



## RENEWABLE ENERGY APPROVAL

 NUMBER 4324-96UL4W  
 Issue Date: June 13, 2013

 2241656 Ontario Corp. operating as GoodLight LP  
 545 Speedvale Ave W  
 Guelph, Ontario  
 N1K 1E6

 Project 1175 and 2002 Sandringham Road  
 Location: Part of Lot 20, Concession 5 Sandringham Rd and Part of Lot 2  
 Kawartha Lakes City,  
 K0M 2T0

*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 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 approximately 10 megawatts (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 "Canadian Solar Goodlight, Revised Noise Study Report" , dated April 2013, prepared by Dillon Consulting and signed by Amir Irvani of Dillon Consulting.
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. "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.
5. "Acoustic Audit Report - Transformer Substation" means a report presenting the results of the Acoustic Audit - Transformer Substation.
6. "Acoustic Audit Report - Transformers and Inverters" means a report presenting the results of the Acoustic Audit - Transformers and Inverters.
7. "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;
8. "Act" means the *Environmental Protection Act*, R.S.O 1990, c.E.19, as amended;
9. "Adverse Effect" has the same meaning as in the Act;
10. "Application" means the application for a Renewable Energy Approval dated August 24, 2012, and signed by Colin

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Parkin, General Manager, Goodlight LP and all supporting documentation submitted with the application, including amended documentation submitted up to May 3, 2013;

11. "Approval" means this Renewable Energy Approval issued in accordance with Section 47.4 of the Act, including any schedules to it;

12. "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";

13. "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";

14. "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";

15. "Class 2 Area" means an area with an acoustical environment that has qualities representative of both Class 1 and Class 3 Areas:

(a) sound levels characteristic of Class 1 during daytime (07:00 to 19:00 or to 23:00 hours);

(b) 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);

(c) no clearly audible sound from stationary sources other than from those under impact assessment.

16. "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:

(a) a small community with less than 1000 population;

(b) agricultural area;

(c) a rural recreational area such as a cottage or a resort area; or

(d) a wilderness area.

17. "Company" means Goodlight LP and includes its successors and assignees;

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

19. "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;

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

21. "Equipment" means the inverters, transformers, and one (1) transformer substation, and associated ancillary equipment identified in this Approval and as further described in the Application, to the extent approved by this Approval;

22. "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);

23. "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;

24. "IEEE Standard C57.12.90" means the IEEE Standard Test Code for Liquid-Immersed Distribution, Power, and Regulating Transformers, 2010.

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25. "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;
26. "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;
27. "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 and Schedule C of this Approval;
28. "Noise Receptor" has the same meaning as in O. Reg. 359/09;
29. "O. Reg. 359/09" means Ontario Regulation 359/09 "Renewable Energy Approvals under Part V.0.1 of the Act" made under the Act;
30. "Point of Reception" has the same meaning as in Publication NPC-205 or Publication NPC-232, as applicable, and is subject to the same qualifications described in those documents;
31. "Publication NPC-103" means the Ministry Publication NPC-103, "Procedures", August 1978;
32. "Publication NPC-104" means the Ministry Publication NPC-104, "Sound Level Adjustments", August 1978;
33. "Publication NPC-205" means the Ministry Publication NPC-205, "Sound Level Limits for Stationary Sources in Class 1 & 2 Areas (Urban)", October 1995;
34. "Publication NPC-232" means the Ministry Publication NPC-232, "Sound Level Limits for Stationary Sources in Class 3 Areas (Rural)", October 1995;
35. "Publication NPC-233" means the Ministry Publication NPC-233, "Information to be Submitted for Approval of Stationary Sources of Sound", October 1995;
36. "Sound Level" means the A-weighted Sound Pressure Level;
37. "Sound Level Limit" is the limiting value described in terms of the one hour A-weighted Equivalent Sound Level  $L_{eq}$ ;
38. "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;
39. "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 ( $\mu\text{Pa}$ );
40. "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  $20 \mu\text{Pa}$ ;
41. "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:

- (a) Schedule A - Facility Description
- (b) Schedule B - Coordinates of the Equipment and Noise Specifications

(c) 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. If the Company has a publicly accessible website, the Company shall ensure that the Approval and the Application are posted on the Company's publicly accessible website within five (5) business days of receiving this Approval.

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 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 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 Decommissioning Plan Report 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.

**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 Limit of 40 dBA as described in Publication NPC-232, subject to adjustment for tonality as described in Publication NPC-104;

(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 (a), 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; and

(4) all of the Noise Control Measures are fully implemented prior to the commencement of the operation of the Facility.

C2. If the Company determines that some or all of the Equipment cannot be constructed in accordance with Condition C1 (b), 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 (b).

#### **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 IEEE Standard C57.12.90 and with the requirements of Publication NPC-233, no later than six (6) months after the commencement of the operation of the Facility.

#### **E - GROUNDWATER MONITORING**

E1. Prior to the construction and installation of the Facility, the Company shall develop a pre- and post-construction ground water monitoring program, which shall include, as a minimum, the following information:

(1) Identification of ground water monitoring wells to be established at appropriate up and down gradient boundary locations of the project location.

(2) Identification of ground water monitoring parameters, monitoring frequency, and trigger concentrations based on appropriate information as deemed necessary for the monitoring wells as described in Condition E1 (a).

E2. The Company shall report the summary of the results of the pre- and post-construction ground water monitoring program on an annual basis to the District Manager.

#### **F - STORMWATER MANAGEMENT**

F1. The Company shall employ best management practices for stormwater management and sediment and erosion control during construction, installation, use, operation, maintenance and retiring of the Facility, as described in the Application.

#### **G - WATER TAKING ACTIVITIES**

G1. The Company shall not take more than 50,000 litres of water on any day by any means during the construction, installation, use, operation, maintenance and retiring of the Facility.

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

H1. The Company shall design and construct a transformer/substation spill containment facility which meets the following requirements:

(1) the spill containment area 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;

(2) the containment facility shall have an impervious concrete floor and walls or impervious plastic liner on floor and walls, sloped toward an outlet, maintaining a freeboard of approximately 0.25 metres terminating approximately 0.30 metres above grade, and a minimum 300mm layer of crushed stoned (19mm to 38mm in diameter) within, all as needed in

accordance to site specific conditions and final design parameters;

(3) the containment facility shall drain to an oil control device, such as an oil/water separator, a pump-out sump, an oil absorbing material in a canister or a blind sump; and

(4) the oil control device shall be equipped with an oil detection system and appropriate sewage appurtenances, 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 in Condition H4.

H2. The Company shall:

(1) prior to the construction of the transformer substation spill containment facility, provide the District Manager and Director a report and drawings issued for construction signed and stamped by an independent Professional Engineer licensed in Ontario and competent in electrical engineering.

(2) within six (6) months of the completion of the construction of the transformer substation spill containment facility, provide the District Manager and Director a report and drawings issued for construction signed and stamped by an independent Professional Engineer licensed in Ontario which includes the following:

(a) as-built drawings of the sewage works;

(b) confirmation that the transformer substation spill containment facility has been designed and installed according to appropriate specifications; and

(c) confirmation of the adequacy of the operating procedures and the emergency procedures manuals as it pertains to the installed sewage works.

(3) as a minimum, check the oil detection system on a monthly basis and create a written record of the inspections;

(4) 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;

(5) immediately identify and clean-up all losses of oil from the transformer;

(6) upon identification of oil in the effluent pumpout, take immediate action to prevent the further occurrence of such loss; and

(7) 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.

H3. 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:

Effluent Parameters	Maximum Concentration Objective
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.

H4. 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	B – Batch, i.e., for each discrete volume in the sewer appurtenance as per H1(4) prior to pumpout; or Q – Quarterly for direct effluent discharge, i.e., four times over a year, relatively evenly spaced.	Grab

(2) in the event of an exceedance of the maximum concentration objective set out in the table in Condition H3, 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; and

(3) if over a period of twenty-four (24) months of effluent monitoring under Condition H4(1), there are no exceedances of the maximum concentration set out in the table in Condition H3, 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.

H5. The Company shall comply with the following methods and protocols for any sampling, analysis and recording undertaken in accordance with Condition H4:

(1) Ministry of the Environment 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.

**I - TRAFFIC MANAGEMENT PLANNING**

I1. Within three (3) months of receiving this Approval, the Company shall prepare a Traffic Management Plan and provide it to the City of Kawartha Lakes.

I2. Within three (3) months of having provided the Traffic Management Plan to the City of Kawartha Lakes, the Company shall make reasonable efforts to enter into a Road Users Agreement with the City of Kawartha Lakes.

I3. If a Road Users Agreement has not been signed with the City of Kawartha Lakes within three (3) months of having provided the Traffic Management Plan to the City of Kawartha Lakes, the Company shall provide a written explanation as to why this has not occurred.

**J - ARCHAEOLOGICAL RESOURCES**

J1. 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 report included in the Application, and which the Company submitted to the Ministry of Tourism, Culture and Sport in order to comply with clause 22 (2) (b) of 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 Director as soon as reasonably possible.

#### **K - ENDANGERED SPECIES ACT REQUIREMENTS**

K1. No construction or installation activities shall be commenced in areas that support habitat for Bobolink or Eastern Meadowlark until the Company has received any required authorizations under the *Endangered Species Act, 2007*

#### **L - NATURAL HERITAGE AND PRE AND POST CONSTRUCTION MONITORING**

##### **GENERAL**

L1. The Company shall implement the following:

- (1) the Environmental Effects Monitoring Plan, set out in Attachment C of the Design and Operations Report dated October 2012 and Table 12 of the Environmental Impact Study dated June 2012, for the Goodlight Solar Project, and included in the Application; and,
  - (2) the commitments made in the Environmental Impact Study, dated June 2012, prepared by Dillon Consulting Ltd., and included in the Application.
- L2. If the Company determines that it must deviate from either the Environmental Effects Monitoring Plan or the Environmental Impact Study, described in Condition L1, the Company shall contact the Ministry of Natural Resources and the Director, prior to making any changes to either of these documents, and follow any directions provided.

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

L3. The Company shall implement the pre-construction monitoring described in the Environmental Effects Monitoring Plan and the Environmental Impact Study described in Condition L1.

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

L4. The Company shall implement the post-construction monitoring described in the Environmental Effects Monitoring Plan and the Environmental Impact Study, described in Condition L1.

##### **HABITAT RESTORATION AND MANAGEMENT PLAN**

L5. Prior to the construction of the Facility, the Company shall develop, and submit to the Ministry of Natural Resources, the Habitat Restoration and Management Plan described in the Environmental Effects Monitoring Plan and the Environmental Impact Study, described in Condition I1, and which shall include the following:

- (1) a habitat compensation and management plan for Open Country Breeding Birds; and
- (2) a follow up monitoring plan on the effectiveness of the habitat management activities.

L6. The Company shall not commence construction of the Facility until it has obtained confirmation, in writing, from the Ministry of Natural Resources that the Habitat Restoration and Management Plan has been completed, and provided a copy of that confirmation to the Director.



## **REPORTING AND REVIEW OF RESULTS**

L7. The Company shall report, in writing, the results of the post-construction monitoring described in Condition I4, to the Director for in accordance with reporting identified in the Environmental Effects Monitoring Plan and Environmental Impact Study,

L8. The Company shall post the following documents on the Company's website, if the Company has a website:

- (1) the post-construction monitoring reports described in Condition L7; and
- (2) the Habitat Restoration and Management Plan described in Condition L5.

## **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 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.

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**

The Facility shall consist of the construction, installation, operation, use and retiring of the following:

- (a) ten (10) arrays of photovoltaic (PV) modules or panels with a total name plate capacity of up to approximately ten (10) megawatts (DC) or ten (10) megawatts (AC), with each array containing one (1) cluster consisting of two (2) 500 kW inverters and one (1) 27.6 kV/1-MVA transformer; and

(b) associated ancillary equipment, systems and technologies including, but not limited to, one (1) transformer substation, on-site access roads, below and above grade cabling, and below and above grade distribution lines,

all in accordance with the Application.

**SCHEDULE B**

**Coordinates of the Equipment and Noise Specifications**

Coordinates of the Equipment are listed below in UTM, Z17-NAD83 projection:

Source ID	Maximum Sound Power Level (dBA)	Easting (m)	Northing (m)	Source Description
INV1	102.2	660863.5	4930896	Inverter Cluster: See Table B2 below
INV2	102.2	660640.3	4930797	Inverter Cluster: See Table B2 below
INV3	102.2	659938.2	4930707	Inverter Cluster: See Table B2 below
INV4	102.2	659901	4930612	Inverter Cluster: See Table B2 below
INV5	102.2	659717.2	4930602	Inverter Cluster: See Table B2 below
INV6	102.2	659387.8	4930635	Inverter Cluster: See Table B2 below
INV7	102.2	659436.2	4930370	Inverter Cluster: See Table B2 below
INV8	102.2	659249.5	4930327	Inverter Cluster: See Table B2 below
INV9	102.2	659106.3	4930483	Inverter Cluster: See Table B2 below
INV10	102.2	659068.4	4930348	Inverter Cluster: See Table B2 below
TRS	89.8	659616.1	4930667	Transformer : See Table B3 below

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

Inverter Cluster 1-10	Octave Band Centre Frequency (Hz)							
	63	125	250	500	1000	2000	4000	8000
Lw (dB Lin)	96	100	106.6	99.8	95.1	91.4	83.4	-

**Table B3 :** Maximum Sound Power Spectrum (dB Lin) of Transformer

Transformer Substation	Octave Band Centre Frequency (Hz)							
	63	125	250	500	1000	2000	4000	8000
Lw (dB Lin)	92.4	94.4	89.4	89.4	83.4	78.4	73.4	66.4

Note: Each Sound Power Level value in all the above tables corresponds to the combined output of all the identified equipment in each cluster, and includes the 5 decibel (dB) adjustment for tonality as prescribed in Publication NPC-104, but does not include barrier effect or insertion loss from acoustic louvres.

**SCHEDULE C**

**Noise Control Measures**

**Acoustic Barrier**

four (4) three-sided 4 metres high acoustic barrier, positioned as per Table 4 and Figures 5a through 5e in the Acoustic Assessment Report. The acoustic barrier shall be continuous without holes, gaps and other penetrations, and having surface mass at least 20 kilograms per square metres.

**Acoustic Enclosure**

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In accordance with Section 6.4 of the Acoustic Assessment Report, all inverter clusters 1-10 shall be encased in an acoustic enclosure with acoustic ventilation louvres, with the enclosure shell, including composite effect of the wall/roof materials, doors and any openings, capable of providing the following values of Insertion-Loss in 1/1 octave frequency bands:

### Acoustic Enclosure Specifications, [dB]

Name	Octave Band Centre Frequency (Hz)							
	63	125	250	500	1000	2000	4000	8000
Acoustic Enclosure with Acoustic Louvres	-	4	4	6	10	17	12	-

*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 and A6 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 Publication NPC-232.
7. Conditions C2, 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-232 and this Approval can be verified.
9. Conditions E, F, G, I, K and L 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 H1 is included to ensure that the sewage works of the transformer spill containment facility are designed to have adequate capacity to provide spill control. This condition is also included to enable compliance with this Approval, such that the environment is protected and deterioration, loss, injury or damage to any person, property or the environment is minimized and/or prevented.
11. Condition H2 is included to ensure that the sewage works of the transformer spill containment facility will be operated and maintained in accordance with the information submitted by the Company, and to adequately manage and clean-up any oil spill from the transformer.
12. Condition H3 is included to establish non-enforceable effluent quality objectives which the Company is required to strive

towards on an ongoing basis. These objectives are to be used as a mechanism to trigger corrective action proactively and voluntarily before environmental impairment occurs.

13. Conditions H4 and H5 are included to require the Company to demonstrate that the performance of the sewage works of the transformer spill containment facility is at a level consistent with the design and effluent objectives specified in the Approval and is not causing any impairment to the environment.

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

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 are 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.

19.

## 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:*

1. 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;
2. 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:*

3. The name of the appellant;
4. The address of the appellant;
5. The renewable energy approval number;
6. The date of the renewable energy approval;
7. The name of the Director;
8. 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  
2 St. Clair Avenue West, Floor 12A  
Toronto, Ontario  
M4V 1L5

**\* Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 314-4600, Fax: (416) 314-4506 or [www.ert.gov.on.ca](http://www.ert.gov.on.ca)**

CONTENT COPY OF ORIGINAL

*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 13th day of June, 2013

Vic Schroter, P.Eng.  
Director  
Section 47.5, *Environmental Protection Act*

SM/  
c: District Manager, MOE Peterborough  
Mark Feenstra, Canadian Solar Solutions Inc.