# CONESTOGO WIND, LP

## Conestogo Wind Energy Centre

## Revised Decommissioning Plan

September 19, 2011

GENIVAR

Project No. MA-09-213-00

# Table of Contents

# 1. Decommissioning Plan

The anticipated life of the project is a minimum of 25 years. If the economics of wind power remain viable at that time, the facility would likely be "repowered" with new technology. This is happening at several facilities where the first generation of commercial wind technology was installed over 15 years ago.

## 1.1 Decommissioning During Construction

It is extremely unlikely that the project would be dismantled during construction. Should this occur the procedures used would depend on the state of construction at the time of project cancellation and be similar to those used after ceasing operation. Any exposed soils would be re-seeded with native grasses or crops, depending on the preference of the landowner.

## 1.2 Decommissioning After Ceasing Operations

If the project is not repowered, then the equipment will be dismantled and the lands restored to pre-construction state.

### 1.2.1 Procedures for Dismantling

If the facility is to be decommissioned and the turbine is to be removed at the end of its life, the impacts will be similar to the construction phase, but in reverse sequence. The potential environmental impacts and mitigation measures will be the same as those detailed in the Revised Construction Plan Report, please refer to this report for details. The procedures will include:

1. The creation of temporary work areas. In order to provide sufficient area for the lay-down of the disassembled wind turbine components and loading onto trucks, and approximately 50 m x 50 m must be cleared, levelled and made accessible. The topsoil will be removed and some material may need to be added;
2. The creation of crane pads. The crane pads will typically be 15 m x 35 m in size. The topsoil at the crane pad will be removed and approximately 600 mm of compacted crushed gravel will be added. Once the turbine disassembly is complete, the gravel area around each turbine will be removed and the area will be restored to prior use using stockpiled topsoil;
3. The use of cranes to remove the blades & hub and tower segments;
4. The use of trucks for the removal of turbines, towers and associated equipment;
5. Foundations will be left in place. The top 1 m will be removed and replaced with clean fill and stockpiled topsoil. This will be contoured to allow cultivation in the case of agricultural lands;
6. Roads will be removed unless the landowner requests that they be left in place. Road bedding material will be removed and replaced with clean sub- and top-soil for reuse by the landowner for agricultural purposes. If requested by the landowner, the roads will be removed and the land will be contoured to maintain the current drainage patterns;
7. Decommissioning of electrical lines. Underground electrical lines will be cut, the ends buried to 1 m below grade, and left in place. These lines are inert and will have no negative impacts on the environment, soil and cultivation practices. Above ground lines and poles that are not shared with Hydro-One will be removed and the hydro pole holes will be filled with clean fill; and
8. The Substation will be demolished. These will be decommissioned in a manner appropriate to and in accordance with the standards of the day. All materials will be recycled, where possible, or disposed offsite at an approved and appropriate facility.

## 1.3 Restoration of Land

Abandonment of the wind turbines will not result in any impacts to surface or groundwater quality. After the abandonment process is completed the land will be returned to agricultural conditions.

### 1.3.1 Pre-Construction Conditions

All of the turbines are located on agricultural land, typically used for growing crops such as beans, corn, wheat and hay. There are 8 residual woodlots, 10 wetlands and two permanent watercourse, and in the project area. Details of these natural features as well as an evaluation of significance can be found in the *Records Review and Natural Heritage Evaluation Ontario Regulation 359/09* (Appendix B).

### 1.3.2 Land Restoration Activities

Once the equipment has been removed the land will be restored to its previous agricultural capacity. This will be accomplished by removing the foundations (or part of foundation), granular material from roadways and culverts, depending on the landowner preference. Agricultural capacity will be restored and the land re-contoured to maintain proper drainage. Preferentially, this will be accomplished using stockpiled subsoils and topsoil. If there is insufficient material onsite, topsoil and/or subsoil will be imported form a source acceptable to the landowner.

Although strict spill prevention procedures will be in place, there is the potential through the routine maintenance of the turbines, operation of the substation and/or decommissioning process for small spills of solvents or fuels. The soil conditions of the turbine areas will be surveyed to the standards of the day to determine if any impacts have occurred. Should soil impacts be noted, the impacted soils will be delineated, excavated and removed, to the standards of the day, from the site for disposal at an approved and appropriate facility. The removed soils will be replaced with stockpiled sub- and topsoil, if available. If none are available, clean fill and topsoil will be imported.

## 1.4 Waste Disposal

As discussed above, the waste generated by the installation, operation and decommissioning of the wind farm is minimal, and there are no toxic residues. Any wastes generated will be disposed of according to standards of the day with the emphasis of recycling materials whenever possible.

## 1.5 Other Approvals

It is anticipated that the decommissioning will require the following permits:

- Building or Demolition permit obtained from the Township of Mapleton; and
- Approvals from the Grand River Conservation Authority.