SUNCOR ENERGY

WIND POWER PROJECT

Welcome

Kent Breeze Wind Power Project

Stantec

We Are Here To:

- Introduce Suncor Energy Products Inc. to the community
- Present the proposed Project and provide a status update
- Provide an overview of the Renewable Energy Approval (REA) process
- Answer questions about the Project and outline next steps
- Receive the community's input and feedback for consideration by the Project Team in Project design and the REA process

Enercon Turbine at Ripley

Who Is Suncor?

- Suncor is one of the largest players in renewable energy in Canada (wind and biofuels)
- With increased demand for energy in this country, we support energy diversification and believe that renewable energy plays an important role in helping us to address air and water quality and provide solutions for greenhouse gas reductions
- We are committed to a “parallel path” for energy development, we build today's oil sands, conventional oil and natural gas resources while also bringing along new sources of energy for tomorrow
- We are dedicated to the safe and responsible development of renewable energy generation and have to date constructed 255 MW of wind power facilities across Canada – AB, SK, ON

Ripley Wind Power Project

The Business of Wind Power

- Suncor's current renewable energy projects (wind and biofuels) are expected to displace the equivalent of nearly 1 million tonnes of carbon dioxide yearly
- This is equal to the annual tailpipe emissions of approximately 200,000 cars
- Suncor's 6 producing wind farms are expected to generate enough electricity to power 100,000 homes

Project Name	Commissioning Date	Location	Capacity	Number of Turbines	Technology
SunBridge Wind Power Project	2002	Saskatchewan	11MW	17	660 kW Vestas turbines
Magrath Wind Power Project	2004	Alberta	30MW	20	1.5 MW General Electric turbines
Chin Chute Wind Power Project	2006	Alberta	30MW	20	1.5 MW General Electric turbines
Ripley Wind Power Project	2007	Ontario	76MW	38	2 MW Enercon turbines
Kent Breeze Wind Power Project	2011	Ontario	20MW	8	2.5 MW General Electric turbines
Wintering Hills Wind Power Project	2011	Alberta	88MW	55	1.6 MW General Electric turbines

Suncor Projects Under Development in Ontario

Project Name		Contract	Location	Capacity
Adelaide Wind Power Project		Feed-In-Tariff (FIT)	Middlesex County	Up to 40 MW
Camlachie Wind Power Project		No	Lambton County	Up to 20 MW
Cedar Point Wind Power Project	Phase I	No	Lambton County	Up to 50 MW
	Phase II	Feed-In-Tariff (FIT)	Lambton County	Up to 100 MW

Recently erected wind turbine at Kent Breeze Wind Power Project

- Suncor has been developing three projects in Ontario
- Adelaide and Cedar Point Phase II are currently the only projects that have received a contract to deliver electricity to the Province
- Suncor continues to develop the Camlachie and Cedar Point Phase I project however contracts have not been awarded for these projects at this time

The Project

- Suncor is proposing to develop the Suncor Energy Cedar Point Wind Power Project (the Project)
- The Project was awarded a Feed-In-Tariff (FIT) contract with the Ontario Power Authority (OPA) on July 4, 2011
- The FIT Contract was for up to 100 MW which could consist of up to 62 wind turbines
- The number of turbines will be dependent upon final selection of make and model of the wind turbine most appropriate for the Project
- Additional components include; meteorological towers, access roads, electrical collector lines, substation, transmission line, and switching facility

Recently erected wind turbines at Ripley Wind Power Project

Draft Site Plan

- The draft turbine layout has not yet been completed for this Project
- It is anticipated that the draft site plan will be available in the next couple of months
- When the draft site plan is available Suncor will hold another Public Meeting to show the draft project layout to the community and solicit feedback
- Notices will be posted in local newspapers and sent to the project mailing list to announce the date, time and location of the Draft Site Plan Public Meeting
- We appreciate your patience as we navigate through the development process

Ripley Wind Power Project

Why This Location?

- Good wind regime
- Compatible land uses – agricultural land
- Landowner interest – 192 parcels participating
- Electrical interconnection – agreement with the Ontario Power Authority to feed power into the local grid
- Environment – based on studies to date, there will be a minimal impact on wildlife and natural features
- Local economic benefit – construction jobs, municipal tax revenue, supplemental income for farmers on participating lands
- Site access – good existing road infrastructure
- Accessible topography

First GE 2.5 MW turbine in North America - Kent Breeze Wind Power Project

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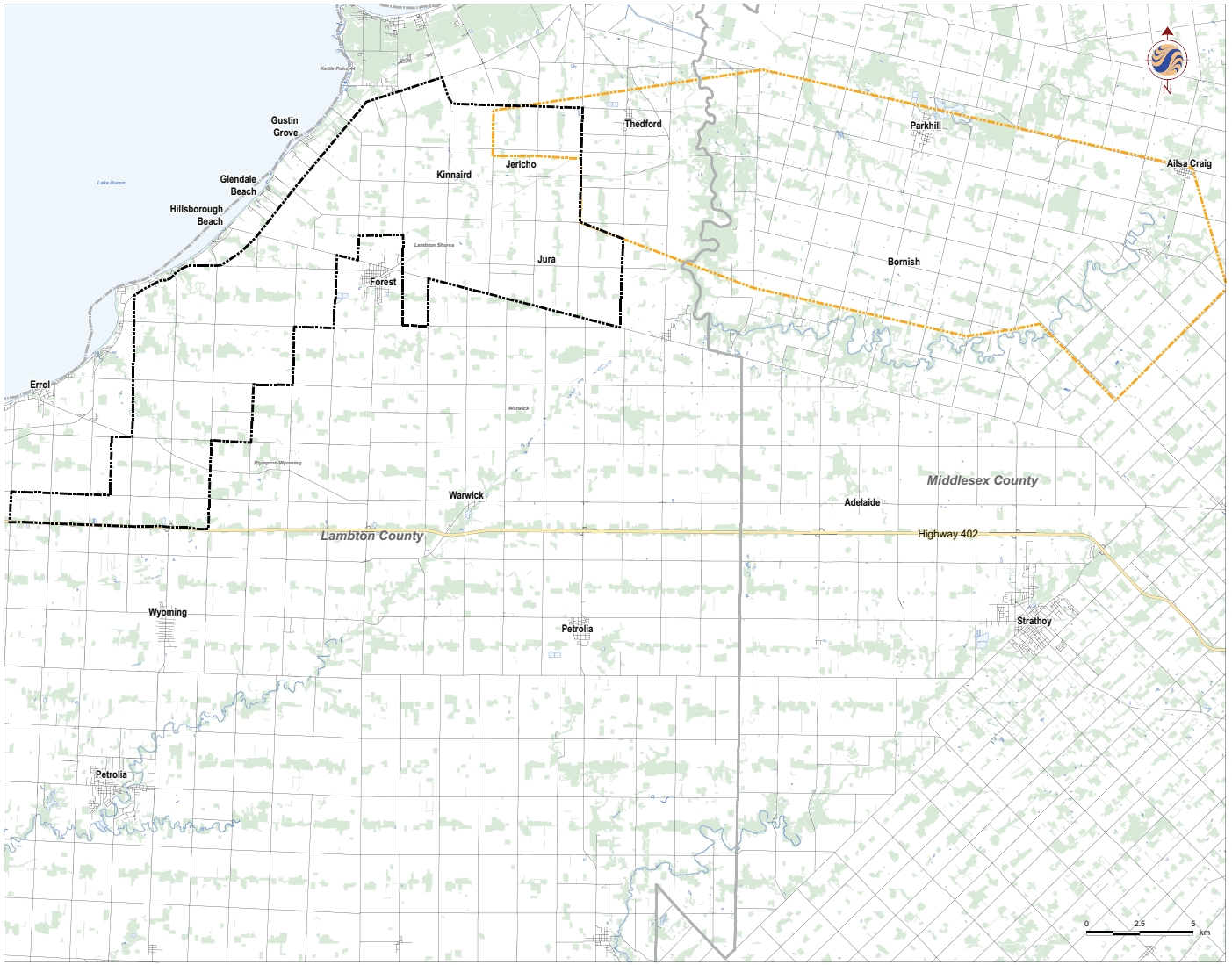
WIND POWER PROJECT

Project Boundary



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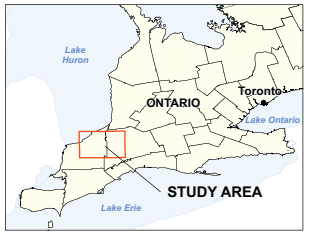
Revised: 2012-04-13 By: dharvey

Legend

- Wind Project Boundary
- Transmission Routing Area
- Expressway / Highway
- Road
- Wooded Area
- Watercourse
- Waterbody
- Municipal Boundary



Notes

1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2011.

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April, 2012
160960709

Client/Project
Suncor Energy
Cedar Point Wind Power Project

Figure No.
1.0

Title
Project Boundary

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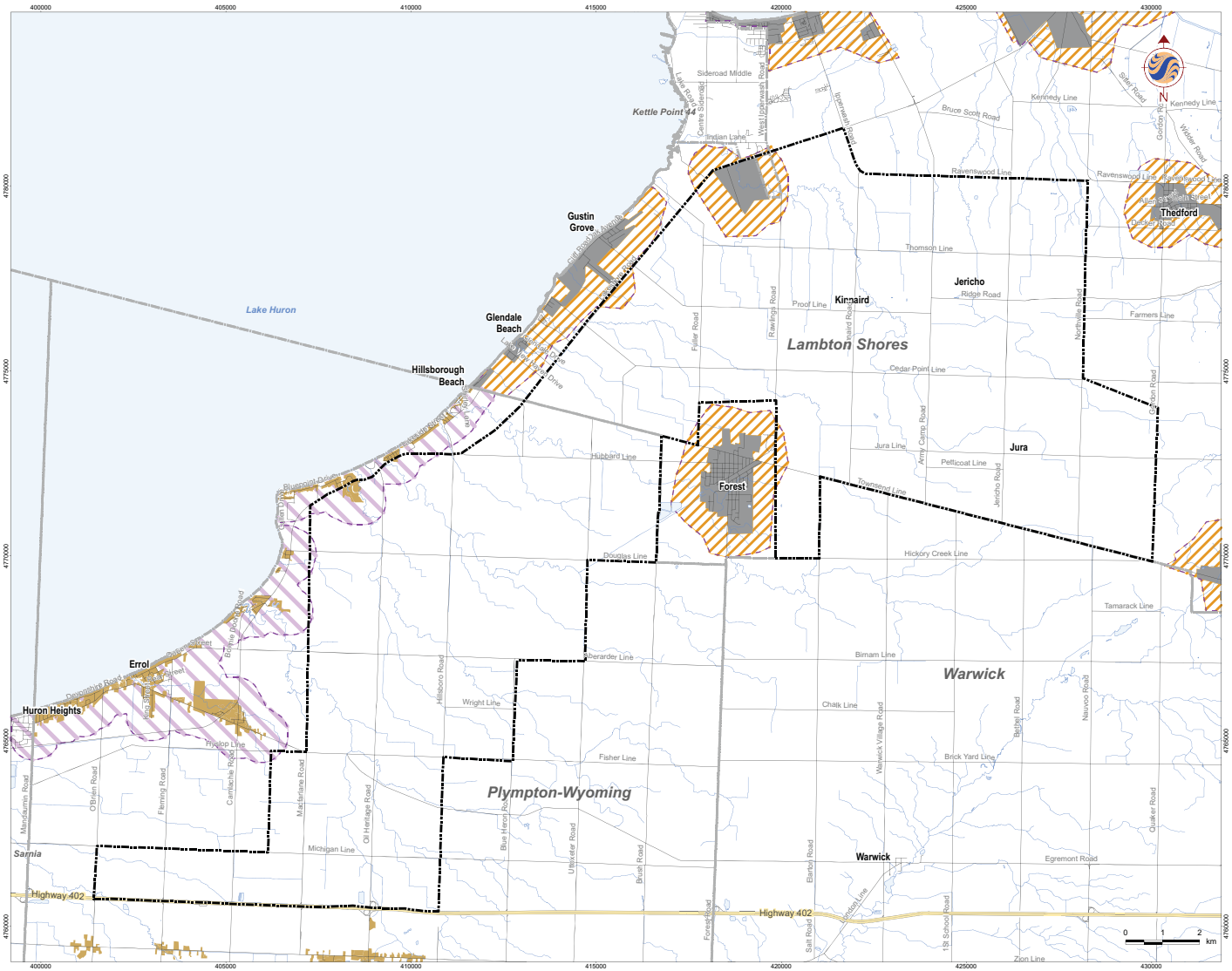
Provision for Urban Expansion



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Revised: 2012-04-13 By: dharvey

Legend

- Wind Project Boundary
- Expressway / Highway
- Road
- Municipal Boundary
- Watercourse
- Waterbody
- Provision For Urban Expansion

Municipality of Lambton Shores

Official Plan Schedule C

- Areas where Commercial Wind Turbines will not be Permitted
- 0.6 km Buffer

Municipal Exclusion Areas (Plympton- Wyoming)

- 0.6 km Buffer
- Urban Settlements

Notes

1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2011. ©Lambton Shores, 2012.

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Client/Project
Suncor Energy
Cedar Point Wind Power Project

Figure No.
2.0

Title
Wind Project Area

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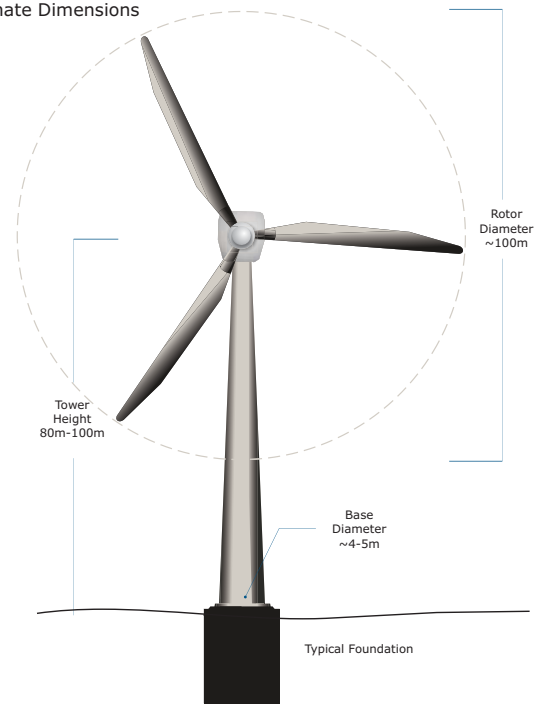
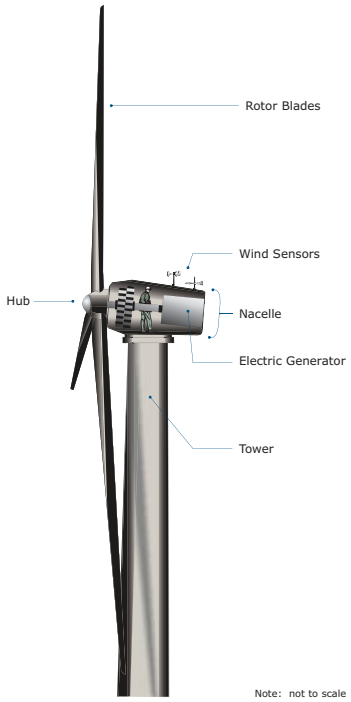
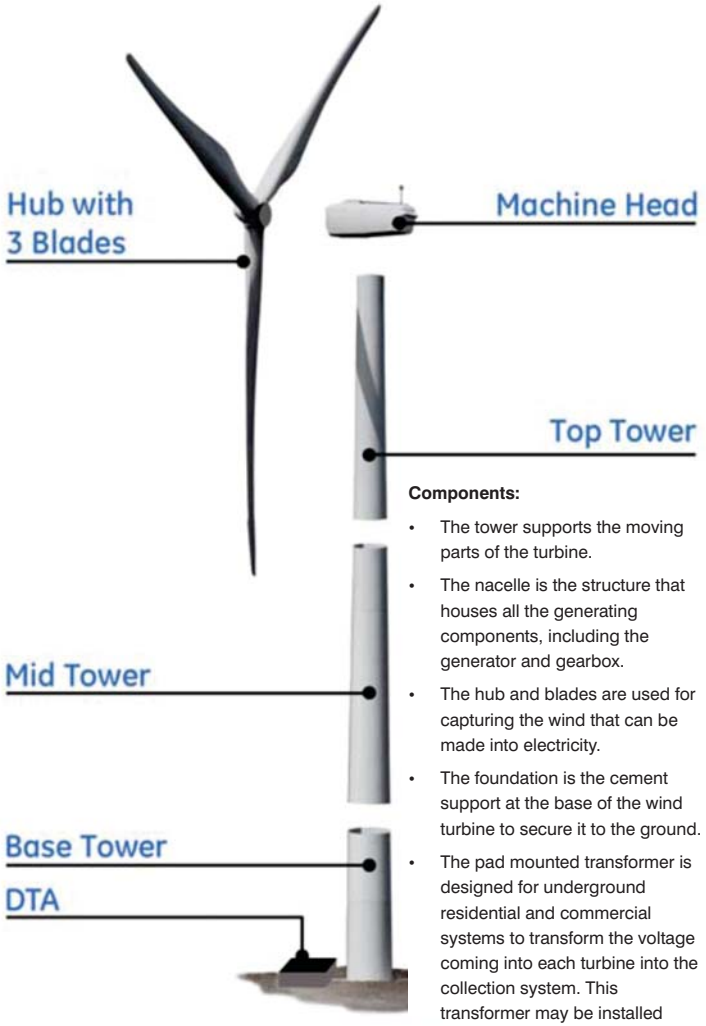
Wind Turbine Details

- The wind turbine manufacturer has not yet been selected, therefore the number of turbines has not yet been decided:
  - Number of turbines: Up to 62
  - Maximum nameplate capacity: 100 MW
  - Maximum Tower Height (both hub and blade length): 156 m
  - Maximum Rotor Diameter: 113 m

Approximate Dimensions





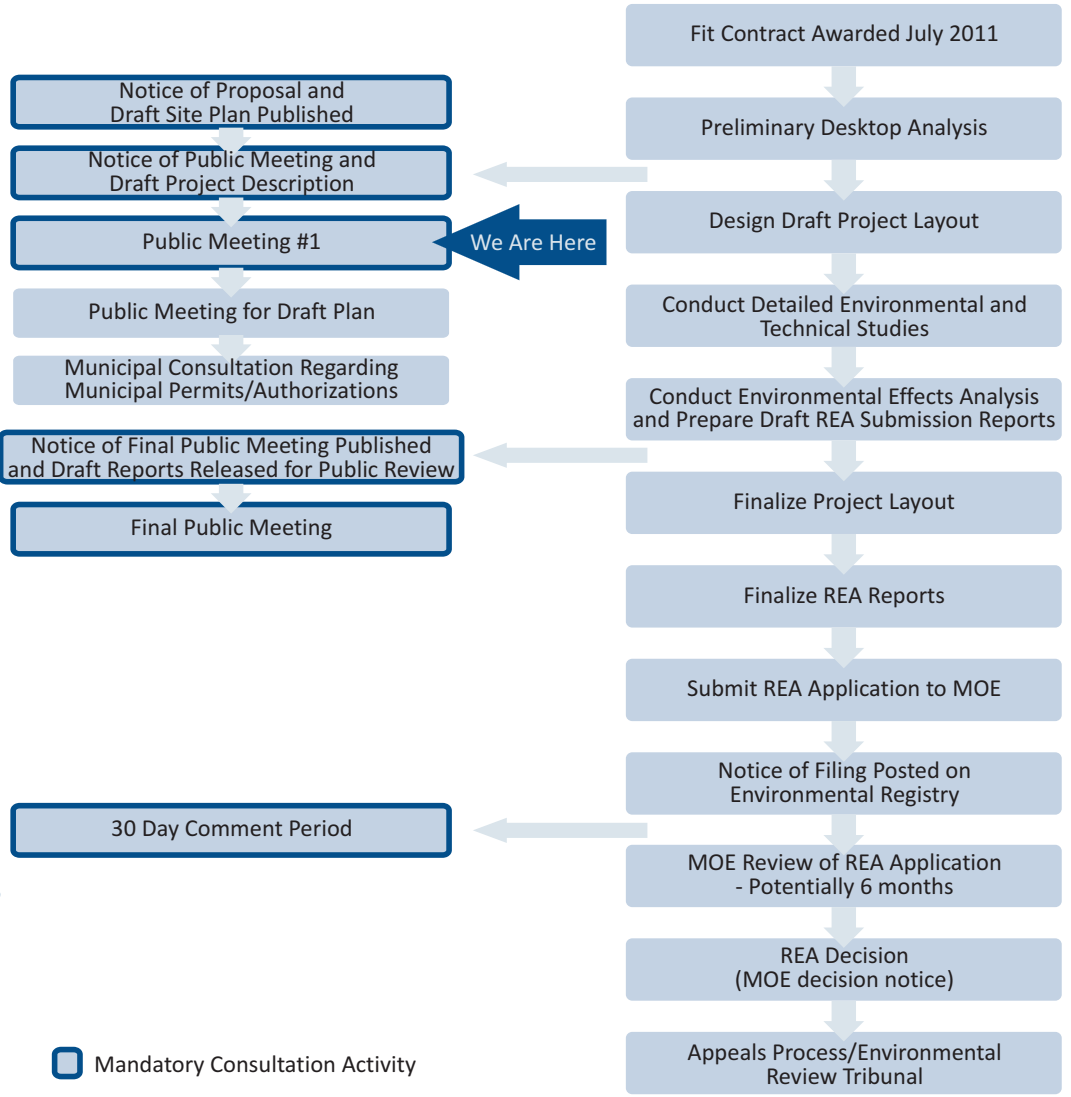


Components:

- The tower supports the moving parts of the turbine.
- The nacelle is the structure that houses all the generating components, including the generator and gearbox.
- The hub and blades are used for capturing the wind that can be made into electricity.
- The foundation is the cement support at the base of the wind turbine to secure it to the ground.
- The pad mounted transformer is designed for underground residential and commercial systems to transform the voltage coming into each turbine into the collection system. This transformer may be installed within the base of the steel tower on some turbine models.

Renewable Energy Approval Process

- The *Green Energy and Green Economy Act (GEA)*, and related amendments to other provincial legislation, received Royal Assent in the Ontario Legislature on May 14, 2009
- The Project will require a Renewable Energy Approval (REA) according to Ontario Regulation 359/09 (REA under Part V0.1 of the Act) under the *Environmental Protection Act*
- This regulation became law on September 24, 2009, was amended on January 1, 2011, and replaces the previous *Ontario Environmental Assessment Act* process for wind projects
- Suncor is planning on submitting our REA application by the end of the year



Municipal Control

Key Permit / Authorization	Rationale	Timing
Municipal Consultation Form	To be provided to each municipality in which the project is located. To bring forward issues related to municipal serving and infrastructure that the proponent must consider	30 days before the first Public Meeting
Municipal Review of Draft Renewable Energy Approval (REA) Reports	Provide additional time for the municipality to review the REA documents and provide comment	90 days before the final Public Meeting
Municipal Consent, Work within the municipal R.O.W	Required for works in municipal road allowances	Before construction
Road Cut Permit	May be required for access roads from county roads or works to county roads	Before construction
Pre-Condition Road Survey	Assessment of pre-construction road conditions for engineering staff	Before construction
Building Permit	Compliance with building codes	Before construction
Entrance Permit	Entrance from county roads	Before construction
Transportation Plan	Adherence to road safety and suitability	Before construction
Additional Plans related to general engineering (e.g. siltation control, lot grading, plan of services, storm water, transportation, etc.)	Required supporting information/plans	Before construction
Municipal Road Right of Way Requisition Agreement	Establish requirements to return roads to agreed upon state	Before construction

Renewable Energy Approval Process Setbacks

- A key component of the Renewable Energy Approval (REA) process is the establishment of common setbacks for all renewable energy facilities in the Province
- Where Project related infrastructure will be located within the setback distances for environmental features, additional analysis (i.e., Environmental Impact Study) will be provided in the REA application
- Key setbacks that will be applied throughout the design of the Project are as follows:

Feature	Setback Distance
Non-participating dwelling, school, etc.	40dBA and minimum 550 m (from centre of turbine base)
Public road right-of-way and railway right-of-way	Turbine blade length + 10 m (from centre of turbine base)
Property line	Turbine height (excluding blades) (from centre of turbine base)
Provincially significant wetland (PSW)	120 m (development prohibited within PSW)
Provincially significant Area of Natural and Scientific Interest (Earth Science)	50 m
Provincially significant Area of Natural and Scientific Interest (Life Science)	120 m
Significant valleyland	120 m
Significant woodland	120 m
Significant wildlife habitat	120 m
Lake or a permanent or intermittent stream	120 m from the average annual high water mark
Seepage area	120 m

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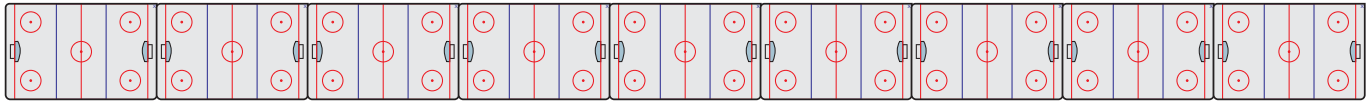
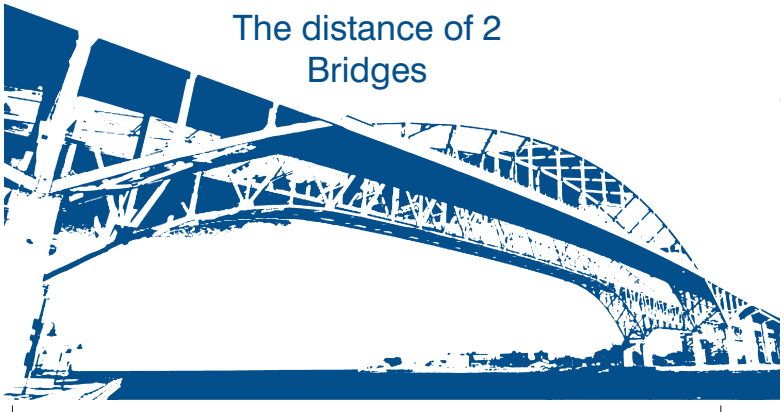
Turbine Setback Distances

Distance from a Wind Turbine to a house 550m

550m

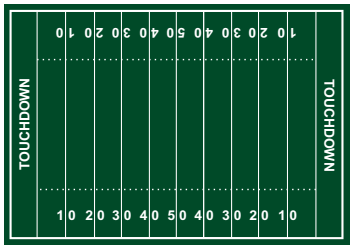


The distance of 2 Bridges



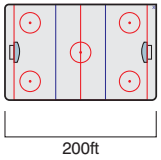
Bluewater Bridge 281m

The distance of more than 4 CFL Football Field's



Football Field 137m

The distance of more than 9 NHL Hockey Rink's



Hockey Rink 60m

*Scale is Approximate.

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Reports Included in a Renewable Energy Approval Application

- **Project Description Report** (a working Draft is already posted on the Project website) – provides an overview of the Project
- **Construction Plan Report** – describes the activities associated with construction and identifies any potential effects resulting from construction of the project
- **Design and Operations Report** – describes the activities associated with operation of the project and identifies any potential effects resulting from operation of the project
- **Noise Study Report** – Ensures the project is in compliance with noise regulations
- **Natural Heritage Assessment & Environmental Impact Study** (includes technical studies for wildlife and wildlife habitat) – identifies potential effects on natural environment
- **Consultation Report** – Demonstrates how Suncor engaged with various stakeholders through the development of the project
- **Archaeological and Cultural Heritage Report** – identifies potential effects on archaeological or cultural heritage resources
- **Water Body and Water Assessment Report** – identifies potential effects on streams, rivers, seepage areas and lakes
- **Wind Turbine Specifications Report** – describes the turbine technology selected for the project
- **Decommissioning Plan Report** – describes the activities associated with decommissioning the project and identifies any potential effects resulting from decommissioning the project

All reports, with the exception of the Consultation Report, will be made available in draft form for public review and comment at least 60 days prior to the Final Public Meeting. Notification of the release of the draft reports will be provided in newspapers and on the Project website

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Natural Heritage Assessment

- The Natural Heritage Assessment is made up of 3 to 4 components: Record Review, Site Investigation, Evaluation of Significance, and Environmental Impact Assessment (if applicable)
- Currently, the Record Review for the Project has been completed
- The Site Investigation has been underway since September, 2011
- For the Records Review background data were collected and reviewed to identify natural features located in or within 120 m of the Project Location
- The results of the Record Review are as follows:

Natural Feature	Result
Wetlands	• No provincially significant wetlands were identified within 120 m. • Site investigations are underway to identify previously unknown wetland features.
Woodlands	• 118 woodlands of at least 4 ha in size in the Project Boundary. • 44 were identified within 120m. • Site investigations are underway to confirm presence and boundaries of woodlands.
Valleylands	• No valleylands are present within 120 m of the Project Location.

Wildlife Habitat	The following natural features have either been confirmed or have the potential to be found within 120 m of the Project Location.
	• Seasonal concentration areas
	  • Colonial bird nesting sites
	  • Waterfowl stopover, staging & nesting sites
	  • Winter raptor feeding & roosting areas
	  • Reptile hibernacula
	  • Bullfrog concentration areas
	  • Winter Deer yards
	  • Shorebird migratory stopover areas
	  • Handbird migratory stopover areas
	  • Migratory butterfly stopover areas
	  • Bat maturnity roosting areas
	• Rare vegetation communities or specialized habitats
	  • Habitats of forest bird species
	  • Old growth or mature forest stands
	  • Foraging areas
	  • Amphibian woodland breeding ponds
	  • Turtle nesting habitat
	  • Specialized raptor nesting habitat
	  • Mink denning sites
	  • Cliffs
	  • Seeps and springs
	• Species of conservation concern
	  • Rare species & declining bird populations
	• Animal movement
	  • Hedgerows
	Site investigations are underway to confirm presence and boundaries of candidate significant wildlife habitat.

Areas of Natural & Scientific Interest (ANSI)	• No Life Science ANSIs were identified within 120 m of the Project Location. • No Earth Science ANSIS were located within 50 m of the Project Location.
Natural Features in Specified Provincial Plan Areas	• The Project is not located within any provincial plan areas.
Provincial Parks and Conservation Areas	• There are no provincial parks or conservation reserves within 120 m of the Project Location.

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Archaeological Assessment

- A Stage 1 Archaeological Assessment (a desktop archaeological study) was completed to determine the archaeological potential for both Pre-Contact Aboriginal and Euro-Canadian cultural remains within the Project Location
    - The results of the Stage 1 indicated that further archaeological studies would be required
- A Stage 2 Archaeological Assessment began in the Spring of 2011. The Stage 2 field assessment is intended to provide an inventory of archaeological sites on the proposed lands to be impacted by the Project
- Once complete the results of the Stage 2 will determine whether a Stage 3 Archaeological Assessment is required
- Findings from the archaeological assessments will be considered in the Project design to minimize impacts as much as possible

Within the Suncor Adelaide Wind Power Project Boundary

- Upon completion the Archeological Assessment Reports will be submitted to the Ministry of Tourism, Culture, and Sport for acceptance into the Ontario Public Register of Archeological Reports

Project Schedule Overview

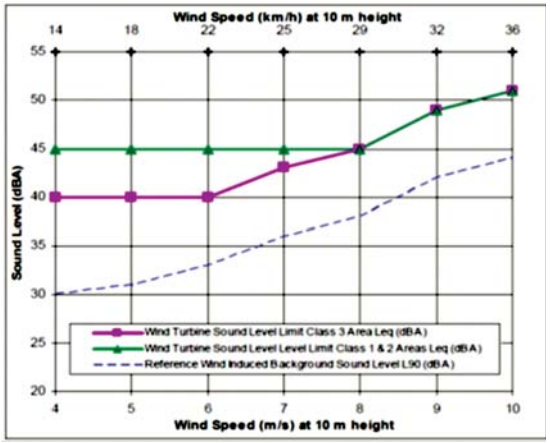
Activity	Dates
REA Technical Studies and Consultation	2011 and 2012
Notice of Proposal	March 2012
Public Meeting #1	April 2012
Public Meeting - Draft Site Plan	Summer 2012
Consultation with Municipality - Permits/Authorizations	Summer/Fall 2012
Draft REA Reports to Public	Summer/Fall 2012
Public Meeting #2	Fall 2012
REA Submission	Fall/Winter 2012
Start of Construction	Summer 2013
Commercial Operation Date	Summer 2014
Repowering/Decommissioning	Approximately 20 years after COD

Acronyms:
REA – Renewable Energy Approval
COD – Commercial Operation Date

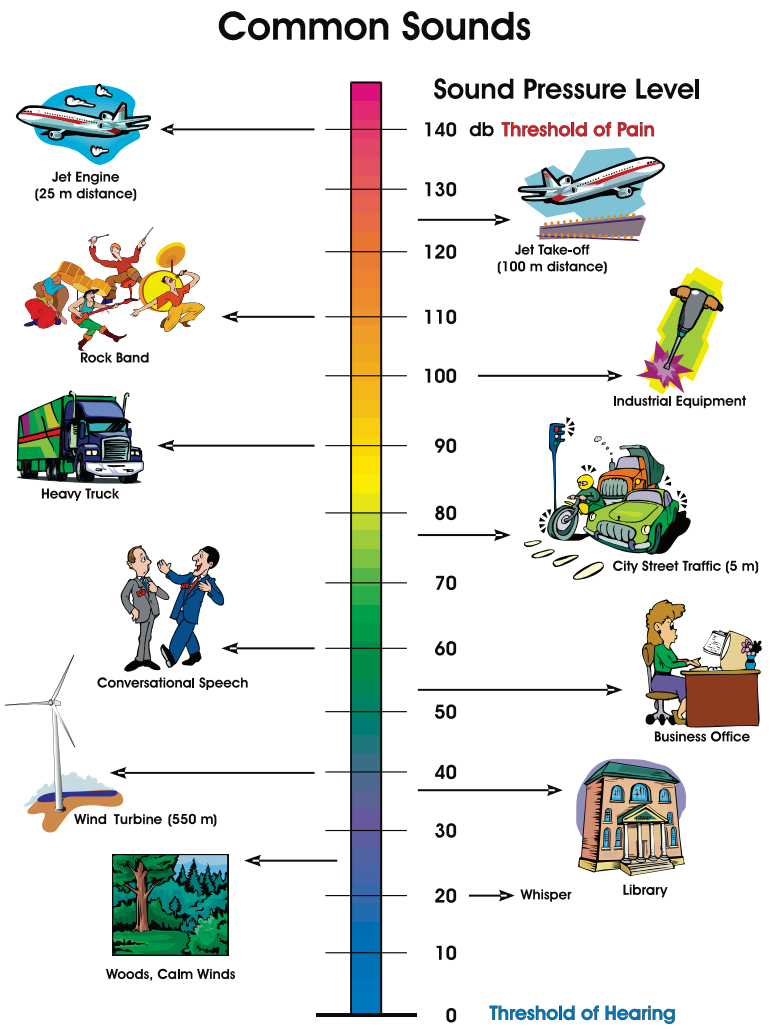
Preparation of rotor installation - Wintering Hills Wind Power Project

Typical Sound Levels and Wind Farms

- There are two potential sources of sound typically associated with wind turbines:
  - **Aerodynamic** - blades pass through the air and create a "swishing" sound
  - **Mechanical** – originated from the gearbox and generator that are housed in the nacelle
- A project this size requires a Noise Assessment Report be completed to ensure the project complies with Ministry of Environment requirements
- The Noise Assessment will consider other operational or proposed wind facilities within a 3 km radius of a proposed turbine location
- Turbines have been and will continue to be sited to ensure compliance with Ministry of Environment requirements, including being located a minimum of 550 m from non-participating receptors (residents)



Source: Table taken from the Ministry of Environment Noise Guidelines for Wind Farm October 2008.



Source: Suncor

- The Project is located in a Class 3 area, which is defined as "a rural area with an acoustical environment that is dominated by natural sounds having little or no road traffic" as per the MOE Noise Guideline

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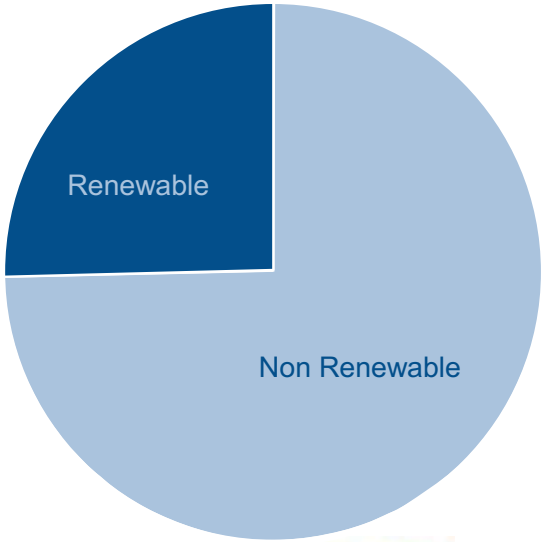
Ontario Power Supply Mix

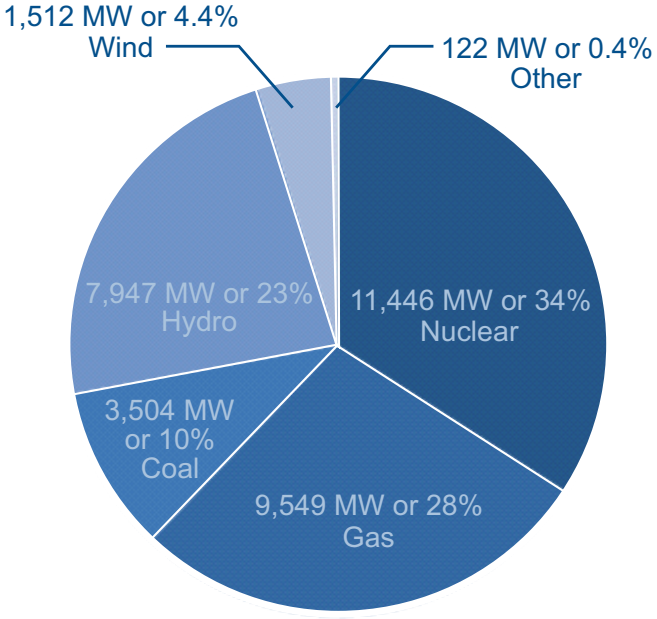
Ontario Installed Supply Capacity*

2009



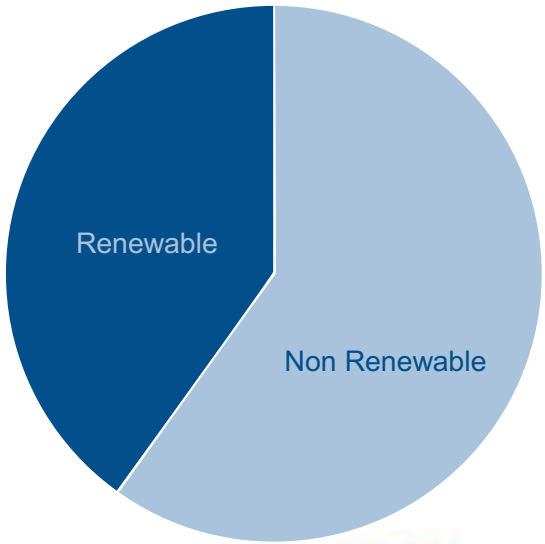
Ontario Supply Mix**

2012



Projected Ontario Installed Supply Capacity*

2014



** From OPA 15899_Ontarios_Renewable_Energy_Feed-In_Tariff_Program.pdf*
*** based on IESO January 31, 2012 Supply Mix*

Community Benefits

- Job creation
- New local investment
- Secondary source of income for farmers and landowners
- Additional tax payments to local municipalities (for a 100 MW project approximately $175,000/yr)
- Small project footprint
- Provide a new supply of safe, clean and reliable electricity
- Helps meet Ontario's commitment to renewable energy and phasing out of coal-fired power plants to reduce healthcare costs

Within the Suncor Cedar Point Wind Power Project Boundary

Environmental Benefits

- It's operation is pollution free
- It doesn't contribute to smog or acid rain
- It utilizes a completely renewable resource which is free
- Generating electricity from wind leaves behind no hazardous or toxic wastes and does not contribute to climate change
- Zero emissions – helps meet forecasted energy supply requirements while reducing greenhouse gas levels

Environmental Impact of Electricity Sources

	Wind	Nuclear	Coal	Natural Gas
Global Warming Pollution	None	None	Yes	Yes
Air Pollution	None	None	Yes	Limited
Mercury	None	None	Yes	None
Mining / Extraction	None	Yes	Yes	Yes
Waste	None	Yes	Yes	None
Water Use	None	Yes	Yes	Yes
Habitat Impacts	Yes	Yes	Yes	Yes

Source: AWEA/fact sheets/Wind Energy and Wildlife/If not wind, then..?

WIND POWER PROJECT

Health and Wind Power

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

- Many studies have been conducted world-wide to examine the relationship between wind turbines and possible human health effects
- In Ontario "Ontario doctors, nurses, and other health professionals support energy conservation combined with wind and solar power – to help us move away from coal"

  Ontario College of Family Physicians, Registered Nurses Association of Ontario, Canadian Association of Physicians for the Environment, Physicians for Global Survival, the Asthma Society of Canada, and the Lung Association
- 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, the report states that there is no scientific evidence to date that vibration from low frequency wind turbine noise causes adverse health effects
- Overall, health and medical agencies agree that sound from wind turbines is not loud enough to cause hearing impairment and is not causally related to adverse effects*
- Scientists and medical experts around the world continue to publish research in this area. Through our health consultants, Suncor Energy is committed to keeping informed on this issue

*e.g., Chatham-Kent Public Health Unit, 2008; Minnesota Department of Health, 2009; Australian Government, National Health and Medical Research Council, 2010; Australian Government, 2011, Massachusetts Department of Environmental Protection (MassDEP) and Massachusetts Department of Public Health (MDPH), 2012

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Construction at Suncor's Wintering Hills Wind Power Project

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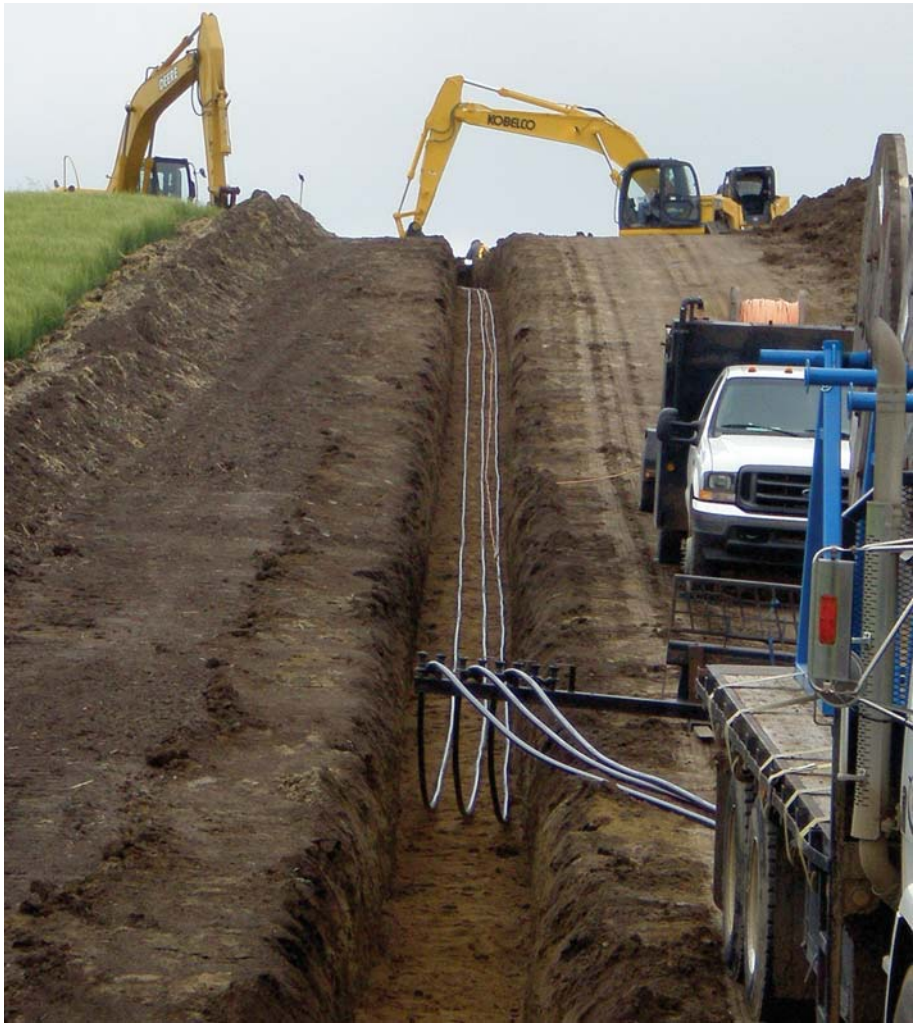
Construction at Suncor's Wintering Hills Wind Power Project



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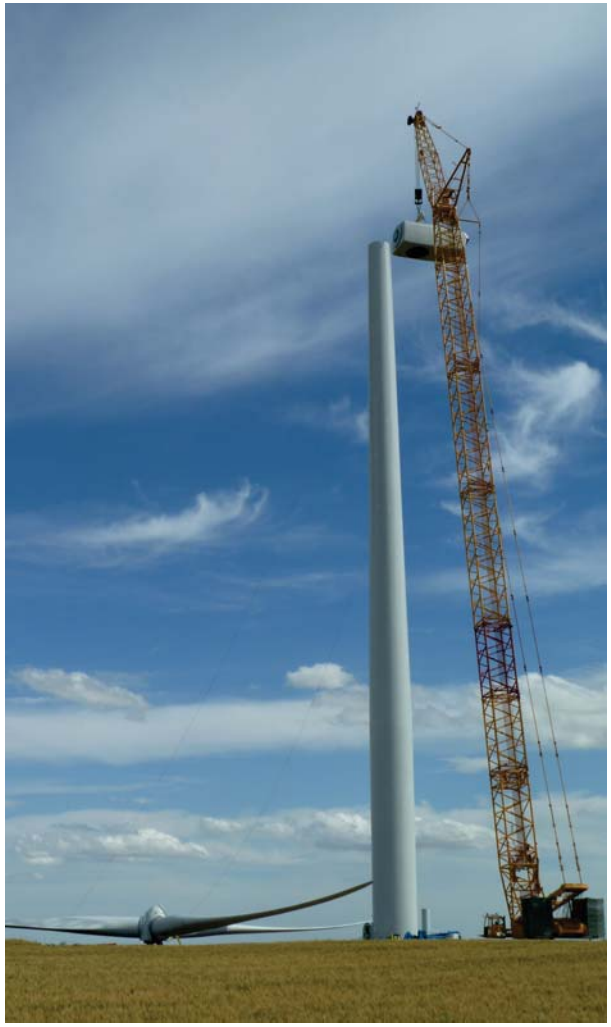
Construction at Suncor's Wintering Hills Wind Power Project



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Construction at Suncor's Wintering Hills Wind Power Project

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Suncor's Ripley Wind Power Project

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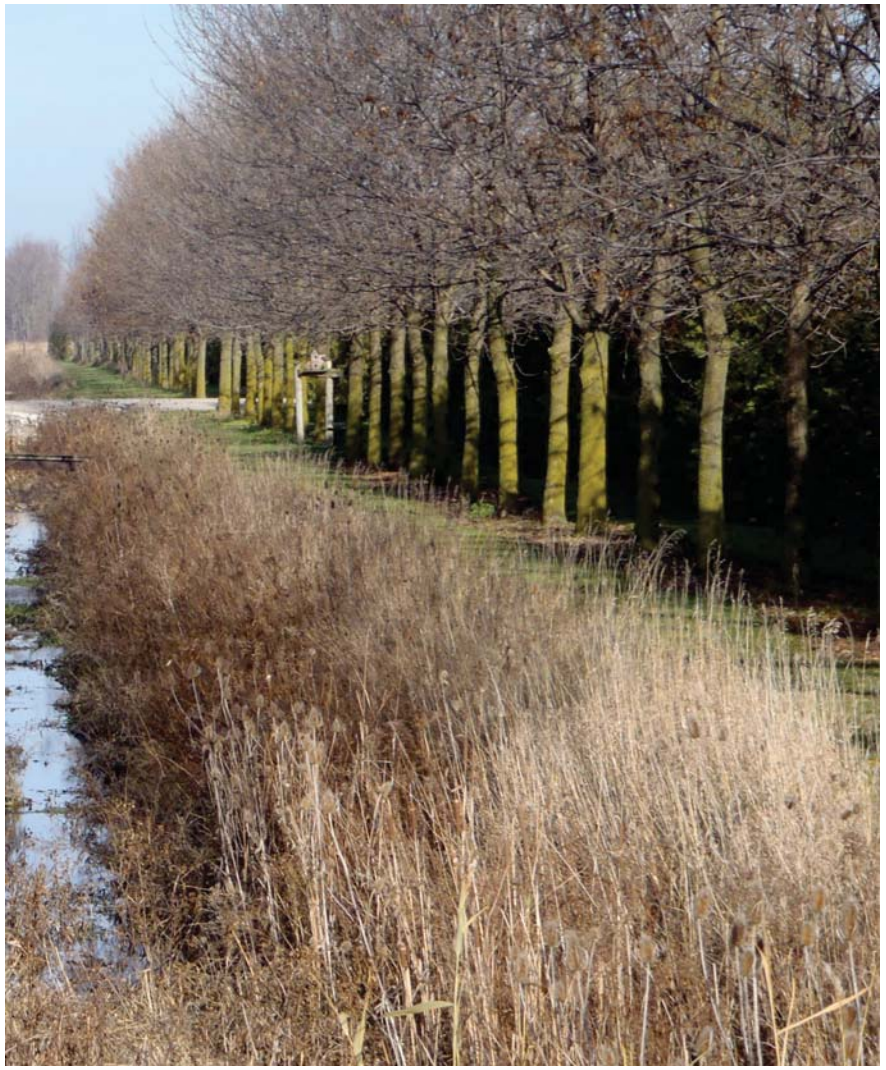
How to have your Questions Answered:

- Ask the Project Team
- Fill out a Comment Card and hand it in or mail it back a postage paid postcard
- Take time to read the information panels around the room
- Review the Studies and Reports available on the tables and on the Project Website
- Visit the Project Website: www.suncor.com/cedarpoint
- Send us an email: cedarpoint@suncor.com
- Give us a call: 1-866-344-0178
- Mail us a letter: Suncor Energy
  P.O. Box 2844,150 6th Ave SW
  Calgary, AB
  Canada, T2P 3E3



Within the Suncor Cedar Point Wind Power Project Boundary

Within the Suncor Adelaide Wind Power Project Boundary

Thank You

Thank you for attending our Project Open House

We appreciate you taking the time to come and learn about our Project

If you would like to be added to the Project mailing list please sign in at the front