



## 1. INTRODUCTION

This Design and Operations report has been prepared to provide information to the public, Aboriginal communities, municipalities and local authorities regarding the proposed Dufferin Wind Power project (the Project). The Project will require approval under *Ontario Regulation 359/09, Renewable Energy Approval (REA or Ontario Regulation 359/09)* under Section V.0.1 of the *Ontario Environmental Protection Act* and this Design and Operations report is a required component of the application. Based on the REA Regulations, this project is a ‘Class 4’ wind facility.

This Design and Operations Report has been prepared to fulfill the requirements of Item 4 in Table 1 of the Ontario Regulation 359/09, Renewable Energy Approvals as outlined in **Table 1**, below.

<b>Table 1: Ontario Regulation 359/09 Design and Operations Report Requirements</b>	
<b>Requirements</b>	<b>Section Reference</b>
1. Set out a site plan of the project location at which the renewable energy project will be engaged in, including:	
i. One or more maps or diagrams of:	
a. all buildings structures, roads, utility corridors, road allowances and easements required in respect of the renewable energy generation facility and situated within 300 m of the facility	Figure 2a, b
b. any ground water and surface water supplies used at the facility	N/A
c. any things from which contaminants are discharged into the air	N/A
d. any works for the collection, transmission, treatment and disposal of sewage	Sections 5.9.2 and 6.6.2 – Septic located next to O&M building
e. any areas where waste, biomass, source separated organics and farm material are stored, handled, processed or disposed of	N/A
f. the Project Location in relation to any of the following within 125 metres: properties described in Column 1 of the Table to section 19, heritage resources, archaeological resources, the portion of the Oak Ridges Moraine Conservation Plan Area that is subject to the Oak Ridges Moraine Conservation Plan, the area of the Niagara Escarpment Plan, the Protected Countryside, the Lake Simcoe watershed	Figure 2b
g. any noise receptors or odour receptors that may be adversely affected by the use or operation of the facility.	Figure 4
ii. a description of each item diagrammed under subparagraph i	Section 6



<b>Table 1: Ontario Regulation 359/09 Design and Operations Report Requirements</b>	
<b>Requirements</b>	<b>Section Reference</b>
iii. one or more diagrams of land contours, surface water, drainage and any of the following, if they have been identified in complying with this Regulation: properties described in Column 1 of the Table to section 19, heritage resources, archaeological resources, water bodies, significant or provincially significant natural features and any other natural features identified in the Protected Countryside or in the portion of the Oak Ridges Moraine Conservation Plan Area that is subject to the Oak Ridges Moraine Plan.	Figure 2a
iv. a description, map or diagram of the distance between the base of wind turbines and any public road rights of way or railway rights of way that are within a distance equivalent to the length of any blades of the wind turbine, plus 10 metres.	N/A as no turbines are that close to road or rail Rights-of-way
v. a description, map or diagram of the distance between the base of any wind turbine and all boundaries of the parcel of land on which the wind turbine is constructed, installed or expanded within a distance equivalent to the height of the wind turbine, excluding the length of any blades.	See Property Line Setback Assessment Report
vi. a description, map or diagram of the distance between the base of each wind turbine and the nearest noise receptor.	Figure 4 and <i>Noise Study Report</i>
2. Set out conceptual plans, specifications and descriptions related to the design of the renewable energy generation facility, including a description of:	the design of the renewable
i. any works for the collection, transmission, treatment and disposal of sewage, including details of any sediment control features and storm water management facilities	Sections 5.9.2 and 6.6.2 – Septic located next to O&M building
ii. any things from which contaminants are discharged into the air	N/A
iii. any systems, facilities and equipment for receiving, handling, storing and processing any waste, biomass, and source separated organics, farm material and biogas.	N/A
3. Set out conceptual plans, specifications and descriptions related to the operation of the renewable energy generation facility, including:	
i. in respect of any water takings	
a. a description of the time period and duration of water takings expected to be associated with the operation of the facility	Section 6.6.1
b. a description of the expected water takings, including rates, amounts and an assessment of the availability of water to meet the expected demand	Section 6.6.1
c. an assessment of and documentation showing the potential for the facility to interfere with existing uses of the water expected to be taken.	N/A
ii. a description of any expected concentration of air contaminants discharged from the facility.	N/A
iii. a description of an expected concentration of air contaminants discharged from the facility	N/A



<b>Table 1: Ontario Regulation 359/09 Design and Operations Report Requirements</b>	
<b>Requirements</b>	<b>Section Reference</b>
iv. in respect of any biomass, source separated organics and farm material at the facility	
a. the maximum daily quantity that will be accepted	N/A
b. the estimated annual average quantity that will be accepted	N/A
c. the estimated average time that it will remain at the facility	N/A
d. the estimated average rate at which it will be used.	N/A
v. in respect of any waste generated as a result of processes at the Project Location, the management and disposal of such waste, including:	
a. the expected types of waste to be generated	Section 6.6.4
b. the estimated maximum daily quantity of waste to be generated, by type	Section 6.6.4
c. processes for the storage of waste	Section 6.6.4
d. processes for final disposal of waste.	Section 6.6.4
4. Include an environmental effects monitoring plan in respect to any adverse environmental effects that may result from engaging in the renewable energy Project, setting out:	
i. performance objectives in respect of the adverse environmental effects.	Section 7 Description of Negative Environmental Effects and Mitigation, Section 8 for Environmental Effects Monitoring Plan
ii. mitigation measures to assist in achieving the performance objectives mentioned in subparagraph I	Section 7 Description of Negative Environmental Effects and Mitigation, Section 8 for Environmental Effects Monitoring Plan
iii. a program for monitoring adverse environmental effects for the duration of the time that the Project is engaged in, including a contingency plan to be implemented if any mitigation measures fail	Section 7 Description of Negative Environmental Effects and Mitigation, Section 8 for Environmental Effects Monitoring Plan
5. Include a response plan setting out a description of the actions to be taken while engaging in the renewable energy project to inform the public, aboriginal communities and municipalities, local roads boards and Local Services Boards with respect to the Project, including:	
i. measures to provide information regarding the activities occurring at the Project Location including emergencies	Section 9
ii. means by which persons responsible for engaging in the Project may be contacted	Section 9
iii. means by which correspondence directed to the persons responsible for engaging in the Project will be recorded and addressed	Section 9



<b>Table 1: Ontario Regulation 359/09 Design and Operations Report Requirements</b>	
<b>Requirements</b>	<b>Section Reference</b>
6. If the Project Location is in the Lake Simcoe watershed, a description of whether the Project requires alteration of the shore of Lake Simcoe, the shore of a fresh water estuary or a stream connected to Lake Simcoe or other lakes or any permanent or intermittent stream and:	
i. how the Project may impact any shoreline, including the ecological functions of the shoreline, and	N/A
ii. how the Project will be engaged in to:	
a. maintain the natural contour of the shoreline through the implementation of natural shoreline treatments, such as planting of natural vegetation and bioengineering	N/A
b. use of vegetative riparian area, unless the Project Location is used for agricultural purposes, and will continue to be used for such purposes.	N/A

This Design and Operations Report was made available for Municipal and Aboriginal review and comment on February 24, 2012, and for public review and comment on May 24, 2012. The consultation period under REA ended on July 23, 2012 and the report has been updated based upon these consultations.

Other reports included in the Project's final REA submission package include:

- Project Description Report
- Construction Plan Report
  - Archaeological Assessments
  - Cultural Heritage Self-Assessments
  - Cultural Heritage Assessment
- Decommissioning Plan Report
- Water Body Report
- Water Assessment Report
- Wind Turbine Specifications Report
- Property Line Setback Assessment Report
- Natural Heritage Assessment Reports
  - Records Review
  - Site Investigation
  - Evaluation of Significance
  - Environmental Impact Study
- Consultation Report
- Supporting Documents.