

**RENEWABLE ENERGY APPROVAL**NUMBER 0871-AV3TFM  
Issue Date: May 4, 2018

Nation Rise Wind Farm GP Inc., as general partner for and  
on behalf of Nation Rise Wind Farm Limited Partnership  
219 Dufferin St., Suite 217C  
Toronto, Ontario  
M6K 3J1

Project Location: Nation Rise Wind Farm  
Within an area generally bounded by the Municipality of  
The Nation and the Township of Russell to the north,  
Courville Road and MacMillan Road to the east, Township  
of South Stormont to the south, and the Township of North  
Dundas to the west.  
Township of North Stormont  
United Counties of Stormont, Dundas and Glengarry

*You have applied in accordance with Section 47.4 of the Environmental Protection Act for approval to  
engage in a renewable energy project in respect of a Class 4 wind facility consisting of the following:*

- the construction, installation, operation, use and retiring of a Class 4 wind facility with a total name plate  
capacity of up to 100 megawatts (MW).

*For the purpose of this renewable energy approval, the following definitions apply:*

1. "Acoustic Assessment Report" means the report included in the Application and entitled "*Nation  
Rise Wind Farm, Renewable Energy Approval Application - Noise Impact Assessment Nation  
Rise Wind Farm Limited Partnership*", Document No.: 10021027-CAMO-R-06 Issue: E, dated  
26 September 2017, prepared by GL Garrad Hassan Canada, Inc and signed by S. Dokouzian,  
P.Eng.;

2. "Acoustic Audit - Emission" means an investigative procedure that is compliant with the CAN/CSA Standard 61400-11 and consisting of measurements and/or acoustic modelling of noise emissions produced by wind turbine generators, assessed to determine compliance with the manufacturer's noise (acoustic) equipment specifications and emission data of the wind turbine generators, included in the Acoustic Assessment Report;
3. "Acoustic Audit - Immission" means an investigative procedure consisting of measurements and/or acoustic modelling of all sources of noise emissions due to the operation of the Equipment, assessed to determine compliance with the Noise Performance Limits set out in this Approval;
4. "Acoustic Audit Report-Emission" means a report presenting the results of the Acoustic Audit - Emission;
5. "Acoustic Audit Report-Immission" means a report presenting the results of the Acoustic Audit - Immission;
6. "Acoustic Audit - Transformer Substation" means an investigative procedure that is compliant with the IEEE Standard C57.12.90 consisting of measurements and/or acoustic modelling of all noise sources comprising the transformer substation assessed to determine compliance with the Sound Power Level specification of the transformer substation described in the Acoustic Assessment Report;
7. "Acoustic Audit Report - Transformer Substation" means a report presenting the results of the Acoustic Audit - Transformer Substation;
8. "Acoustical Consultant" means a person currently active in the field of environmental acoustics and noise/vibration control, who is knowledgeable about Ministry noise guidelines and procedures and has a combination of formal university education, training and experience necessary to assess noise emissions from wind facilities;
9. "Acoustically Equivalent Wind Turbine" means a wind turbine with the same or lower octave band sound power levels, tonal audibility values, and the predicted noise impact levels at receptor(s) as the Reference Wind Turbine.
10. "Act" means the *Environmental Protection Act* , R.S.O 1990, c.E.19, as amended;
11. "Adverse Effect" has the same meaning as in the Act;
12. "Application" means the application for a Renewable Energy Approval dated July 18, 2017, and signed by Kenneth Little, Senior Project Manager, Nation Rise Wind Farm Limited Partnership, and all supporting documentation submitted with the application, including amended documentation submitted up to the date this Approval is issued;

13. "Approval" means this Renewable Energy Approval issued in accordance with Section 47.4 of the Act, including any schedules to it;
14. "A-weighting" means the frequency weighting characteristic as specified in the International Electrotechnical Commission (IEC) Standard 61672, and intended to approximate the relative sensitivity of the normal human ear to different frequencies (pitches) of sound. It is denoted as "A";
15. "A-weighted Sound Pressure Level" means the Sound Pressure Level modified by application of an A-weighting network. It is measured in decibels, A-weighted, and denoted "dBA";
16. "CAN/CSA Standard 61400-11" means the "Wind turbine generator systems – Part 11: Acoustic noise measurement techniques";
17. "Class 1 Area" means an area with an acoustical environment typical of a major population centre, where the background sound level is dominated by the activities of people, usually road traffic, often referred to as "urban hum";
18. "Class 2 Area" means an area with an acoustical environment that has qualities representative of both Class 1 and Class 3 Areas:
  1. sound levels characteristic of Class 1 during daytime (07:00 to 19:00 or to 23:00 hours);
  2. low evening and night background sound level defined by natural environment and infrequent human activity starting as early as 19:00 hours (19:00 or 23:00 to 07:00 hours);
  3. no clearly audible sound from stationary sources other than from those under impact assessment.
19. "Class 3 Area" means a rural area with an acoustical environment that is dominated by natural sounds having little or no road traffic, such as the following:
  1. a small community with less than 1000 population;
  2. agricultural area;
  3. a rural recreational area such as a cottage or a resort area; or
  4. a wilderness area.
20. "Company" means Nation Rise Wind Farm GP Inc., as general partner for and on behalf of Nation Rise Wind Farm Limited Partnership, a partnership under the laws of Ontario, and includes its successors and assignees;

21. "Compliance Protocol for Wind Turbine Noise" means the Ministry document entitled, Compliance Protocol for Wind Turbine Noise, Guideline for Acoustic Assessment and Measurement, April 2017;
22. "Decibel" means a dimensionless measure of Sound Level or Sound Pressure Level, denoted as dB;
23. "Director" means a person appointed in writing by the Minister of the Environment pursuant to section 5 of the Act as a Director for the purposes of section 47.5 of the Act;
24. "District Manager" means the District Manager of the appropriate local district office of the Ministry where the Facility is geographically located;
25. "Equipment" means the thirty three (33) wind turbine generators and one (1) transformer substation, identified in this Approval and as further described in the Application, to the extent approved by this Approval;
26. "Equivalent Sound Level" is the value of the constant sound level which would result in exposure to the same total A-weighted energy as would the specified time-varying sound, if the constant sound level persisted over an equal time interval. It is denoted  $L_{eq}$  and is measured in dB A-weighting (dBA);
27. "Facility" means the renewable energy generation facility, including the Equipment, as described in this Approval and as further described in the Application, to the extent approved by this Approval;
28. "IEEE Standard C57.12.90" means the IEEE Standard Test Code for Liquid-Immersed Distribution, Power, and Regulating Transformers;
29. "Independent Acoustical Consultant" means an Acoustical Consultant who is not representing the Company and was not involved in preparing the Acoustic Assessment Report. The Independent Acoustical Consultant shall not be retained by the Acoustical Consultant involved in the noise impact assessment;
30. "In-water Works" means any construction related works or activity that takes place below the high water mark during flowing conditions and/or when water is present;
31. "Ministry" means the ministry of the government of Ontario responsible for the Act and includes all officials, employees or other persons acting on its behalf;
32. "Noise Guidelines for Wind Farms" means the Ministry document entitled "Noise Guidelines for Wind Farms", dated May 2016, PIBS 9900e, as amended;
33. "Noise Receptor" has the same meaning as in O. Reg. 359/09;

34. "O. Reg. 359/09" means Ontario Regulation 359/09 "Renewable Energy Approvals under Part V.0.1 of the Act" made under the Act;
35. "Professional Engineer" has the same meaning as in O. Reg. 359/09;
36. "Professional Geoscientist" has the same meaning as in O. Reg. 359/09;
37. "Project Location" has the same meaning as in O. Reg. 359/09;
38. "Point of Reception" has the same meaning as in the Noise Guidelines for Wind Farms and is subject to the same qualifications described in that document;
39. "Reference Wind Turbine" for this Approval is the turbine described in section 4.1 of the Acoustic Assessment Report; (Vestas V136 STE, 3.45 MW Mode 0 turbine with a maximum Sound Power Level of 105.8 dBA);
40. "Project Location" has the same meaning as in O. Reg. 359/09;
41. "Project Study Area" means the area designated as the "Project Study Area" in Figure 2-1 of the report included in the Application and entitled "Construction Plan Report", dated April 25, 2018, and prepared by DNV GL;
42. "Publication NPC-233" means Ministry Publication NPC-233, "Information to be Submitted for Approval of Stationary Sources of Sound", October 1995;
43. "Qualified Inspector" means a person with training and/or experience in erosion and sediment control, stormwater management, and surface water monitoring not representing the Company who was not involved in preparing the stormwater management and erosion and sediment control plans;
44. "Significant Storm Event" means 10 millimetres of rain in any 24 hour period as measured at the closest Environment Canada weather station;
45. "Sound Level" means the A-weighted Sound Pressure Level;
46. "Sound Level Limit" is the limiting value described in terms of the one hour A-weighted Equivalent Sound Level  $L_{eq}$ ;
47. "Sound Power Level" means ten times the logarithm to the base of 10 of the ratio of the sound power (Watts) of a noise source to standard reference power of  $10^{-12}$  Watts;
48. "Sound Pressure" means the instantaneous difference between the actual pressure and the average or barometric pressure at a given location. The unit of measurement is the micro pascal ( $\mu\text{Pa}$ );

49. "Sound Pressure Level" means twenty times the logarithm to the base 10 of the ratio of the effective pressure ( $\mu\text{Pa}$ ) of a sound to the reference pressure of  $20 \mu\text{Pa}$ ;
50. "Spring Freshet" means a comparatively high rate of flow of fresh water of short duration in a stream, resulting from heavy rainfall or rapid snow melt;
51. "Turbid Water" means any discharge water or diverted water that results in a maximum increase of 8 NTU in the receiving water body relative to the background levels.
52. "UTM" means Universal Transverse Mercator coordinate system.
53. "Wind Turbine Specifications Checklist" means a document which summarizes the parameters of the Acoustically Equivalent Wind Turbine. The document is available at <https://files.ontario.ca/moecc-20-wind-specifications.docx> .
54. "Wind Turbine Specifications Report" means a document which details the parameters of the Acoustically Equivalent Wind Turbine and at a minimum contains the information specified in the Wind Turbine Specifications Checklist.

*You are hereby notified that this approval is issued to you subject to the terms and conditions outlined below:*

## **TERMS AND CONDITIONS**

### **A – GENERAL**

- A1. The Company shall construct, install, use, operate, maintain and retire the Facility in accordance with the terms and conditions of this Approval and the Application and in accordance with the following schedules attached hereto:  
  
Schedule A - Facility Description  
Schedule B - Coordinates of the Equipment and Noise Specifications  
Schedule C - Noise Control Measures
- A2. Where there is a conflict between a provision of this Approval and any document submitted by the Company, the conditions in this Approval shall take precedence. Where there is a conflict between one or more of the documents submitted by the Company, the document bearing the most recent date shall take precedence.
- A3. The Company shall ensure a copy of this Approval is:
  - (1) accessible, at all times, by Company staff operating the Facility and;
  - (2) submitted to the clerk of each local municipality and upper-tier municipality in which the Facility is situated.

- A4. The Company shall maintain a publicly accessible website for the life of the Facility and shall ensure that:
- (1) this Approval, the Application, and any amendments to this Approval or the Application, are posted on the Company's publicly accessible website within five (5) business days of the date this Approval is issued or amended;
  - (2) with the exception of the reports referred to in Condition A4(3), any technical report(s) required to be prepared by a condition of this Approval is posted on the Company's publicly accessible website within five (5) business days of the date the report(s) is prepared, subject to the redaction of any personal, commercially sensitive or proprietary information, as deemed appropriate by the Ministry;
  - (3) the reports and records described in Conditions I5, I7(5), I8(2), J1, J5, K1, K6, L1, L5, H2, and R1 are posted on the Company's publicly accessible website within five (5) business days of the date the reports and records are approved by the Ministry, subject to the redaction of any personal, commercially sensitive or proprietary information, as deemed appropriate by the Ministry;
  - (4) any project-related documentation requested by the District Manager to be posted on the Company's publicly accessible website is posted on the Company's publicly accessible website within five (5) business days of the date of the District Manager's request;
  - (5) all of the documentation described in Conditions A4(1), A4(2), A4(3), and A4(4) remains posted on the Company's publicly accessible website for the life of the Facility.
- A5. The Company shall, at least six (6) months prior to the anticipated retirement date of the entire Facility, or part of the Facility, review the report included in the Application and entitled "Decommissioning Plan Report" dated August 4, 2017, and prepared by DNV GL, to ensure that it is still accurate. If the Company determines that the Facility cannot be decommissioned in accordance with the "Decommissioning Plan Report" dated August 4, 2017, and prepared by DNV GL, the Company shall provide the Director and District Manager a written description of plans for the decommissioning of the Facility.
- A6. The Facility shall be retired in accordance with the report included in the Application and entitled "Decommissioning Plan Report" dated August 4, 2017, and prepared by DNV GL, and any directions provided by the Director or District Manager.
- A7. The Company shall provide the District Manager and the Director at least ten (10) days written notice of the following:
- (1) the commencement of any construction or installation activities at the Project Location; and
  - (2) the commencement of the operation of the Facility.

- A8. The Company shall, at least six (6) months prior to the anticipated retirement date of the entire Facility, or part of the Facility, contact the ministry responsible for agriculture in Ontario at that time to discuss its plans for the decommissioning of the Facility, and follow any directions provided by that ministry in respect of the Company's plans to restore the Project Location to its previous agricultural capacity.
- A9. If an Acoustically Equivalent Wind Turbine(s) is utilized in the Facility then:
- (1) at least three (3) months prior to delivery of the first Equipment component to the site of the Facility or such other date as agreed to in writing by the Director, a Wind Turbine Specifications Checklist confirming the actual equipment make/model, must be submitted to the Director and the District Manager for review and approval,
  - (2) at least three (3) months prior to delivery of the first Equipment component to the site of the Facility or such other date as agreed to in writing by the Director, the following documents must be submitted to the Director and the District Manager for review and approval;
    - (a) a Wind Turbine Specifications Report,
    - (b) an IEC 61400-11 test report(s) confirming the chosen turbine is acoustically equivalent to the approved Reference Wind Turbine, and
    - (c) a summary containing updated tables 7-1 and 7-2 of the Acoustic Assessment Report.

**B – EXPIRY OF APPROVAL**

- B1. Construction and installation of the Facility must be completed within three (3) years of the later of:
- (1) the date this Approval is issued; or
  - (2) if there is a hearing or other litigation in respect of the issuance of this Approval, the date that this hearing or litigation is disposed of, including all appeals.
- B2. This Approval ceases to apply in respect of any portion of the Facility not constructed or installed before the later of the dates identified in Condition B1.

**C – NOISE PERFORMANCE LIMITS**

- C1. The Company shall ensure that:
- (1) the Sound Levels from the Equipment, at the Points of Reception identified in the Acoustic Assessment Report, comply with the Sound Level Limits set in the Noise Guidelines for Wind Farms, as applicable, and specifically as stated in the table below:

<b>Wind Speed (m/s) at 10 m height</b>	<b>at or below 4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>
--	----------------------	----------	----------	----------	----------	----------	-----------



Sound Level Limits, dBA	40.0	40.0	40.0	43.0	45.0	49.0	51.0
-------------------------	------	------	------	------	------	------	------

- (2) the Equipment is constructed and installed at either of the following locations:
  - (a) at the locations identified in Schedule B of this Approval; or
  - (b) at a location that does not vary by more than 10 metres from the locations identified in Schedule B of this Approval and provided that,
    - (i) the Equipment will comply with Condition C1(1); and
    - (ii) all setback prohibitions established under O. Reg. 359/09 are complied with.
- (3) the Equipment complies with the noise specifications set out in Schedule B of this Approval.

- C2. If the Company determines that some or all of the Equipment cannot be constructed in accordance with Condition C1(2), prior to the construction and installation of the Equipment in question, the Company shall apply to the Director for an amendment to the terms and conditions of the Approval.
- C3. Within three (3) months of the completion of the construction of the Facility, the Company shall submit to the Director a written confirmation signed by an individual who has the authority to bind the Company that the UTM coordinates of the "as constructed" Equipment comply with the requirements of Condition C1(2).
- C4. Prior to construction and installation of the transformer substation the Company shall submit to the Director a written confirmation signed by an individual who has the authority to bind the Company that the subject transformer sound power levels, determined fully in accordance with the IEEE Standard C57.12.90-2010, do not exceed the maximum sound power levels specified in the Schedule B of the Approval.

**D – CONFIRMATION OF VACANT LOT NOISE RECEPTORS**

- D1. The locations identified as vacant lot receptor in Appendix A of the Acoustic Assessment Report are specified as Noise Receptors for the purposes of subsection 54 (1.1) of O. Reg. 359/09 and subsection 35 (1.0.1) of O. Reg. 359/09.

**E – ACOUSTIC AUDIT - IMMISSION**

- E1. The Company shall carry out an Acoustic Audit - Immission of the Sound Levels produced by the operation of the Equipment in accordance with the following:
  - (1) the acoustic audit measurements shall be undertaken in accordance with Part D of the Compliance Protocol for Wind Turbine Noise; {all data including Supervisory Control and Data Acquisition data (SCADA) from the subject turbines is to be documented in one (1) minute intervals unless prior to the measurements another interval is agreed to in

writing by the Director};

- (2) the acoustic audit measurements shall be performed by an Independent Acoustical Consultant on two (2) separate occasions at five (5) different Points of Reception that represent the location of the greatest predicted noise impacts, i.e., the highest predicted Sound Levels, and that are located in the direction of prevailing winds from the Facility;
- (3) if any of the five (5) Points of Reception cannot be selected on the basis of the criteria described in Condition E1(2) due to access restrictions or for any other reason, the Company must select alternate Points of Reception or locations (other than a Point of Reception), and must provide a clear written explanation to the Director and District Manager prior to undertaking the acoustic audit measurements as to why the criteria described in Condition E1(2) could not be met and the basis for selecting the alternate Points of Reception or locations. The Company must obtain the written agreement of the Director, and follow any directions provided, for the use of these alternate Points of Reception or locations prior to proceeding with the acoustic audit measurements.

E2. The Company shall submit to the Director and the District Manager an Acoustic Audit Report - Immission, prepared by an Independent Acoustical Consultant, at the following points in time:

- (1) no later than twelve (12) months after the commencement of the operation of the Facility, or such other date as agreed to in writing by the Director, for the first of the two (2) acoustic audit measurements at the five (5) different Points of Reception; and
- (2) no later than eighteen (18) months after the commencement of the operation of the Facility, or such other date as agreed to in writing by the Director, for the second of the two (2) acoustic audit measurements at the five (5) different Points of Reception.

E3. The Company shall carry out an Acoustic Audit - Transformer Substation and shall submit to the Director and the District Manager an Acoustic Audit Report - Transformer Substation prepared by an Independent Acoustical Consultant, in accordance with Ministry Publication NPC-233, "Information to be Submitted for Approval of Stationary Sources of Sound", October, 1995 as amended, and no later than six (6) months after the commencement of the operation of the Facility.

E4. In addition to the requirements described in Condition E3, the Acoustic Audit - Transformer Substation must include a compliance summary of the measurement results and the transformer sound data contained in the Acoustic Assessment Report. The following items must be included in the compliance summary:

- (1) transformer sound power levels (overall level and frequency spectra in octave bands); and
- (2) a statement that the transformer overall A-weighted sound power levels do not exceed the maximum sound power levels specified in the Schedule B of the Approval.

## **F – ACOUSTIC AUDIT- EMISSION**

- F1. The Company shall carry out an Acoustic Audit - Emission of the acoustic emissions produced by the operation of the wind turbine generators in accordance with the following:
- (1) the acoustic emission measurements shall be undertaken in accordance with the CAN/CSA Standard C61400-11:07;
  - (2) the acoustic emission measurements shall be performed by an Independent Acoustical Consultant; and
  - (3) the acoustic emission measurements shall be performed on one (1) of each type / model of wind turbine generator(s) used in the Facility.
- F2. The Company shall submit to the Director and the District Manager an Acoustic Audit Report-Emission, prepared in accordance with Section 9 of the CAN/CSA Standard C61400-11:07 by an Independent Acoustical Consultant, no later than twelve (12) months after the commencement of the operation of the Facility, or such other later date as agreed to in writing by the Director.
- F3. In addition to the requirements described in Condition F2, the Acoustic Audit Report-Emission must include a summary of the measurement results corresponding to the Maximum Sound Power Levels (dBA) shown in Schedule B. The purpose of the summary is to confirm the noise specifications of the wind turbine generators with specifications included in the Application. The following items must be included in the summary:
- (1) sound power levels (overall levels and frequency spectra in octave bands for each wind speed) of the wind turbine generators;
  - (2) tonal audibility values (for each wind speed) of the wind turbine generators;
  - (3) a statement that the measured overall A-weighted sound power levels of wind turbine generators, do not exceed the values of the Maximum Sound Power Level (dBA) shown in Schedule B of the Approval with consideration that Part E of the Compliance Protocol will be used to evaluate compliance of the Facility; and
  - (4) a statement commenting on the measured wind turbine generators tonal audibility values, as per Condition F3(2), and the maximum tonal audibility value noted in the Acoustic Assessment Report with consideration that Part E of the Compliance Protocol will be used to evaluate compliance of the Facility.

## **G – WATER TAKING ACTIVITIES**

- G1. The Company shall carry out water taking activities in accordance with the report included in the Application and entitled "Hydrogeological Assessment and Effects Assessment", dated August 11, 2017, and prepared by DNV GL.

- G2. The Company shall implement any proposed mitigation measures, contingency measures, and monitoring described in the report included in the Application and entitled "Hydrogeological Assessment and Effects Assessment", dated August 11, 2017, and prepared by DNV GL.
- G3. The Company shall notify the District Manager within two (2) business days of any complaint arising from the taking of water authorized under this Approval and shall report any action which has been taken or is proposed with regard to such complaints. The Company shall notify the District Manager immediately if the taking of water is observed to have any significant impact on the surrounding waters. After hours, calls shall be directed to the Ministry's Spills Action Centre at 1-800-268-6060.
- G4. The Company shall ensure that the taking of water authorized under this this Approval does not result in an Adverse Effect on waters in the vicinity of the Facility.
- G5. The Company shall ensure that any water discharged to the natural environment does not result in scouring, erosion or physical alteration of stream channels or banks and that there is no flooding in the receiving area or water body, downstream water bodies, ditches or properties caused or worsened by this discharge.
- G6. Siltation control measures shall be installed at the discharge site(s) and shall be sufficient to control the volumes.
- G7. Any discharge facilities installed at or downstream of the discharge point(s) such as discharge diffusers, settlement ponds, silt bags, flow checks or filters shall be designed and constructed to capture and treat the discharge water for suspended solids prior to release to any watercourse. The discharge facilities shall be maintained for the full duration of the discharge.
- G8. The Company shall not discharge Turbid Water to any watercourse.
- G9. The Company shall take all measures necessary to prevent damage to buildings, bridges, structures, roads and/ or railway lines that may be impacted either directly or indirectly by the taking of water authorized under this Approval.
- G10. If the taking of water is observed to cause any negative impact to other water supplies obtained from any adequate sources that were in use prior to initial issuance of the Approval, the Company shall take such action necessary to make available to those affected, a supply of water equivalent in quantity and quality to their normal takings, or shall compensate such persons for their reasonable costs of so doing, or shall reduce the rate and amount of taking to prevent or alleviate the observed negative impact. Pending permanent restoration of the affected supplies, the Company shall provide, to those affected, temporary water supplies adequate to meet their normal requirements, or shall compensate such persons for their reasonable costs of doing so. If permanent interference is caused by the water taking, the Company shall restore the water supplies of those permanently affected.
- G11. The total amounts of water taken shall be measured using a calibrated flow meter and totalizer.

G12. The Company shall maintain a record of all water takings. This record shall include the dates and times of water takings, and the total measured amounts of water taken per day for each day that water is taken under the amount authorized at the time of water taking. A separate record shall be maintained for each source. The Company shall keep all required records up to date and available at or near the site of the taking and shall produce the records immediately for inspection by the Ministry upon request.

## **H – STORMWATER MANAGEMENT, EROSION AND SEDIMENT CONTROL, AND SURFACE WATER MONITORING**

- H1. The Company shall employ best management practices for stormwater management and erosion and sediment control during construction, installation, use, operation, maintenance and retiring of the Facility.
- H2. The Company shall prepare a detailed, site-specific stormwater management and erosion and sediment control plan for the construction, installation, use, operation, maintenance and retiring of the Facility, and submit the plan to the Director at least one month prior to the commencement of construction of the Facility.
- H3. The stormwater management and erosion and sediment control plan described in Condition H2 shall be prepared by a qualified expert (Professional Engineer), and shall:
- (1) include details related to site-specific erosion and sediment control measures (including measures to address any construction dewatering discharge), spill control and response plans, stormwater management measures, contingency measures, monitoring, monitoring frequency, and the requirement for a Qualified Inspector to do the monitoring;
  - (2) comply with the Ministry's Guideline B-6 "Guidelines for Evaluating Construction Activities on Water Resources", January 1995; "Stormwater Management Planning and Design Manual", March 2003; and "Erosion and Sediment Control Guideline for Urban Construction, as Compiled by the Greater Golden Horseshoe Conservation Authority", December 2006;
  - (3) as a minimum requirement, require the installation of silt fencing prior to construction at the limits of construction around all staging and laydown areas, access roads, and turbine construction areas, when the limit of construction is located within 30m of a water body.
- H4. The Company shall not commence construction of the Facility (including any site preparation, site clearing, or site grading) unless:
- (1) the stormwater management and erosion and sediment control plan mentioned in Condition H2 has been approved in writing by the Director; and
  - (2) the pre-construction measures outlined in the approved stormwater management and erosion and sediment control plan have been properly installed.

- H5. The Company shall implement the approved stormwater management and erosion and sediment control plan during the construction, installation, use, operation, maintenance and retiring of the Facility.
- H6. The Company shall ensure that the stormwater management and erosion and sediment control measures described in the approved stormwater management and erosion and sediment control plan are installed and maintained as described in the approved stormwater management and erosion and sediment control plan.
- H7. The Company shall take all measures necessary to prevent damages (or any related impacts) to neighbouring properties, buildings, bridges, structures, roads, railway lines and/or other infrastructure that may be impacted by the discharge/ drainage resulting from the construction and operation of the Facility.
- H8. The Company shall employ a Qualified Inspector to maintain and inspect all stormwater management and erosion and sediment control measures, and perform all monitoring and measurements such as turbidity, as outlined in Conditions H10 and H17.
- H9. The stormwater management and erosion and sediment control measures shall be maintained and inspected daily during construction by the Company, and shall be maintained and inspected by a Qualified Inspector following precipitation events during the Spring Freshet and after any Significant Storm Event. These measures shall continue until such a time as the Qualified Inspector determines that the measures are no longer required or the Qualified Inspector deems that the risk of surface water/ environmental impacts from construction activities is negligible.
- H10. For the duration of construction, the Company shall require the Qualified Inspector to monitor in-field turbidity levels for all project components/ construction which takes place within 30 m of the high water mark of a waterbody in accordance with the following:
- (1) Monitoring shall be conducted on a daily basis upstream of the construction activity, and downstream of the construction activity during Significant Storm Events and the spring freshet;
  - (2) If the average (arithmetic mean) daily turbidity level downstream of the In-Water Works and construction activity exceeds the Canadian Council of Ministers of the Environment Canadian Water Quality Guidelines (CCME-CWQG) for the Protection of Aquatic Life for a short-term or long-term exposure as defined in the Canadian Environmental Quality Guidelines, Canadian Council of Ministers of the Environment, 1999, and as updated, the Company shall notify the Spills Action Centre (SAC) (1-800-268-6060 (toll-free, province-wide), or at 416-325-3000 (Toronto area), or 1-855-889-5775 (TTY)), within 24 hours and the Company shall implement the response plan to prevent further migration of turbid water into the watercourse(s).
- H11. When there is an overlap between regulatory requirements, the Company shall apply the more stringent and the more protective requirements for water bodies, natural heritage features and fish habitat.

- H12. The Company shall ensure that runoff/ stormwater does not contain a concentration of oil or petrochemicals that could be detected as a visible film, sheen or discoloration, be detected by odour, cause the tainting of any edible aquatic organism, form deposits on shorelines or bottom sediments, or that could be deleterious to aquatic organisms.
- H13. The Company shall ensure that water pumped from any excavations is not discharged at a rate or in a quantity which will cause downstream flooding, erosion, or an Adverse Effect and that appropriate sediment control measures such as sediment basin and filter strips will be employed as necessary at the discharge location.
- H14. The Company shall ensure that construction works and related activities are located a minimum of 30 m from the high water mark of water bodies, except as identified in the site-specific stormwater management plan and erosion and sediment control plan described in Condition H2.
- H15. The Company shall maintain records of all inspections, monitoring and sampling data, and maintenance carried out pursuant to Conditions H1 to H14 and H17 (for In-Water Works), which shall be made available for inspection by the Ministry, upon request. The records shall include the name of the Qualified Inspector, date and timing of inspections and all remedial actions taken.
- H16. In-water Works shall be completed in a manner that protects fish habitat and other sensitive species/ habitats.
- H17. The Company shall monitor in-field turbidity levels for the duration of In-water Works or until such a time as the Qualified Inspector determines that the erosion and sediment control measures are no longer required and/ or that the risk of surface water/ environmental impacts are negligible, in accordance with a sampling program prepared by the Company and submitted to the District Manager for approval prior to the commencement of construction including In-Water Works. The sampling program shall include the following:
- (1) Monitoring shall be conducted on a daily basis upstream and downstream of the In-Water Works within the waterbody(s), and downstream of the Facility within the waterbody(s);
  - (2) The Company shall notify the District Manager if the turbidity downstream of the erosion and control works is greater than 8 NTU (as per CCME-CWQG) from that measured upstream. The Company shall immediately implement additional erosion and sediment control measures to reduce or mitigate the sediment related impacts; and
  - (3) The Company shall collect water samples from a location immediately upstream of the In-water Works, and from a location immediately downstream of the In-water Works to be analyzed for total suspended solids (TSS). The TSS sampling shall take place at least once daily during In-water Works related construction, unless otherwise directed by the Ministry.
- H18. The Company shall install all In-water Works in a manner which:

- (1) Prevents an Adverse Effect to the stream bed, substrates, stream bank, instream and near-shore habitat, and flow characteristics, absent of any authorizations such as timing restrictions and/ or mitigation requirements from partner ministries and agencies; and
- (2) Adheres to timing restrictions and/ or mitigation requirements of partner ministries and agencies.

## **I – WELL WATER SAMPLING**

11. Prior to the commencement of the construction of the Facility, the Company shall make reasonable efforts, to the satisfaction of the Ministry, to contact owners of all active water wells within 1 km from each individual Equipment, communication tower, and meteorological towers, and seek permission to undertake a groundwater survey at existing water wells. Reasonable effort shall include, but may not be limited to, at least two in-person visits to each property, with one visit completed outside of regular business hours. If permission is granted, the Company shall interview the residents regarding water well construction, water use, water treatment, groundwater quality, groundwater quantity and well locations to establish and document a history of the water well. The Company shall collect a water well sample from each well, prior to any treatment systems (“raw”), after allowing the distribution system to flow for approximately 5 minutes.
12. If the representation of active water wells (i) within the Project Study Area and (ii) outside of the Project Study Area though within 1 km from each individual Equipment, communication tower, and meteorological towers is not adequate, to the satisfaction of the Ministry, the Company shall implement a groundwater monitoring well network by installing monitoring wells to a depth representative of the existing water wells in the area. The Company shall collect a representative groundwater sample from each monitoring well prior to the commencement of the construction of the Facility.
13. Prior to the commencement of the construction of the Facility, the Company shall submit the water samples described in Conditions I1 and I2 to a qualified laboratory for analysis of the following parameters: electrical conductivity, pH, total dissolved solids, total suspended solids, turbidity, alkalinity, ammonia, chloride, dissolved organic carbon, hardness, nitrite, nitrate, orthophosphate, sulphate, E. Coli, total coliform, total background, aluminum, antimony, arsenic, barium, beryllium, boron, cadmium, cobalt, copper, iron, lead, magnesium, manganese, molybdenum, nickel, phosphorus, potassium, selenium, silicon, silver, sodium, strontium, thallium, titanium, uranium, vanadium, and zinc.
14. The Company shall ensure that the work described in Conditions I1, I2, and I3 is undertaken, or approved by, a qualified expert (Professional Engineer or Professional Geoscientist), and is conducted in accordance with the sampling and chain-of-custody standard protocols as set out in the Ministry document titled "Practices for the Collection and Handling of Drinking Water Samples, version 2.0", dated April 1, 2009.
15. The Company shall create written records of the well water sampling surveys described in Condition I1. The records shall be submitted to the Ministry in the form of a technical report prior to the commencement of the construction of the Facility. The records shall include the following:
  - (1) a list of active water wells sampled pursuant to Condition I1, including:



- (a) the address of the property where the well is situated;
  - (b) the full name of the owner of the property where the well is situated;
  - (c) time, date and specific location that the water sample was taken;
  - (d) information obtained from each resident about their water well(s), including information about water well construction, water use, water treatment, groundwater quality, groundwater quantity and well locations.
- (2) a list of all properties with active water wells at the locations specified in Condition I1 where active water wells were not sampled, including:
- (a) the address of the property where the well is situated;
  - (b) full name of the owner of the property where the well is situated;
  - (c) time and date that the Company sought permission from the property owner to take a water sample pursuant to Condition I1;
  - (d) the rationale provided by the property owner for not providing the Company permission to take the water sample specified in Condition I1, if a rationale was provided.
  - (e) sign off by the property owner that permission to take a water sample was not granted, if the property owner signs off.

- I6. Prior to the commencement of the construction of the Facility, the Company shall retain a qualified expert (Professional Engineer or Professional Geoscientist) who will be responsible for responding to any complaints regarding wells or well water, pursuant to Conditions I7 and I8. The Company shall provide written confirmation to the District Manager that a suitable qualified expert has been retained, and that the qualified expert has the capability to fulfill the requirements of Conditions I7 and I8, should the need arise.
- I7. Should the Company receive a complaint about wells or well water from an owner of an active water well (i) within the Project Study Area; or (ii) outside of the Project Study Area through within 1 km from each individual Equipment, communication tower, and meteorological towers, the Company shall direct the qualified expert referenced in Condition I6 to undertake the following:
- (1) forthwith, contact the well owner to collect detailed information regarding the timing and nature of the complaint, and to arrange the site visit described in Condition I7(2);

- (2) within 24 hours of receiving the complaint, and subject to permission from the well owner, collect a water well sample at the complainant's water well, prior to any treatment systems ("raw"), after allowing the distribution system to flow for approximately 5 minutes, and submit the water sample to a qualified laboratory for an analysis of the water quality parameters identified in Condition I3;
  - (3) compare the results of the analysis of the water sample noted in Condition I7(2) to the pre-construction water sampling analysis results noted in Condition I3 for the subject well. If no pre-construction water quality sample was taken from the subject well, the sampling results shall be compared to the typical pre-construction water quality recorded for other wells within the Project Study Area;
  - (4) within five business days of the site visit noted in Condition I7(2), provide the Ministry with a preliminary summary of the information and laboratory results collected under Conditions I7(1), I7(2), and I7(3).
  - (5) within four weeks of the site visit noted in Condition I7(2), provide a detailed written opinion as to whether the water sampling analysis results demonstrate that the construction, operation or decommissioning of the Facility caused or may have caused an Adverse Effect to the well's water supply. The opinion shall consider the results of the test-pile driving monitoring program described in Condition J1, the results of the ground-borne vibration monitoring described in Condition K1, and the results of the groundwater monitoring program described in Condition I1.
18. Pursuant to Conditions I7(2) and I7(3) and based on the opinion of the qualified expert referenced by Condition I6, if the field observations or the results of the raw water quality sampling indicate a deterioration in water quality or quantity relative to pre-construction conditions:
- (1) forthwith, provide an adequate quantity of potable water to the well owner until such time that the issue has been resolved to the satisfaction of the Ministry; and
  - (2) forthwith, direct the qualified expert referenced in Condition I6 to investigate and provide a detailed written opinion regarding the specific cause of the change in well water quality. The written opinion shall be provided to the Ministry within four weeks of receiving the complaint in conjunction with the written opinion required by Condition I7(5).
19. Pursuant to Condition I7(5), if the qualified expert determines that the construction, operation or decommissioning of the Facility caused or may have caused an adverse effect to a complainant's well or well water, the Company shall immediately implement the contingency plan described in Condition I10.
- I10. Prior to the commencement of the construction of the Facility, the Company shall retain a qualified expert (Professional Engineer or Professional Geoscientist) to establish a contingency plan. The contingency plan shall, at a minimum, include a sequence of remedial measures to be undertaken by the Company, at the Company's expense, to resolve any impacts to wells or well water resulting from the construction, operation, or decommissioning of the Facility.

- I11. The Company shall notify the District Manager, in writing, within one (1) business day of receiving a complaint related to wells or well water. The written notification shall include a description of actions to be undertaken by the Company to resolve the complaint received.
- I12. The Company shall keep detailed logs of all construction activities, specifically including dates, times, and locations of all pile-driving activities carried out at the Project Location. The Company shall also keep detailed logs of all turbine commissioning and testing activities carried out prior to the commencement of commercial operation of the Facility. These logs shall be provided to the Ministry on a weekly basis during the construction and commissioning of the Facility.
- I13. On a weekly basis during the construction and commissioning of the Facility, the Company shall provide written notice to the Ministry of any pile-driving to occur at the Project Location or turbine commissioning to be carried out at the Project Location. The written notice shall include information on the intended location, anticipated date and anticipated duration of the pile-driving or commissioning activity for the week in question.
- I14. Any complaints received pursuant to Condition I7 during the construction of the Facility shall be resolved to the satisfaction of the Ministry, as confirmed in writing by the District Manager, prior to the commencement of the commercial operation of the Facility.
- I15. The Company shall create written records of all pre-construction water sampling activities and analyses of results undertaken in accordance with Conditions I1 to I5, all complaints received pursuant to Condition I7, and all investigative and remedial actions undertaken in accordance with Conditions I7 to I10 to resolve complaints regarding wells or well water. The Company shall retain these records for the life of the Facility, and shall make them available for inspection by the Ministry, upon request.
- I16. The Company shall consult with and follow any directions provided by the District Manager in respect of measures to be implemented by the Company to investigate and resolve public complaints received by the Ministry or the Company regarding potential impacts of the construction, commissioning, operation or decommissioning of the Facility to wells or well water.
- I17. Three (3) years after the commencement of the commercial operation of the Facility, the Company may submit a written request to the District Manager to amend or remove the requirements described in Sections I7 to I10, and shall follow any written directions provided by the District Manager.

## **J – TEST PILE DRIVING**

- J1. Prior to the commencement of any pile driving activities for the construction of the Facility, the Company shall undertake a test pile driving program which shall consist of the installation of test piles at representative locations within the Project Location. The test piles shall be installed using materials, specifications and installation methods that are consistent with those to be used during pile driving activities for the construction of the Facility. The Company shall retain a qualified expert (Professional Engineer or Professional Geoscientist) to develop and carry out a monitoring program during the installation of the test piles. The monitoring program shall include, but not be limited to, the following:

- (1) measuring and monitoring ground-borne vibration generated from the installation of the test piles;
  - (2) measuring and monitoring any changes in groundwater pressures generated from the installation of the test piles;
  - (3) measuring and monitoring groundwater quality before, during, and after the installation of the test piles; and
  - (4) the monitoring points used for Conditions J1(1), J1(2), and J1(3) may include existing water wells, but shall also include dedicated monitoring wells that are constructed using materials and methods that are representative of typical water well construction within the project area.
- J2. The monitoring program described in Condition J1 shall be submitted to the Director and the District Manager prior to any pile-driving activities and blasting activities at the Project Location.
- J3. The Company shall not commence any pile-driving activities and blasting activities at the Project Location until the monitoring program described in Condition J1 has been approved in writing by the Director.
- J4. The Company shall implement the approved monitoring program prior to and during the installation of the test piles described in Condition J1.
- J5. The Company shall create written records of the results of the monitoring program implemented pursuant to Condition J4. These written records shall be prepared by a qualified expert (Professional Engineer or Professional Geoscientist), and shall include a detailed analysis of any potential Adverse Effects on nearby water wells that may be caused by pile-driving activities. These records shall be submitted to the Ministry in the form of a technical report and the Company shall not commence pile driving activities for the construction of the Facility until the technical report is approved in writing by the District Manager. The Company shall retain these records for the life of the Facility, and shall make them available for inspection by the Ministry, upon request.

## **K – GROUND-BORNE VIBRATION MONITORING**

- K1. The Company shall retain a qualified expert to develop a ground-borne vibration monitoring program. The ground-borne vibration monitoring program shall include:
- (1) measuring and monitoring ground-borne vibration generated from blasting activities during construction of the Facility;
  - (2) measuring and monitoring ground-borne vibration generated from pile-driving and compaction activities during construction of the Facility;
  - (3) measuring and monitoring ground-borne vibration generated from the commissioning and commercial operation of the wind turbines at the Facility;

- (4) locations in the Project Study Area where the vibration monitoring equipment will be installed. The vibration monitoring equipment shall be installed at locations which permit the qualified expert to effectively fulfil the requirements of Condition I7(5).
- K2. The ground-borne vibration monitoring program described in Condition K1 shall be submitted to the Director and the District Manager following completion of the test pile-driving program specified in Section J and prior to commencement of any blasting activities and pile driving activities for the construction of the Facility.
- K3. The Company shall not commence blasting activities, compaction activities and pile driving activities for the construction of the Facility until the ground-borne vibration monitoring program described in Condition K1 has been approved in writing by the Director.
- K4. The Company shall implement the approved ground-borne vibration monitoring program prior to and during any blasting activities and pile-driving activities for the construction of the Facility and during the commissioning and commercial operation of the wind turbines at the Facility.
- K5. Three (3) years after the commencement of the commercial operation of the Facility, the Company may submit a written request to the District Manager to amend or remove the monitoring requirements described in the approved ground-borne vibration monitoring program and shall follow any written directions provided by the District Manager.
- K6. The Company shall create written records of the results of the approved ground-borne vibration monitoring program. These records shall be submitted to the Director and District Manager consistent with the format and schedule specified in the monitoring plan described in Condition K1. The Company shall retain these records for the life of the Facility, and shall make them available for inspection by the Ministry, upon request.

## **L – GROUNDWATER MONITORING**

- L1. The Company shall retain a qualified expert to develop a groundwater monitoring program. The groundwater monitoring program may include, but not be limited to:
  - (1) measuring and monitoring groundwater pressure changes in response to blasting activities and pile-driving activities during construction of the Facility;
  - (2) measuring and monitoring groundwater quality in response to blasting activities and pile-driving activities during construction of the Facility;
  - (3) locations in the Project Study Area where the groundwater monitoring will be carried out. The monitoring locations shall be selected to allow the qualified expert to effectively fulfil the requirements of Condition I7(5).

- L2. The groundwater monitoring program described in Condition L1 shall be submitted to the Director and the District Manager following completion of the test pile-driving program specified in Section J and prior to commencement of any blasting activities and pile driving activities for the construction of the Facility.
- L3. The Company shall not commence blasting activities and pile driving activities for the construction of the Facility until the groundwater monitoring program described in Condition L1 has been approved in writing by the Director.
- L4. The Company shall implement the approved groundwater monitoring program prior to and during any blasting activities and pile-driving activities for the construction of the Facility.
- L5. The Company shall create written records of the results of the approved groundwater monitoring program. These records shall be submitted to the Director and District Manager consistent with the format and schedule specified in the monitoring plan described in Condition L1. The Company shall retain these records for the life of the Facility, and shall make them available for inspection by the Ministry, upon request.

#### **M – SEWAGE WORKS OF THE TRANSFORMER SUBSTATION SPILL CONTAINMENT FACILITY**

- M1. The Company shall design and construct a transformer substation oil spill containment facility which meets the following requirements:
  - (1) the spill containment facility serving the transformer substation shall have a minimum volume equal to the volume of transformer oil and lubricants plus the volume equivalent to providing a minimum 24-hour duration, 50-year return storm capacity for the stormwater drainage area around the transformer under normal operating conditions. This containment area shall have:
    - (a) an impervious floor with walls usually of reinforced concrete or impervious plastic liners, sloped toward an outlet / oil control device, allowing for a freeboard of 0.25 metres terminating approximately 0.30 metres above grade to prevent external stormwater flows from entering the facility. The facility shall have a minimum of 300mm layer of crushed stone (19mm to 38mm in diameter) within, all as needed in accordance to site specific conditions and final design parameters; or
    - (b) a permeable floor with impervious plastic walls and around the transformer pad; equipped with subsurface drainage with a minimum 50mm diameter drain installed on a sand layer sloped toward an outlet for sample collection purposes; designed with an oil absorbent material on floor and walls, and allowing for a freeboard of 0.25 metres terminating approximately 0.30 metres above grade to prevent external stormwater flows from entering the facility. The facility's berm shall be designed as needed in accordance to site specific conditions and the facility shall have a minimum 300mm layer of crushed stone (19mm to 38mm in diameter) on top of the system, as needed in accordance to site specific conditions and final design parameters.

- (2) the spill containment facility shall be equipped with an oil detection system; it also shall have a minimum of two (2) PVC pipes (or equivalent material) 50mm diameter to allow for visual inspection of water accumulation. One pipe has to be installed half way from the transformer pad to the vehicle access route;
- (3) the spill containment facility shall have appropriate sewage appurtenances as necessary, such as but not limited to: sump, oil/grit separator, pumpout manhole, level controllers, floating oil sensors, etc., that allows for batch discharges or direct discharges and for proper implementation of the monitoring program described under Condition M4; and
- (4) the Company shall have a qualified person on-site during construction to ensure that the system is installed in accordance with the approved design and specifications.

M2. The Company shall:

- (1) within six (6) months after the completion of the construction of the transformer substation spill containment facility, provide to the District Manager an engineering report and as-built design drawings of the sewage works for the spill containment facility and any stormwater management works required for it, signed and stamped by an independent Professional Engineer licensed in Ontario and competent in electrical and environmental engineering. The engineering report shall include the following:
  - (a) as-built drawings of the sewage works for the spill containment facility and any stormwater management works required for it;
  - (b) a written report signed by a qualified person confirming the following:
    - (i) on-site supervision during construction;
    - (ii) in case of a permeable floor systems: type of oil absorbent material used (for mineral-based transformer oil or vegetable-based transformer oil, make and material's specifications);
    - (iii) use of stormwater best management practices applied to prevent external surface water runoff from entering the spill containment facility; and
    - (iv) confirm adequacy of the installation in accordance with specifications.
  - (c) confirmation of the adequacy of the operating procedures and the emergency procedures manuals as it pertains to the installed sewage works;

- (d) procedures to provide emergency response to the site in the form of pumping and clean-up equipment within 24 hours after an emergency has been identified. Such response shall be provided even under adverse weather conditions to prevent further danger of material loss to the environment.
- (2) as a minimum, the Company shall check the oil detection systems on a monthly basis and create a written record of the inspections;
- (3) ensure that the effluent is essentially free of floating and settle-able solids and does not contain oil or any other substance in amounts sufficient to create a visible film, sheen or foam on the receiving waters;
- (4) immediately identify and clean-up all losses of oil from the transformer;
- (5) upon identification of oil in the spill containment facility, take immediate action to prevent the further occurrence of such loss;
- (6) ensure that equipment and material for the containment, clean-up and disposal of oil and materials contaminated with oil are kept within easy access and in good repair for immediate use in the event of:
  - (a) loss of oil from the transformer;
  - (b) a spill within the meaning of Part X of the Act; or
  - (c) the identification of an abnormal amount of oil in the effluent.
- (7) in the event of finding water accumulation in the PVC pipes at the time of inspection, as per Condition M4, the Company shall: (a) for impervious floors, inspect the sewage appurtenances that allow drainage of the concrete pit; or (b) for permeable systems, replace the oil absorbent material to ensure integrity of the system performance and design objectives;
- (8) for permeable floor systems, the Company shall only use the type of oil specified in the design, i.e. mineral-based transformer oil or vegetable-based transformer oil. If a change is planned to modify the type of oil, the Company shall also change the type of the oil absorbent material and obtain approval from the Director to amend this Approval before any modification is implemented.

M3. The Company shall design, construct and operate the sewage works such that the concentration of the effluent parameter named in the table below does not exceed the Maximum Concentration Objective shown for that parameter in the effluent, and shall comply with the following requirements:

<b>Effluent Parameters</b>	<b>Maximum Concentration Objective</b>
Oil and Grease	15mg/L



- (1) notify the District Manager as soon as reasonably possible of any exceedance of the maximum concentration objective set out in the table above;
- (2) take immediate action to identify the cause of the exceedance; and
- (3) take immediate action to prevent further exceedances.

M4. Upon commencement of the operation of the Facility, the Company shall establish and carry out the following monitoring program for the sewage works:

- (1) the Company shall collect and analyze the required set of samples at the sampling points listed in the table below in accordance with the measurement frequency and sample type specified for the effluent parameter, oil and grease, and create a written record of the monitoring:

<b>Effluent Parameters</b>	<b>Measurement Frequency and Sample Points</b>	<b>Sample Type</b>
Oil and Grease	Quarterly, i.e. four times over a year, relatively evenly spaced having a minimum two (2) of these samples taken within 48 hours after a 10mm rainfall event.	Grab

- (2) in the event of an exceedance of the maximum concentration objective set out in the table in Condition M3, the Company shall:
  - (a) increase the frequency of sampling to once per month, for each month that effluent discharge occurs; and
  - (b) provide the District Manager, on a monthly basis, with copies of the written record created for the monitoring until the District Manager provides written direction that monthly sampling and reporting is no longer required;
- (3) if over a period of twenty-four (24) months of effluent monitoring under Condition M4, there are no exceedances of the maximum concentration set out in the table for Concentration Objective, the Company may reduce the measurement frequency of effluent monitoring to a frequency as the District Manager may specify in writing, provided that the new specified frequency is never less than annual.

M5. The Company shall comply with the following methods and protocols for any sampling, analysis and recording undertaken in accordance with Condition M4:

- (1) Ministry of the Environment and Climate Change publication "Protocol for the Sampling and Analysis of Industrial/ Municipal Wastewater", January 1999, as amended from time to time by more recently published editions; and
- (2) the publication "Standard Methods for the Examination of Water and Wastewater", 21st edition, 2005, as amended from time to time by more recently published editions.

## **N – ARCHAEOLOGICAL RESOURCES**

- N1. The Company shall implement all of the recommendations, if any, for further archaeological fieldwork and for the protection of archaeological sites found in the consultant archaeologist's reports included in the Application, and which the Company submitted to the Ministry of Tourism, Culture and Sport in order to comply with O. Reg. 359/09.
- N2. Should any previously undocumented archaeological resources be discovered, the Company shall:
- (1) cease all alteration of the area in which the resources were discovered immediately;
  - (2) engage a consultant archaeologist to carry out the archaeological fieldwork necessary to further assess the area and to either protect and avoid or excavate any sites in the area in accordance with the *Ontario Heritage Act*, the regulations under that act and the Ministry of Tourism, Culture and Sport's *Standards and Guidelines for Consultant Archaeologists*; and
  - (3) notify the Director as soon as reasonably possible.

## **O – CULTURAL HERITAGE RESOURCES AND PROTECTED PROPERTIES**

- O1. The Company shall implement all of the recommendations for the protection of cultural heritage resources and protected properties found in the heritage consultant's report included in the Application, and which the Company submitted to the Ministry of Tourism, Culture and Sport in order to comply with O. Reg. 359/09.

## **P – NATURAL HERITAGE AND PRE AND POST CONSTRUCTION MONITORING**

### **GENERAL**

- P1. The Company shall implement the Environmental Effects Monitoring Plan for the Nation Rise Wind Farm, titled "Nation Rise Wind Farm, Bird and Bat Environmental Effects Monitoring Plan" dated July 2017, and the commitments made in the following reports included in the Application, and which the Company submitted to the Ministry of Natural Resources and Forestry in order to comply with O. Reg. 359/09:
- Nation Rise Wind Farm, Natural Heritage Records Review Report, dated June 2017, and prepared by Natural Resource Solutions Inc.
  - Nation Rise Wind Farm, Natural Heritage Site Investigation Report, dated June 2017, and prepared by Natural Resource Solutions Inc.
  - Nation Rise Wind Farm, Natural Heritage Evaluation of Significance Report, dated July 2017, and prepared by Natural Resource Solutions Inc.

- Nation Rise Wind Farm, Natural Heritage Environmental Impact Study Report, dated July 2017, and prepared by Natural Resource Solutions Inc.

P2. If the Company determines that it must deviate from the Environmental Effects Monitoring Plan or the Environmental Impact Study, described in Condition P1, the Company shall contact the Director, the District Manager and the Ministry of Natural Resources and Forestry, prior to making any changes to the Environmental Effects Monitoring Plan or the Environmental Impact Study, and follow any directions provided.

### **PRE-CONSTRUCTION MONITORING - SIGNIFICANT HABITAT**

P3. The Company shall implement the pre-construction monitoring described in the Natural Heritage Environmental Impact Study Report described in Condition P1, for the following candidate significant habitats:

- (1) Bat Maternity Colony (BMA-001, 003);
- (2) Turtle Wintering Area (TWA-001);
- (3) Alvar Habitat (ALV-001, 002);
- (4) Savannah Habitat (SAV-001);
- (5) Tallgrass Prairie Habitat (TGP-001, 002);
- (6) Amphibian Woodland Breeding Habitat (AWO-001, 004, 006, 007, 008, 010, 011, 012, 013, 014, 015, 016, 017, 019, 020, 022, 023, 024);
- (7) Open Country Bird Breeding Habitat (OCB-001);
- (8) Common Nighthawk Habitat (CONI-001, 002, 003, 004, 005, 006, 007, 008, 009);
- (9) Eastern Wood Peewee Habitat (EAWP-001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 013, 014, 015, 016, 017, 018);
- (10) Wood Thrush Habitat (WOTH-001, 002, 004, 005);
- (11) Muhlenberg Weissia Habitat (MUWE-001, 002, 003, 004, 005, 007, 009, 010);
- (12) Monarch Butterfly Habitat (MONA-001, 002, 003, 004, 005, 006);

### **POST-CONSTRUCTION MONITORING - SIGNIFICANT HABITAT**

P4. The Company shall implement the post-construction monitoring described in the Natural Heritage Environmental Impact Study Report and the Environmental Effects Monitoring Plan described in Condition P1, for the following confirmed significant habitat:

- (1) Waterfowl Stopover and Staging Area – Aquatic Habitat (WSA-001);
- (2) Amphibian Woodland Breeding Habitat (AWO-018);

P5. Based on the results of the pre-construction monitoring described in Condition P3, should any of the habitats described in Condition P3 be deemed significant, the Company shall implement the post-construction monitoring described in the Environmental Effects Monitoring Plan and the Natural Heritage Environmental Impact Study Report described in Condition P1, at the specific habitats that are found to be significant, including the following:

- (1) Bat Maternity Colony (BMA-001, 003);
- (2) Turtle Wintering Area (TWA-001);
- (3) Alvar Habitat (ALV-001, 002);
- (4) Savannah Habitat (SAV-001);
- (5) Tallgrass Prairie Habitat (TGP-001, 002);
- (6) Amphibian Woodland Breeding Habitat (AWO-001, 004, 006, 007, 008, 010, 011, 012, 013, 014, 015, 016, 017, 019, 020, 022, 023, 024);
- (7) Open Country Bird Breeding Habitat (OCB-001);
- (8) Common Nighthawk Habitat (CONI-001, 002, 003, 004, 005, 006, 007, 008, 009);
- (9) Eastern Wood Peewee Habitat (EAWP-001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 013, 014, 015, 016, 017, 018);
- (10) Wood Thrush Habitat (WOTH-001, 002, 004, 005);
- (11) Muhlenberg Weissia Habitat (MUWE-001, 002, 003, 004, 005, 007, 009, 010);
- (12) Monarch Butterfly Habitat (MONA-001, 002, 003, 004, 005, 006);

#### **POST CONSTRUCTION MONITORING - BIRD AND BAT MONITORING**

P6. The Company shall implement the post-construction bird and bat mortality monitoring described in the Environmental Effects Monitoring Plan, described in Condition P1, at a minimum of ten (10) turbines, including Turbine 46 if it is constructed.

### THRESHOLDS AND MITIGATION

P7. The Company shall contact the Director, the District Manager, and the Ministry of Natural Resources and Forestry if any of the following bird and bat mortality thresholds, as stated in the Environmental Effects Monitoring Plan described in Condition P1, exceeds:

- (1) 10 bats per turbine per year;
- (2) 14 birds per turbine per year at individual turbines or turbine groups;
- (3) 0.2 raptors per turbine per year (all raptors) across the Facility;
- (4) 0.1 raptors per turbine per year (provincially tracked raptors) across the Facility;
- (5) 10 or more birds at any one turbine during a single monitoring survey; or
- (6) 33 or more birds (including raptors) at multiple turbines during a single monitoring survey.

P8. If the bat mortality threshold described in Condition P7(1) is exceeded, the Company shall:

- (1) implement operational mitigation measures consistent with those described in the Ministry of Natural Resources publication entitled "*Bats and Bat Habitats: Guidelines for Wind Power Projects*" dated July 2011, or in an amended version of the publication. Such measures shall include:
  - (a) adjust cut-in speed to 5.5 m/s and/or feather wind turbine blades when wind speeds are below 5.5 m/s between sunset and sunrise, from July 15 to September 30 at all turbines for the operating life of the Facility;
- (2) implement an additional three (3) years of effectiveness monitoring.

P9. If the bat mortality threshold described in Condition P7(1) is exceeded after operational mitigation is implemented in accordance with Condition P8, the Company shall prepare and implement a contingency plan, in consultation with the Director, the District Manager, and the Ministry of Natural Resources and Forestry, to address mitigation actions which shall include additional mitigation and scoped monitoring requirements.

- P10. If any of the bird mortality thresholds described in Conditions P7(2), P7(3), or P7(4) are exceeded for turbines located within 120m of bird significant wildlife habitat, or if disturbance effects are realized at bird significant wildlife habitat within 120m of turbine(s) while monitoring is being implemented in accordance with Conditions P6, the Company shall implement immediate mitigation actions as described in the Natural Heritage Environmental Impact Study Report and Environmental Effects Monitoring Plan described in Condition P1, and an additional three (3) years of effectiveness monitoring.
- P11. If any of the bird mortality thresholds described in Conditions P7(2), P7(3), or P7(4) are exceeded for turbines located outside 120m of bird significant wildlife habitat, the Company shall conduct two (2) years of subsequent scoped mortality monitoring and cause and effects monitoring. Following the completion of scoped monitoring, the Company shall implement operational mitigation and effectiveness monitoring at individual turbines as agreed to between the Company, the Director, the District Manager, and the Ministry of Natural Resources and Forestry, for the first three (3) years following the implementation of mitigation.
- P12. If either of the bird mortality thresholds described in Conditions P7(5) or P7(6) are exceeded, the Company shall prepare and implement a contingency plan to address immediate mitigation actions which shall include:
- (1) periodic shut-down of select turbines; or
  - (2) blade feathering at specific times of year; or
  - (3) an alternate plan agreed to between the Company, the Director, the District Manager, and the Ministry of Natural Resources and Forestry.
- P13. If any of the bird mortality thresholds described in Conditions P7(2), P7(3), or P7(4) are exceeded while monitoring is being implemented in accordance with Conditions P10 or P11, or if either of the bird mortality thresholds described in Conditions P7(5) or P7(6) are exceeded after mitigation is implemented in accordance with Condition P12, the Company shall contact the Director, the District Manager, and the Ministry of Natural Resources and Forestry and prepare and implement an appropriate response plan that shall include some or all of the following mitigation measures:
- (1) increased reporting frequency to identify potential threshold exceedance;
  - (2) additional behavioural studies to determine factors affecting mortality rates;
  - (3) periodic shut-down of select turbines;
  - (4) blade feathering at specific times of year; or
  - (5) an alternate plan agreed to between the Company, the Director, the District Manager, and the Ministry of Natural Resources and Forestry.

## REPORTING AND REVIEW OF RESULTS

- P14. The Company shall report, in writing, the results of the post-construction disturbance monitoring described in Conditions P4, P5, and P6, to the Director, the District Manager, and the Ministry of Natural Resources and Forestry for three (3) years on an annual basis and within three (3) months of the end of each calendar year in which the monitoring took place.
- P15. The Company shall report, in writing, bird and bat mortality levels to the Director, the District Manager, and the Ministry of Natural Resources and Forestry for three (3) years on an annual basis and within three (3) months of the conclusion of the November mortality monitoring, with the exception of the following:
- (1) if either of the bird mortality thresholds described in Conditions P7(5) or P7(6) are exceeded, the Company shall report the mortality event to the Director, the District Manager, and the Ministry of Natural Resources and Forestry within 48 hours of observation;
  - (2) for any and all mortality of species at risk (including a species listed on the Species at Risk in Ontario list as Extirpated, Endangered or Threatened under the provincial *Endangered Species Act, 2007*) that occurs, the Company shall report the mortality to the Ministry of Natural Resources and Forestry within 24 hours of observation or the next business day;
  - (3) if the bat mortality threshold described in Condition P7(1) is exceeded, the Company shall report mortality levels to the Director, the District Manager, and the Ministry of Natural Resources and Forestry for the additional three (3) years of monitoring described in Condition P8, on an annual basis and within three (3) months of the conclusion of the October mortality monitoring for each year;
  - (4) if any of the bird mortality thresholds described in Conditions P7(2), P7(3), or P7(4) are exceeded for turbines located within 120m of bird significant wildlife habitat, the Company shall report mortality levels to the Director, the District Manager, and the Ministry of Natural Resources and Forestry for the additional three (3) years of effectiveness monitoring described in Condition P10, on an annual basis and within three (3) months of the conclusion of the November mortality monitoring for each year;
  - (5) if any of the bird mortality thresholds described in Conditions P7(2), P7(3), or P7(4) are exceeded for turbines located outside 120 m of bird significant wildlife habitat, the Company shall report mortality levels to the Director, the District Manager, and the Ministry of Natural Resources and Forestry for the additional two (2) years of cause and effects monitoring described in Condition P11, on an annual basis and within three (3) months of the conclusion of the November mortality monitoring for each year; and

- (6) if the Company implements operational mitigation following cause and effects monitoring in accordance with Condition P11, the Company shall report mortality levels to the Director, the District Manager, and the Ministry of Natural Resources and Forestry for the three (3) years of subsequent effectiveness monitoring described in Condition P11, on an annual basis and within three (3) months of the conclusion of the November mortality monitoring for each year.

P16. The Company shall publish the following documents on the Company's website;

- (1) any modifications to the Environmental Effects Monitoring Plan as described in Condition P2 within five (5) days of submitting the final plan to the Director, the District Manager, and the Ministry of Natural Resources and Forestry;
- (2) the results of the post-construction disturbance monitoring as described in Condition P14 within five (5) days of submitting the final report(s) to the Director, the District Manager, and the Ministry of Natural Resources and Forestry; and
- (3) annual bird and bat mortality monitoring as described in Condition P15 with the exception of subsection P15(2), within five (5) days of submitting the final report(s) to the Director, the District Manager, and the Ministry of Natural Resources and Forestry.

#### **Q – ENDANGERED SPECIES ACT REQUIREMENTS**

- Q1. The Company shall ensure that activities requiring authorization under the *Endangered Species Act, 2007* will not commence until necessary authorizations are in place.

#### **R – GEOTECHNICAL**

- R1. The Company shall submit to the Director for approval, in writing, a scope of work for a supplementary detailed geotechnical investigation report. Upon written approval from the Director of the scope of work, the Company shall submit a supplementary detailed geotechnical investigation report. Construction of individual turbine foundations and access road shall not commence without the written approval of the Director of the supplementary detailed geotechnical investigation report.

#### **S – MUNICIPAL CONSULTATION**

- S1. At least three (3) months prior to the commencement of construction of the Facility, the Company shall prepare a traffic management plan and provide it to the Township of North Stormont and the United Counties of Stormont, Dundas and Glengarry.
- S2. The Company shall make reasonable efforts to enter into a road users agreement with the United Counties of Stormont, Dundas and Glengarry prior to the commencement of construction of the Facility.
- S3. If a road users agreement has not been signed with the United Counties of Stormont, Dundas and Glengarry prior to the commencement of construction of the Facility, the Company shall promptly provide a written explanation to the Director as to why this has not occurred.



## T – COMMUNITY LIAISON COMMITTEE

- T1. Within three (3) months of receiving this Approval, the Company shall make reasonable efforts to establish a community liaison committee. The community liaison committee shall be a forum to exchange ideas and share concerns with interested residents and members of the public. The community liaison committee shall be established by:
- (1) publishing a notice in a newspaper with general circulation in each local municipality in which the Project Location is situated; and
  - (2) posting a notice on the Company's publicly accessible website, if the Company has a website;
- to notify members of the public about the proposal for a community liaison committee and invite residents living within a one (1) kilometre radius of the Facility that may have an interest in the Facility to participate on the community liaison committee.
- T2. The Company may invite other members of stakeholders to participate in the community liaison committee, including, but not limited to, local municipalities, local conservation authorities, Indigenous communities, federal or provincial agencies, and local community groups.
- T3. The community liaison committee shall consist of at least one Company representative who shall attend all meetings.
- T4. The purpose of the community liaison committee shall be to:
- (1) act as a liaison facilitating two way communications between the Company and members of the public with respect to issues relating to the construction, installation, use, operation, maintenance and retirement of the Facility;
  - (2) provide a forum for the Company to provide regular updates on, and to discuss issues or concerns relating to, the construction, installation, use, operation, maintenance and retirement of the Facility with members of the public; and
  - (3) ensure that any issues or concerns resulting from the construction, installation, use, operation, maintenance and retirement of the Facility are discussed and communicated to the Company.
- T5. The community liaison committee shall be deemed to be established on the day the Director is provided with written notice from the Company that community liaison committee members have been chosen and a date for a first community liaison committee meeting has been set.
- T6. If a community liaison committee has not been established within three (3) months of receiving this Approval, the Company shall promptly provide a written explanation to the Director as to why this has not occurred.

- T7. The Company shall ensure that the community liaison committee operates for a minimum period of two (2) years from the day it is established. During this two (2) year period, the Company shall ensure that the community liaison committee meets a minimum of two (2) times per year. At the end of this two (2) year period, the Company shall contact the Director to discuss the continued operation of the community liaison committee.
- T8. The Company shall ensure that all community liaison committee meetings are open to the general public.
- T9. The Company shall provide administrative support for the community liaison committee including, at a minimum:
- (1) providing a meeting space for community liaison committee meetings;
  - (2) providing access to resources, such as a photocopier, stationery, and office supplies, so that the community liaison committee can:
    - (a) prepare and distribute meeting notices;
    - (b) record and distribute minutes of each meeting; and
    - (c) prepare reports about the community liaison committee's activities.
- T10. The Company shall submit any reports of the community liaison committee to the Director and post it on the Company's publicly accessible website, if the Company has a website.
- T11. The Company shall notify residents in the Project Study Area by mail or email of significant project milestones, such as the commencement of construction and the commencement of commercial operations, and any other relevant project-related updates and information. The Company shall ensure that any notification distributed to residents pursuant to this condition includes contact information of a Company representative for which questions can be directed.

## **U – INDIGENOUS CONSULTATION**

- U1. During the construction, installation, operation, use and retiring of the Facility, the Company shall:
- (1) create and maintain written records of any communications with Indigenous communities; and
  - (2) make the written records available for review by the Ministry upon request.
- U2. The Company shall provide the following to interested Indigenous communities:
- (1) updated project information, including the results of monitoring activities undertaken and copies of additional archaeological assessment reports that may be prepared; and

- (2) updates on key steps in the construction, installation, operation, use and retirement phases of the Facility, including notice of the commencement of construction activities at the Project Location.
- U3. If an Indigenous community requests a meeting to obtain information relating to the construction, installation, operation, use and retiring of the Facility, the Company shall make reasonable efforts to arrange and participate in such a meeting.
- U4. The Company shall invite members of Indigenous communities to participate in further archaeological fieldwork.
- U5. If any archaeological resources of Indigenous origin are found during the construction of the Facility, the Company shall:
  - (1) notify any Indigenous community considered likely to be interested or which has expressed an interest in such finds; and
  - (2) if a meeting is requested by an Indigenous community to discuss the archaeological find(s), make reasonable efforts to arrange and participate in such a meeting.

#### **V – OPERATION AND MAINTENANCE**

- V1. Prior to the commencement of the operation of the Facility, the Company shall prepare a written manual for use by Company staff outlining the operating procedures and a maintenance program for the Equipment that includes as a minimum the following:
  - (1) routine operating and maintenance procedures in accordance with good engineering practices and as recommended by the Equipment suppliers;
  - (2) emergency procedures;
  - (3) procedures for any record keeping activities relating to operation and maintenance of the Equipment; and
  - (4) all appropriate measures to minimize noise emissions from the Equipment.
- V2. The Company shall;
  - (1) update, as required, the manual described in Condition V1; and
  - (2) make the manual described in Condition V1 available for review by the Ministry upon request.
- V3. The Company shall ensure that the Facility is operated and maintained in accordance with the Approval and the manual described in Condition V1.

#### **W – RECORD CREATION AND RETENTION**

W1. The Company shall create written records consisting of the following:

- (1) an operations log summarizing the operation and maintenance activities of the Facility;
- (2) within the operations log, a summary of routine and Ministry inspections of the Facility; and
- (3) a record of any complaint alleging an Adverse Effect caused by the construction, installation, use, operation, maintenance or retirement of the Facility.

W2. A record described under Condition W1(3) shall include:

- (1) a description of the complaint that includes as a minimum the following:
  - (a) the date and time the complaint was made;
  - (b) the name, address and contact information of the person who submitted the complaint;
- (2) a description of each incident to which the complaint relates that includes as a minimum the following:
  - (a) the date and time of each incident;
  - (b) the duration of each incident;
  - (c) the wind speed and wind direction at the time of each incident;
  - (d) the ID of the Equipment involved in each incident and its output at the time of each incident;
  - (e) the location of the person who submitted the complaint at the time of each incident; and
- (3) a description of the measures taken to address the cause of each incident to which the complaint relates and to prevent a similar occurrence in the future.

W3. The Company shall retain, for the life of the Facility, all records described in Condition W1, and make these records available for review by the Ministry upon request.

## **X – NOTIFICATION OF COMPLAINTS**

X1. The Company shall notify the District Manager in writing of each complaint within two (2) business days of the receipt of the complaint.

X2. The Company shall provide the District Manager with the written records created under Condition W1(3) within eight (8) business days of the receipt of the complaint.

## Y – CHANGE OF OWNERSHIP

- Y1. The Company shall notify the Director in writing, and forward a copy of the notification to the District Manager, within thirty (30) days of the occurrence of any of the following changes:
- (1) the ownership of the Facility;
  - (2) the operator of the Facility;
  - (3) the address of the Company;
  - (4) the partners, where the Company is or at any time becomes a partnership and a copy of the most recent declaration filed under the *Business Names Act* , R.S.O. 1990, c.B.17, as amended, shall be included in the notification; and
  - (5) the name of the corporation where the Company is or at any time becomes a corporation, other than a municipal corporation, and a copy of the most current information filed under the *Corporations Information Act* , R.S.O. 1990, c. C.39, as amended, shall be included in the notification.

## SCHEDULE A

### Facility Description

1. The Facility shall consist of the construction, installation, operation, use and retiring of the following:
  - (a) a total of thirty-three (33) Acoustically Equivalent Wind Turbine generators each rated between approximately 3.0 to 3.6 megawatts generating output capacity, as specified in the Acoustic Assessment Report; and
    - i. a maximum total name plate capacity of approximately 100 megawatts (MW),
    - ii. designated with source ID Nos. noted in Schedule B of this Approval,
    - iii. each with a hub height of up to 132 metres above grade and blade length of up to 68 metres, and
    - iv. sited at the locations shown in Schedule B, in accordance with Condition C1(2)(b);  
and
  - (b) associated ancillary equipment, systems and technologies including one (1) transformer substation, on-site access roads, and underground and overhead cabling and distribution lines,

all in accordance with the Application.
2. The location of any temporary laydown areas, access roads, entrances to the site, underground or overhead distribution or transmission lines, and other project components associated with the Facility, excluding the Equipment, may be altered or moved by up to 20 metres from the locations specified in the Application, provided that:
  - (a) proposed modifications to the project are all within the already-assessed Project Location;
  - (b) all setback prohibitions established under O. Reg. 359/09 are complied with;
  - (c) the appropriate ministries have been consulted, including the Ministry of Natural Resources and Forestry and the Ministry of Tourism, Culture and Sport, as applicable;
  - (d) any applicable revised report in respect of the proposed modifications, as well as a modifications document prepared in accordance with Chapter 10 of the Ministry of the Environment and Climate Change publication "Technical Guide to Renewable Energy Approvals", 2017; as amended, is prepared and submitted to the Director; and
  - (e) no modifications to the project occurs until the Director provides written approval of the proposed modifications in the form of a letter.
3. The Company shall follow any and all directions provided to the Director in respect of project modifications proposed pursuant to Item 2 of Schedule A.

## SCHEDULE B

### Coordinates of the Equipment and Noise Specifications

**Table B1: Coordinates and Maximum Sound Power Levels of Wind Turbine Generators**

	Source ID	Maximum Sound Power Level (dBA)	Easting (m)	Northing (m)	Approximate Hub Height (m)	Source Description (Approximately 3.0 - 3.6 MW)
1	T 1	105.8	480,621	5,007,611	132	Acoustically Equivalent Wind Turbine
2	T 2	105.8	480,992	5,007,313	132	Acoustically Equivalent Wind Turbine
3	T 4	105.8	482,870	5,006,768	132	Acoustically Equivalent Wind Turbine
4	T 5	105.8	484,160	5,007,567	132	Acoustically Equivalent Wind Turbine
5	T 6	105.8	481,950	5,004,643	132	Acoustically Equivalent Wind Turbine
6	T 7	105.8	484,187	5,005,760	132	Acoustically Equivalent Wind Turbine
7	T 9	105.8	485,446	5,006,565	132	Acoustically Equivalent Wind Turbine
8	T 10	105.8	483,097	5,003,468	132	Acoustically Equivalent Wind Turbine
9	T 11	105.8	483,354	5,003,162	132	Acoustically Equivalent Wind Turbine
10	T 12	105.8	484,260	5,004,075	132	Acoustically Equivalent Wind Turbine
11	T 16	105.8	485,706	5,001,932	132	Acoustically Equivalent Wind Turbine
12	T 18	105.8	487,011	5,004,960	132	Acoustically Equivalent Wind Turbine
13	T 20	105.8	486,785	5,004,255	132	Acoustically Equivalent Wind Turbine
14	T 21	105.8	486,717	5,003,432	132	Acoustically Equivalent Wind Turbine
15	T 23	105.8	487,073	5,002,532	132	Acoustically Equivalent Wind Turbine
16	T 25	105.8	488,426	5,001,668	132	Acoustically Equivalent Wind Turbine
17	T 27	105.8	490,721	5,004,544	132	Acoustically Equivalent Wind Turbine
18	T 28	105.8	492,449	5,003,929	132	Acoustically Equivalent Wind Turbine
19	T 29	105.8	492,423	5,005,472	132	Acoustically Equivalent Wind Turbine
20	T 32	105.8	488,724	5,000,105	132	Acoustically Equivalent Wind Turbine
21	T 35	105.8	490,094	5,000,515	132	Acoustically Equivalent Wind Turbine
22	T 38	105.8	490,750	5,001,244	132	Acoustically Equivalent Wind Turbine
23	T 41	105.8	491,182	5,000,208	132	Acoustically Equivalent Wind Turbine
24	T 43	105.8	494,279	5,001,837	132	Acoustically Equivalent Wind Turbine
25	T 44	105.8	487,121	4,996,303	132	Acoustically Equivalent Wind Turbine
26	T 46	105.8	487,994	4,993,166	132	Acoustically Equivalent Wind Turbine
27	T 47	105.8	490,614	4,998,234	132	Acoustically Equivalent Wind Turbine
28	T 48	105.8	491,382	4,997,145	132	Acoustically Equivalent Wind Turbine
29	T 52	105.8	488,444	4,995,522	132	Acoustically Equivalent Wind Turbine
30	T 54	105.8	488,115	4,998,329	132	Acoustically Equivalent Wind Turbine
31	T 56	105.8	491,538	4,994,880	132	Acoustically Equivalent Wind Turbine
32	T 57	105.8	492,803	4,996,220	132	Acoustically Equivalent Wind Turbine
33	T 58	105.8	485,047	4,999,775	132	Acoustically Equivalent Wind Turbine
34	Transf	109.9	487,208	5,005,295	N/A	115 MVA 230 kV Transformer

Note: The Maximum Sound Power Level of the transformer includes the applicable 5 dB tonal penalty described in the Noise Guidelines for Wind Farms.

**SCHEDULE C**  
**Noise Control Measures**

**Acoustic Barrier**

One (1) four (4) sided acoustic barrier, positioned as per Section 4.4 of the Acoustic Assessment Report. The acoustic barrier shall be continuous without holes, gaps and other penetrations, and having a surface mass of at least 20 kilograms per square metre. The barrier shall have the following minimum heights relative to facades of the transformer substation:

<b>Façade of Substation</b>	<b>Height of Barrier</b>
North	5.0 m
East	5.5 m
South	6.0 m
West	5.0 m

Minor adjustments to the barrier's positioning are acceptable, in order to accommodate the final transformer geometric size, as long as the modelled sound levels are equal or below sound levels in the Acoustic Assessment Report. If there are minor adjustments to the barrier alignment an updated Acoustic Assessment Report based on the actual barrier configuration shall be submitted to the Director and the District Manager three (3) months (or a date agreed to in writing by the Director) prior to construction of the acoustic barrier.

*The reasons for the imposition of these terms and conditions are as follows:*

1. Conditions A1, A2 and A9 are included to ensure that the Facility is constructed, installed, used, operated, maintained and retired in the manner in which it was described for review and upon which Approval was granted. These conditions are also included to emphasize the precedence of conditions in the Approval and the practice that the Approval is based on the most current document, if several conflicting documents are submitted for review.
2. Conditions A3 and A4 are included to require the Company to provide information to the public and the local municipality.
3. Conditions A5, A6, and A8 are included to ensure that final retirement of the Facility is completed in an aesthetically pleasing manner, in accordance with Ministry standards, and to ensure long-term protection of the health and safety of the public and the environment.
4. Condition A7 is included to require the Company to inform the Ministry of the commencement of activities related to the construction, installation and operation of the Facility.
5. Condition B is intended to limit the time period of the Approval.



6. Condition C1 is included to provide the minimum performance requirement considered necessary to prevent an Adverse Effect resulting from the operation of the Equipment and to ensure that the noise emissions from the Equipment will be in compliance with applicable limits set in the Noise Guidelines for Wind Farms.
7. Conditions C2, C3, and D are included to ensure that the Equipment is constructed, installed, used, operated, maintained and retired in a way that meets the regulatory setback prohibitions set out in O. Reg. 359/09.
8. Conditions E and F are included to require the Company to gather accurate information so that the environmental noise impact and subsequent compliance with the Act, O. Reg. 359/09, the Noise Guidelines for Wind Farms and this Approval can be verified. Specifically, Condition F is also included to verify whether the results of the acoustic emission measurements for wind turbines comply with the Maximum Sound Power Levels (dBA) shown in Schedule B of the Approval, however with consideration that Part E of the Compliance Protocol for Wind Turbines will be used to evaluate compliance of the Facility.
9. Conditions G, H, I, J, K, L, M, P, Q, R, and S are included to ensure that the Facility is constructed, installed, used, operated, maintained and retired in a way that does not result in an Adverse Effect or hazard to the natural environment or any persons.
10. Condition N is included to protect archaeological resources that may be found at the project location.
11. Condition O is included to protect cultural heritage resources and protected properties.
12. Condition T is included to ensure continued communication between the Company and the local residents.
13. Condition U is included to ensure continued communication between the Company and interested Indigenous communities.
14. Condition V is included to emphasize that the Equipment must be maintained and operated according to a procedure that will result in compliance with the Act, O. Reg. 359/09 and this Approval.
15. Condition W is included to require the Company to keep records and provide information to the Ministry so that compliance with the Act, O. Reg. 359/09 and this Approval can be verified.
16. Condition X is included to ensure that any complaints regarding the construction, installation, use, operation, maintenance or retirement of the Facility are responded to in a timely and efficient manner.
17. Condition Y is included to ensure that the Facility is operated under the corporate name which appears on the application form submitted for this Approval and to ensure that the Director and District Manager is informed of any changes.

## NOTICE REGARDING HEARINGS

*In accordance with Section 139 of the Environmental Protection Act, within 15 days after the service of this notice, you may by further written notice served upon the Director, the Environmental Review Tribunal and the Environmental Commissioner, require a hearing by the Tribunal.*

*In accordance with Section 47 of the Environmental Bill of Rights, 1993, the Environmental Commissioner will place notice of your request for a hearing on the Environmental Registry.*

*Section 142 of the Environmental Protection Act provides that the notice requiring the hearing shall state:*

- a. The portions of the renewable energy approval or each term or condition in the renewable energy approval in respect of which the hearing is required, and;
- b. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

*The signed and dated notice requiring the hearing should also include:*

1. The name of the appellant;
2. The address of the appellant;
3. The renewable energy approval number;
4. The date of the renewable energy approval;
5. The name of the Director;
6. The municipality or municipalities within which the project is to be engaged in;

*This notice must be served upon:*

The Secretary\*  
Environmental Review Tribunal  
655 Bay Street, 15th Floor  
Toronto, Ontario  
M5G 1E5

AND

The Environmental Commissioner  
1075 Bay Street, 6th Floor  
Suite 605  
Toronto, Ontario  
M5S 2B1

AND


The Director  
Section 47.5, Environmental Protection Act  
Ministry of the Environment and Climate  
Change  
135 St. Clair Avenue West, 1st Floor  
Toronto, Ontario  
M4V 1P5

**\* Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 212-6349, Fax: (416) 326-5370 or [www.ert.gov.on.ca](http://www.ert.gov.on.ca)**

*Under Section 142.1 of the Environmental Protection Act, residents of Ontario may require a hearing by the Environmental Review Tribunal within 15 days after the day on which notice of this decision is published in the Environmental Registry. By accessing the Environmental Registry at [www.ebr.gov.on.ca](http://www.ebr.gov.on.ca), you can determine when this period ends.*

*Approval for the above noted renewable energy project is issued to you under Section 47.5 of the Environmental Protection Act subject to the terms and conditions outlined above.*

DATED AT TORONTO this 4th day of May, 2018

  
Mohsen Keyvani, P.Eng.  
Director  
Section 47.5, Environmental Protection Act

NC/

c: Area Manager, MOECC Cornwall

c: District Manager, MOECC Ottawa

Kenneth Little, EDP Renewables Canada Limited