# Welcome Henvey Inlet Wind Transmission Line



We welcome you to our second Public Information Centre. Your questions and comments are important to us. Please be sure to sign in and complete a comment sheet.



# Why Are We Here?

# Good Planning Involves The Community.

This Public Information Centre (PIC) continues the conversation on the Henvey Inlet Wind (HIW) Transmission Line.

#### The purpose of this meeting is to:

» Provide an update on the HIW Transmission Line and learn about where we are in the environmental assessment (EA) process



- » Share the results of the studies and investigations that have been conducted to date and get your feedback on the Interim Draft Environmental Review Report (ERR)
- Discuss next steps of the EA process, including the finalization of the ERR and the 30-day review and comment period



# Who We Are



#### Henvey Inlet Wind (HIW) Nigig Power

In October of 2014, Nigig Power Corporation (Nigig) entered into a joint venture partnership with Pattern Energy Group LP (Pattern Development) to jointly develop, own and operate the 300 megawatt (MW) Henvey Inlet Wind Energy Centre (HIWEC).

The HIWEC has a 20-year Power Purchase Agreement with the Independent Electricity System Operator (IESO).

# Corporation

Nigig, owned by Henvey Inlet First Nation (HIFN) was first established in 2010. The Chief Executive Officer and President is community member Ken Noble. The corporation is overseen by four board members and four advisors. Nigig secured the largest Feed-In-Tariff contract in Ontario and is developing the largest First Nation wind energy centre in Canada at 300 MW.

### Pattern Development

Pattern Development is a leader in developing renewable energy and transmission assets. With a global footprint spanning Canada, the United States, Mexico, Chile and Japan, Pattern Development's highly-experienced team has brought more than 4,000 MW of renewable power to market and is currently advancing a 5,900 MW pipeline of projects. Our mission is to develop high performance renewable energy and transmission projects built to last for the long-term. Pattern Development's affiliate company, Pattern Energy Group Inc. (Pattern Energy), is an independent power company listed on the NASDAQ and Toronto Stock Exchange with a portfolio of 16 wind power projects and a total owned interest of 2,282

MW.



# How Can You Get Involved?

#### We're Interested In What You Have To Say!

As you are reviewing the information presented, we encourage you to ask questions and provide your thoughts about the HIW Transmission Line.

Throughout the course of the EA process, you can visit our website at: www.henveyinletwind.com to access upto-date information.

We also encourage you to provide feedback to the HIW team at any point during the study by:



- » Email: info@henveyinletwind.com
- » Phone: 705.857.5265
- Henvey Inlet Wind Office » Mail: 295 Pickerel River Road Pickerel, ON P0G 1J0

#### Your Comments Matter!

All comments and questions gathered to date will be documented in the HIW Transmission Line ERR. The report will include how these questions and comments were considered as part of the EA process.



# Transmission Line Study Area



The Transmission Line will deliver electricity generated by the HIWEC to the Ontario electricity grid.

The Transmission Line is subject to an EA under the Ontario Electricity Project Regulation (O.Reg. 116/01).

Two potential routes for the Transmission Line are being assessed until a preferred route is selected.

Only one Transmission Line will be constructed.

#### **Route A:**

- » Approximate Length: 14 kilometres (km)
- » Travels east from the HIFN Reserve No. 2 (I.R. #2)
- » Connects to the existing Hydro One Networks

#### Route B:

- » Approximate Length: 86 km
- » Travels south from HIFN I.R. #2, generally parallel to Highway 69/400 before diverting from Highway 69/400 to follow the existing 500 kV HONI Transmission Line System

#### Inc. (HONI) 500 kilovolt (kV) Transmission Line System at the Highway 522 intersection

#### » Connects to the existing 230 kV line southeast of Parry Sound

![](_page_4_Picture_16.jpeg)

# Design of the HIW Transmission Line

#### **Key Facts and Figures**

	Route A	Route B
Approximate Length of Transmission Line	14 km	86 km
Nominal Voltage	Up to 500 kV	230 kV
Right-of-Way Width	Up to 30 m	
Tower Height	20 m to 50 m	
Typical Span of Towers	170 m to 230 m, except where site specific conditions require shorter or longer tower spans (e.g., significant changes in line direction, large waterbody crossings, or compliance with design codes and laws)	
Anticipated Construction Start Date	May 2016	

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![](_page_5_Picture_4.jpeg)

#### Henvey Inlet Wind Transmission Line

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Pattern Development

## Transmission Line – Route A

#### Path of "Route A"

- » Begins at the eastern edge of HIFN
  I.R. #2 and travels east to Highway
  522
- » Then follows Highway 522 to HONI 500 kV Transmission Line System
- » Connects to the existing HONI 500 kV Transmission Line System

![](_page_6_Figure_5.jpeg)

The alignment for Route A was determined based on a review of environmental and technical constraints and input received from the public and other stakeholders.

![](_page_6_Picture_8.jpeg)

## Transmission Line – Route B

#### Path of "Route B"

- » Travels south from the HIFN I.R. #2
- » Generally parallels the future Highway 69/400 corridor
- » Diverts east from Highway 69/400 south of Woods Road to parallel existing 500 kV HONI Transmission Line System

![](_page_7_Picture_5.jpeg)

 Follows the HONI Transmission
 Line System south to a connection point at 230 kV transmission line southeast of
 Parry Sound

The alignment for Route B was determined based on a review of environmental and technical constraints and input received from the public and other stakeholders.

![](_page_7_Picture_9.jpeg)

# **Preliminary Transmission Line Route Analysis**

#### The general principles used to identify potential routes include:

- » Minimizing overall route length wherever possible;
- » Aligning with existing linear disturbances (i.e., roads, trails, railways) wherever possible;
- » Avoiding large waterbody crossings (>200 m) wherever possible;
- » Avoiding wetlands wherever possible;
- » Avoiding private property wherever possible; and
- » Avoiding sensitive land uses (i.e., Provincial Parks, Areas of Natural and Scientific Interest, Provincially Significant Wetlands) wherever possible.

A preliminary route evaluation using both quantitative and qualitative methods was undertaken to identify the relative environmental impacts of each route with respect to the following environmental criteria:

![](_page_8_Picture_9.jpeg)

- » Fauna, including habitat;
- » Flora;
- » Species at Risk;
- » Wetlands;
- » Air quality;
- » Surface and groundwater;
- » Socio-economic factors;
- » Anishinabek and other Aboriginal community's interests; and
- » Land use.

The final route will be determined based on technical analyses including the results of the technical review by the IESO.

![](_page_8_Picture_21.jpeg)

## Environmental Assessment Process

- » Components of the HIW Transmission Line that are located off HIFN Reserve Lands are subject to O.Reg. 116/01 under the Ontario Environmental Assessment Act (1990)
- » The HIW Transmission Line is subject to an "Environmental Screening" (O.Reg. 116/01 – Category B)
- » HIW has voluntarily elected to elevate the Environmental Screening to an "Environmental Review" under the Environmental Screening Process
- » As part of the Environmental Review, HIW has reviewed existing conditions through background research and by conducting field investigations. HIW is currently assessing potential effects and will recommend mitigation measures and conduct all other necessary studies and analyses required by O.Reg. 116/01. All of this information, together with stakeholder input and records of consultation activities will be documented in the Final Draft ERR

![](_page_9_Figure_5.jpeg)

- » Although not required under O.Reg. 116/01, HIW has made an Interim Draft ERR available for review and comment on their website at www.henveyinletwind.com. You are encouraged to review this report and provide your feedback by August 8, 2015
- » Following this PIC, the ERR will be finalized and a Notice of Completion will be issued to announce completion of the study and the start of the 30-day review and comment period on the Final Draft ERR, in accordance with O.Reg. 116/01

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![](_page_9_Picture_10.jpeg)

# **Environmental Screening Process**

Proponent wishes to proceed with a transmission line development

YES

Is the transmission line designated under the Electricity Projects Regulation?

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Is the transmission line subject to the Environmental Screening Process under the Electricity Projects Regulation?

![](_page_10_Picture_6.jpeg)

We are here!

Screening Stage / Voluntary Elevation to Environmental Review Proponent applies environmental screening criteria, consults with Aboriginal communities, public and agencies, and identifies methods of mitigating / managing environmental effects. Proponent undertakes detailed studies to focus on key issues.

![](_page_10_Figure_9.jpeg)

\*MOECC = Ministry of the Environment and Climate Change

![](_page_10_Picture_12.jpeg)

## Physical Environment Existing Conditions

### Physiography and Topography

The ground surface in the Route A and B study areas is mainly exposed bedrock with thin topsoil and shallow root structures. This means that erosion can happen quite easily – particularly along higher ridges with steeper slopes. In lower lying areas and bedrock hollows, marsh-like conditions are found.

### Geology

Both Route A and B study areas run along the Canadian Shield. These areas are a part of the Central Gneiss Belt, which means that the bedrock is primarily made up of rock composed of layers that look like alternating dark and light colour bands.

![](_page_11_Picture_5.jpeg)

Quarrying of the bedrock for road building materials occurs throughout the Georgian Bay and Algonquin Highlands area and along both Routes A and B.

#### Seismicity

The probability for unexpected ground motion along Route A is low. Route B also has a low probability for seismic activity, although it is higher along the southern portion of the route.

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![](_page_11_Picture_11.jpeg)

## Natural Environment Existing Conditions

#### Wildlife and Wildlife Habitat

The majority of Routes A and B are largely undeveloped. Background literature review indicates that they provide habitat to 17 mammal species, 13 reptile species, 12 amphibian species and approximately 200 bird species.

### Vegetation and Ecological Communities

The Route A and B study areas are located in the Georgian Bay Ecoregion. The majority of this area is dominated by mixed forest (32%), followed by deciduous forest (22%), coniferous forest (12%) and sparse forest (11%).

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Upland parts of the study areas have little to no soil and little vegetation; lowlands have accumulated more soils, and therefore have higher amounts of vegetation.

Tree species identified within the Route A study area include Pines, Birches, Maples, Hemlock, Poplar and Red Oak.

Vegetation communities identified within the Route B study area include forests, rock barrens, swamps, fens, marshes, open aquatics and meadows. Little Bluestem a provincially significant plant species is found in the northern section of the study area.

#### Wetlands

One Provincially Significant Wetland – the Haines Lake Wetland Complex – is found in the Route B study area, along with Locally Significant Wetlands. No Provincially Significant Wetlands are found within the Route A study area.

![](_page_12_Picture_11.jpeg)

![](_page_12_Picture_13.jpeg)

# Natural Environment

Existing Conditions

#### Waterbodies

A number of waterbodies are found within the Route A and B study areas.

Route A waterbodies include the Key River and Portage Lake.

Route B waterbodies include Giroux River, Magnetawan River, Straight Lake, Still River and tributaries, and Little Still River and tributaries.

#### **Fish and Fish Habitat**

![](_page_13_Picture_7.jpeg)

The waterbodies within the Route A and B study areas support a variety of warm, cool and cold water fish and can be important spawning areas. They are widely used by Anishinabek, other Aboriginal groups and recreational sportfish anglers.

A number of fish species were found in the Route A and Route B study areas such as Brown Bullhead, Smallmouth Bass, Largemouth Bass, Walleye, Northern Pike, White Sucker and Redhorse Sucker.

#### Groundwater

Groundwater within the Canadian Shield is a source of drinking water for many residents. Route A and B study areas are important groundwater recharge areas, as the exposed bedrock is highly cracked which allows groundwater to move easily into the rock.

The Ministry of the Environment and Climate Change records identified 2 water well records within the Route A

#### study area and 28 within the Route B study area.

![](_page_13_Picture_16.jpeg)

## Rare, Threatened or Endangered Species Existing Conditions

A Species of Conservation Concern (SOCC) is a species that may become endangered or threatened because of biological characteristics and / or identified threats.

A number of SOCC were identified as occurring or having the potential to occur within the Route A and B study areas. These include:

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Species	Route A	Route B
Bald Eagle	•	•
Black Tern	•	•
Eastern Wood-Pewee		•
Louisiana Waterthrush	•	•
Peregrine Falcon	•	
Rusty Blackbird		•
Short-eared Owl	•	•
Wood Thrush		•
Yellow Rail		•

![](_page_14_Picture_5.jpeg)

#### Reptiles

Species	Route A	Route B
Common Five-lined Skink	•	•
Milksnake	•	•
Snapping Turtle		•

#### Plants

![](_page_14_Picture_10.jpeg)

![](_page_14_Picture_11.jpeg)

#### Henvey Inlet Wind Transmission Line

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## Species at Risk Existing Conditions

A **Species at Risk** is a protected species that is listed as endangered or threatened by the federal Species at Risk Act, 2002, or the provincial Endangered Species Act, 2007. Activities that disrupt these species may require permits from Environment Canada or the Ministry of Natural Resources and Forestry.

### Federal and Provincial Species at Risk

A number of federally and provincially protected species were identified as occurring or having the potential to occur within the Route A and Route B study areas. These include:

![](_page_15_Picture_4.jpeg)

#### Birds

Route A & Route B	Federal	Provincial
Bank Swallow		•
Barn Swallow		•
Bobolink		•
Canada Warbler	•	
Cerulean Warbler		•
Chimney Swift	•	•
Common Nighthawk	•	
Eastern Meadowlark		•
Golden-winged Warbler	•	
Least Bittern	•	•
Olive-sided Flycatcher	•	
Red-headed Woodpecker	•	
Whip-poor-will	•	•
Loggerhead Shrike (Route A only)	•	•

#### Mammals

Route A & Route B	Federal	Provincial
Eastern Small-footed Myotis		•

#### Reptiles

Route A & Route B	Federal	Provincial
Blanding's Turtle	•	•
Eastern Foxsnake (Georgian Bay population)	•	•
Eastern Hog-nosed Snake		•
Eastern Musk Turtle	•	
Massasauga Rattlesnake (Great Lakes / St. Lawrence population)	٠	•
Spotted Turtle	•	•

#### Amphibians

Route A & Route B	Federal	Provincial
Western Chorus Frog (Great Lakes / St. Lawrence – Canadian Shield Population)	•	

#### Fish

Route B	Federal	Provincia

#### Little Brown Bat

Northern Myotis Bat

#### Lake Sturgeon (Great Lakes – Upper St. Lawrence River population)

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## Socio-Economic Environment Existing Conditions

The socio-economic environment includes factors such as population and demographics, employment, housing, community services, transportation, recreation and natural resource use.

The socio-economic study area includes the Transmission Line right-of-way (ROW) for both routes, as well as adjacent municipalities.

#### **Population and Demographics**

The study areas are sparsely populated, with some residential and commercial activities located primarily along Highway 69/400.

#### **Recreation and Tourism**

Both Route A and B study areas are important for outdoor recreation and tourism activities including fishing, hunting, hiking, paddling, and motor sports (ATVs and snowmobiles). The region caters to a "cottage country" population that travels to use nearby waterbodies and forests.

#### **Natural Resource Assets**

Much of the study areas consist of Crown Land, with some areas of natural resource extraction for forestry and aggregates.

- » Route A is the most sparsely populated, and is predominately located on Crown Land.
- » Route B crosses two First Nation Reserves (Magnetawan First Nation and Shawanaga First Nation), and passes to the east of Parry Sound where residential areas are more prevalent.

### Community Services, Employment and Public Health

Community services vary by municipality – many areas in the northern Parry Sound District are unincorporated with no local services. In the Route B study area, Parry Sound is the largest centre, and provides health care, community services and employment opportunities in the area.

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![](_page_16_Picture_15.jpeg)

## Archaeology, Heritage and Culture Existing Conditions

#### **Aboriginal Interests**

First Nation and Métis interests are being considered as part of this study, and the team has worked with MOECC and MNRF to identify the communities to be engaged.

The Reserve lands of three First Nation communities are located directly within the Route A and B study areas:

- » Henvey Inlet First Nation;
- » Magnetawan First Nation; and
- » Shawanaga First Nation.

### **Built / Cultural Heritage**

No listed, designated or otherwise recognized heritage features are located in the study area. An assessment is being done to determine if any non-listed built heritage or cultural heritage landscapes are in the study area, to see if they have cultural heritage value and if they will be impacted by the proposed Transmission Line. Mitigation measures will be provided if any negative effects are identified.

![](_page_17_Picture_9.jpeg)

It is expected that these communities will have the highest potential interest given their location and expected traditional use of the area.

These and other communities will continue to be informed and engaged as the study progresses.

## Archeology

There are areas within both Route A and B study areas that have archaeological potential.

Archaeological potential typically exists in areas previously inhabited by people, such as:

- » Areas of well-drained soil or high ground next to hunting or fishing grounds;
- » Old transportation routes;
- » Old settlement areas; and
- » Other areas identified by the community as being of heritage importance.

#### Areas of archaeological potential that will possibly be impacted by the Transmission Line will be subject to additional field studies to ensure no impact on known archaeological sites.

![](_page_17_Picture_22.jpeg)

# Construction

### **Overview of Construction Activities:**

- » Delineation of work area and important natural features, and installation of erosion and sedimentation controls;
- » Vegetation clearing and site grading;
- » Geotechnical investigations;
- » Delineation of temporary work areas and installation of temporary facilities, including storage areas, laydown and access (where required);

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- » Construction of access roads and upgrading of existing access roads (where required);
- » Installation of transmission tower foundations;
- » Transmission tower and structure erection;
- » Installation of Transmission Line conductors and anchoring;
- » Installation of the switching station; and
- » Restoration of the temporary work site and removal of temporary facilities and storage areas.

Activities that may occur during the pre-construction phase include: planning and resource management, preconstruction surveys, permitting and detailed design.

![](_page_18_Picture_15.jpeg)

## **Operations, Maintenance & Decommissioning**

# Overview of Operations and Maintenance Activities:

- » Annual visual inspection;
- » Preventative and routine maintenance on the Transmission Line and switching station;
- » Unplanned maintenance;
- » ROW maintenance (e.g., vegetation control);
- » Manual tree clearing, as required;
- » Monitoring of restoration; and

![](_page_19_Picture_8.jpeg)

» Maintenance of plantings and areas of soil stabilization.

#### Decommissioning

- » Upgrading of access roads to facilitate decommissioning;
- » Removal of lines, towers, switching station infrastructure and access roads; and
- » Site restoration.

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# HIWEC Study Area

![](_page_20_Picture_1.jpeg)

The HIWEC will include approximately 91 wind turbines, though up to 120 wind turbines are being assessed across HIFN I.R. #2, with an installed power capacity of up to 300 MW.

HIFN's Band Council is the decision-making authority with respect to granting of interest in land within HIFN I.R. #2. A parallel consultation program is underway for the HIWEC. For more information, please visit www.henveyinletwind.com.

![](_page_20_Picture_5.jpeg)

# Thank You For attending the second HIW Transmission Line PIC!

#### **Next Steps for the HIW Transmission Line**

» Collect feedback received from this meeting and finalize the ERR » Release the Final Draft ERR for 30-day review and comment

### We value your feedback and want to hear from you!

Please help yourself to some refreshments and complete a comment sheet before you leave or send it to us before August 8, 2015:

info@henveyinletwind.com 705.857.5265 295 Pickerel River Road Pickerel, ON P0G 1J0

To learn more about the HIW Transmission Line or to provide feedback, please visit our website at: www.henveyinletwind.com

![](_page_21_Picture_12.jpeg)