

Frequently Asked Questions about the Innisfil 400 Wind Farm

Environmental Assessment Process	
What sort of Environmental Assessment (EA) Study is done for a wind farm?	<ul style="list-style-type: none"> • Schneider Power Inc. (SPI) initiated the EA process for the Innisfil 400 Wind Farm in 2006, following the Ontario Ministry of the Environment (MOE) guidelines for electricity projects. • Three Public Open Houses (drop-in information centres) were held in Innisfil in 2006 and 2007. • A draft Environmental Impact Statement / Environmental Screening Report (EIS/ESR) was submitted to agencies such as the MOE and Ministry of Natural Resources for their review and comments in June 2007. • Finalization of the EIS/ESR and 30 day public review of the document is expected in the fall of 2008. • Several assessment studies were completed as part of the EA process: <ul style="list-style-type: none"> ○ Noise Assessment – received MOE approval ○ Visual Impact Assessment ○ Avian Assessment ○ Bat Assessment ○ Hydrogeological Assessment ○ Stage 1 and 2 Archeological Assessments ○ Natural Environment Review ○ Phase 1 Environmental Site Assessment ○ Geotechnical Evaluation ○ Shadow Flicker Assessment
Wind Turbine Generator (WTG)	
How many WTG's will there be?	<ul style="list-style-type: none"> • There will be five wind turbines on the site.
How high are the WTG's?	<ul style="list-style-type: none"> • The WTG's range in height from 78m to 108m.
How big is the foundation?	<ul style="list-style-type: none"> • 20m in width and 2.5m in depth
What is the foundation made of?	<ul style="list-style-type: none"> • Concrete.
What is the output of the WTG's (how much energy do they generate)?	<ul style="list-style-type: none"> • Each WTG outputs 2.0MW of energy. The entire wind farm will output 10MW.
How many households can they service?	<ul style="list-style-type: none"> • 5MW services roughly 1,400 homes, therefore the Innisfil 400 Wind Farm should service 2,800 in total.

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Do the WTG's have lights?	<ul style="list-style-type: none"> • Yes – lighting is installed in accordance with NAVCanada and Transport Canada guidelines, while also minimizing impact to birds, bats and humans.
What are the towers made of?	<ul style="list-style-type: none"> • Concrete.
What are the blades made of?	<ul style="list-style-type: none"> • Fiberglass.
Do the WTG's require a lot of maintenance?	<ul style="list-style-type: none"> • No. SPI utilizes full Supervisory Control and Data Acquisition (SCADA) for remote supervisory monitoring and control of each WTG. SCADA also provides capability for full monitoring of the circuit breaker, interconnection with Innisfil Hydro and remote supervisory operation of equipment, as may be required for transfer tripping, and other control functions. • The WTG's are very reliable. Actual servicing of the WTG's will only be required once every few years.
Do you need a transformer station?	<ul style="list-style-type: none"> • Yes. It is located adjacent to the WTG.
Will you build aboveground or underground cables?	<ul style="list-style-type: none"> • Most of our cables will be buried underground (between the WTGs); however, we may upgrade the existing hydro poles – it is dependent on location.
Local Community Concerns	
Can you tell me more about your company?	<ul style="list-style-type: none"> • SPI is a Canadian owned and operated company with a focus on developing renewable energy electricity generation by investing directly in clean energy projects. Considered a leader in wind energy and solar, our project teams and partners have installed wind and solar power farms worldwide. Although we are a young and dynamic company, we can look back at 115 years of experience. • We focus on small-scale, low-impact wind farms and solar projects that minimize impact on local communities, wildlife and the environment. • We are the only electric energy developer in Canada that has been recognized and is an official member of the United Nations Global Compact. We have proven to the highest body in the world that our company has successfully implemented the advancement of responsible environmental planning, corporate citizenship, public accountability and transparency. • Our facilities are certified under the Canadian EcoLogo^M standard for renewable power. We strive to reduce the impact on nature with the least possible intrusion on the landscape, wildlife and waterways. We are proud to provide one of the world's most sustainable forms of electricity and we ensure we not only meet, but also exceed requirements to provide 'clean'

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	power for a growing nation.
Where will this wind farm be located?	<ul style="list-style-type: none"> The wind farm will be located between the City of Barrie and the community of Cookstown, between 5th and 6th Line in the Town of Innisfil, approximately 1km east of Highway 400.
What is this land currently used for?	<ul style="list-style-type: none"> The site is currently used for hay farming and is approximately 285 acres in size.
Does SPI purchase the farm outright?	<ul style="list-style-type: none"> No. SPI enters into a long-term easement agreement with the landowner. The landowner can continue to use their land while the wind farm is in operation.
How will the community benefit from the wind farm?	<ul style="list-style-type: none"> The wind farm will assist both the Town of Innisfil and the province in general in avoiding future brown outs or blackouts. The wind farm is an overall contribution to clean energy options – replacing coal power & reducing greenhouse gas emissions.
What's in this for Innisfil?	<ul style="list-style-type: none"> Local economies benefit from construction-related employment such as that from the Innisfil Wind Farm and money spent on local services. In the long-term, the Town will benefit from property taxes paid to the municipality. The wind farm will offer employment and revenue to the Town and surrounding communities during both the construction and operation phases and enable future development. In fact, local electricity production will enhance economic development in the Town and the region. The Town of Innisfil (including local businesses within the community) may also benefit from increased visits to the community. The location of the wind farm adjacent to a frequently travelled provincial highway provides a new landmark for the Town and may increase the number of times someone chooses to exit the highway to visit the Town.
Does Innisfil have enough wind to power these machines?	<ul style="list-style-type: none"> Innisfil has good wind. A wind monitoring tower has been installed on the site and has been gathering wind data for over a year. SPI would not plan for, nor develop a wind farm in the area if the energy output was not sufficient.
What happens to the foundation at the decommissioning and after the easement agreement is expired?	<ul style="list-style-type: none"> The farmland is immediately rehabilitated and brought back to previous farming conditions.
Who pays for the removal of the wind farm components (ex: foundation)?	<ul style="list-style-type: none"> SPI.
Who owns the wind farm?	<ul style="list-style-type: none"> SPI.

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<p>Is this wind farm in compliance with the Town of Innisfil Official Plan (OP)?</p>	<ul style="list-style-type: none"> • Yes. The wind farm is in compliance with the existing OP. The new OP is not yet approved. The existing designation of the land is “Agriculture”. • An OP Amendment is required for this wind farm project as the current Section 4.0 “Environmental Management”, Subsection 4.4 Energy and Resource Conservation of the OP does not have provisions for the installation of any new electric power facilities for the purpose of producing energy for sale (which would include wind turbines). • Site specific Zoning By-Law approval is also required for the project. The OP Amendment and the Zoning By-Law Amendment are currently under review with the Town of Innisfil. A public meeting is scheduled for September 10, 2008 to pass the amendments.
<p>What happens with the wind farm when you go bankrupt?</p>	<ul style="list-style-type: none"> • Members of our management team are owners in the company, and thus, owners of the wind farm. We have a solid vision for the future, as well as a solid team behind us to ensure the project is a success for many years to come.
<p>What are the setbacks from houses and roads?</p>	<ul style="list-style-type: none"> • While the Government of Ontario has not passed legislation indicating setback distances from wind turbines, proponents of wind farms are advised to follow "guidelines" set out by Provincial Authorities. • Many local governments not only in Ontario, but across Canada do not have specific wind planning and permitting protocols. Therefore, most local municipalities rely on “Best Practices” undertaken in other jurisdictions. These “Best Practices” are supported by the Canadian Wind Energy Association (CanWEA)¹. • The setbacks for the Innisfil 400 Wind Farm were determined according to the “Best Practices” recommended by CanWEA, and which are also in place in several other municipalities in Ontario. The setbacks for the wind farm were also discussed with Provincial Authorities (MOE, Ministry of Transportation), Municipal Authorities (Town of Innisfil, County of Simcoe), landowners, members of the public and local Conservation Authorities. • The setbacks for the wind turbines were incorporated by a computer model to include all of the comments. The setbacks for the Innisfil 400 Wind Farm are: <ul style="list-style-type: none"> ○ 250m from on-site residences ○ 300m from off-site residences ○ 50m from a lot line

¹ “Canadian Wind Energy Association Position on Setbacks for Large-Scale Wind Turbines in Rural Areas (MOE Class 3) in Ontario”. September 28, 2007.

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<p>We heard that property values decrease in the local area once a wind farm is established. What can you do to guarantee it is not going to affect us?</p>	<ul style="list-style-type: none"> • The one overriding affective determinant to property values in the immediate vicinity of the wind farm is proximity to Highway 400. • With respect to adjacent properties placing wind turbines on their fields, conclusive evidence across the world (USA, UK, Denmark, Australia) clearly shows that wind developments have no material effect on property values. In short, wind farms have no negative effect on property values.
<p>Is wind power reliable?</p>	<ul style="list-style-type: none"> • Yes. The wind turbines are located in an area where there is enough wind to produce electricity 70 to 80% of the time.
<p>We think wind turbines are ugly and an eyesore to look at. What are you going to do about that?</p>	<ul style="list-style-type: none"> • A Visual Impact Assessment was completed for this study. SPI will ensure that the visual impact is minimal.
<p>I wrote several letters to SPI about the Innisfil Wind Farm, but never received a response. How were my concerns dealt with?</p>	<ul style="list-style-type: none"> • In accordance with MOE protocols SPI has taken all of the comments and questions that have been received from both the public and agencies throughout the Environmental Screening Process and have ensured that answers are obtained and that the topic is addressed in the relevant section of the EIS/ESR.
<p>Is this going to be a huge industrial farm with lots of turbines in massive fields like you see in the U.S.?</p>	<ul style="list-style-type: none"> • No. The Innisfil Wind Farm consists of only five wind turbines. SPI believes in developing small scale, low impact wind farms that minimize impact on local communities, wildlife and the environment.
<p>Health and Safety Concerns</p>	
<p>Shadow flicker from the WTG's causes epilepsy and affects people prone to epilepsy. What can you do to mitigate this effect?</p>	<ul style="list-style-type: none"> • There will be no shadow flicker occurrences at this farm as a result of sun angle and tower positioning.
<p>Shadow flicker from the WTG's have negative effect on farm animals (inaudible sound), what can you do to mitigate this negative effect?</p>	<ul style="list-style-type: none"> • There will be no shadow flicker occurrences at this farm as a result of sun angle and tower positioning.
<p>Do people living near a turbine get sick because of the vibrations?</p>	<ul style="list-style-type: none"> • The levels of vibration from wind turbines are so small that only the most sophisticated instrumentation and data processing can reveal their presence, and they are almost impossible to detect.

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<p>We have heard that people living near turbines become sick from the noise.</p>	<ul style="list-style-type: none"> • The Innisfil 400 Wind Farm meets the MOE requirements for noise. Noise modeling undertaken for this wind farm has shown that some noise will occur from the turbines. Most of this is aerodynamic noise from the blades rather than from the mechanical equipment. During high winds, when the turbines will generate the greatest noise, the background noise is high due to the sound of the wind in the area. The high winds are anticipated during winter months when residents are indoors with the windows and doors closed due to the cold weather. • Modern WTG's produce very little noise. The turbine blades produce a whooshing sound as they encounter turbulence in the air, but this noise tends to be masked by the background noise of the blowing wind. • With new technology, WTG's are much quieter than they were twenty years ago. The rotation of the blades was changed to significantly reduce the whooshing sound, and better insulation is used on the mechanical components.
<p>How often do wind turbines collapse or catch on fire?</p>	<ul style="list-style-type: none"> • The WTG's are manufactured to global wind energy standards and there have historically been few problems with turbine collapse. Siting of these wind turbines in agricultural fields on the private farm means that there will be no pedestrian traffic near the wind turbines, which minimizes interaction between the wind turbines and the public. • To SPI's knowledge the manufacturer chosen for this wind farm has never had a tower collapse and frankly the occurrence of a tower collapse would require an extreme or significant event. However, if the structure collapsed it would not reach a residence since the total height of the tower and blade is less than the 250m setback from the nearest residence.
<p>What will happen to the WTG's when a tornado passes through this wind farm?</p>	<ul style="list-style-type: none"> • The WTG's are constructed to strict standards. The event of a collapse is very rare.
<p>What happens if a turbine blade breaks or flies off?</p>	<ul style="list-style-type: none"> • The wind turbines are manufactured to global wind energy standards and there have historically been few problems with blade breakage. Prior to breakage of the blade it is likely that a crack would form, which the sensors would pick up and the unit would be shutdown prior to full breakage. The blades weigh approximately 3 tonnes and if they were to break off during operation they would not travel far distances but would fall to the ground due to gravity. With a 250m setback distance, it is very unlikely that they would reach a residence.

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<p>What happens if ice forms on the blade? Won't the ice go flying off as the blades turn?</p>	<ul style="list-style-type: none"> • Each wind turbine has a comprehensive control system that monitors the subsystems within the turbine and the local wind conditions to determine whether the conditions are suitable for operation. For example, ice detection strategies are utilized to shut the wind turbine down during ice events thus avoiding ice throw. • Icing of wind turbine blades would be expected to occur in mountainous sites or northern climates and fortunately not in Southern Ontario. However, to mitigate any potential effects of ice throw, the wind turbines for the Innisfil 400 Wind Farm are located a safe distance from any occupied structure, road, or public use area. To date, there have been no reports of personal injury or property damage due to ice throw from a wind turbine.
<p>What if there is an airport very close to the wind farm?</p>	<ul style="list-style-type: none"> • SPI has received Aeronautical Obstruction Clearance from Transport Canada for the Innisfil 400 Wind Farm. Communication with NAV Canada indicates that they have no objection to the project.
<p>Natural Environment Concerns</p>	
<p>Is it true that wind farms kill birds and bats?</p>	<ul style="list-style-type: none"> • A study reviewing the impact of wind farms on birds in the U.S. found that generally only two birds per turbine per year ever die in collisions with wind turbines. This is far less than the millions of deaths per year associated with birds crashing into buildings and windows or colliding with other objects. • Construction activities of the wind farm are done outside of migration seasons, so there is no impact to birds and bats at that time. During operation, birds learn to adapt to the presence of turbines. • Bat studies were undertaken for the Innisfil Wind Farm. It is concluded that bats occur in moderate to low numbers within the study area. The resulting level of concern for this project is considered to be minimal.
<p>Do the wind turbines contaminate the soil?</p>	<ul style="list-style-type: none"> • All fluids used for the Innisfil 400 Wind Farm are non-PCB (polychlorinated biphenyl) type, and PCB contamination will not be a concern. During construction of the wind farm any spill of hydrocarbons or other fluids that may occur will be contained with appropriate spill cleanup materials (stored on-site). Spill cleanup materials and any contaminated soil will be removed to a suitable disposal facility. • Refueling will be done away from any watercourses. No refueling of vehicles will be done on-site during the construction or operation phase. Padmount transformers will be constructed at each wind turbine but they will be of the dry type which means that no oil will be present.

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There is a woodlot on the property site. Will it be affected?	<ul style="list-style-type: none">• Removal of vegetation will be kept to a minimum, and no trees need to be removed for construction of any of the wind turbines. The WTG's are sited 30m away from the woodlot to provide a buffer.
What effect will the foundations of these WTG's have on the local groundwater?	<ul style="list-style-type: none">• There will be no impact to groundwater.
Next Steps for Innisfil Wind Farm	
When can the public review information on this project?	<ul style="list-style-type: none">• An EIS/ESR will be released for a mandatory 30-day public and agency review in the fall of 2008.
What sort of municipal approvals are required for this project?	<ul style="list-style-type: none">• SPI is in the process of obtaining both an Official Plan Amendment and a Zoning By-Law Amendment for the wind farm. A statutory public meeting to pass the amendment will take place on September 10, 2008.
If someone has a concern about this project, what can they do?	<ul style="list-style-type: none">• If someone has a problem right now, the best thing to do is set up a meeting with SPI to work through the concerns. If after meeting your concerns are still not resolved, during the 30-day EIS/ESR review period you can make a request to the Minister of the Environment to elevate the project to a higher level.
When will this wind farm be built?	<ul style="list-style-type: none">• SPI hopes to begin construction in summer 2009.