

# Welcome

to the First Official  
Public Meeting Under  
the Renewable Energy  
Approval (REA) Process  
for the Niagara Region  
Wind Project

## Thank you for coming!

We are happy to share new information about this clean, renewable energy project with you, and introduce Niagara Region Wind Corporation.

Please review the display boards and feel free to ask us any questions you may have.

We want to hear from you!  
If you would like to be added to the Project mailing list, please sign up at the front desk.



# Objectives of this Public Meeting



- Provide a status update on the Project and Project Description Report.
- Provide an overview of the Renewable Energy Approval (REA) process.
- Share new information about the environmental studies which have been completed to date.
- Answer questions that we've been hearing about the Project and outline next steps.
- Receive the community's input and feedback for consideration by the Project team.

# Who Are We?

Niagara Region Wind Corporation (NRWC) is a Canadian renewable energy company focused on the development of wind power in Canada.

NRWC is a partnership between Daniels Power Corporation and Renewable Energy Business Ltd., two privately held Ontario companies committed to renewable energy projects.

The Study Team for this Project includes:



Stantec Consulting Ltd.  
(Renewable Energy  
Approval process)



Hatch Ltd.  
(Engineering)



Intrinsic Inc.  
(Health)



Bridgepoint Group Ltd.  
(Media & Communications)

## Project Contact Information

Website: [www.nrwc.ca](http://www.nrwc.ca) Email: [info@nrwc.ca](mailto:info@nrwc.ca)  
Phone: 905-390-3306 or 1-855-720-2892 (toll free)



## Niagara Region Wind Project

# Project Overview

### Class 4

- This project is considered a Class 4 Wind Facility according to the REA Regulation.

### 230 MW

- The total nameplate capacity of this project will be 230 MW (1 MW can power approximately 250 Ontario homes).

### 80-100 turbines

- There will be approximately 80 to 100 turbines. Depending on the turbine model selected, turbines are expected to be between 2.0 to 3.1 MW each.

### Study Area

- The Study Area is within Haldimand County and Niagara Region (including the Township of Pelham, Township of Wainfleet, and Township of West Lincoln).

### Transmission Line

- The Transmission Line Interconnection study area is within the Town of Grimsby, Town of Lincoln and the Township of West Lincoln, in Niagara Region.

### PowerPurchase

- This Project has been awarded a PowerPurchase Agreement (FIT Contract) by the Ontario Power Authority in February, 2011.

### Components

- Other Project components include: underground / overhead collector lines, two transmission lines, fiber optic / wireless communication system, operations and maintenance building, two substations, a manual disconnect switch, and turbine access roads with culverts (where required).
- Additional details regarding the preliminary design of this Project are outlined in the Draft Project Description Report (PDR) available for review today, and at [www.nrwc.ca](http://www.nrwc.ca), local libraries and municipal offices.



## Niagara Region Wind Project

# Interconnector Study Area & Transmission Line

- The Interconnection location was determined through a FIT contract with the government - Beach Transformer Station.
- Current Local Distribution Company (LDC) system supports up to 27 KV on wooden poles within municipal rights-of-way.
- Proposed option includes similar structures (wooden monopole design) located within existing municipal rights-of-way.
- Located within the Greenbelt and Niagara Escarpment Commission planning areas.



Existing Line in the  
Interconnection Study Area



Proposed Transmission Line

## Niagara Region Wind Project

# Site Selection

## Why Haldimand County & Niagara Region?

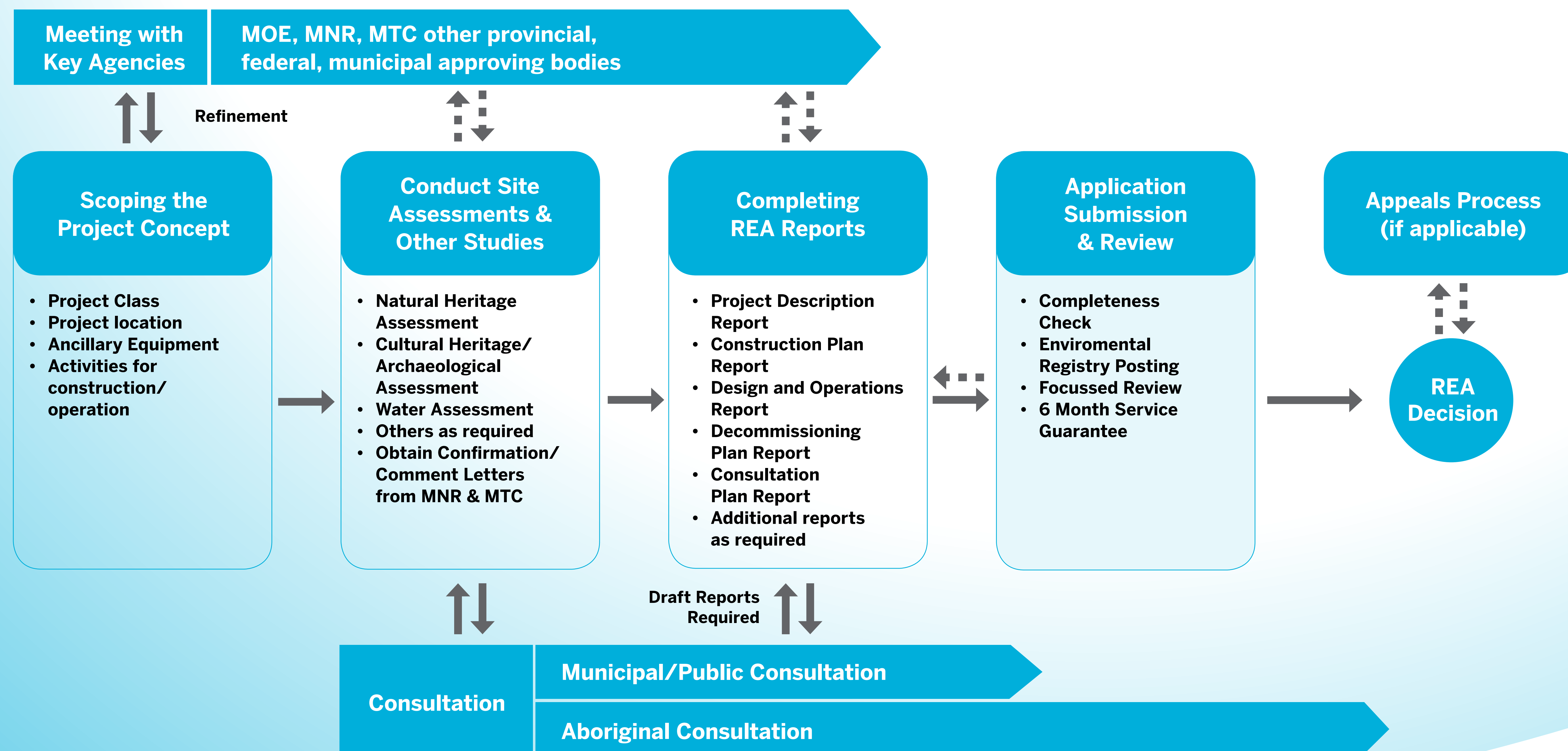
- Good wind regime
- Electrical interconnection – the Project has access to connect to existing transmission capacity on the Hydro One provincial grid near the QEW
- Environment – to date, our review of existing environmental features shows that the Project can be designed to avoid or minimize impacts on wildlife and natural features
- Landowner interest
- Compatible land uses – agricultural land requiring a small footprint for Project components
- Flat topography for the Study Area
- Site access – good existing road infrastructure
- Access to skilled labour



# Renewable Energy Approval Process

## An Overview

- Issued under Ontario Regulation 359/09 under the Environmental Protection Act (REA Regulation).
- Stringent environmental approval process that NRWC needs to satisfy before construction.
- Specifies how the Project will be designed, built, operated and decommissioned so that local community and environment are protected.
- For this project, the REA process began in July 2011, with the publication of a Notice of Proposal to Engage in a Renewable Energy Project.



# Setback Distances

A key component of the Renewable Energy Approval (REA) process is the establishment of common setbacks for all renewable energy facilities in the Province.

Within the regulation, there are some setbacks for which studies that identify potential negative environmental effects and mitigation measures can be conducted if it is not possible to meet the setback requirements. For example, in some instances, development and site alteration may be possible within a setback area if an Environmental Impact Study (EIS) is completed to assess potential impacts and mitigation measures.

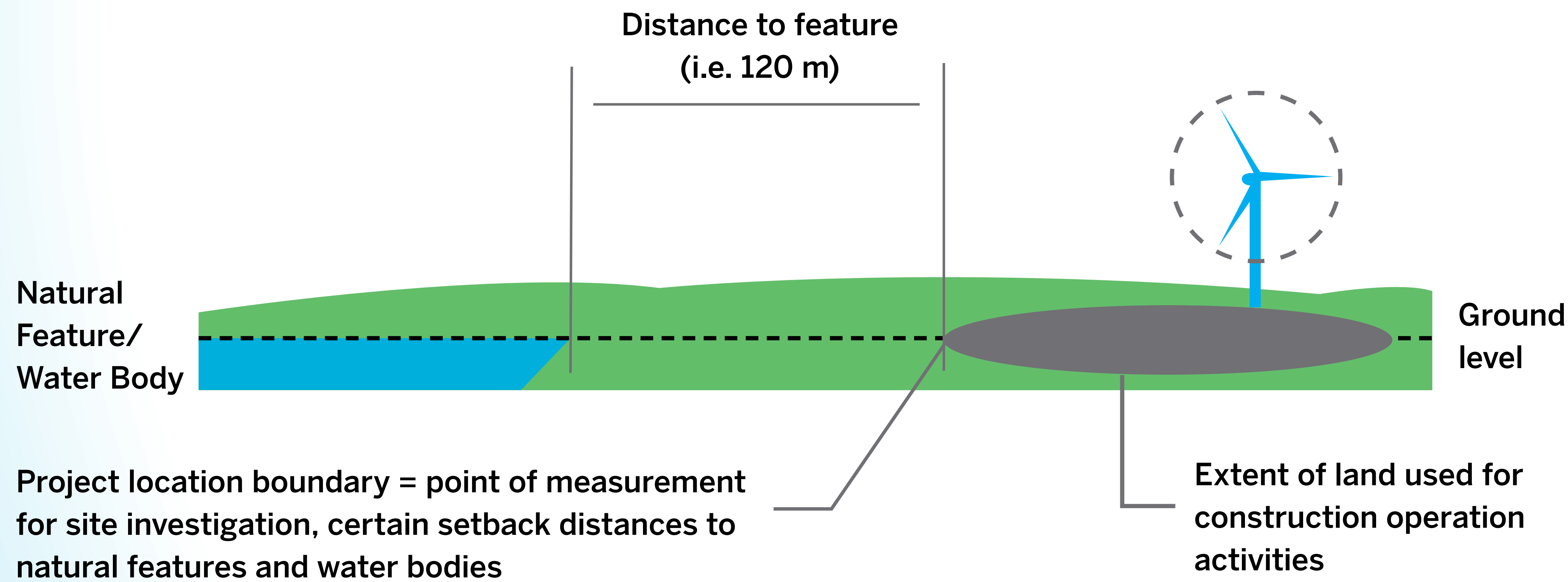


Figure 1. Project location boundary where construction area is furthest

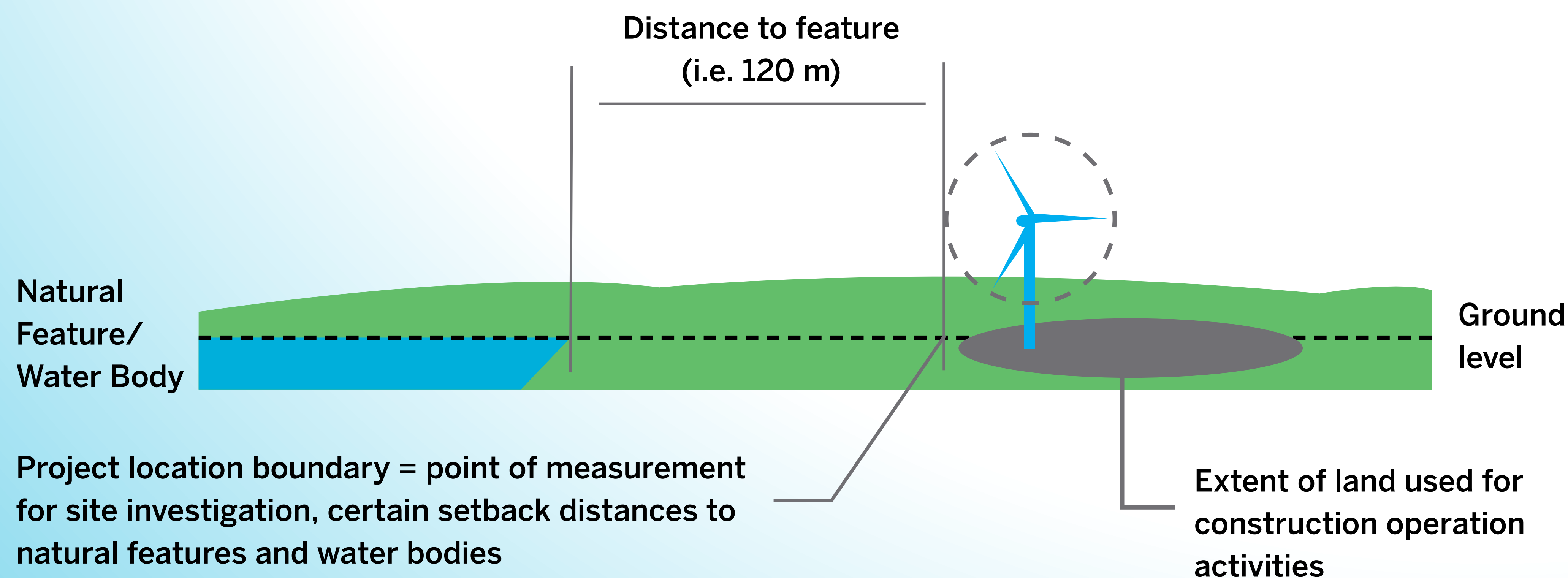


Figure 2. Project location boundary where turbine blade tip is furthest

Source: Technical Guide to Renewable Energy Approvals (MOE, 2011)



# Key Setbacks

Key setbacks which will be applied throughout the design of the project are as follows:

Feature	Setback Distance	Study Required When Within Setback
Non-participating dwelling, school, etc.	Minimum 550 m (from centre of turbine base)	N/A
Public road right-of-way and railway right-of-way	Turbine blade length + 10 m (from centre of turbine base)	N/A
Property Line	Turbine height (excluding blades) (from centre of turbine base)	Property Line Setback Assessment
Provincially significant wetland (PSW)	120 m (development prohibited within PSW)	Environmental Impact Study
Provincially significant Areas of Natural and Scientific Interest (Earth Science)	50 m	Environmental Impact Study
Provincially significant Areas of Natural and Scientific Interest (Life Science)	120 m	Environmental Impact Study
Significant valleyland	120 m	Environmental Impact Study
Significant woodland	120 m	Environmental Impact Study
Significant wildlife habitat	120 m	Environmental Impact Study
Non-provincially significant wetland within the Greenbelt	120 m	Environmental Impact Study
Sand barren, savannah, tallgrass prairie or alvar within the Greenbelt	120 m	Environmental Impact Study
Non-Provincially significant Areas of Natural and Scientific Interest (Life Science) within the Greenbelt	120 m	Environmental Impact Study
Lake or a permanent or intermittent stream	120 m (from the average annual high water mark) (turbines and substations prohibited within 30 m)	Water Body Report
Seepage area	120 m (turbines and substations prohibited within 30 m)	Water Body Report

# Preliminary Environmental Findings

The Natural Heritage Assessment and Water Assessment studies have been initiated, as follows:

## Data collection:

Compilation and review of existing background information

## Mapping:

Overlay of existing information with current aerial photography

## Consultation:

Meetings with Ministry of Natural Resources,  
Niagara Escarpment Commission and Conservation Authorities

## Field investigations:

Initiation of fall migratory bird surveys and confirmation of  
vegetation communities

The following Project-specific issues and potential effects have been identified and are expected to be further analyzed as part of the REA application process:

- Heritage and Archaeological Resources
- Natural Heritage
- Water Bodies and Aquatic Resources
- Air Emissions of Odour and Dust
- Environmental Noise
- Land Use and Resources
- Provincial and Local Infrastructure
- Public Health and Safety
- Areas Protected under Provincial Plans and Policies

For further information, see Appendix C of the Draft Project Description Report available online at [www.nrwc.ca](http://www.nrwc.ca)

# Preliminary Environmental Findings



No Provincial Parks or Conservation Reserves occur within the study area.

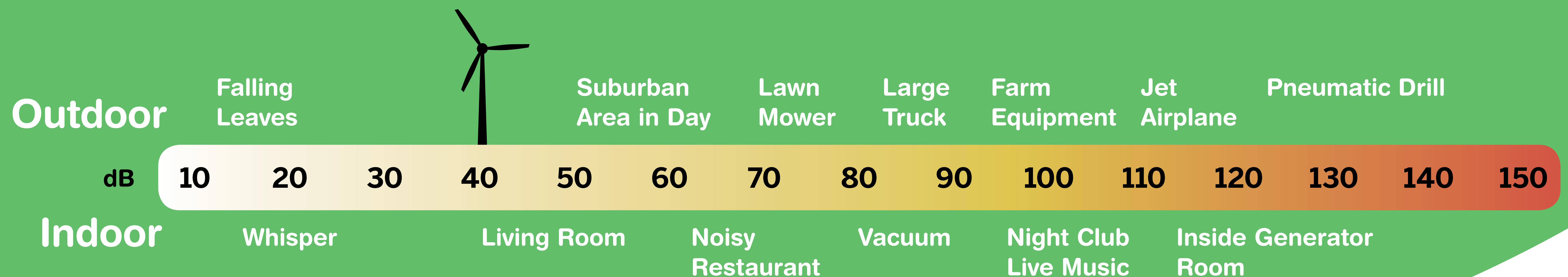
Existing natural features known to occur within the study area include:

- 2 Earth Science and 11 Life Science Areas of Natural and Scientific Interest
- 27 Provincially Significant Wetlands and 8 Locally Significant Wetlands
- Numerous woodlands and unevaluated wetland communities
- Numerous candidate significant wildlife habitat features (birds, mammals, amphibians)
- Niagara Escarpment and associated natural features
- Welland River is the largest watercourse within the study area
- Other local tributaries of Lake Erie, Lake Ontario and Grand River also occur
- Primarily a diverse warmwater fish community with >40 species
- Rare plants and wildlife

The Natural Heritage Assessment and Water Assessment studies will be provided in draft form for public review & comment a minimum of 60 days before Final Public Meeting.

# Environmental Noise Impact Assessment

- An Environmental Noise Impact Assessment will be completed to ensure compliance with Ministry of the Environment (MOE) regulatory requirements (included in the Design & Operations Report).
- Field verification will be undertaken Fall 2011 to accurately establish all sensitive receptors and to assess noise impact, and will generally cover an extent of 1.5 kilometers beyond the Study Area.
- Current regulatory requirements are intended to limit sound level outside the nearest dwelling to 40 dBA, a sound level equal to the World Health Organization Europe (2008) night-time noise guideline which is a health-based value necessary to protect the public from the adverse health effects of night noise.



# Health & Wind Power

## Public health and safety will be considered during all stages of the Project.

In “The Potential Health Impact of Wind Turbines” (May 2010), Ontario’s Chief Medical Officer of Health recently examined the scientific literature related to wind turbines and public health, considering potential effects, such as dizziness, headaches, and sleep disturbance.

The report concluded that:

“...the scientific evidence available to date does not demonstrate a direct causal link between wind turbine noise and adverse health effects. The sound level from wind turbines at common residential setbacks is not sufficient to cause hearing impairment or other direct health effects, although some people may find it annoying”.

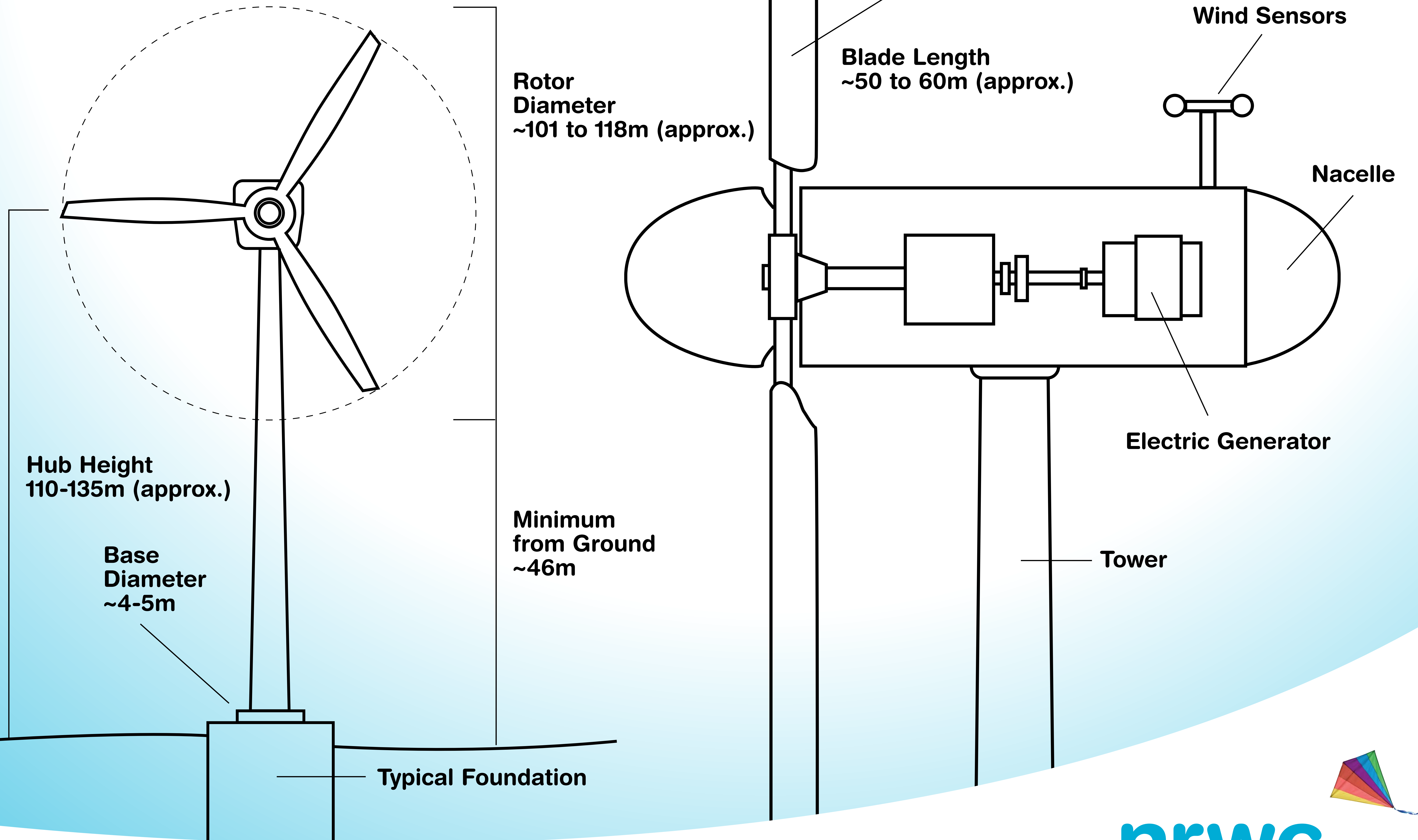
The report also concluded that low frequency sound and infrasound from current generation upwind model turbines are **well below the pressure sound levels at which known health effects occur**. Further, there is **no scientific evidence to date that vibration from low frequency wind turbine noise causes adverse health effects**.

Ontario has regulated setbacks from receptors in the new FIT contracts that exceed most wind farms to date. As such, Ontario expects that annoyance from wind turbines would be greatly diminished.



# Typical Wind Turbine

Height and size of turbines may vary.



# Addressing Community Priorities

NRWC has been listening to the dialogue about wind in the community. To that end, we are going beyond what is required by the MOE in the following ways:

- We are holding more public meetings than required by the REA process.
- We will be participating in local community events to meet our neighbours and to make ourselves accessible.
- We have hired a real estate firm to conduct a property value study in Haldimand County.
- We have contracted independent environmental health consultants to assist with the Project.

**We want to hear from you!**

If you would like to be added to the Project mailing list, please sign up at the front desk.



# Community Benefits

**NRWC plans to be an active and good neighbour.**

We will be establishing a Community Benefits Fund, where a portion of the Project's revenue will be reinvested in the local community, with the input of local municipalities.

The Project would also be a positive benefit to the community:

- Approximately \$5 million in new local property tax revenue over 20 years, and approximately \$80 million in revenue to local landowners, would be generated
- Secondary source of income for local farmers and landowners
- New supply of safe and clean energy
- Helps to meet Ontario's commitment to renewable energy and phasing out of coal-fired power plants
- Helps to meet forecasted energy demand while reducing greenhouse gas levels





# Economic Benefits

The Niagara Region Wind Project will provide significant economic benefits for the local community.

A study conducted by AECOM Canada Inc. to explore employment and income impacts shows that the Project has the ability to significantly positively impact unemployment rates in the region and across Ontario.

The Niagara Region Wind Project will create approximately 770 jobs annually during the four-year development and construction period and 120 long-term jobs during the subsequent 20-year operational period.

The project will generate \$230 million in direct Ontario-based capital expenditures.



# Property Values

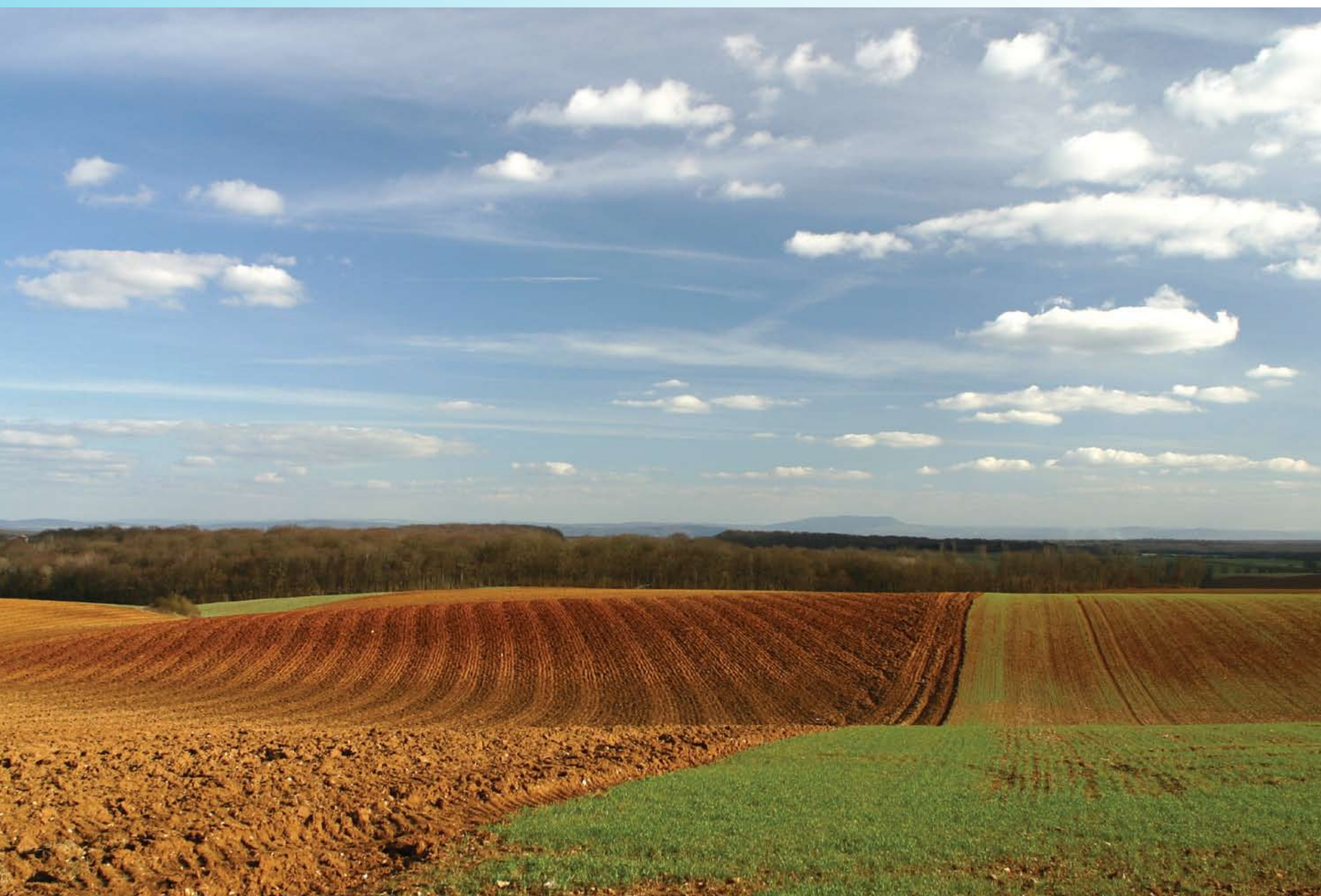
NRWC has heard that concerns about property values is of significant importance to the local community.

We are conducting a property value impact study of turbines up and running in Haldimand County.

Recent studies have shown that neither the view of the turbines nor the proximity of turbines has any consistent measurable or statistically significant effect on home sale prices.

Canadian Wind Energy Association (CanWEA) hired independent consultants to review property values in Chatham Kent and the study also indicated that in some cases, local impacts of increased tourism and economic stimulus from wind farms can actually drive up property values in host communities (January 2010). \*

\*See resource tables for copies.



# Timeline



## 2011

Feed-In-Tariff  
contract awarded  
February, 2011

Field programs and technical work commenced summer, 2011

Initiate Renewable  
Energy Approval  
Process – July, 2011

Community Meeting  
July 26, 2011

Draft Project  
Description Report provided to Ministry of the Environment  
August 3, 2011

Draft Project  
Description Report and Municipal Consultation Form  
provided to Municipalities August 3, 2011

**TODAY: Public Meeting #1**  
September 13, 14 and 15, 2011

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## 2012

Draft REA Reports to Public for 60-day Public Review & Comment  
Fall 2012 / Winter 2013

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## 2013

Public Meeting #2  
Winter / Spring 2013

REA application  
submitted to the MOE - Spring 2013

30-day Environmental Registry public  
review period - date  
determined by MOE

REA issued by MOE  
(anticipated) Fall, 2013

Start of  
Construction  
Fall, 2013

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## 2014

Commercial  
Operation Date (COD)  
Spring, 2014

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Repowering/  
Decommissioning  
(Approximately 25 years after COD)

# Renewable Energy Approval Process Required Reports

- 1 Project Description Report (Draft posted at [www.nrwc.ca](http://www.nrwc.ca) and available for review today)
- 2 Construction Plan Report
- 3 Design & Operations Report
  - Property Line Setback Assessment Report
  - Noise Study Report
- 4 Decommissioning Plan Report
- 5 Consultation Report
- 6 Natural Heritage Assessment (and Environmental Impact Study, if required)
  - Environmental Effects Monitoring Plan
- 7 Water Assessment Report (and Water Body Report, if required)
- 8 Protected Properties and Heritage Assessment
- 9 Archaeological Assessment
- 10 Wind Turbine Specifications Report

All reports, with the exception of the Consultation Report, will be made available in draft form for review and comment a minimum of 60 days before the Final Public Meeting.



# Other Approval and Permitting Requirements



Additional approval and permitting requirements may be required for the project from the following agencies:

- Ministry of Natural Resources (MNR)
- Niagara Escarpment Commission (NEC)
- Grand River and Niagara Peninsula Conservation Authorities (GRCA and NPCA)
- Haldimand County & Niagara Region (Township of Wainfleet, Township of West Lincoln, Township of Pelham, Town of Grimsby and Town of Lincoln)
- Ministry of Transportation (MTO)
- Transport Canada (TC)
- Ontario Energy Board (OEB)
- Fisheries and Oceans Canada (DFO)
- Nav Canada
- Hydro One Networks Inc. (HONI) and Others

# We Want to Hear From You!

Copies of the display boards from this Public Meeting will be available on the web ([www.nrwc.ca](http://www.nrwc.ca)) September 16, 2011.

Opportunities for feedback:

- Sign up at the front entrance to be added to the project notification list.
- Pick up and fill out a paper questionnaire today.
- Call us to share your thoughts toll-free at 1-855-720-2892.
- Email your thoughts to [info@nrwc.ca](mailto:info@nrwc.ca).
- Visit us at the final Public Meeting for the Renewable Energy Approval process in 2013.
- Visit us on the web at [www.nrwc.ca](http://www.nrwc.ca) for copies of our information boards and for additional project details.

