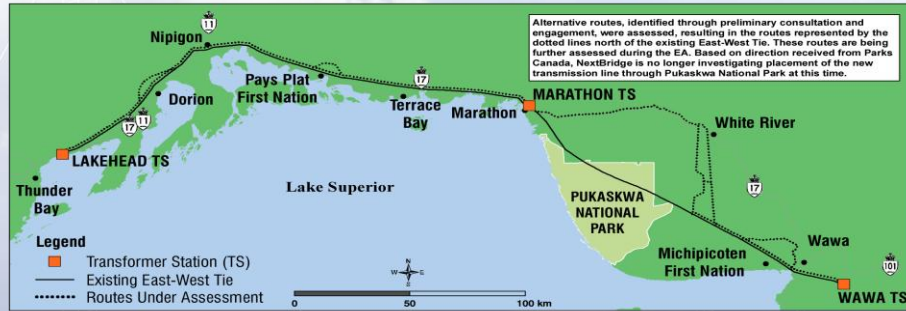


# East-West Tie Transmission Project Overview

The Project is to consist of a new, approximately 430 km double-circuit 230 kilovolt (kV) transmission line that extends from the Wawa Transformer Station (TS) to the Lakehead TS in Shuniah with a connection between these points at the Marathon TS. Hydro One Networks Inc. will be responsible for modifying each TS to accommodate the new line.



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# East-West Tie Transmission Project Overview

## Key Project Components Include:

- Right-of-way (cleared area) width of approximately 56 m
    - This is in addition to the right-of-way for the existing East-West Tie
    - Discussions are ongoing regarding joint use of the existing right-of-way and on-right-of-way roads
  - Additional space may be required for the following:
    - Angles in the route alignment
    - Crossing of the existing East-West Tie or other high-voltage lines in the area
    - General construction access
    - Temporary working spaces and laydown areas
    - Access roads
    - Access over steep or challenging terrain
  - Approximately 1,100 towers
  - Typical tower height of approximately 43 m
  - Typical span length (space between towers) of approximately 400 m
- The new line, in conjunction with the existing East-West Tie, is anticipated to provide a total eastbound and westbound transfer capability of 650 megawatts while respecting all applicable reliability standards.
  - The new East-West Tie is expected to be in service in the first half of 2018.

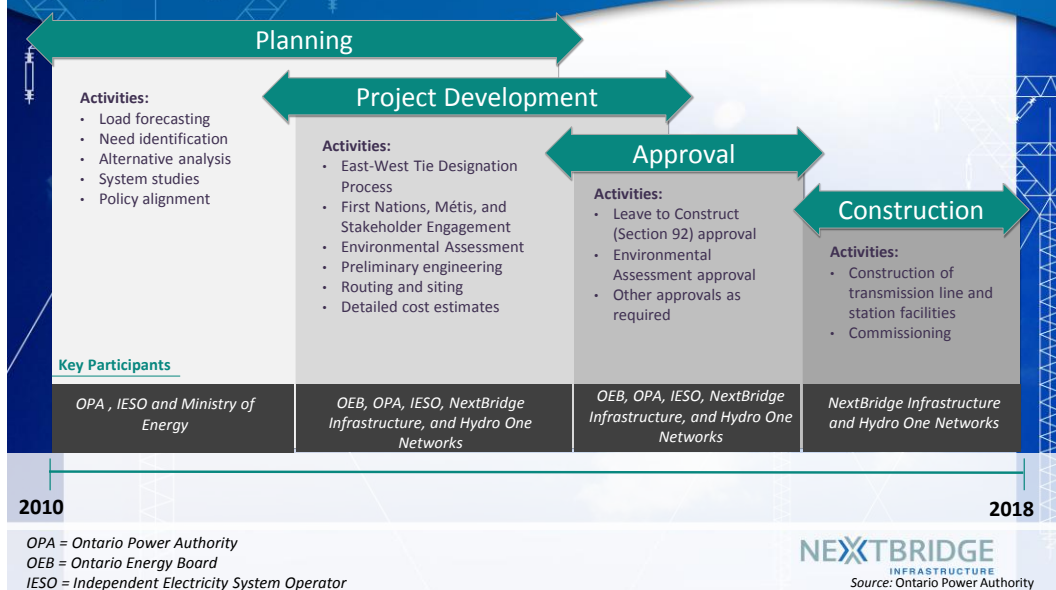
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## Why We're Here? The Scope of the Project

- The Ontario Energy Board awarded NextBridge the privilege to develop the East-West Tie Project. Development refers to completing the work required to submit a Leave to Construct application and an Environmental Assessment.
- The Environmental Assessment and Leave to Construct applications are being completed in parallel and planned to be filed at the end of January 2015. The Ministry of the Environment and Climate Change will make a decision on the Environmental Assessment.
- The Ontario Energy Board is responsible for approving the project. When making this decision, the Ontario Energy Board may only consider the following as stated Section 96(2) of the *Ontario Energy Board Act, 1998*:
  - The interest of consumers with respect to prices and the reliability and quality of electricity service.
  - Where applicable and in a manner consistent with the policies of the Government of Ontario, the promotion of the use of renewable energy sources.

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## Transmission Development Process





# Project Rationale

The Ontario Power Authority (OPA), the provincial agency responsible for long-term electricity planning, identified the expansion of the transmission system between Wawa and Thunder Bay in order to maintain a reliable, long-term supply of electricity to northwestern Ontario. Industrial activities in northwestern Ontario, particularly in the mining sector, are expected to drive electricity demand growth in the coming decade. Coupled with changes to the electricity supply in the area, the OPA has identified supply needs for the northwest, which can be met with additional transmission or generation. Following analysis the OPA recommended expansion of the East-West Tie based on technical, economic and other considerations. The East-West Tie was included as a priority project in the Government of Ontario's 2010 Long Term Energy Plan.

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## Who is NextBridge?

*Three strong partners in the energy sector*



**NextEra Energy Canada** is a wholly-owned subsidiary of NextEra Energy, Inc., a leading clean energy company with revenues of more than US\$15.3 billion, more than 41,000 megawatts (MW) of generating capacity, and approximately 15,000 employees in 24 states and Canada. Florida Power & Light Company, another subsidiary of NextEra, serves approximately 4.6 million customer accounts in Florida and is one of the largest rate-regulated electric utilities in the United States.



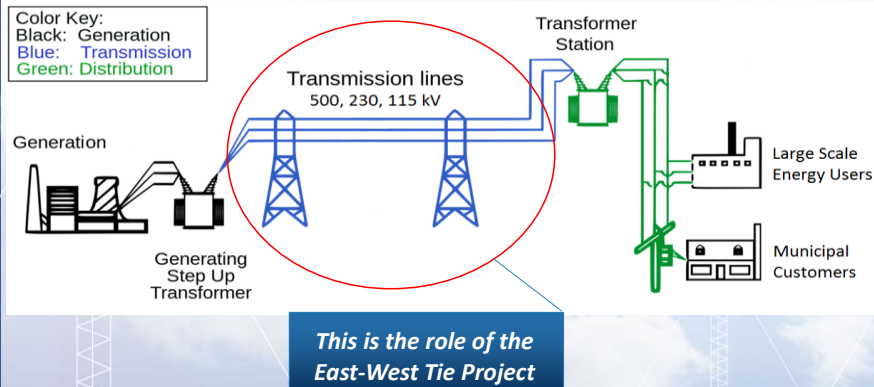
**Enbridge Inc.** is a North American leader in delivering energy, operating the world's longest crude oil and liquids transportation system, and has almost 1,000 MW of renewable and alternative energy generating capacity. Enbridge Inc. also owns the Montana-Alberta Tie-Line (MATL), a 300 MW, 230 kilovolt (kV) electrical transmission line allowing the movement of power between Alberta and Montana. Enbridge Inc. employs about 10,000 people, primarily in Canada and the U.S. and is ranked as one of Canada's Greenest Employers, and one of the Top 100 Companies to Work for in Canada.



**Borealis Infrastructure** is the infrastructure investment arm of the Ontario Municipal Employees Retirement System (OMERS), one of Canada's largest pension plans with approximately C\$60 billion in net assets. Borealis ranks as one of the world's largest and most respected infrastructure investors with a proven track record in identifying, investing and actively managing large-scale infrastructure investments on behalf of OMERS.

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# Transmission System Overview



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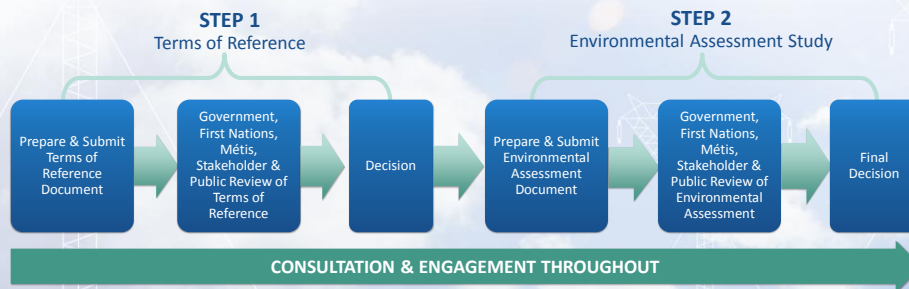
# Project Timeline

|             |  |
|-------------|--|
| 2010        | Ontario Power Authority identifies the project   |
| 2011        | Minister of Energy asks the Ontario Energy Board to undertake a designation process to select a transmitter to develop the project |
| 2012        | Ontario Energy Board asks for bids to develop a new corridor in Ontario's northwest  |
| August 2013 | NextBridge selected as the designated transmitter  |
| 2013-2014   | Terms of Reference for Environmental Assessment  |
| 2014-2015   | Environmental Assessment   |
| 2014-2015   | Leave to Construct Application   |
| 2016-2017   | Construction   |
| 2018        | In Service   |

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# The Environmental Assessment Process

## Overview of Environmental Assessment Process



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# Environmental Assessment

- Environmental Assessment (EA) studies and engagement are proceeding based on anticipated approval of the Terms of Reference.
- The EA report will include the following:
  - Purpose and need for the Project based on planning process completed by the Ontario Power Authority (OPA);
  - Rationale for undertaking the Project based on planning process completed by the OPA;
  - Evaluation of alternative methods of completing the Project;
  - Description of the environmental baseline setting that could potentially be affected by the Project;
  - Identification and assessment of potential positive and negative environmental effects on baseline conditions, the development of mitigation measures to eliminate or minimize adverse effects, and the resulting net effects;
  - Documentation of the results from the engagement program;
  - Future commitments including monitoring and follow-up programs; and,
  - Technical reports completed to support the Project.

Terms of  
Reference  
approval by the  
Minister of the  
Environment and  
Climate Change  
is anticipated in  
Summer 2014.

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# Identification of Alternative Routes

Alternative Routes were identified using desktop data, including secondary source information (e.g, official plans, GIS mapping, data provided by government agencies and other existing literature).

Feedback received from the public Open Houses and other consultation activities, including comments received during the public review of the ToR, was also reviewed to identify Alternative Routes.

## General Routing Considerations

| Factor         | Rule   |
|----------------|--|
| Natural        | Avoid significant natural features (i.e., Area of Natural and Scientific Interest (ANSI), Species at Risk, environmentally sensitive areas, wetlands and waterbodies), critical Landform/Vegetation (LV) types and adhere to appropriate setback requirements. |
|                | Minimize watercourse crossings and reduce impacts to woodlands, wetlands, fish and wildlife habitats, and natural areas. Avoid areas with unsafe or hazardous slopes.  |
| Socio-Economic | Maximize the distance from cultural heritage resources (archaeological, built heritage and cultural heritage landscapes).  |
|                | Minimize incompatibility with existing sensitive land uses (i.e., First Nation reserves, residences, agricultural lands, forest management areas, trap lines, mining claims).  |
|                | Minimize the use of private properties (i.e., use of existing ROW is favoured to minimize disruption to property owners).  |
|                | Minimize potential disturbance to adjacent residences (and traditional lands if applicable) which may be affected by construction activities.  |
|                | Minimize potential disturbance to adjacent commercial and industrial properties which may be affected by construction activities.  |
|                | Minimize potential disturbance to adjacent institutional and recreational properties which may be affected by construction activities including tourism lakes.   |
| Technical      | Maximize conformity with local land use policy.  |
|                | Minimize disruption to local traffic.  |
|                | Avoid impact to water wells, aquifer recharge areas and active mining/aggregate operations.  |
|                | Find the shortest and most direct routes.  |
|                | Minimize rail and road crossings.  |
|                | Avoid areas with an insufficient amount of construction work space or uneven terrain.  |
|                | Minimize the number of overhead electric transmission line crossings.  |
|                | Select the best topographical/terrain areas for the route (i.e., dry, flat and stable ground).   |

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# Selection of Alternative Routes

**As indicated in the ToR, and using the general routing considerations, Alternative Routes were selected to:**

- connect Lakehead TS and Wawa TS;
- avoid federal lands; and,
- avoid provincial parks and conservation reserves.

**The majority of Alternative Routes follow existing (previously disturbed) corridors, including:**

- Highway 11/17;
- local roads;
- rail lines;
- pipelines;
- logging roads (and associated cutover areas); and,
- transmission lines.

In areas without existing (previously disturbed) corridors, greenfield options were also selected including a submarine route in Lake Superior.

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# Route Evaluation Criteria and Indicators

|                | Evaluation Criteria  | What Will Be Measured  |
|----------------|--|--|
| Physical       | Potential for Impact on agricultural soils   | Area of agricultural fields within proposed right-of-way   |
|                | Potential to Impact Private Property   | Number of private properties potentially affected within the proposed right-of-way<br>Number of potential dwelling displacements within the proposed right-of-way<br>Number of potential property buy-outs within the proposed right-of-way<br>Number of settlement areas, forest management units and mining claims crossed |
|                | Potential to Impact Different Land Uses  | Area of Conservation Areas, Conservation Reserves, Provincial Parks, National Parks, mines, mining claims, aggregate pits, area of high aggregate potential, commercial and industrial designated lands within proposed right-of-way   |
|                | Potential to Impact Community Services   | Number of hospitals, healthcare facilities, schools and educational institutes, community centres, waste management facilities crossed   |
|                | Potential to Impact Tourism and Recreation   | Number of trails, outposts, golf courses crossed<br>Area of campgrounds within the proposed right-of-way   |
| Socio-Economic | Potential for Impact on Aesthetics   | Number of scenic viewpoints within the right-of-way  |
|                | Potential for impact on Non-Aboriginal Archaeology, Cultural Heritage, Traditional Land and Resource Use | Length of right-of way with archaeological potential<br>Number of known archaeological sites and cemeteries crossed<br>Area of traditional land uses/harvest areas identified within the proposed right-of-way   |
|                | Potential for Impact on Aboriginal Archaeology, Cultural Heritage, Traditional Land and Resource Use     | Length of proposed right-of-way with archaeological potential<br>Number of archaeological sites within the proposed right-of-way<br>Area of First Nation reserves, traditional land use/harvest areas, traditional burial grounds within the proposed right-of-way   |
|                | Potential for Impact on Way of Life  | Métis mobility within the identified study area<br>Types of teaching/ transmission programs, services and practices within the identified study area<br>Spiritual connection to areas within the identified study area   |
|                | Potential for Impact on Harvesting   | Type of harvesting activities within the identified study area<br>Identification of key cultural species harvested and conditions required for continued harvest.  |
|                |  |  |
|                |  |  |
|                |  |  |

\*Based on data availability.

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# Route Evaluation Criteria and Indicators (con't)

|                     | Evaluation Criteria  | What Will Be Measured  |
|---------------------|--|--|
| Natural Environment | Potential for Impact on Areas of Natural and Scientific Interest | Area of mapped Provincially Significant and Candidate Areas of Natural and Scientific Interest (Earth Science and Life Science) within the proposed right-of-way   |
|                     | Potential for Impact on Wetlands                                 | Area of mapped wetlands within the right-of-way including Provincially Significant Wetlands, evaluated non-provincially significant wetlands, un-evaluated wetlands  |
|                     | Potential for Impact on Waterbodies and Watercourses             | Number of mapped watercourses crossed<br>Area of mapped waterbodies (not including watercourses) within the proposed right-of-way  |
|                     | Potential for Impact on Forest Resources                         | Area of previously logged lands and seed collection lands within the proposed right-of-way   |
|                     | Potential for Impact on Wildlife Habitat                         | Area of mapped potential significant wildlife habitat within the proposed right-of-way<br>Number of mapped nesting sites within the proposed right-of-way  |
|                     | Potential for Impact on Species at Risk                          | Area of mapped Woodland Caribou continuous and discontinuous habitat within the proposed right-of-way  |
|                     | Potential for Impact on Community Infrastructure                 | Number of roads, rail lines, pipelines and airports crossed  |
| Technical           | Constructability   | Overall length of proposed right-of-way<br>Area of hazard (unstable) land crossed by the proposed right-of-way<br>Number of transmission line corners and crossovers required<br>Distance of existing access roads available<br>Distance of new access roads required<br>Favourable terrain (i.e., poor, moderate, good)<br>Sufficient work space (i.e., poor, moderate, good) |
|                     |  |  |
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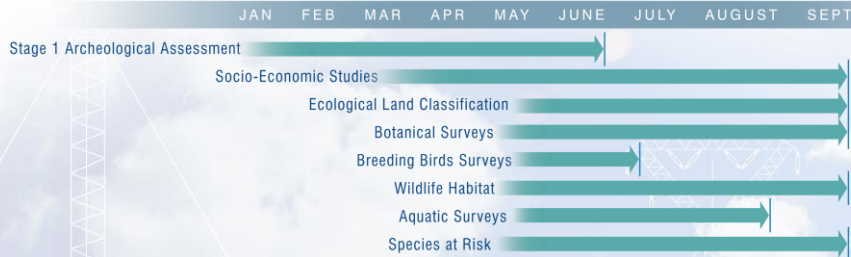
\*Based on data availability.

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# EA Studies Underway

## 2014 ENVIRONMENTAL ASSESSMENT STUDIES



Additional studies will be required in 2015. Approval of the Environmental Assessment may be conditional upon the completion of these studies.

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# EA Studies Underway – Natural Environment

## The following Natural Environment Studies are underway:

### Ecological Land Classification

- Ecological land classification field studies are occurring in representative areas throughout the study area.

### Botanical Surveys

- Botanical surveys are taking place over three seasons. Sampling efforts are focused in areas where rare plant species are likely to occur, such as rare vegetation communities, cliffs, wetlands, and areas that may contain plant Species at Risk.

### Breeding Bird Surveys

- Breeding bird surveys are used to establish estimates of bird populations and associated habitats within the study area, and for the purpose of assessing potential impacts and developing mitigation considerations for areas of breeding bird habitat.

### Wildlife Habitat

- Observations of wildlife and the presence of potential significant wildlife habitat are being recorded during field investigations. Dens, tracks, scat, and other wildlife evidence is being documented.

### Aquatic Surveys

- Aquatic habitat surveys are occurring within the study area and at water bodies where road crossing improvements have the potential to impact water bodies and fish habitat.
- Collected data will help determine fish habitat sensitivity and potential impacts on the water bodies. Information collected will also assist with determining suitable mitigation measures to protect fish and fish habitat.

### Species at Risk

- Targeted Species at Risk surveys are being conducted, including surveys for Woodland Caribou.



Shallow Marsh surrounded by Spruce Forest along transmission corridor.



Marsh with emergent and floating vegetation surrounded by Spruce Forest.

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# EA Studies Underway – Socio-Economic Environment

## The following Socio-Economic Studies are underway:

### Forestry

- Discussions with forestry companies and agencies and an inventory of forestry operations to understand potential effects to the forestry industry.

### Mining and Industrial Operations

- Discussions with mining companies, key industries and agencies and an inventory of mining operations and other key industries to understand potential effects to mining and other industries.

### Energy

- Inventory of existing and proposed energy generation and transmission facilities (e.g., hydroelectric, biomass, renewables, transmission/distribution lines, transformer stations, etc.). Discussions with energy developers to determine potential effects of the Project on energy development.

### Land Use (Crown and Private)

- Review of municipal policy and planned development, discussions with municipal staff, inventory of community infrastructure, and the preparation of community profiles to understand potential effects on communities, Crown lands, as well as First Nation and Métis communities.

### Recreation and Tourism

- Inventory of parks as well as recreation and tourism features to understand potential effects on tourism values and/or recreation activities.

### Cultural Heritage

- Conduct a Stage One Archaeological Assessment for the corridor. A Stage Two Archaeological Assessment will be conducted in areas of high potential if they may be disturbed by the Project.
- Conduct a review of cultural heritage landscapes and built heritage features.



Barrick Gold – Hemlo Property



Marathon Pulp Mill

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# Leave to Construct Approval

## Leave to Construct Approval (Section 92 of the *Ontario Energy Board Act, 1998*)

In order to build the new East-West Tie, NextBridge must file a Leave to Construct application with the Ontario Energy Board.

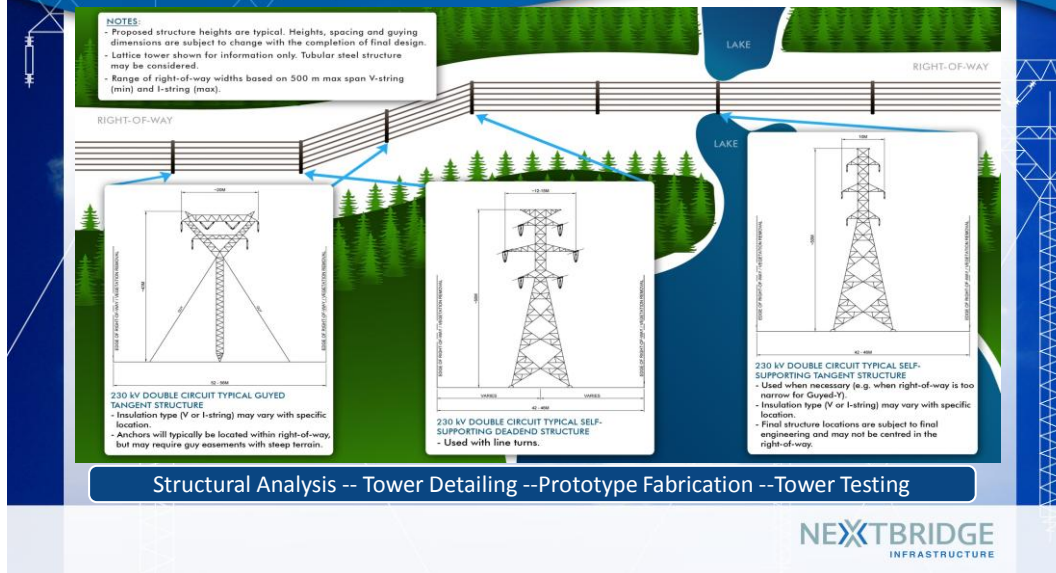
When the Ontario Energy Board receives a Leave to Construct application, it reviews the material, makes the information public and provides an opportunity for any interested parties, including First Nations and Métis communities, to provide input.

In carrying out its mandate, the Ontario Energy Board considers the impacts that the project may have upon consumers with respect to prices, as well as matters that concern the reliability and quality of electricity service. The Ontario Energy Board will approve projects they consider to be in the public interest.

NextBridge is currently contacting landowners to arrange for access to property for field surveys and assessments.

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# Tower Design



# Tower Locations

## STRUCTURE SPOTTING

Structures were initially spotted on the proposed transmission line alignment with the primary goals of minimizing natural environment, socio-economic, and technical impacts.

Structure types and locations will be adjusted as necessary to:

- comply with strength limitations related to designed wind and weight span.
- avoid other project constraints applicable to each specific location.
- to meet appropriate electrical clearances.

Guyed tangent structures will be used wherever practical. In locations where environmental or topographical constraints dictate, self-supporting tangent structures may be used. All strain and deadend structure types will be self-supporting towers.

# NextBridge Infrastructure's Engagement Commitment

## COMMUNITY RELATIONS

NextBridge will engage stakeholders in any project it develops through honest, regular and open communication, seeking and respecting each party's input. We are committed to timely and meaningful dialogue with stakeholders, including governments, regulators, landowners, and interested members of the public, and believe that this input will be critical to a successful project that seeks to address the needs of those involved.

## FIRST NATIONS AND MÉTIS RELATIONS

NextBridge Infrastructure considers the participation of First Nations and Métis communities to be an essential component of successful transmission projects in Northern Ontario. NextBridge is committed to working with First Nations and Métis communities in Ontario to provide sustainable benefits to those communities.



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# Consultation and Engagement Activities

## Planned Engagement Activities during the Environmental Assessment

- Notice of Commencement of Environmental Assessment
- Notice of Open Houses
- Continuation of municipal, key stakeholder, First Nations and Métis, agency, and landowner meetings
- Project hotline: 1-888-767-3006
- Project website: [www.nextbridge.ca](http://www.nextbridge.ca)
- Additional newsletters
- Open House round two – alternative route evaluation and proposed mitigation measures
- Open House round three – Draft Environmental Assessment
- Draft Environmental Assessment 30-day comment period
- Notice of Submission of Environmental Assessment to Ministry of the Environment and Climate Change
- Minimum seven-week public comment period on submitted Environmental Assessment
- Posting of Ministry review of Environmental Assessment
- Notification of Minister's decision

NextBridge is available to respond to questions and discuss the project with interested parties throughout the Environmental Assessment process

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# Consultation and Engagement Activities to Date

- NextBridge recognizes the importance of meaningful and respectful Stakeholder, First Nations and Métis engagement.
- We encourage participation at every step of this project.

## During development of the Terms of Reference NextBridge has to date:

- Notified landowners along the Reference Route and alternatives and established contact;
- Contacted directly affected landowners and Crown interest holders within the proposed corridor and along the proposed preliminary preferred reference route to obtain access to lands for preliminary survey and study activities
- Developed a project contact list and notified elected officials, municipal staff, agencies and other key stakeholders;
- Placed ads in the local newspapers;
- Initiated discussions with First Nations and Métis;
- Held Open Houses;
- Prepared and distributed notices and newsletters;
- Established a website and toll-free project hotline; and,
- Attended a public Town Hall meeting in the Township of Dorion.

# Aboriginal Relations Activities Underway

- In early November of last year, the Crown signed a MOU with NextBridge that assigned the Duty to Consult to NextBridge. This designates NextBridge to undertake thorough and well-documented consultation efforts with 18 Aboriginal communities identified by the Crown.
- NextBridge has engaged with all 18 communities and has provided information on the Environmental Assessment, along with other project based activities
- Along with rights-based Consultation, NextBridge has signed a commercial term sheet with 6 First Nations along the proposed route in order to provide economic participation in the line

- Fort William First Nation
- Red Rock Indian Band
- Pays Plat First Nation

- Pic Mobert First Nation
- Ojibways of Pic River
- Michipicoten First Nation

# Electric and Magnetic Fields

- Electromagnetic Fields (EMFs; also called electric and magnetic fields) 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 (ELF). EMFs produced by both power lines and use of electrical appliances belong to this category.
- The levels of EMF drop off rapidly with distance from source.

## HEALTH CANADA'S POSITION ON EMFS

There is no compelling scientific evidence that EMFs in living and school environments, regardless of distance from transmission lines, cause ill health such as cancer.

Health Canada (2012) states:

*"When you are inside your home, the magnetic fields from high voltage power lines and transformer boxes are often weaker than those from household electrical appliances".*

Based on the available weight of evidence, Health Canada *"does not consider that any precautionary measures are needed regarding daily exposures to EMFs at ELFs. There is no conclusive evidence of any harm caused by exposures at levels found in Canadian homes and schools, including those located just outside the boundaries of power line corridors".*

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# Land & Property Matters

## CURRENT ACTIVITIES

- Land Agents in the field consulting with property owners; Crown interest holders; and ministries on routes under assessment
- Right of Access Agreements are currently being sought for preliminary environmental and engineering studies
- Completion of a benchmark market valuation to establish the Fair Market Value (FMV)

## NEXT STEPS

- Land Acquisition will be initiated in early fall 2014
- Land Agents will set appointments with property owners to discuss the Land Acquisition program and associated Compensation Principles
- Land Agents will be available throughout the land acquisition process to provide additional information and address any concerns that property owners may have

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# Land & Property Matters

NextBridge will engage landowners in an open and respectful manner, with a commitment to timely, meaningful and transparent dialogue as it relates to property owner compensation.

It is NextBridge's objective to acquire land rights for the proposed East-West Tie Transmission Line Project by successfully negotiating mutually acceptable agreements with property owners. NextBridge is confident that a positive "win-win" outcome for both NextBridge and the affected property owners can be achieved by applying a set of comprehensive and fair compensation principles, thereby avoiding potentially lengthier, less flexible and less certain outcomes associated with legislated expropriation procedures.

Land Agents will be contacting affected property owners and interest holders to discuss the Compensation Principles and Forms of Agreement related to the proposed East-West Tie Transmission Line Project.

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# Land & Property Matters

## **COMPENSATION AND ACQUISITION PRINCIPLES INCLUDE:**

- Compensation payable to property owners and Crown interest holders
- Method for Establishing Fair Market Value
- Components of compensation including per acre value and potential incentives, injurious affection, timber loss, construction damages
- Forms of Agreement
- Reimbursement of legal and independent appraisal fees
- Mandatory Buy-Out Principle and approach

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# Thank You!

**ON BEHALF OF THE PROJECT TEAM,  
THANK YOU FOR ATTENDING THIS OPEN HOUSE.**

Please remember to fill out a comment form before you go.

**Input is always welcome:**

Your input is important to us. If you have any questions or concerns, or if you require further information regarding this project, please contact:

**Michael Power, Project Director**  
NextBridge Infrastructure  
Email: [info@nextbridge.ca](mailto:info@nextbridge.ca)  
Project Hotline: 1-888-767-3006

Be sure to visit the project website for updates:

[www.nextbridge.ca](http://www.nextbridge.ca)

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