

# East Durham WIND ENERGY CENTRE NEWS

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## WELCOME

As you may be aware, East Durham Wind, Inc., a subsidiary of NextEra Energy Canada, was selected by the Ontario Power Authority (OPA) to develop a wind energy project in Grey County. This newsletter is an opportunity for us to introduce ourselves and share regular updates on the proposed East Durham Wind Energy Centre.

The wind turbines will be located on privately-owned land in the Municipality of West Grey, to generate clean, renewable energy, producing no air pollutants and allowing landowners to use their land as they did before.

In July 2011, the OPA awarded a Feed-in-Tariff (FIT) contract, a 20 year agreement for the sale of clean power, to NextEra Energy Canada for the East Durham Wind Energy Centre. While the contract to sell electricity has been secured, the approval process to build the facility is ongoing. You may have seen our teams conducting environmental field studies as we prepare to submit our Renewable Energy Approval (REA) application.

While wind is a safe and reliable energy source that makes sense for Ontario, we are aware there are many complex issues that require ongoing consideration and discussion. We are committed to continuing to work closely with the Grey County community. **Your voice counts and your opinion matters** – we hope this and future newsletters provide valuable information, but we also encourage you to share any comments, questions or suggestions for topics you would like to see included in future newsletters.

Kind regards,

Laura Cantave  
Project Director  
East Durham Wind Energy Centre

## CONTACT US

For more information or to contact us directly:

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## ABOUT NEXTERA ENERGY CANADA

- NextEra Energy Canada is a subsidiary of NextEra Energy Resources, LLC, the largest generator of wind energy in North America.
- NextEra Energy Resources operates 90 wind projects in 3 provinces and 17 states with more than 8,800 wind turbines providing over 8,500 megawatts of generation.
- NextEra Energy Resources is focused on developing clean, renewable energy and approximately 95 per cent of our electricity comes from clean or renewable sources.



We value your privacy. Information will be collected and used in accordance with the Freedom of Information and Protection of Privacy Act, and will be maintained on file for use during the planning process for the proposed wind centres.

# ABOUT THE EAST DURHAM WIND ENERGY CENTRE

## LOCATION:

The East Durham Wind Energy Centre will be located on private land in the Municipality of West Grey, Southwestern Ontario.

This location has been specifically chosen because of the site's potential to capture energy from wind at minimal impact to the local community and environment.

As we move forward, we are committed to incorporating the highest standards in design and will ensure factors related to health, the natural environment, and local economy are considered as part of our planning and construction processes.

## ECONOMIC BENEFITS:

For Grey County, we anticipate the project will have a positive economic impact over its 20 year lifespan - driving jobs, salaries, increased tax revenues and business activity for other industries in the area.

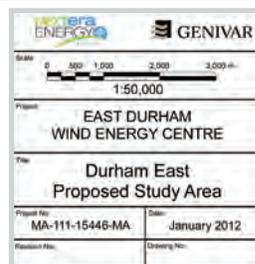
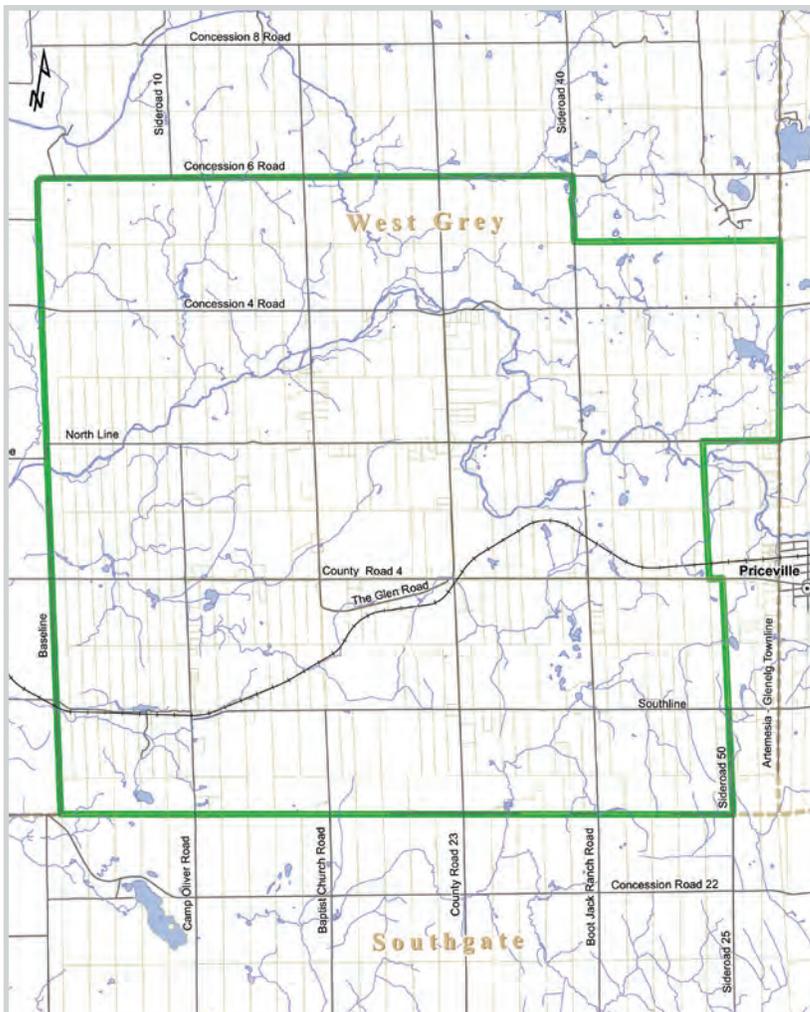
We estimate the proposed project will contribute \$14.6 million in corporate income tax and over a \$1 million in property taxes to the local County in addition to approximately \$4 million in landowner payments.

## QUICK FACTS:

- We anticipate the East Durham Wind Energy Centre will generate up to 23 megawatts utilizing up to 14 wind turbines.
- At maximum capacity, this will produce enough energy to power approximately 7,000 homes in Ontario.
- We estimate the project will create 150 construction jobs and 2-3 full time and local operations jobs.

## PROJECT STATUS:

During the spring and summer we will be conducting archeological and biological field studies as part of the REA process. Reports that describe what has been done to date will be available this autumn on [www.NextEraEnergyCanada.com](http://www.NextEraEnergyCanada.com).



# FREQUENTLY ASKED QUESTIONS

In our conversations with community members, we are often asked questions that are relevant to the entire community – we have answered some commonly asked questions below. If you have any additional questions or would like any further information, please do not hesitate to contact us.

**Q: WHAT IMPACT DO WIND TURBINES HAVE ON OUR HEALTH?**

**A:** NextEra takes concerns about human health very seriously.

Although much has been written about health effects associated with wind turbines, we have found no credible, scientifically peer-reviewed study that demonstrates a link between wind turbines and negative health effects.

In May 2010, the Chief Medical Officer of Health of Ontario conducted a report titled *“The Potential Health Impacts of Wind Turbines”* which states<sup>1</sup>:

“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, and there is no scientific evidence to date that vibration from low frequency wind turbine noise causes adverse health effects.”

In *“Health effects and wind turbines: A review of the literature”*, Canadian based Loren D. Knopper and Christopher Ollson state:

“To date, no peer reviewed articles demonstrate a direct causal link between people living in proximity to modern wind turbines, the noise they emit and resulting physiological health effects.”<sup>2</sup>

Canadian Wind Energy Association’s *“Wind Turbine Sound and Health Effects: An Expert Panel Review”* states:

- Sound from wind turbines does not pose a risk of hearing loss or any other adverse health effect in humans;
- Sub-audible, low frequency sound and infrasound from wind turbines do not present a risk to human health;
- Some people may be annoyed at the presence of sound from wind turbines. Annoyance is not a pathological entity; and
- A major cause of concern about wind turbine sound is its fluctuating nature. Some may find this sound annoying, a reaction that depends primarily on personal characteristics as opposed to the intensity of the sound level.<sup>3</sup>

**Q: DO WIND TURBINES CAUSE SHADOW FLICKER?**

**A:** When the sun is in a particular position behind a turbine, and there is no cloud cover, rotating wind turbine blades may cast shadows in the windows of neighboring properties creating what is known as a ‘flickering’ effect. Ontario’s 550m minimum setback from non-participating homes helps minimize this effect, but it may not completely remove it. This phenomenon can be very easily predicted and, if necessary, mitigated by planting trees or installing awnings in the line of sight.

Fundamentally, shadow flicker is an aesthetic rather than a safety issue, but we recognize that it could be disruptive. NextEra will have a construction and operations communication program in place to address any concerns related to the projects, should they arise.

**Q: WILL THIS PROJECT AFFECT THE PROPERTY VALUES OF OUR HOMES?**

**A:** Multiple studies<sup>4</sup> have found that there are not significant changes to property values of homes caused by the existence of a wind facility in the area.

According to the 2010 study *Effect on Real Estate Values in the Municipality of Chatham-Kent, Ontario*:

“In the study area, where wind farms were clearly visible, there was no empirical evidence to indicate that rural residential properties realized lower sale prices than similar residential properties within the same area that were outside of the viewshed (the area in which the turbines can be seen) of a wind turbine. **No statistical inference to demonstrate that wind farm negatively affect rural residential market values in Chatham-Kent was apparent in this analysis.”**

**Q: HOW LOUD ARE WIND TURBINES?**

**A:** With the evolution of modern wind turbine technology, the mechanical noise from the turbine is almost undetectable. Turbines only run when the wind is blowing and the sound of the wind masks most of the noise.

What’s more, wind projects in Ontario are under strict sound guidelines, as prescribed by the Ministry of the Environment. For residences in the area, the East Durham project will be quieter than many common sounds – such as a quiet room.

If concerns regarding sound levels arise, we commit to investigating and, if necessary, remedying this situation as soon as possible.

<sup>1</sup> The report can be found at: [http://www.health.gov.on.ca/en/public/publications/ministry\\_reports/wind\\_turbine/wind\\_turbine.pdf](http://www.health.gov.on.ca/en/public/publications/ministry_reports/wind_turbine/wind_turbine.pdf)

<sup>2</sup> The report can be found at: <http://www.ehjournal.net/content/10/1/78>

<sup>3</sup> The report can be found at: [http://www.canwea.ca/pdf/talkwind/Wind\\_Turbine\\_Sound\\_and\\_Health\\_Effects.pdf](http://www.canwea.ca/pdf/talkwind/Wind_Turbine_Sound_and_Health_Effects.pdf)

<sup>4</sup> For example, see: Ernest Orlando Lawrence and Berkeley National Laboratory - *The Impact of Wind Power Projects on Residential Property Values in the United States: A Multi-Site Hedonic Analysis* (Dec 2009) and CanWEA - *Wind Energy Study - Effect on Real Estate Values in the Municipality of Chatham-Kent, Ontario* (Feb 2010)



# THE RENEWABLE ENERGY APPROVAL PROCESS

Proposed wind and renewable energy projects in Ontario must go through an approval process regulated by the Ministry of the Environment and the Ministry of Natural Resources. Under the Renewable Energy Approval (REA) process, a



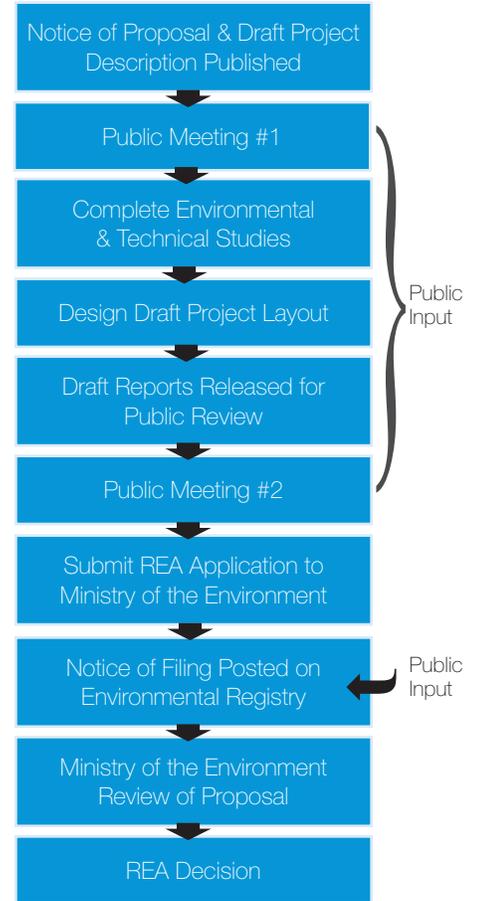
proposed wind project must show that it meets the guidelines as set out by Ontario's Green Energy Act.

As part of the REA process, we are undertaking a number of comprehensive studies that assess how the proposed project will impact the cultural and heritage resources and natural environment as well as the local community.

As part of this, we will be consulting you and your local community as we conduct site studies and set-up public meetings and drop-in sessions. As we move forward, we will improve our design to reduce, eliminate or mitigate potential effects, which may be identified during this process.

When we complete the studies, NextEra Energy Canada will provide the public with the studies 60 days prior to our final public meeting. After receiving comments, we will submit the REA application for review by the Ministry of the Environment. Other agencies, including the Ministry of Natural Resources, the Ministry of Transportation, the Ministry of Tourism, Culture and Sport and local conservation authorities also provide input to the approval process.

## OVERVIEW OF THE APPROVAL PROCESS



## WHY WIND?

The Ontario Government has identified a need to increase clean, renewable energy generation in Ontario through renewable energy projects including solar farms and wind turbines. This is intended to reduce our province's dependence on traditional forms of energy while boosting investment and creating local jobs.

Not only are wind turbines considered 'clean energy' as they help reduce our dependence on fossil fuels without producing harmful waste, greenhouse gases or water emissions, they can also bring a host of benefits to your local community.

While the costs of fuel for many forms of conventional energy are volatile, the cost of wind energy is fixed. This means that once a wind farm is built, the price of electricity is stable for the lifespan of the wind turbine – approximately 20-30 years.

Developments in technology have also resulted in more efficient wind turbine production and the last twenty years has seen the cost of wind-generated electricity drop significantly. On top of this, there has been a threefold

increase in the amount of power wind turbines can generate, making wind an increasingly cost-effective energy resource.

The construction and maintenance of wind turbines also benefits your local community as they stimulate economic growth.

**BY 2018<sup>5</sup>, IT IS ANTICIPATED THAT THE WIND ENERGY SECTOR WILL ATTRACT BILLIONS OF DOLLARS OF PRIVATE INVESTMENTS TO ONTARIO, AND ONCE THE WIND TURBINES ARE INSTALLED AND PRODUCING POWER, MORE THAN HALF OF THIS – APPROXIMATELY \$8.5 BILLION<sup>6</sup> – WILL BE SPENT LOCALLY IN COMMUNITIES ACROSS THE PROVINCE.**

**IN ONTARIO ALONE, LANDOWNERS ARE EXPECTED TO BENEFIT FROM OVER \$1 BILLION IN LEASE PAYMENTS OVER THE 20-YEAR LIFESPAN OF PROJECTS – ENSURING THAT THEY AND THEIR FAMILIES CAN CONTINUE TO RELY ON THE LAND AS A VALUED SOURCE OF INCOME FOR GENERATIONS TO COME.**

potentially take their place, making the cost of wind energy even more economical.

Lastly, wind energy diversifies and increases farmers' incomes as they continue to rely on traditional land use while receiving payments to lease their land.

For these reasons, we believe wind turbines are a win-win situation for all.

<sup>5</sup> ClearSky Advisors

<sup>6</sup> Economic Impacts of the Wind Energy Sector in Ontario