

RENEWABLE ENERGY APPROVAL  
NUMBER 0173-AW6HLN  
Issue Date: April 3, 2018

Barlow Energy Centre GP Inc., as general partner for and on behalf of Barlow  
Energy Centre Limited Partnership  
53 Jarvis St, No. 300  
Toronto, Ontario  
M5C 2H2

**Project** Barlow Solar Energy Centre  
**Location:** Lot 20 and 21, Concession 4  
South Stormont Township, 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 3 solar facility consisting of the following:*

the construction, installation, operation, use and retiring of a Class 3 solar facility with a total name plate capacity of up to 10 megawatts alternating current (AC)

*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 Barlow Solar Energy Centre Acoustic Assessment Report, dated October, 5, 2017, prepared and signed by Prabu Surendran, B.Eng and Kana Ganesh, P.Eng., Stantec Consulting Ltd;
2. "Acoustic Audit" 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;
3. "Acoustic Audit Report" means a report presenting the results of an Acoustic Audit;
4. "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 solar facilities;

5. "Act" means the *Environmental Protection Act*, R.S.O 1990, c.E.19, as amended;
6. "Adverse Effect" has the same meaning as in the Act;
7. "Application" means the application for a Renewable Energy Approval dated October, 5, 2017, and signed by Stephane Desdunes, Director, Barlow Energy Centre GP Inc., as general partner for and on behalf of Barlow Energy Centre Limited Partnership, and all supporting documentation submitted with the application, including amended documentation submitted up to March 13, 2018;
8. "Approval" means this Renewable Energy Approval issued in accordance with Section 47.4 of the Act, including any schedules to it;
9. "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";
10. "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";
11. "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";
12. "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.
13. "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.

14. "Company" means Barlow Energy Centre GP Inc., as general partner for and on behalf of Barlow Energy Centre Limited Partnership and includes its successors and assignees;

15. "Decibel" means a dimensionless measure of Sound Level or Sound Pressure Level, denoted as dB;

16. "Director" means a person appointed in writing by the Minister of the Environment and Climate Change pursuant to section 5 of the Act as a Director for the purposes of section 47.5 of the Act;

17. "District Manager" means the District Manager of the appropriate local district office of the Ministry where the Facility is geographically located;

18. "Equipment" means the electrical inverters and transformers and associated ancillary equipment identified in this Approval and as further described in the Application, to the extent approved by this Approval;

19. "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);

20. "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;

21. "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;

22. "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;

23. "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;
24. "Noise Control Measures" means measures to reduce the noise emissions from the Facility and/or Equipment including, but not limited to, barriers, silencers, acoustical louvres, hoods and acoustical treatment, described in the Acoustic Assessment Report;
25. "Noise Receptor" has the same meaning as in O. Reg. 359/09;
26. "O. Reg. 359/09" means Ontario Regulation 359/09 "Renewable Energy Approvals under Part V.0.1 of the Act" made under the Act;
27. "Point of Reception" has the same meaning as in Publication NPC-300, as applicable, and is subject to the same qualifications described in this documents;
28. "Publication NPC-103" means the Ministry Publication NPC-103, "Procedures", August 1978;
29. "Publication NPC-104" means the Ministry Publication NPC-104, "Sound Level Adjustments", August 1978;
30. "Publication NPC-233" means the Ministry Publication NPC-233, "Information to be Submitted for Approval of Stationary Sources of Sound", October 1995;
31. "Publication NPC-300" means the Ministry Publication NPC-300, "Environmental Noise Guideline, Stationary and Transportation Sources - Approval and Planning, Publication NPC-300", August 2013, as amended;
32. "Qualified Inspector" means a person with training and/or experience in erosion and sediment control and stormwater management, not representing the Company who was not involved in preparing the stormwater management and erosion and sediment control plans;
33. "Qualified Person" means a person that includes Engineer, Hydrogeologist, or a person with training and/or experience in erosion and sediment control and stormwater management;
34. "Significant Storm Event" means a minimum of 10 mm of rain in any 24 hour period as measured at the closest Environment Canada weather station;
35. "Sound Level" means the A-weighted Sound Pressure Level;
36. "Sound Level Limit" is the limiting value described in terms of the one hour A-

weighted Equivalent Sound Level  $L_{eq}$ ;

37. "Sound Power Level" means is 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 ;

38. "Sound Pressure" means the instantaneous difference between the actual pressure and the average or barometric pressure at any given location. The unit of measurement is the micro pascal ( $\mu\text{Pa}$ );

39. "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  $20 \mu\text{Pa}$ ;

40. "UTM" means Universal Transverse Mercator coordinate system.

*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:

- (1) Schedule A – Facility Description
- (2) Schedule B – Coordinates of the Equipment and Noise Specifications

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, the Application, and any amendments to this approval or the Application, are:

- (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 within five (5) business days of the date this Approval is issued or amended.

A4. If the Company has a publicly accessible website, the Company 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) 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; and

(3) all of the documentation described in Conditions A4(1) and A4(2) 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 commencement date of the decommissioning of the entire Facility, or part of the Facility, review its Decommissioning Plan Report to ensure that it is still accurate. If the Company determines that the Facility cannot be decommissioned in accordance with the Decommissioning Plan Report, the Company shall provide the District Manager and the Director a written description of plans for the decommissioning of the Facility.

A6. The Company shall, at least six (6) months prior to the anticipated commencement date of the decommissioning of the entire Facility, or part of the Facility, contact the Ministry of Agriculture, Food and Rural Affairs 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.

A7. The Facility shall be retired in accordance with the Decommissioning Plan Report and any directions provided by the District Manager or the Director.

A8. 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;

(2) the commencement of the operation of the Facility; and

(3) the commencement of any decommissioning activities at the Project Location.

## **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 as described in Publication NPC-300, subject to adjustment for tonality as described in Publication NPC-104;

(2) the Equipment is constructed and installed within the allowable polygon identified in Schedule B of this Approval; and

(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).

#### **D - ACOUSTIC AUDIT**

D1. The Company shall carry out an Acoustic Audit in accordance with the procedures set out in Publication NPC-103, and shall submit to the District Manager and the Director an Acoustic Audit Report prepared by an Independent Acoustical Consultant in accordance with the requirements of Publication NPC-233, no later than six (6) months after the commencement of the operation of the Facility.

#### **E - STORMWATER MANAGEMENT, EROSION AND SEDIMENT CONTROL, AND SURFACE WATER MONITORING**

E1. The Company shall prepare and submit a site-specific stormwater management plan and erosion and sediment control plan for the construction, installation, use, operation, maintenance and retiring of the Facility to the Director and the District Manager at least one month prior to the commencement of construction of the Facility.

E2. The Company shall not commence construction of the Facility until the site-specific grading plan, stormwater management plan and erosion and sediment control plan mentioned in Condition E1 have been approved in writing by the Director.

E3. The site-specific stormwater management plan and erosion and sediment control plan shall:

- (1) Include details on erosion, sediment, stormwater management, spill control and response plan for all construction-related activities for the Facility;
- (2) Be prepared by a Qualified Person; and
- (3) 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.

E4. The Company shall take all measures necessary to prevent damage (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 from the site.

E5. The Company shall install and maintain the stormwater management and erosion and sediment control measures as detailed in the plans required under Condition E3 (1). No construction shall commence until the preconstruction measures outlined in the plans have been installed.

E6. The Company shall employ a Qualified Inspector to inspect all erosion and sediment control and stormwater management measures, and perform all monitoring and measurements such as turbidity as outlined in Conditions E8 and E15.

E7. The erosion and sediment control and stormwater management measures shall be maintained during construction and inspected daily by the Company, and shall be 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 the construction activity is negligible.

E8. For the duration of construction, the Company shall monitor in-field turbidity levels. Turbidity monitoring shall be conducted on a daily basis upstream of the facility within the watercourse(s), and downstream of the facility within the watercourse(s). During significant rainfall events (10 mm or more), monitoring shall be conducted on a more frequent basis (at least three (3) times per day during the rainfall event i.e., within the subsequent 24 hour period). In the event the average (arithmetic mean) daily turbidity level downstream exceeds the CCME-CWQG defined as, "The maximum increase of 8 NTUs from background levels for a short-term exposure (e.g., 24-hour period) or the maximum average increase of 2 NTUs from background levels for a longer term exposure (e.g., 30-day period)", the Company shall immediately notify the local District Office, and implement a response plan to prevent further migration of turbid water into the watercourse(s).

Additionally, during significant rainfall events (10 mm or more within a 24-hour period), the Company shall collect a surface water sample to be analyzed for Total Suspended Solids (TSS). The TSS sampling shall be collected from the watercourse(s) upstream and downstream of the facility.

E9. Where there is 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.

E10. 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.

E11. 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 environmental impact, and that appropriate sediment control measures such as sediment basin and filter strips will be employed as necessary at the discharge location.

E12. The Company shall maintain records of all inspections, monitoring and sampling data and maintenance carried out pursuant to Conditions E1 to E12 and E14 (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.

### **In-water Works During Construction**

E13. In-water works shall be completed in a manner that protects fish habitat and other sensitive aquatic species/habitats.

E14. The Company shall monitor in-field turbidity levels for the duration of construction 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 the following:

(1) Monitoring shall be conducted on a daily basis upstream of the works within the waterbody(s), and downstream of the Facility within the waterbody(s); during significant storm events and the spring freshet;

(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.

E15. The Company shall install all in-water works in a manner which:

(1) Maintains 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.

### **F - SEWAGE WORKS OF THE TRANSFORMER SUBSTATION SPILL CONTAINMENT FACILITY**

F1. 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 300 mm layer of crushed stoned (19 mm to 38 mm 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 50 mm 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 300 mm layer of crushed stoned (19 mm to 38 mm 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) 50 mm 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 F4; 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.

F2. 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 or retain two Professional Engineers licensed in Ontario (one competent in environmental engineering and the other electrical engineering) to work together simultaneously on the project. 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 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 F4, 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.

F3. 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.

F4. 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</b>	<b>Measurement Frequency and Sample</b>	<b>Sample Type</b>
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Parameters	Points	
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 F3, 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 F4, 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 specified by the District Manager in writing, provided that the new specified frequency is not less than once a year.

F5. The Company shall comply with the following methods and protocols for any sampling, analysis and recording undertaken in accordance with Condition F4:

- (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.

**G - NATURAL HERITAGE**

G1. The Company shall implement the commitments made in the Barlow Solar Energy Centre, Natural Heritage Assessment Environmental Impact Study Report, dated June 2017, prepared by Stantec Consulting, and the Environmental Effects Monitoring Plan included as Section 6.0 in the Design and Operations Report, dated June 2017, prepared by Stantec Consulting, and included in the Application.

**H - ENDANGERED SPECIES ACT REQUIREMENTS**

H1. The Company shall ensure that activities requiring authorization under the *Endangered Species Act, 2007* will not commence until necessary authorizations are in place.

**I - CULTURAL HERITAGE RESOURCES AND PROTECTED PROPERTIES**

I1. The Company shall implement all of the recommendations, if any, 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.

## **J - ARCHAEOLOGICAL RESOURCES**

J1. The Company shall implement all of the recommendations, if any, for further archaeological field work and for the protection of archaeological sites found in the consultant archaeologist'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.

J2. 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 District Manager and the Director as soon as reasonably possible.

## **K – TRAFFIC MANAGEMENT PLANNING**

K1. Prior to commencement of construction of the Facility, the Company shall prepare a Traffic Management Plan and provide it to the Township of South Stormont, City of Cornwall and the United Counties of Stormont, Dundas and Glengarry.

K2. Within three (3) months of having provided the Traffic Management Plan to the Township of South Stormont, City of Cornwall and the United Counties of Stormont, Dundas and Glengarry, the Company shall make reasonable efforts to enter into a Road Users Agreement with the Township of South Stormont, City of Cornwall and the United Counties of Stormont, Dundas and Glengarry.

K3. If a Road Users Agreement has not been signed with the Township of South Stormont, City of Cornwall and the United Counties of Stormont, Dundas and Glengarry within three (3) months of having provided the Traffic Management Plan to the Township of South Stormont, City of Cornwall and the United Counties of Stormont, Dundas and Glengarry, the Company shall immediately provide a written explanation to the District Manager and the Director as to why this has not occurred.

## **L – RAISIN REGION CONSERVATION AUTHORITY**

L1. The Company shall ensure that activities requiring authorization from the Raisin Region Conservation Authority will not commence until these authorizations are in place.

## **M – OPERATION AND MAINTENANCE**

M1. 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.

M2. The Company shall:

(1) update, as required, the manual described in Condition M1; and

(2) make the manual described in Condition M1 available for review by the Ministry upon request.

M3. The Company shall ensure that the Facility is operated and maintained in accordance with the Approval and the manual described in Condition M1.

## **N – RECORD CREATION AND RETENTION**

N1. 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.

N2. A record described under Condition N1(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 ID of the Equipment involved in each incident and its output at the time of each incident;

(d) the location of the person who submitted the complaint at the time of each incident.

(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.

N3. The Company shall retain, for a minimum of five (5) years from the date of their creation, all records described in Condition N1, and make these records available for review by the Ministry upon request.

## **O – NOTIFICATION OF COMPLAINTS**

O1. The Company shall notify the District Manager of each complaint within two (2)

business days of the receipt of the complaint.

O2. The Company shall provide the District Manager with the written records created under Condition N2 within eight (8) business days of the receipt of the complaint.

O3. If the Company receives a complaint related to groundwater, the Company shall contact the District Manager within one (1) business day of the receipt of the complaint to discuss appropriate measures to manage any potential groundwater issues.

#### **P – CHANGE OF OWNERSHIP**

P1. 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) Up to four (4) inverter clusters within arrays of photovoltaic (PV) modules consisting of one (1) 2.5 megawatt (MW) inverter and one (1) 3 megavolt-ampere (MVA) transformer; and

(b) Associated ancillary equipment, systems and technologies including, but not limited to, one (1) 12 megavolt-ampere (MVA) transformer substation, on-site access roads, below and above grade cabling, and below and above grade distribution and transmission lines.

2. The location of any temporary laydown areas, interior 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 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.  
all in accordance with the Application.

**SCHEDULE B**

**Table B1: Coordinates of Allowable Polygon for the Equipment and Noise Specifications**

Coordinates of the Polygon are listed below in UTM, Z18-NAD83 projection:

Source ID	Sound Power Level (dBA)	Easting (m)	Northing (m)	Source Description
inv_01	92	514755 514681 514463 514469	4988097 4987892 4988021 4988218	Inverter 1, See Table B2 below
inv_02	92	514983 514767 514681 514688	4988000 4987876 4987892 4988125	Inverter 2, See Table B2 below
inv_03	92	514711 514763 514823 514982	4988150 4988371 4988360 4988045	Inverter 3, See Table B2 below
inv_04	92	514763 514711 514422 514625	4988371 4988150 4988273 4988395	Inverter 4, See Table B2 below
trans_01	82	514755 514681 514463 514469	4988097 4987892 4988021 4988218	Inverter Transformer 1, See Table B3 below
trans_02	82	514983 514767 514681 514688	4988000 4987876 4987892 4988125	Inverter Transformer 2, See Table B3 below
trans_03	82	514711 514763 514823 514982	4988150 4988371 4988360 4988045	Inverter Transformer 3, See Table B3 below
trans_04	82	514763 514711 514422 514625	4988371 4988150 4988273 4988395	Inverter Transformer 4, See Table B3 below
substation	95	514875	4987839	Transformer Substation, See Table B4

		514803	4987912	below
		514927	4987983	
		514953	4987883	

Note: The inverter and transformer Sound Power Level values in the above table correspond to the combined output in each cluster, and include the 5 Decibel (dB) adjustment for tonality as prescribed in Publication NPC-104.

**Table B2:** Maximum Sound Power Spectrum (dB Lin) of 2.5 MW Inverter

Inverter 1 - 4	Octave Band Centre Frequency (Hz)							
	63	125	250	500	1000	2000	4000	8000
Lw (dB Lin)	87	85	91	88	86	85	81	77

**Table B3 :** Maximum Sound Power Spectrum (dB Lin) of 3-MVA Inverter Transformer

Transformer 1 - 4	Octave Band Centre Frequency (Hz)							
	63	125	250	500	1000	2000	4000	8000
Lw (dB Lin)	85	87	82	82	76	71	66	59

**Table B4 :** Maximum Sound Power Spectrum (dB Lin) of Transformer Substation

Transformer Substation	Octave Band Centre Frequency (Hz)							
	63	125	250	500	1000	2000	4000	8000
Lw (dB Lin)	97	99	94	94	88	83	78	71

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

1. Conditions A1 and A2 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 A7 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 A8 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 Publication NPC-300.
7. Conditions C2 and C3 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. Condition D is 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, Publication NPC-300 and this Approval can be verified.

9. Conditions E, F, G, H, I, and K 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.

11. Condition J is included to protect archaeological resources that may be found at the project location.

12.

13. Condition L is included to ensure that the necessary authorizations are in place prior to commencement of the project.

14.

15. Condition M 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.

16. Condition N 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.

17. Condition O 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.

18. Condition P 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 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, <i>Environmental Protection Act</i> Ministry of the Environment and Climate Change 135 St. Clair Avenue West, 1st Floor Toronto, Ontario M4V 1P5
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**\* 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 3rd day of April, 2018

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

SR/  
c: Area Manager, MOECC Cornwall  
c: District Manager, MOECC Ottawa  
Rob Nadolny, Stantec Consulting Ltd.