

The screening criteria below are applied to every project being reviewed under the Ministry of the Environment's Environmental Screening Process as outlined in Ontario Regulation 116/01. For the purpose of completing the checklist, mitigation or impact management measures are not considered – these are applied during the subsequent step of determining a project's net effects. Responses to each question in the checklist are based upon the best available information at the time of writing.

**Table 1: MOE Environmental Features Screening Checklist (Ontario Regulation 116/01)**

Criterion: Will the project...	Yes	No	Additional / Supporting Information
<b>1.Surface and Ground Water</b>			
1.1 have negative effects on surface water quality, quantities, or flow?	✓		<ul style="list-style-type: none"> <li>construction is proposed within surface water courses and limited works (e.g. stringing overhead power lines) are proposed within 30 metres of a watercourse</li> <li>the proposed development does not involve the storage or consumption of surface water</li> <li>the proposed development will not require significant alteration of surface runoff patterns</li> <li>surface water quality could be affected by sedimentation during construction of access roads</li> </ul>
1.2 have negative effects on groundwater quality, quantity, or movement?	✓		<ul style="list-style-type: none"> <li>it is possible that some dewatering activities may be required when installing the tower foundations/footings</li> <li>there is potential to affect wells in close proximity of the construction site in the event that a shallow water bearing formation is intercepted during construction</li> <li>withdrawal quantities will be below the threshold for a Permit to Take Water from the MOE (i.e., &lt;50,000 l/d) and will not negatively affect groundwater quality or quantity</li> <li>construction and operation of the septic system will conform to the latest MOE guidelines, local building code requirements, and industry best practices</li> </ul>
1.3 cause significant sedimentation, soil erosion, or shoreline or riverbank erosion on or off-site?	✓		<ul style="list-style-type: none"> <li>limited shoreline works will be undertaken as part of the Project (see criterion 1.1)</li> <li>Project construction will require excavation and soil storage, the sites are of limited topographic relief and hence erosion of excavated or stored soil materials is not anticipated</li> <li>no significant sedimentation, soil erosion, or shoreline or riverbank erosion is anticipated</li> </ul>
1.4 cause potential negative effects on surface or ground water from accidental spills or releases to the environment?	✓		<ul style="list-style-type: none"> <li>undesirable materials on-site are limited to fuel, lubricating oils, and other fluids associated with turbine construction, maintenance and operation and could be spilled. These materials are contained within the turbine itself and/or the maintenance/control building and will not be stored elsewhere on the sites</li> <li>large quantities of these materials are not contained within the turbine or on-site and do not represent a significant potential negative effect on the surface or groundwater in the event of accidental spills</li> <li>standard containment facilities and emergency response materials will be maintained on-site as required</li> </ul>

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<b>2. Land-Use</b>			
2.1 have negative effects on residential, commercial, or institutional land-uses within 500 metres of the site?	✓		<ul style="list-style-type: none"> <li>lands for the access roads, electrical lines and turbines will be required for the lease period (i.e., 20 years with renewal options)</li> <li>during the lease period these lands will be removed from their present land-use</li> </ul>
2.2 be inconsistent with the Provincial Policy Statement ("PPS"), provincial land-use, or resource management plans?		✓	<ul style="list-style-type: none"> <li>although not directly applicable to the ESP, the planning activities of the Project have had regard for the PPS</li> <li>the 2005 PPS contains policies that support the establishment of wind plants in rural and agricultural areas</li> <li>no effects on provincial land-use or resource management plans are anticipated</li> </ul>
2.3 be inconsistent with municipal land-use policies, plans, and zoning by-laws?		✓	<ul style="list-style-type: none"> <li>the Project is compatible with the area's surrounding rural and agricultural land-uses</li> <li>Project will be consistent with the municipal land-use and zoning by-law requirements</li> </ul>
2.4 use hazard lands or unstable lands subject to erosion?		✓	<ul style="list-style-type: none"> <li>no hazard lands will be used as part of the project's development</li> <li>land is generally stable, there is limited topographic relief, and hence limited erosion potential</li> </ul>
2.5 have potential negative effects related to the remediation of contaminated land?	✓		<ul style="list-style-type: none"> <li>history of the area is rural and agricultural, therefore there is limited potential for contaminated sites, however, the possibility of encountering such lands cannot be completely ruled out</li> </ul>
<b>3. Air and Noise</b>			
3.1 have negative effects on air quality due to emissions of oxides of nitrogen ("NO <sub>x</sub> "), sulphur dioxide ("SO <sub>2</sub> "), total suspended particulates ("TSP"), or other pollutants?	✓		<ul style="list-style-type: none"> <li>reciprocating engine equipment (e.g., excavators and haulage trucks) will be used during the construction phase of the Project</li> <li>operation of the wind farm will not result in negative effects on air quality since no emissions of NO<sub>x</sub>, SO<sub>2</sub>, TSP, or particulate matter are generated by the wind turbines</li> </ul>
3.2 cause negative effects from the emission of greenhouse gases (carbon dioxide and methane)?	✓		<ul style="list-style-type: none"> <li>emissions of carbon dioxide or methane will be generated by construction equipment</li> </ul>
3.3 cause negative effects from the emission of dust or odour?	✓		<ul style="list-style-type: none"> <li>during construction dust will be generated – these emissions will be short in duration and limited to the lands surrounding the work areas.</li> </ul>
3.4 cause negative effects from the emission of noise?	✓		<ul style="list-style-type: none"> <li>mechanical and aerodynamic noise will be emitted from the wind turbines</li> <li>there is potential for limited environmental noise effects at sensitive receptors</li> <li>a detailed environmental noise impact assessment will be undertaken as per the MOE's document <i>Interpretation for Applying MOE NPC Technical Publications to Wind Turbine Generators (July, 2004)</i></li> </ul>

**4. Natural Environment**

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Criterion: Will the project...	Yes	No	Additional / Supporting Information
4.1 cause negative effects on rare, threatened, or endangered ("VTE") species of flora or fauna or their habitat?	✓		<ul style="list-style-type: none"> <li>the Natural Heritage Information Centre and the Ministry of Natural Resources have identified historical sitings of VTE species within the general area of study for the turbine locations and in the proximity of the proposed power line route</li> <li>area habitats may support such species and disruption/alteration of the habitat could cause negative effects</li> </ul>
4.2 cause negative effects on protected natural areas such as areas of natural and scientific interest ("ANSI"), environmentally sensitive areas ("ESA") or other significant natural areas?		✓	<ul style="list-style-type: none"> <li>there are no ANSIs, ESAs, conservation areas, or parks (i.e., National or Provincial) within the lands optioned for the project</li> </ul>
4.3 cause negative effects on wetlands?		✓	<ul style="list-style-type: none"> <li>there are unclassified and non-provincially significant wetlands identified within the study area as well as Conservation Authority managed woodlands</li> <li>no construction is proposed within provincially or non-provincially significant wetlands or Conservation Authority managed woodlands</li> </ul>
4.4 have negative effects on wildlife habitat, populations, corridors, or movement?	✓		<ul style="list-style-type: none"> <li>the installation of new electrical generation and transmission infrastructure, within vegetated areas, may have potential to affect wildlife habitat</li> <li>following good planning practices there will be limited clearing associated with the Project and the bulk of the project is located on rural/agricultural lands</li> </ul>
4.5 have negative effects on fish or their habitat, spawning, movement, or environmental conditions (e.g., water temperature, turbidity)?	✓		<ul style="list-style-type: none"> <li>limited to no in-water works are proposed to cross watercourses</li> <li>limited shoreline works will be undertaken as part of the Project (see criterion 1.3)</li> </ul>
4.6 have negative effects on migratory birds, including effects on their habitat or staging areas?	✓		<ul style="list-style-type: none"> <li>there is potential to affect migratory birds due to collision with the turbine tower and/or blades (see also criterion 4.4)</li> </ul>
4.7 have negative effects on locally important or valued ecosystems or vegetation?		✓	<ul style="list-style-type: none"> <li>turbine construction sites are not located within forested or naturally vegetated areas – they will be located on lands already cleared for rural and agricultural land-uses and therefore there should be no negative effect on valued ecosystems or vegetation</li> </ul>
<b>5. Resources</b>			
5.1 result in inefficient (below 40 percent) use of a non-renewable resource?		✓	<ul style="list-style-type: none"> <li>the electricity created by the Project is generated from wind – a renewable resource</li> </ul>
5.2 have negative effects on the use of Canada Land Inventory Class 1-3 (i.e., prime agricultural lands), specialty crops, or locally significant agricultural lands?	✓		<ul style="list-style-type: none"> <li>the towers, access roads, and ancillary facilities will occupy areas of prime agricultural land</li> <li>the operation of the wind turbines will not negatively affect the use of adjoining prime agricultural lands, field crop production, or livestock pasturing, all of which can occur in close proximity to the wind turbines</li> <li>the 2005 PPS contains policies that support the establishment of wind plants in rural and agricultural areas</li> </ul>
5.3 have negative effects on existing agricultural production?	✓		<ul style="list-style-type: none"> <li>agricultural production on the lands occupied by the wind turbines, access roads, and ancillary facilities will be discontinued over the Project life</li> </ul>

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5.4 have negative effects on the availability of mineral, aggregate, or petroleum resources?	✓		<ul style="list-style-type: none"> <li>there are known petroleum resources within the study area</li> <li>there are no designated mineral or aggregate resources within the lands proposed for the Project</li> </ul>
5.5 have negative effects on the availability of forest resources?		✓	<ul style="list-style-type: none"> <li>construction of the wind turbines, access roads, and ancillary facilities will not affect any merchantable forest resources</li> </ul>
5.6 have negative effects on game and fishery resources, including negative effects caused by creating access to previously inaccessible areas?	✓		<ul style="list-style-type: none"> <li>the area is largely cleared for agriculture and there are no areas that could be deemed inaccessible</li> <li>there are fisheries resources that may be affected by the construction of the Project (e.g., possibility of limited drainage ditch crossings)</li> </ul>
<b>6. Socio-Economic</b>			
6.1 have negative effects on neighbourhood or community character?	✓		<ul style="list-style-type: none"> <li>the proposed Project will introduce 44 industrial scale turbines into the area</li> <li>the Project will change the present rural / agricultural/recreational community character of the area to the north and south of the existing turbine facilities</li> </ul>
6.2 have negative effects on local businesses, institutions, or public facilities?		✓	<ul style="list-style-type: none"> <li>area businesses will benefit financially from construction activities and fulfilling operational supplies</li> <li>no significant negative effects to local businesses, institutions, and public facilities are expected as a result of the Project</li> </ul>
6.3 have negative effects on recreation, cottaging, or tourism?		✓	<ul style="list-style-type: none"> <li>the Project is sited on rural / agricultural land</li> <li>the concept of a wind farm could act as a catalyst to increase the benefits of tourism for the local area by drawing tourists into the Municipality to see the turbines where they will require meals, gasoline, and other services</li> </ul>
6.4 have negative effects related to increases in the demands on community services and infrastructure?		✓	<ul style="list-style-type: none"> <li>up to six additional operating personnel will be required to maintain the wind farm, therefore there will be only a nominal demand on/for public services (e.g., housing, hospitals, and schools)</li> <li>the Project will not be physically connected to community services or infrastructure and hence no increases for these services is required (e.g., no new demand for potable water, wastewater connections, etc.)</li> </ul>
6.5 have negative effects on the economic base of a municipality or community?		✓	<ul style="list-style-type: none"> <li>through the Project, Kruger Energy will contribute new resources to the economic base of the municipalities and community (e.g., through annual taxation) without creating the demand for additional municipal services</li> <li>to the extent possible local goods and services will be procured during construction, operation and maintenance, and decommissioning of the Project where these are available in sufficient quantity and quality and at competitive prices – creating a positive economic effect</li> </ul>
6.6 have negative effects on local employment and labour supply?		✓	<ul style="list-style-type: none"> <li>to the extent possible local persons will be employed during the construction phase and to provide operational supplies – creating a positive effect for local labour and employment</li> </ul>

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6.7 have negative effects related to traffic?	✓		<ul style="list-style-type: none"> <li>the transport of equipment and supplies during the construction phase will result in additional (temporary) road use and traffic to the Project sites carrying excess loads and large tower components</li> <li>numerous trucks trips will be required for equipment transportation during Project construction</li> <li>during operation supplies will be intermittently delivered to the Project as required</li> </ul>
6.8 cause public concerns related to public health and safety?	✓		<ul style="list-style-type: none"> <li>potential exists for accidents and malfunctions and thus there may be general public safety concerns with the new infrastructure</li> <li>Health Canada's website notes that, based upon the available evidence, electric and magnetic fields are not associated with any known human health risks</li> <li>the Project will not contribute green house gases or other atmospheric pollutants and thus no public health concerns have been identified</li> </ul>
<b>7. Heritage and Culture</b>			
7.1 have negative effects on heritage buildings, structures, or sites, archaeological resources, or cultural heritage landscapes?	✓		<ul style="list-style-type: none"> <li>no known heritage buildings, structures, or sites, nor any cultural heritage landscapes have been identified within the Project sites</li> <li>a Stage I and II Archaeological Assessment will be undertaken for the study area to identify any areas of moderate to high potential for archaeological resources</li> </ul>
7.2 have negative effects on scenic or aesthetically pleasing landscapes or views?	✓		<ul style="list-style-type: none"> <li>with a hub height of 80 metres the wind turbines will be seen from some distance in the surrounding environs and thus alter local/area landscapes and views</li> </ul>
<b>8. Aboriginal</b>			
8.1 cause negative effects on First Nations or other Aboriginal communities?	✓		<ul style="list-style-type: none"> <li>there are known First Nations communities within the study area</li> <li>based upon information provided by the Ministry of Indian and Northern Affairs, there are two First Nations with claims in the study area</li> </ul>
<b>9. Other</b>			
9.1 result in the creation of waste materials requiring disposal?	✓		<ul style="list-style-type: none"> <li>construction wastes, such as excavated soils, equipment packaging and wrappings, and scraps, will be produced</li> <li>the Project will generate waste associated with turbine construction, maintenance and operation, and decommissioning</li> </ul>
9.2 cause any other negative environmental effects not covered by the criteria outlined above?	✓		<ul style="list-style-type: none"> <li>potential accidents and malfunctions for consideration may include seismicity, third party damage, aeronautical obstruction, and effects of the environment on the project (e.g., tornadoes and hail)</li> </ul>