

DRAFT AMHERST ISLAND WIND ENERGY PROJECT DECOMMISSIONING PLAN DRAFT ANNOTATED REPORT

1.1 PROJECT OVERVIEW

The basic components of the proposed Project include up to 36 Siemens wind turbines. The turbine model proposed utilizes the same 36 turbine pad locations that have been subject to the assessment required under the Renewable Energy Approval (REA). The layout includes 34 Siemens SWT-2.3-113 2300 kW and two (2) Siemens SWT-2.3-113 2221 kW model wind turbines. The final layout will result in a total installed nameplate capacity of approximately 56 - 75 MW. The number of wind turbines will be dependent upon final selection of the model of the wind turbine most appropriate to the proposed Project.

Q. Please provide actual numbers and locations of turbines in final draft of report.

The Proponent has elected to assess and seek approval for some alternative Project configurations. REA application process will consider:

- Two alternative mainland transmission line routes;
- Two alternative switching station locations and corresponding point of common coupling with the HONI line;
- Three alternative mainland temporary dock locations along the mainland;
- A submarine cable with three alternative submarine cable routes near the mainland;
- Three alternative mainland submarine cable landing locations and corresponding cable vault locations;
- Up to three alternative met tower locations; and,
- Up to four potential locations for an operations and maintenance building.

Final selection of the sites to be used would be based on the results of consultation activities, detailed design / engineering work, and the conditions experienced during construction.

Q. Please provide final configuration of project in final draft of report.

1.2 REPORT REQUIREMENTS – No Comment

2.0 Probable Future Use of the Project Location

Project components are expected to be in service for the term of the 20 year Ontario Power Authority Feed-In Tariff contract. Following the term of the contract, a decision would be made to extend the life of the facility (repower the Project) or to decommission.

Q. How is this decision made?

Decommissioning would entail removal of facility components and restoring the land to an acceptable condition for its intended use. The costs for removal of Project infrastructure will be the responsibility of the owner of the Project. The current land use of the Project Location is described in the following sections, with a determination of

probable future use at the time of decommissioning.

Q. What is the plan for repair / replacement of turbine blades / parts. Experience in Europe indicates that the life expectancy of turbine blades / parts appears to be in the 10 year range. What is the life expectancy of the turbines selected for this project? Please provide details as to “acceptable condition for intended use” in final draft of Decommissioning Plan Report.

Q. Who pays for the decommissioning?

Turbine Areas – No Comment

Collector Lines and Transmission Line

Portions of the collector lines and the transmission line would be located on participating private land. These areas are currently agricultural or landscaped, and it is anticipated that these areas would be restored to their original use. On the mainland the transmission line is proposed mostly within municipal/County road allowances.

Q. When the collector lines were above ground on oversized poles, are the poles replaced with standard poles?

Municipal Road Allowance

The municipal/County road allowance, which is proposed for use for electrical system components including the installation of underground and/or overhead collector lines and transmission lines where required, access roads, and data cabling are cleared for utility usage. Unopened road allowances on the island are either not in use, or agricultural. Future use of the municipal road allowance (including the unopened road allowance) is anticipated to remain the same. **Submarine Cable**

The submarine cable will be located within the North Channel between Amherst Island and mainland. The location of the submarine cable does not change the current use of the waterway.

Q. Is the cable removed or simply abandoned in place?

Cable Vaults – No Comment

Switching Station – No Comment

Operations and Maintenance Building Property – No Comment

Substation Property – No Comment

Storage Shed Property – No Comment

Mainland Dock – No Comment

Island Dock – No Comment

Met Tower Area(s)

3.0 Decommissioning of Facility after Ceasing Operation

3.1 GENERAL ENVIRONMENTAL PROTECTION

During decommissioning and restoration activities, general environmental protection and mitigation measures would be implemented. Many activities during decommissioning would be comparable to the construction phase; including the use of heavy equipment on site, restoring constructible areas around all Project infrastructure, and preparing staging areas. General mitigation measures and best management practices, as appropriate, erosion and sediment control, air quality and noise mitigation, and contingency plans for unexpected finds and spills, are provided in the Draft Construction Plan Report.

Q. Please provide details as to the environmental protection and mitigation measures that will be implemented. Please provide a general time-table for decommissioning as well as the anticipated number of truck loads. Please address the issues raised in our comments on the Draft Construction Plan report as they would apply to a decommissioning plan.

This section says that the proponent will develop a decommissioning plan in accordance with MOE requirements at the time of decommissioning. Why is a draft plan not put in place at this point?

3.2 PRE-DISMANTLING ACTIVITIES

Prior to engaging in decommissioning works, the Proponent will develop a decommissioning plan in accordance with MOE requirements at the time of decommissioning. Decommissioning and restoration activities will be performed in accordance with all relevant statutes in place at the time of decommissioning.

Q. In order to provide a clearer picture of the process, please provide a decommissioning plan in accordance with current MOE requirements.

At the end of the Project's useful life, it will first be de-energized and isolated from all external electrical lines.

Prior to any dismantling or removal of equipment, staging areas would be delineated at each turbine site, along access roads, the met tower location(s), along collector lines, along transmission lines, the substation property, operations and maintenance building, storage shed, and cable landing locations, as appropriate. All decommissioning activities would be conducted within designated areas; this includes ensuring that vehicles and personnel stay within the demarcated areas. Work to decommission the collector lines and transmission lines would be conducted within the boundaries of the municipal road allowance and appropriate private lands.

Crane pads or mats, to accommodate dismantling, would be installed at each turbine location in the same manner as described in the Draft Construction Plan Report. Temporary erosion and sediment control measures will be implemented as noted in Section 3.1. These measures will be implemented with consideration of industry best management practices, and will be determined by an environmental advisor prior to decommissioning.

Q. Section 3.1 provides incomplete information. Please provide details as to the environmental protection and mitigation measures that will be implemented. Please provide a general time-table for decommissioning as well as the anticipated number of truck loads. Please address the issues raised in our comments on the Draft Construction Plan report as they would apply to a decommissioning plan

3.3 EQUIPMENT DISMANTLING AND REMOVAL

3.3.1 Staging Areas

Temporary staging areas at each turbine site, along access roads, the met tower location(s), along collector lines, along transmission lines, the substation property, operations and maintenance building, storage shed, and cable landing locations, could be used for temporary storage of the project components, parking, and excavated foundations. These areas would not be excavated or gravelled and would be restored to pre-existing conditions at the end of the decommissioning phase.

Q. Will photographs be taken of each area to establish pre-existing conditions? Please specify type of re-vegetation – will this encompass trees / shrubs of similar size to those removed? Will a watering program be undertaken as a follow up measure in order to ensure the re-vegetated trees and shrubs thrive?

Q. Please provide specifics as to what access roads, what size storage areas, what will be stored there (and what is not to be stored there). What public roads will be required for this use and for how long?

3.3.2 Turbines

The turbines would be disassembled into their original component parts. A heavy-lift crawler and mobile cranes would be used to carry out the reverse sequence of steps that occurred during turbine assembly (detailed in the Draft Construction Plan Report), namely:

- Removal of the blades and hub;
- Removal of the nacelle; and
- Decoupling and lowering the tower sections. The turbine components would be temporarily stored at the staging area at each turbine site until removed from the site by truck. To the extent possible, crane paths for the decommissioning phase would follow the same routes used for the construction phase.
- 'Turbines would be disassembled and temporarily stored.'

Q. Storage will occur for how long? How will liquids such as lube oils, transformer PCBs, fuels etc, be captured and disposed of?

3.3.3 Turbine Transformers

The small transformer associated with each turbine will be removed for resale, reuse,

reconditioning, or disposal. The foundation of each transformer will be removed as per Windlectric's lease agreement with the landowner.

3.3.4 Turbine Foundations

The turbine foundations would be partially removed to a depth of approximately 1.5 m below grade, in accordance with the land agreements. This depth enables normal agricultural practices to be conducted over the foundation areas. The concrete would be removed from the site by dump truck. It is not anticipated that blasting would be used to remove the turbine foundations, however if required for turbine foundation removal, blasting may be considered and appropriate consultation would occur with required authorities and the landowner.

Q. If blasting is not anticipated to be required, what method is anticipated to be used – please specify in final draft of report. Please provide a margin of error with regards to what constitutes approximately 1.5m (i.e. – 1.5m +/- 10 cm)

3.3.5 Crane Pads

After turbine removal is completed, construction pads would be removed; this includes the geotextile material beneath the pads and granular material. Granular and geotextile materials would be removed from the site by dump truck.

Q. Will photographs be taken of each area to establish pre-existing conditions? Please specify type of re-vegetation – will this encompass trees / shrubs of similar size to those removed? Will a watering program be undertaken as a follow up measure in order to ensure the re-vegetated trees and shrubs thrive?

3.3.6 Electrical Infrastructure Electrical Collector Lines

Underground collector lines and the transmission line on private property would be cut with the ends buried to a depth of approximately 1m and left in place, in consultation with the landowner and in accordance with the land agreements. Any junction boxes will be removed. Underground collector lines, the transmission line, splice vaults and junction boxes installed in the road allowances would be removed, if required by an agreement with the Township and/or the County.

Any above ground collector lines, transmission line, and poles would be removed if necessary in consultation with the landowner and in accordance with the land agreements. In areas where above ground collector lines are strung on shared use poles, only the lines would be removed, unless otherwise required by the shared use agreement that would be developed with other users.

Q. Why would the abandoned and oversized poles not be removed for safety reasons as well as esthetics.

Pad mount Transformers

Pad mount transformers, located immediately adjacent to each turbine, and grounding grids would be removed, and the associated concrete foundation would be removed to approximately 1 m below grade, in accordance with the land agreements. All electrical

system components would be taken off-site by truck.

Q. Please clarify why pad mount transformer concrete foundations will be removed to approximately 1m below grade and turbine foundations will be removed to 1.5m below grade which is (according to section 3.3.4) a depth which enables normal agricultural practices to be conducted over the foundation areas. Please provide a margin of error with regards to what constitutes approximately 1m (i.e. – 1m +/- 10 cm)

Submarine Cable Line

As the Project will be constructed on Amherst Island, a submarine cable will be required to transmit the energy produced by the facility to the interconnection point located on mainland. The submarine cable to the mainland may remain in place, with both ends that come to the surface excavated to approximately 1.2 m below grade, in consultation with MTO and in accordance with the land lease agreements. The cable vaults will be removed.

Q. Why is the cable left in place?

Substation and Switching Station

The substation and switching station would be dismantled as agreed to, or as necessary, in accordance with the land lease agreement. The transformers, fencing, switchgear, and grounding grid would be removed, and the concrete foundation would be removed to approximately 1 m below grade/completely removed. This may include removal of the transformer pit and sump pump, and the drainage system. All granular and geotextile materials would be removed from the site by dump truck. All electrical system components would be taken off-site by truck. The interconnection to the Hydro One transmission lines at the switching station property would be removed in accordance with Hydro One requirements.

3.3.7 Access Roads

All access roads would be removed, including culverts, the geotextile material beneath the roads and granular material. The access roads would be returned to a similar condition as prior the Project commencement. Excavated areas on agricultural land would be brought to grade with fill and topsoil to be taken from surrounding land. All materials would be removed from the site by dump truck. Where the landowner sees it advantageous to retain access roads, these would be left in place as long as compliance with Township and Cataraqui Region Conservation Authority (CRCA) regulations were recognised.

Q. Will photographs be taken of each area to establish pre-existing conditions? Please specify type of re-vegetation – will this encompass trees / shrubs of similar size to those removed? Will a watering program be undertaken as a follow up measure in order to ensure the re-vegetated trees and shrubs thrive? Please clarify comment “Excavated areas on agricultural land would be brought to grade with fill and topsoil to be taken from surrounding land.” The assumption of excess topsoil seems somewhat tenuous.

3.3.8 Water Crossings

Culverts would be removed if requested by the landowner and approved by the Township, County, Ministry of Natural Resources (MNR), CRCA and/or Fisheries and Oceans Canada (DFO), as appropriate.

3.3.9 Operations and Maintenance Building

The operations and maintenance building would be dismantled as agreed to, or as necessary, in accordance with the land lease agreement. The fencing would be removed, and the concrete foundation would be removed to approximately 1 m below grade/completely removed.

Q. Why only one metre below grade?

All granular and geotextile materials would be removed from the site by dump truck. All electrical system components would be taken off-site by truck.

Septic System

The septic system would be decommissioned in accordance with local and/or provincial requirements at the time (e.g., Environmental Protection Act), as appropriate. This may include pumping out, filling with sand, and capping of the tank and tile bed.

Q. In order to provide a clearer picture of the process please provide details of the septic system decommissioning process currently in place.

Water System

The water tank would be removed. If a water well is installed, it will be decommissioned in accordance with local and/or provincial requirements at the time, as appropriate. This may include capping the well below grade and removal of pump.

Q. In order to provide a clearer picture of the process, please provide details of the water well decommissioning process currently in place.

3.3.10 Storage Shed

The storage shed would be dismantled as agreed to, or as necessary, in accordance with the land lease agreement. The concrete foundation would be removed to approximately 1 m below grade/completely removed. All granular and geotextile materials would be removed from the site by dump truck.

Q. Please clarify why storage shed concrete foundations will be removed to approximately 1m below grade and turbine foundations will be removed to 1.5m below grade which is (according to section 3.3.4) a depth which enables normal agricultural practices to be conducted over the foundation areas. Please provide a margin of error with regards to what constitutes approximately 1m (i.e. – 1m +/- 10 cm).

3.3.11 Met Tower(s)

The met tower(s) would be disassembled and removed by truck from the site. The truck to be used for removal of the met tower would be determined based on the tower model selected, but may be an appropriately sized pick-up truck (e.g. F-350) or a small rubber tired rig. Foundations would be partially removed to a depth of approximately 1 m below

grade. The site(s) would be accessed using the same route as in the construction phase.

Q. Please provide details of truck size required upon final selection of tower model which should be available in final draft of Decommissioning Plan Report. Please clarify why Met Tower concrete foundations will be removed to approximately 1m below grade and turbine foundations will be removed to 1.5m below grade which is (according to section 3.3.4) a depth which enables normal agricultural practices to be conducted over the foundation areas. Please provide a margin of error with regards to what constitutes approximately 1m (i.e. – 1m +/- 10 cm).

3.3.12 Data Cabling

Data cabling would remain in place, with both ends that come to the surface excavated, cut, and removed to approximately 1 m below grade. The excavation would be backfilled in consultation with the landowner and in accordance with the land agreement.

3.3.13 Island Dock

The island dock, including all in water works, will be removed. Any excavation would be backfilled in consultation with the landowner and in accordance with the land agreement.

Q. In final draft of Decommissioning Plan Report please provide details of process required for removal of island dock as well as plans to re-vegetate.

3.3.14 Mainland Dock

The mainland in water dock components would be removed after commercial operation commenced, however, any concrete shoreline work would remain in place until decommissioning at which time the structure would be completely removed.

Q. In final draft of Decommissioning Plan Report please provide details of process required for removal of mainland dock as well as plans to re-vegetate.

3.4 SITE RESTORATION PLAN

This section describes how the lands used for the facility components will be restored to bring the site into a condition consistent with the probable future use described in Section 2.0.

At the time of decommissioning, the Site Restoration Plan should be updated as necessary based on the standards and best practices at the time of decommissioning, and in consultation with landowners and the appropriate regulatory and government bodies.

Q. Where is a copy of this plan?

3.4.1 Natural Heritage Features

Natural heritage features which may be impacted by the removal of facility components would be reviewed with the MNR prior to removal. Mitigation and monitoring measures may also be required including plans for replanting and restoration and would also be

reviewed and implemented in consultation with the MNR.

3.4.2 Agricultural Lands

Areas that would require excavations during decommissioning of the facility are described in Section 3.3. Subsoil or clean fill would be added as necessary.

Areas that may have compacted due to decommissioning activities would be restored through the use of deep ploughing equipment.

Any agricultural tile damaged during decommissioning would be repaired by a drainage tile contractor. Land owner approval will be obtained as per Windlectric's lease agreement.

Topsoil would be added to similar depth as surrounding areas, where necessary. Imported topsoil would be of the same or similar soil type and texture as pre-construction conditions and/or adjacent lands and would be selected with input from the landowner.

Areas would be graded to pre-construction conditions and restored appropriately, in consultation with the landowner.

Q. Please provide details. Excavations must be backfilled with sub-soil, clean fill and quality top-soil brought to the Island and supervised by a qualified Agricultural Soils expert. Compacted areas are to be restored through deep ploughing, followed by restored top-soil, ground cover and seeding. Damaged agricultural tile is to be replaced, not repaired, by a qualified drainage tile contractor.

3.4.3 Areas not in Agricultural Production

If Project components are sited on industrial properties or those that are no longer under agricultural production, slightly different methods would be used.

The subsoil would be restored and de-compacted, and topsoil added, as described in Section 3.4.2. The areas would be re-seeded or re-vegetated with the same or similar vegetation as adjacent areas to prevent topsoil erosion.

Q. Will photographs be taken of each area to establish pre-existing conditions? Please specify type of re-vegetation – will this encompass trees / shrubs of similar size to those removed? Will a watering program be undertaken as a follow up measure in order to ensure the re-vegetated trees and shrubs thrive?

If seed is applied, any erosion and sediment control measures required on-site would be left in place until seed is fully established, as determined by an environmental advisor.

3.4.4 Municipal Road Allowances

Where Project infrastructure has been removed, roadside ditches would be seeded with quick growing native species to prevent topsoil erosion; the seed mixture would be determined at that time in consultation with the Township, the County, and/or CRCA. Erosion and sediment control measures at the ditch would be left in place until seed is fully established, as determined by an environmental advisor.

If any underground collector lines require removal by request of the Township or the County, the area would be rehabilitated to pre-existing conditions as appropriate in consultation with the Township or County.

3.4.5 Watercourse Crossings – No Comment

3.4.6 Potential Contamination

During the construction and operation of the Project, environmental management practices would be in effect, such as secure containment of potential hazardous materials, to minimize the potential for spills. As there is limited handling or storage of bulk fuels or chemicals during the construction or operations phases of the Project, the potential for site contamination is very low. The Project should not, therefore, result in any long term decommissioning issues that would be detrimental to future site uses. The turbine sites would have no materials storage. Liquids such as oils would be primarily contained within equipment. The potential for spills at each turbine site during the life of the Project is limited. In the event that a spill occurred at a turbine location a spills management protocol would be enacted such that appropriate clean up and mitigation was put in place.

The operation and maintenance building would contain materials storage for the overall facility, and the substation and switching station would contain oils. As part of the decommissioning of this site, an Environmental Site Assessment would be completed to evaluate any potential impacts identified from a review of site operational and historical records, as required. The Environmental Site Assessment, if required, would follow the protocols of O. Reg. 153/04 – Records of Site Condition, Part XV.1 of the Environmental Protection Act (O. Reg. 153/04) as amended or other applicable regulation(s) in place at the time of the decommissioning of the Project. Rehabilitation measures for any contaminated soil or groundwater would be determined at the time of decommissioning, and would follow regulations and best practices in place at the time of decommissioning.

Q. Please provide details. The 'Cleanup' agreement should be specific, referring to ALL the liquids used in the turbines, the service buildings and all construction vehicles working on the Island. The source of contamination is to be identified and removed. All contaminated material is to be immediately removed from the Island and disposed of in a mainland dump licensed to receive contaminated soil. Rehabilitation measures for contaminated ground-water are to be defined and remedies specified with particular attention to ground- water supplying wells for domestic or animal use.

4.0 Decommissioning During Construction

In the unlikely event that Windlectric cannot successfully complete the construction of the Project, the rights to the Project (and any associated liabilities and obligations) may be sold to allow the Project to be successfully constructed by the purchasing developer.

In the event that a delay occurs in the purchasing of the Project by another developer, Windlectric would be responsible for interim environmental protection. In the event that the Project Location has been cleared and/or excavated in preparation for installation of Project infrastructure, appropriate environmental protection measures would be

implemented to prevent topsoil erosion and/or watercourse sedimentation. The extent of environmental protection measures required would be dependent on the progress made at the time and would be determined through site investigations by qualified specialists. Possible measures would include, as appropriate, erosion and sediment control fencing, filling excavated areas, replacement of topsoil and/or reseeded and revegetation.

In the event that the Project is not purchased by another developer, Windlectric will be responsible for decommissioning of the Project. In such a case the decommissioning process to be followed and the mitigation measures to be implemented will be the same as those detailed in Section 3.0 for decommissioning after ceasing operation of the Project.

5.0 Managing Excess Materials & Waste

During dismantling and demolition of the Project, the Proponent will follow the principles outlined in A Guide to Waste Audits and Waste Reduction Work Plans For Construction & Demolition Projects, as required under Ontario Regulation 102/94 (O.Reg. 102/94), as amended or other applicable regulation(s) in place at the time. These principles follow the 3Rs hierarchy and include the reduction of the amount of waste generated, reuse of materials, and recycling of any materials that cannot be reused. All wastes would be managed in accordance with Ontario Regulation 347, General – Waste Management (O.Reg.347) and with reference to Ontario Provincial Standard Specification 180 - General Specification For The Management of Excess Materials (OPSS 180), or relevant regulations and specifications in effect at that time.

Typical waste materials and modes of disposal, recycling or reuse are presented in Table 5-1 below:

Major pieces of equipment may be recyclable or reusable. The steel towers may be recycled. Electrical equipment could either be salvaged for reuse or recycled. Components such as the generators and cabling are likely to have a high resale value due to copper and aluminum content. Concrete from footings could be crushed and recycled as granular fill material. Spent oils could be recovered for recycling through existing oil reprocessing companies.

As much of the facility would consist of reusable or recyclable materials, there would be minimal residual waste for disposal as a result of decommissioning the facility. Small amounts of registerable waste materials would be managed in accordance with O. Reg. 347 or subsequent applicable legislation. Residual non-hazardous wastes would be disposed at a licensed landfill in operation at the time of decommissioning **6.0**

Monitoring

For agricultural land, potential soil problem areas including trench subsidence, soil erosion and/or stoniness would be noted. For municipal road allowances, a review should occur of the establishment and health of re-vegetation as required, depending on pre-construction conditions. Additional monitoring activities may also be conducted, depending upon the site conditions at the time of decommissioning. If negative impacts are noted during monitoring activities, appropriate remediation measures would be implemented as necessary, and additional follow-up monitoring would be conducted, as appropriate and determined in consultation with required authorities.

7.0 Other Considerations

7.1 EMERGENCY RESPONSE AND COMMUNICATIONS PLAN

The Project's Emergency Response and Communications Plan is discussed in the Draft Design and Operations Report. The plan would be in effect for all phases of the Project including decommissioning.

Q. The Draft Design and Operations Report makes reference to an Emergency Response and Communications Plan that "will be prepared". Please provide details of Construction Emergency Response and Communications Plan in final draft of Decommissioning Plan Report.

7.2 DECOMMISSIONING NOTIFICATION

Prior to decommissioning, Windlectric will consult with stakeholders (e.g. local government) regarding the details of decommissioning and would prepare an updated and comprehensive decommissioning plan as required to meet regulatory requirements in effect at that time. A description of non-emergency communications with Project stakeholders is included in the Emergency Response and Communications Plan.

Q. As noted above, an Emergency Response and Communications Plan has not been provided for review as of December 2012.

7.3 OTHER APPROVALS

Following the preparation of the updated and comprehensive decommissioning plan as required, the Proponent would obtain all necessary approvals in effect at the time from appropriate government and regulatory bodies. Currently existing permits and approvals, which may be required at the time of decommissioning, are provided in the following table (Table 7-1).

Table 7.1: Potential Decommissioning Permits and Approvals

General Comment:

There are many references to removal of foundations and below-grade material 'according to land use agreements'. There is some reference to the holes left from excavation being filled by 'fill' and top-soil from surrounding land. Some sections do not mention 'back-fill' at all. eg: Section 3.39: backfill not mentioned.

Section 3.10: Backfill not mentioned.

section 3.32: backfill material not mentioned.

Recommendation:

Borrow-pit backfilling should not be permitted. Excavated material should be immediately removed from the Island and replaced with clean fill and quality top-soil from an approved mainland source. Land use agreements must include agreements with the Township.