission line to connect the proposed Leamington TS to the existing transmission lines south of Hwy 401 in the Town of Lakeshore; and
- a new 230 kV transmission line on an existing provincially-owned transmission corridor between Sandwich Junction, near Maidstone, and Hydro One's Lauzon TS in the City of Windsor.

The proposed site for the Leamington TS and the proposed route for the connector transmission line were presented at Public Information Centre #3 held in Leamington on July 16, 2009.

3. Why did Hydro One choose this particular route for the proposed transmission line in the Municipality of Leamington and the Town of Lakeshore?

At Public Information Centre #2 held in Leamington in July 2008, Hydro One presented two alternative routes -- A and B.

Alternative Route A would follow the municipal utility corridor northward from a new transformer station in the Leamington area. It would divert to the west around the community of Staples and then follow the east side of Lakeshore Road 245 and the gas pipeline northward to connect with the existing 230 kV transmission lines south of Hwy 401. Alternative Route B would be a new ("greenfield") transmission corridor from a new transformer station in the Leamington area that would join up with and follow the

municipally-owned utility corridor north of County Road 8 until connecting with the existing 230 kV transmission lines south of Hwy 401.

Based on input received from key stakeholders and the public, and an assessment of the potential environmental and socio-economic effects of both alternative routes, Hydro One determined that Alternative Route A had more advantages than Alternative Route B, including:

- Makes better use of land dedicated to and used by existing infrastructure
- Lesser impact on agricultural farm operations
- Less property (easement rights) required from private landowners
- Fewer residences in proximity to the proposed route
- Better opportunity to place towers on lot lines between property owners.

4. *Why is Hydro One now entertaining an alternative route alignment between Lakeshore Roads 243 and 245?*

At Public Information Centre #2 held in July 2008, a modification to Alternative Route A was proposed. Hydro One was asked to investigate the potential to shift the route to back lot lines between Lakeshore Road 243 and 245 (formerly Concession Roads 7 and 8) north of County Road 8. Hydro One did consider this suggestion and could not offer a mid-concession route because of proposed sites for wind turbines that are part of Brookfield Renewable Power's development plans for the Comber Wind Project.

At Public Information Centre #3 held in July 2009, Hydro One was again asked to explore alternative route alignments west of Lakeshore Road 245. Members of Hydro One's project team agreed to have a second look at potential alternatives and to confirm the location of proposed wind turbines with Brookfield Power. As a result of this input and further investigations, Hydro One has identified one technically-feasible route alternative west of Lakeshore Road 245. This alternative and the former Alternative Route A are being reviewed with potentially-affected property owners at tonight's workshop. Hydro One is seeking input the importance the community attaches to various evaluation criteria used to compare alternative transmission line routes.

5. *Why type of towers is Hydro One proposing, and how far apart would they be?*

Hydro One is planning to use standard two-circuit 230 kV lattice steel towers. These four-legged structures are approximately 120 feet tall and their base occupies a footprint of approximately 20 feet x 20 feet. On average, the towers would be about 750 feet apart. However, there may be some flexibility in tower spacing depending on the terrain and property fabric.

6. *When would Hydro One know the exact location for the towers?*

The exact "centreline" for the 130 foot wide right-of-way and placement of towers can only be determined once the project has received Class EA approval. Hydro One staff would require access to private property in order to conduct legal surveys, soil and

geotechnical tests and other assessments which may be required to design the transmission line and determine optimal tower locations.

7. *Why can't Hydro One bury the transmission line?*

A very small portion of Hydro One's 29,000 kilometre high-voltage transmission network across Ontario is built underground. Since the operation, maintenance and development of the transmission system is funded by all electricity ratepayers in Ontario, Hydro One's practice is to build overhead wherever technically feasible. Burying high-voltage power lines can be 5 to 7 times more expensive than building them above-ground. Faults on underground cables can also be more difficult to locate and repair. Trenching for underground facilities can be as disruptive to the environment and existing land uses as the installation of towers several hundred feet apart.

8. *When will Hydro One select its preferred route?*

With the input from this workshop and your direction on which route evaluation criteria are most important to your community, Hydro One and its environment consultant will conduct an evaluation of the two alternative routes and identify a preferred route. Workshop participants and individuals on Hydro One's project mailing list will be advised of the outcome of Hydro One's route evaluation and will also receive a copy of the workshop notes recorded by the independent facilitator.