

Introduction

- Wind power is among the fastest growing renewable energy sources in the world
- Forecasts predict a 30% growth rate for wind energy over the next decade
- Wind power is an adjunct to hydro-electric power
- The cost of wind power continues to decrease

Actual and Projected Wind Power Capacities

- Current world-wide installations account for more than 40,000 MW or 12 million households
- In Canada, wind energy supplies approximately 590 MW or 177,000 households
- By 2012, an estimated 2,553 MW or 765,000 households will be powered by wind energy in Canada

Wind Power

- A 25 MW wind farm can produce enough energy to power 7,500 households annually.
- A 25 MW wind farm prevents approximately 75,000 tons of greenhouse gas emissions

The Benefits

- Wind energy produces no known atmospheric pollution and relieves global warming
- Wind energy is renewable, reliable and very efficient



The Project

The project, known as the Kruger Energy Port Alma Limited Partnership or "KEPA" will consist of the construction and operation of a 101.2-megawatt wind power-generating project within the Municipality of Chatham-Kent. Forty-four turbines and related interconnection facilities will be located on an area of approximately 4,800 hectares.

As part of the project's stakeholder consultation and information disclosure process, KEPA launched a project specific e-mail (kepawind@kruger.com), a toll free telephone number (1-866-599-9024) and a project website, www.kepawind.com. Future consultation efforts will include the launch of a website, project newsletters, public open houses, public notices, and meetings with stakeholders at various stages of the endeavor. Consultation efforts have three objectives:

1. To gain support by informing stakeholders and interested parties about the project,
2. To provide opportunities for stakeholder input, and
3. To address stakeholder questions and concerns and resolve potential issues regarding the project.

Our formal consultations commenced on February 15, 2006 with the circulation of a letter to relevant agencies regarding a Notice of Commencement of Environmental Screening for the project. The Notice of Commencement was circulated to a number of provincial and government agencies as well as local stakeholder organizations. Any and all feedback is welcome in view of a perfect integration within the community.

KEPA intends, along with Stantec Consulting Ltd, our lead environmental consultant, to work with both federal and provincial EA regulators to comply with the harmonization agreement by submitting a project description discussing federal concerns and information requirements to the CEA Agency.



Port Alma

WIND POWER PROJECT

PORT ALMA AND KRUGER

Wind energy is a cleaner and increasingly efficient way to produce electricity. With less than 1,000 MW of wind energy capacity installed nationwide, and several thousand megawatts under construction or in the latter stages of development, Canada's vast wind resource has only begun to be harnessed. The market for wind energy is vibrant; with environmental, social, and economic forces acting to make this renewable resource an important part of Ontario's energy supply mix.

Port Alma was one of several project sites considered for Kruger's first entry into the Ontario wind power market. Kruger worked with expert consultants and local partners to identify areas with above average wind regimes, as well as proximity to the transmission grid. This was done using atmospheric modeling techniques in conjunction with Geographical Information Systems analysis.

Kruger is a major pulp and paper company involved in the manufacture and sale of newsprint, specialty grades, lightweight, coated paper, directory paper, tissue, recycled linerboard, corrugated containers, lumber and wood products. Scott Paper Limited, a member of the Kruger Company, is the leading tissue manufacturer in Canada. Kruger has operations in Quebec, Ontario, Alberta, British Columbia and Newfoundland and Labrador, the United States and the United Kingdom and employs over 10,500 people. We invite you to visit Kruger's website at www.kruger.com.

In early 2004, the Kruger Energy group was formed to acquire and develop renewable energy projects such as wind and hydro production. This initiative is a part of a greater vision of sustainable development and environmentally sound practices subscribed to by all of Kruger's business units.

The lead proponent for the Port Alma Wind Power Project is KEPA. KEPA is a subsidiary of Kruger Energy Inc. The proponent's headquarters and project contact are: Kruger Energy Port Alma Limited Partnership, Mr. Jean Roy, Vice President Operations, Kruger Energy Inc. 3285 Bedford Road, Montréal, QC H3S 1G5.

Project Structure

The basic components of the Port Alma Wind Power Project include wind turbines, transformers, electrical gathering lines, a substation, a 230 kV transmission line, a switchyard, and a control and maintenance building.

The wind turbines consist of a tower foundation, supporting tower, rotor blades, and nacelle. Each tower will be approximately 80 meters in height to the centre of the rotor hub, with a rotor blade length of 45 meters (total blade diameter of approximately 93 meters including spinner). The blades rotate at a speed of 6 to 16 revolutions per minute.

The nacelle houses the gearbox and electric generator, as well as blade and turbine control equipment, sensors, heaters and fans. These components are located at the top of the supporting tower. The towers require the construction of concrete foundations of various depths depending upon subsurface conditions.

Each wind turbine requires several ancillary facilities including: access road, electrical gathering line, and transformer. Access roads are required to arrive at turbine sites from existing public roads. The length and location of required access roads are determined based upon final turbine location and consultations with the affected landowner and municipality.



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WIND POWER PROJECT

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A transformer, located at the base of each turbine will be required to transform the electricity created in the nacelle to a standard operating transmission line voltage (i.e. 690 V to 34.5 kV). The transformer footprint will be approximately three meters by two meters in size. Gathering lines will then transmit the generated electricity via new 34.5 kV electric feeder lines to a new 230 kV substation, then along a transmission line, which will then interconnect with an existing Hydro One grid.



Resource Requirements

The production processes used at the Port Alma Wind Power Project include the generation of renewable electrical energy as harnessed from the wind resource present in the area. The Project's raw materials include concrete, wood, aggregate, and metal. Beyond the materials required for construction of project structures, resource requirements for on-going operation of the Project include the existing, renewable wind resource and the land base required for the turbine locations.

The land requirement for each turbine will be dependent upon the final locations of the turbines, their associated infrastructure, and existing on-site environmental features. The land base required for each turbine, excluding the access road, is approximately 0.5 acres.

Excavation and fill requirements for the Project will include deep excavations of up to 6 meters for the turbine foundations, excavations for transformer pads, substation and the switchyard, as well as excavation for the installation of subsurface gathering lines and installation of electric collector and transmission line poles.

Fill may be required for the installation of access roads to the turbine sites, as well as for turbine foundation installation and site grading of the switchyard. The amount of fill material added or removed during construction of the Project will be determined following additional project design and layout. No additional fill or excavation work is anticipated during the operation of the Project.

Hazardous materials to be used during the course of the Project are mainly limited to fuels and lubricants that will be on-site for use in equipment during the construction phase, as well as the use of lubricants and fluids for the maintenance of the turbines, transformers, and substation. There are no known hazardous by-products of the wind energy generation process itself.

There are limited waste by-products created from the wind energy generation process. Limited waste will be produced from ongoing maintenance of the turbine facilities (e.g., lube and hydraulic oils). Hazardous waste materials will not be generated in large quantities and will be disposed of through conventional waste-oil and hazardous waste disposal streams. Non-hazardous waste will be disposed of through conventional local waste handling facilities. Waste materials will not be permanently stored on-site.

Introduction

Wind is the cleanest of all existing energy sources. Wind energy produces no greenhouse gas or pollution. As a result, it does not in any way contribute to global warming. In addition, wind energy produces no dangerous waste that could contaminate the environment over the short or long term.

There is an associated environmental impact with wind energy, as any project will have some effect on the environmental and human surroundings. Kruger wishes to present the primary environmental effects associated with wind energy development in order to review the real impact related to wind turbines and to emphasize the fact that good mitigating measures can minimize the impact.

Myths

Wind Turbines Are Very Noisy

Wind turbines do, in fact, produce noise, but it is minimal. The noise produced is that of the wind passing through the blades and that of the generator. Thanks to new technological advancements, wind turbines are quiet while in operation. Improved blade design and generator casings make it possible to stand directly below the tower and converse at normal volume levels. Additionally, a certain distance is maintained between wind turbines and dwellings, to ensure that dwellings are not affected by the noise.

Wind Turbines Severely Impact Birds

In comparison with the main causes of bird mortality, wind turbines cause very few deaths among the bird population. Studies show that the majority of birds avoid the turbines. Bird deaths may increase if turbines are located on nesting grounds or in the migratory corridors of some species. For this reason, studies are systematically carried out during the project's environmental analysis to evaluate the prevalence of birds.

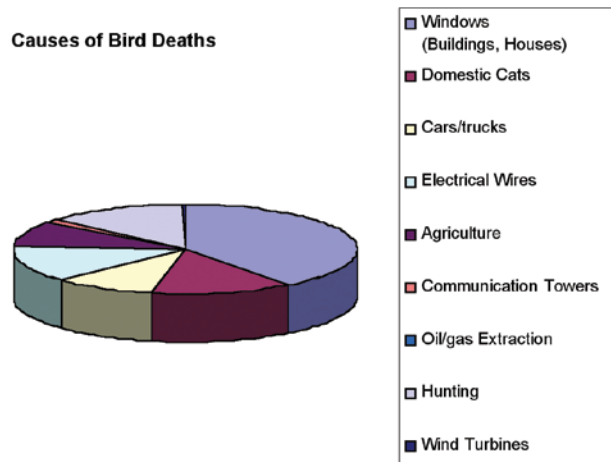
Impact Studies

All wind farm projects are subject to an environmental impact study. The evaluation defines both the positive and negative repercussions of the project on the environment as well as on the population. Furthermore, the study serves to identify mitigating measures that will minimize the impact. Some of the elements that are assessed during these studies include:

- The impact of the project on the bird population
- The impact of the project on wildlife
- The impact of the project on the flora
- The impact of the project on the local economy
- The impact of the project on landscape
- The impact of the project on archeological and cultural sites
- The impact of the project on ambient noise
- The cumulative impacts of the project, etc.

Additionally, during the environmental study phase, members of community are invited and encouraged to communicate their opinions and concerns. Kruger will consult the population in order to take into consideration their concerns when developing the wind energy project.

Causes of Bird Deaths



Introduction

Wind farms can be built on many types of terrain, including forests, mountains and agricultural land. Developing wind farms on agricultural land is becoming increasingly common, due to the growth of this type of energy in Ontario and elsewhere in the world. Moreover, wind turbines and agricultural activities are fitting collaborators when the needs of farmers are harmonized with those of developers.

Developing a Wind Farm

Kruger has identified Port Alma as a potential site to develop a wind farm. Kruger would like to study the site in greater detail in order to validate the wind farm potential of the area. This will require the identification of the required land and the installation of measuring masts in order to submit a project proposal. The one-year wind analysis program must be undertaken prior to being able to definitively identify the ideal locations for the wind turbines.

Following agreements in principle between Kruger and the farmers, and once the project has been approved, servitude contracts will be offered and the final location of the wind farm components will be determined.

The placement of the wind farm components will be decided as a function of wind resources and agricultural activity. For example, the access roads will be parallel to the lots in order to minimize the loss of productive land. Existing access roads will be exploited as much as possible.

Components of a Wind Farm

A wind farm is made up of access roads, wind turbines mounted on concrete foundations, under and above-ground electrical lines, a switching station where the electrical network converges, and, lastly, a service building where the equipment required to maintain the wind turbines is stored. In cases where wind turbines are installed on agricultural land, space is required only for access roads and the wind turbines as all electrical wiring is underground.

The Study Phase

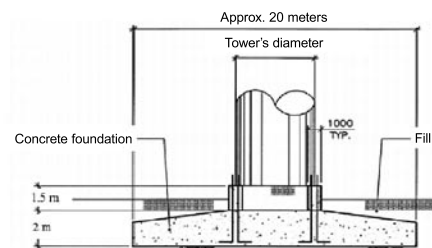
Once a decision is made to proceed with the project, Kruger will be undertaking environmental and feasibility studies as well as public consultations to ensure that we respect the environment and the various parties involved, including farmers, prior to deciding on the final location of the wind farm components and the commencement of construction.

Building a Wind Farm

To establish a wind farm, it is first necessary to build an access road leading to the site where the wind turbines are to be located. The access road is approximately 12 meters wide and it ends at the work area where the wind turbines will be erected. On agricultural land, road construction takes place when the ground is frozen, to reduce ruts and preserve the utmost respect for the farmers' work.

An on-site area is also required for the installation of the wind turbines. Subsequent to pouring a concrete foundation, the wind tower is assembled and erected using a crane. The nacelle is then attached to the tower. The final step is the installation of the blades. Approximately 5,100 m² is required to carry out this process. This area must be cleared and leveled. Kruger intends to work very closely with property-owners in order to ensure that the impact of this phase is as minor as possible. It is Kruger's intent to be able to find an equitable understanding for any negative occurrence that for whatever reason cannot be prevented or corrected to the landowners' satisfaction.

The foundations of the wind turbines are designed with slopes that allow water to run off toward the ground in order to avoid the disruption of agricultural activities. The dimensions shown below are for information purposes only.



Typical Foundation

Once the wind turbines have been erected, the under or above ground electrical wire network is established along the access road.



The trenches usually measure 1.5 meters in depth and 1 meter in width.

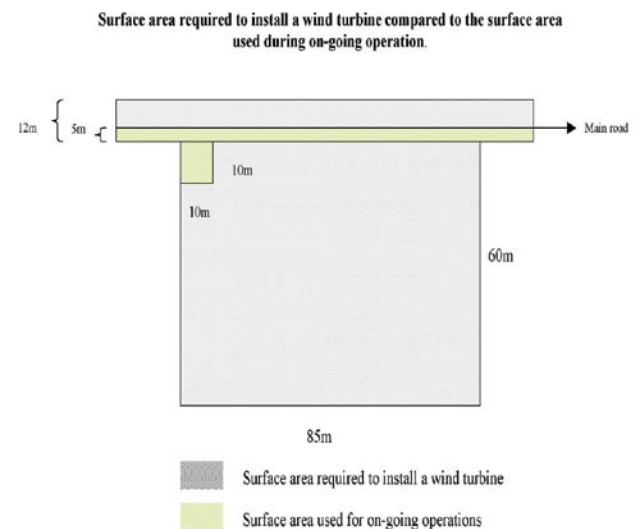
Wooden boards and warning ribbons will be erected to ensure that the collector network presents no danger or inconvenience to the land user or agricultural area.

The Operational Phase

The surface area required for construction is significantly reduced during the operational phase. The access road, which must measure 12 meters in width during the construction phase decreases to a 5-meter width during the operational phase. The same is true of the working area, which is only 100 m², i.e. the area surrounding the turbine. In addition, approximately 90% of the area utilized during construction is restored once the construction has been completed, at which time agricultural activity may resume normal operations.

Compensation

Farmers who loan a part of their land to the construction of a wind turbine will receive financial compensation from the developer; thus effecting an equitable exchange between the developer and the farmer. In exchange for a compensatory allocation to the farmer, the developer is granted access to a part of the agricultural land. In addition, all activities related to the wind energy project that take place on agricultural land will be carried out in such a way to minimize adverse impact.



Prospecting (Approximately 1 year)

- Business plan
- Wind mapping
- Strategic studies
- Legal and regulatory framework
- Constraint analysis
- Meetings with property-owners
- Preliminary feasibility studies

Engineering studies (From 1 to 2 years)

- Environmental impact studies: wildlife, plant life, countryside and noise
- Public consultations
- Geological studies
- Network integration studies
- Agreement with property-owners
- Order equipment and agreements with contractors
- Permit applications

Development (From 1 to 2 years)

- Installation of wind measurement masts
- Advanced meteorology
- Evaluation of wind energy potential

Construction (From 1 to 2 years)

- Performance tests
- Construction of access roads
- Construction of foundations
- Erection of towers
- Installation of electrical equipment, transformer station and cables
- Testing and start-up

Operation (From 20 to 25 years)

- Maintenance of the wind farm

