Ministry of the Environment and Climate Change
West-Central Region
Hamilton District Office
9th Floor
119 King St W
Hamilton ON L8P 4Y7
Fax: (905) 521-7806
Tel: (905) 521-7609

Ministère de l'Environnement et de l'Action en matière de changement climatique
Direction régionale du Centre-Ouest
Bureau du district de Niagara
9e étage
119 rue King O
Hamilton ON L8P 4Y7
Télécopieur: (905) 521-7806
Tél:(905) 521-7609

March 9, 2018

Gillian MacLeod
Nanticoke Solar Inc., as general partner for and on behalf of Nanticoke Solar Limited Partnership
700 University Ave, H18D16
Toronto, Ontario
M5G 1X6

Dear Ms. MacLeod

RE: Approval of the surface water monitoring plan for Nanticoke Solar -
Renewable Energy Approval # 5132-ASMNK8
Reference Number 2144-AWPLFM

The ministry has completed a review of the surface water monitoring plan for the Nanticoke Solar site prepared by McIntosh Perry Consulting Engineers Ltd. for Nanticoke Solar LP and dated March 8, 2018, and finds it to be acceptable. This letter will serve as approval of the monitoring plan in accordance with Condition G3 of Renewable Energy Approval # 5132-ASMNK8.

If you have questions concerning this letter please contact Officer Michael Durst at: (905)521-7609.
Yours truly,

Paul Widmeyer
District Manager (A)
Hamilton District Office

File Storage Number: SI HA HL NA

SURFACE WATER MONITORING PLAN
NANTICOKE SOLAR

Project No.: 0CP-16-7134

Prepared for:

Nanticoke Solar LP
700 University Ave
Toronto, Ontario
M5G 1X6

Prepared by:

McIntosh Perry Consulting Engineers Ltd.
115 Walgreen Rd. RR3
Ottawa, Ontario
K0A 1L0

March 8, 2018

McINTOSH PERRY

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1.0 INTRODUCTION

Nanticoke Solar LP has proposed a project within the Haldimand County, Ontario to use photovoltaic panels to capture the sun's energy and generate electricity. It is proposed to construct a 44 megawatts alternating current (MWAC) solar generation facility that will generate electricity with no resultant greenhouse gas emissions, pollutants, or noise. The location of the Nanticoke Solar (Site) project is south of Rainham Road (County Road 3) approximately 4.5 km east of Nanticoke, Ontario (Figure 1).

At the request of Nanticoke Solar LP, McIntosh Perry Consulting Engineers Ltd. (McIntosh Perry) has been retained to prepare a 'Surface Water Monitoring Plan' for the Site as per Section G2 of Renewable Energy Approval (REA) 5132-ASMNK8 received on February 21, 2018.

The following plan describes, in detail, the proposed continuous stream flow and water quality monitoring before, during and after construction of the project.

2.0 BACKGROUND

2.1 Renewable Energy Approval Requirements

As per Section G2 of the REA the following shall be carried out:

- Continuous stream flow and water quality monitoring for a minimum of four (4) years including one (1) year of pre-development, at the following locations:
    - Watercourse 2 (the permanent tributary flowing across the site eastward to Hickory Creek) shall be monitored at the upstream and downstream ends at the project location boundaries. At a minimum, monitoring parameters shall include total suspended solids, temperature, hardness and organic nitrogen.
    - Watercourse 7 (an intermittent stream flowing east to Hickory Creek) shall be monitored at the upstream and downstream ends at the project location boundaries. At a minimum, monitoring parameters shall include total suspended solids, temperature, hardness and organic nitrogen.
    - Outfalls 1 and 2 as defined in the report included in the Application and entitles "Conceptual Stormwater Management Plan Report", dated August 2017, prepared by Arcadis. At a minimum, monitoring parameters shall include total suspended solids (TSS), temperature, hardness and organic nitrogen.
    - If construction begins with one (1) year of the pre-development monitoring period, a nearby surface watercourse with similar hydrology and sub-watershed characteristics shall be monitored in addition to the watercourses described above to collect background to which impacted locations will be compares to evaluate adverse effects.
- Identification of monitoring frequency and trigger concentrations.

- Identification of contingency measures to be implemented should trigger concentrations be exceeded or an adverse effect to surface water quality be observed.
- The requirement that a qualified person undertake the monitoring.

Refer to Appendix A for REA.

3.0 CONTINUOUS STREAM FLOW MONITORING

As per G2 (1) (a) (b) of the REA, continuous stream flow monitoring is required at the following locations:

- Watercourse 2: WC-2a (inlet of culvert beneath Rainham Road) and WC-2b (upstream of creek crossing at eastern edge of Project Location)
- Watercourse 7: WC-7a (watercourse flowing beneath S. Coast Drive, west of the Project Location) and WC-7b (watercourse adjacent to S. Coast Drive at the eastern boundary of the Project Location)

As per G2 (2) of the REA, this monitoring is required at the following location, if construction is within the one (1) year pre-development period:

- Hickory Creek: WC-HCa (inlet of culvert beneath Rainham Road) and WC-HCb (upstream of WC-5)
- It is anticipated that construction will commence mid-March, 2018 and therefore a one (1) year of pre-development sampling will not be feasible. Hickory Creek was therefore chosen as the nearby surface watercourse with similar hydrology and sub-watershed characteristic to collect background data.
- Pre-construction monitoring will be conducted starting in mid-March 2018, once stations are installed.

Please note - 'a' refers to upstream and 'b' refers to downstream. Refer to Figure 1 for sampling locations.

3.1 Continuous Flow Monitoring Protocol

The following protocols shall be followed for the continuous flow monitoring:

- A staff gauge attached to a T-stake shall be installed at all monitoring locations (Figure 1) in the middle of each watercourse. A level logger, to continuously measure the water level, shall be secured to the base of a T-stake with the battery pack and barometric gauge secured to the back of the staff gauge, above the high water level. Refer to Appendix B for specifications for an example of a level logger equipment.
- Real-time continuous water level monitoring will be conducted via telemetry with monitoring of the data by a qualified person.
- Electronic 'Surface Water Monitoring Plan' record sheets (Refer to Appendix C) should be completed.

- The data shall be collected by a qualified person.
    - A qualified person is defined as a person who has been trained on the 'Surface Water Monitoring Plan' and the monitoring protocols, including use of the equipment.

3.2 Frequency

The following describes the frequency for the continuous stream flow monitoring during and after construction. The sampling shall occur for four (4) years including both during and after construction.

3.2.1 During Construction Protocol

- Continuous stream flow data (levels converted to flow) shall be collected continuously at the locations noted on Figure 1.
- At the time of water quality sample collection (Section 4.0 below), the water level on the staff gauge is also to be recorded.

3.2.2 After Construction Protocol

Once construction is complete (site is fully vegetated), and flow monitoring data indicate 'no impact', then the continuation of the flow monitoring program shall be discussed with the Ministry of Environment and Climate Change (MOECC) District Manager and reduced. The reduction or cessation of flow monitoring shall be considered in conjunction with water quality monitoring results as noted in Section 4.2.2.

4.0 WATER QUALITY MONITORING

As per G2 (1) (a) (b) of the REA, water quality monitoring is required at the following locations:

- Watercourse 2: WC-2a and WC-2b
- Watercourse 7: WC-7a and WC-7b

As per G2 (2) of the REA, water quality monitoring is required at the following location, if construction is within the one (1) year pre-development period:

- Hickory Creek: WC-HCa and WC-HCb
- It is anticipated that construction will commence mid-March, 2018, and therefore a one (1) year of pre-development sampling will not be feasible. Hickory Creek was therefore chosen as the nearby surface watercourse with similar hydrology and sub-watershed characteristic to collect background data.

- Pre-construction monitoring of turbidity (field measured), TSS, hardness and organic nitrogen will be conducted starting in mid-March 2018 until the end of April 2018 at five locations (WC-2a, WC-2b, WC-7a, WC-7b and WC-HCa) twice per week to obtain some background data prior to construction.

Please note - 'a' refers to upstream and 'b' refers to downstream. Refer to Figure 1 for sampling locations.

4.1 Sampling Protocol

The following protocols shall be followed for the water quality monitoring:

- Surface water samples are to be collected using the bottles provided from a CALA-Accredited laboratory for each location.
- The samples shall be taken to ensure that there is minimal disturbance to the watercourse (i.e. sampler shall not disturb watercourse bottom sediments).
- The sampler is to wear disposable nitrile gloves.
- The laboratory will supply clean sample bottles for collection of water samples for TSS, hardness, temperature and organic nitrogen.
- At the time of sampling, a field turbidity measurement will also be taken by the sampler.
- Bottles shall be labelled prior to filling with surface water samples:
    - Client
    - Sample ID- ID that is noted on Figure 1
    - Project Number
    - Date and Time
- Samples should be sent to a CALA-Accredited laboratory within 24 hours of monitoring and kept in a cool area until shipped.
        - Ensure bottle caps are tight.
        - Bottles shall be wrapped in bottle wrap to ensure safe transportation.
        - Ensure that a chain of custody is completed and sent along with the sample bottles.
- During each monitoring event the 'Surface Water Monitoring Plan' record sheet (Refer to Appendix C) should be completed.
        - A photo shall be taken at each location, if accessible.
- If any of the surface water locations are dry during a monitoring event, no action is required.
- The surface water samples shall be collected by a qualified person.

- A qualified person is defined as a person who has been trained on the 'Surface Water Monitoring Plan' and the sampling protocols.

4.2 Frequency

The following describes the frequency for the water quality monitoring during and after construction. The sampling shall occur for four years including both during and after construction.

4.2.1 During Construction Protocol

The monitoring of surface water for field turbidity, TSS, temperature hardness and organic nitrogen shall take place at the locations noted on Figure 1 at the following frequency:

- Once per week starting in May 2018.
- During a significant weather event.
  - Significant weather event is defined as:
    - Rain event - Minimum of 20 mm of rain within any 24 hour period as measured at the closest Environment Canada weather station with similar weather conditions or through the use of an on-site rain gauge (Refer to Appendix B for specifications on equipment);

      AND/OR
    - Spring freshet - Visible observation of spring thaw or snow and ice melt resulting in runoff entering one of the on-site watercourses (WC2 and WC7) watercourse or off-site (twice per week during spring freshet).
- If there is visible turbid surface water runoff flowing from the Site and entering one of the on-site watercourses (WC2 and WC7).

4.2.2 After Construction Protocol

Once construction is complete (site is fully vegetated), water quality monitoring can be reduced as follows:

- Samples are to be collected once per month.
- Three (3) consecutive monitoring events (i.e. after three significant weather events, not regular monthly sampling events) shall be completed to determine if the stormwater management facilities are functioning as intended. If there are no exceedances (refer to Section 4.3) in the downstream locations (WC-2b, and WC-7b) after these three (3) consecutive significant weather sampling events, the frequency of the sampling program shall be discussed with the MOECC District Manager and may be reduced. As noted above in Section 3.2.2, this must be considered with respect to the flow monitoring data.

- It is recommended that the frequency be reduced to the following:
    - Once per week during spring freshet.
        - Please note this may vary depending on the year but is most commonly occurs in March and April.

          AND
    - Once every three months (4 times per year-includes one spring freshet monitoring event). If possible, these events should take place after a significant rain event or thaw.
- If exceedances occur during these monitoring events then the frequency shall revert back to 'during construction' protocol until three consecutive significant weather monitoring events have occurred that result in no exceedances.

4.3 Trigger Concentrations

As per G2 (1) (a) (b) of the REA, the following parameters shall be analyzed at all sampling locations:

- TSS, temperature, hardness and organic nitrogen

The Canadian Water Quality Guidelines for the Protection of Aquatic Life (CWQG), the Provincial Water Quality Objectives (PWQO), and the Ontario Drinking Water Quality Standards, Objectives and Guidelines are being recommended to be used for the surface water trigger concentrations (Table 1).

Table 1: Site Specific Surface Water Quality Guidelines and Criteria

Parameter	Guideline	Criteria
TSS	CCME-CWQG	Must not be more than 25 mg/L increase over background conditions when background TSS is up to 250 mg/L Must not be more that 10% of the background condition when background TSS is greater than 250 mg/L
Temperature	PWQO	Discharge temperature must not be more than 10°C over background – conditions.
Hardness	ODWQSOG	80 – 100 mg/L
Organic Nitrogen	ODWQSOG	0.15 mg/L

The field turbidity measurements will be evaluated immediately upon completion of each water quality monitoring event. It will be considered an exceedance, if the downstream turbidity is more than 8 NTU higher than the upstream measurement.

However, if the pre-construction data (mid-March 2018 - April 2018) show a similar trend (downstream concentrations higher than upstream), then an exceedance will be evaluated based on the pre-construction measurements.

5.0 CONTINGENCY MEASURES

In the event of trigger concentrations being exceeded or adverse impacts being observed, contingency measures must be implemented. It is recommended that contingency measures during construction include the inspection, maintenance, repair, and if required, the addition of erosion and sediment control (ESC) measures. Upon receipt of laboratory results showing that trigger concentrations are exceeded, the Company (Nanticoke Solar LP) shall notify the MOECC District Manager.

The following contingency plan is recommended:

1. The Constructor (PCL Constructors Canada Inc. (PCL)) shall monitor the Environment Canada's website (or similar source of information) for the five (5) day weather forecast on a daily basis to anticipate weather conditions and shall be prepared to leave the Site in a stable and secure condition.

2. Before the significant weather event, the Constructor (PCL) shall inspect all ESC measures to ensure they are in proper working order. ESC measure shall be repaired and/or additional ESC measures shall be installed, if in the opinion of the Constructor (PCL) they are required.

3. Immediately (within 24 hours) after the significant weather event, the Constructor (PCL) shall inspect all ESC measures again to ensure they are all still working effectively.

    a. If in the event an ESC measure is found to be defective or there is an exceedance (Refer to Section 4.3), the Constructor (PCL) shall repair, or remove and reinstated the ESC measure immediately.

    b. Additional ESC measures shall be installed in areas of concern immediately.

4. Work shall not restart until the ESC measures are found to be in proper working order.

6.0 RECORD KEEPING

As per Q1 (1) and Q3 of the REA the following record keeping shall be completed:

- An operations log summarizing the operation and maintenance activities of the Facility.
    - It is recommended that the operation log include the 'Water Quality Monitoring Table' (Refer to Appendix C) and be reviewed on a monthly basis.
    - The Nanticoke Solar LP shall retain, for a minimum of five (5) years from the date of their creation, all records, and make these records available for review by the MOECC upon request.

7.0 SIGNATURES

Should you have any questions, please feel free to contact the undersigned.

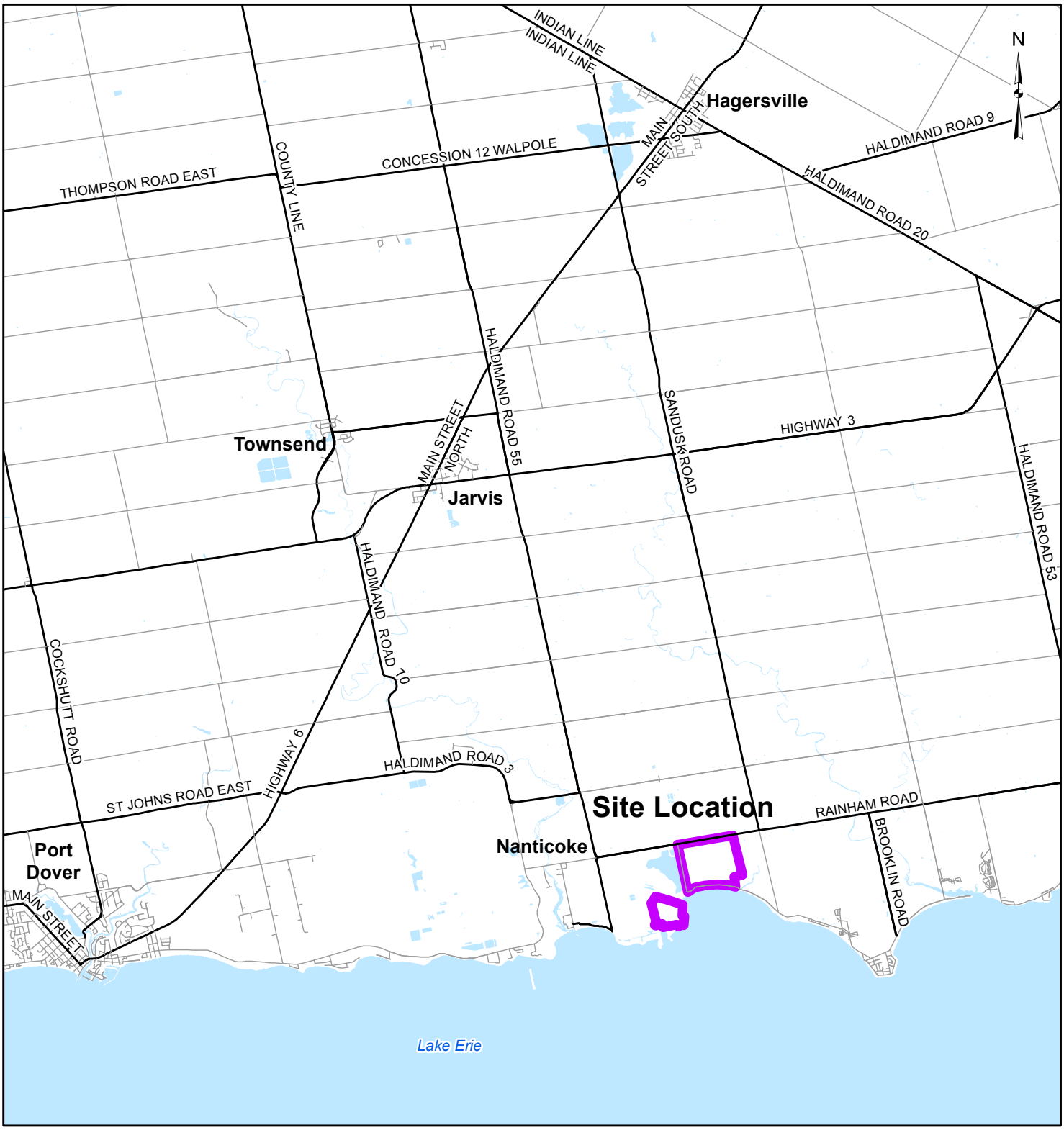
Regards,

Jennifer Cavanagh, P.Eng.
Project Engineer
McIntosh Perry Consulting Engineers
T: 613.836.2184 (2261)
E: j.cavanagh@mcintoshperry.com

Mark Priddle, P.Geo.
Senior Environmental Geoscientist
McIntosh Perry Consulting Engineers
T: 613.836.2184 (2236)
E: m.priddle@mcintoshperry.com

Ref. H:\01 Project - Proposals\2016 Jobs\CP\0CP-16-7134 Nanticoke Solar LP_SurfaceWaterPlan\02 Surfacewater Plan\0CP-16-7134 Surf. Water Mon. Plan Final 8March18.docx

FIGURES



LEGEND

- Site Boundary
- Local Road
- Major Road
- Waterbody

REFERENCE

GIS data provided by the Ontario Ministry of Natural Resources and Forestry, 2018.

3,500 1,750 0 3,500

Scale 1:120,667 Metres

CLIENT: NANTICOKE SOLAR INC.

PROJECT: NANTICOKE SOLAR FARM

TITLE: KEY MAP

McINTOSH PERRY
115 Walgreen Road, RR3, Carp, ON K0A1L0
Tel: 613-836-2184 Fax: 613-836-3742
www.mcintoshperry.com

PROJECT NO:KP-16-7134		FIGURE:
Date	Feb., 27, 2018	1
GIS	SK	
Checked By	JC	

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LEGEND

- Site Boundary
- Local Road
- Major Road
- Watercourse
- Downstream Surface Water Location
- Upstream Surface Water Location
- Continuous Stream Flow Location

REFERENCE

GIS data provided by the Ontario Ministry of Natural Resources and Forestry, 2018.

0 125 250 500

Scale 1:13,000 Metres

CLIENT: NANTICOKE SOLAR LP

PROJECT: NANTICOKE SOLAR FARM

TITLE: SURFACE WATER MONITORING PLAN

McINTOSH PERRY
115 Walgreen Road, RR3, Carp, ON K0A1L0
Tel: 613-836-2184 Fax: 613-836-3742
www.mcintoshperry.com

PROJECT NO:	KP-16-7134
Date	Mar., 08, 2018
GIS	SK
Checked By	MC

FIGURE: 2

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APPENDIX A: RENEWABLE ENERGY APPROVAL

Ontario

Ministry of the Environment and Climate Change
Ministère de l'Environnement et de l'Action en matière de changement climatique

RENEWABLE ENERGY APPROVAL

NUMBER 5132-ASMNK8
Issue Date: February 21, 2018

Nanticoke Solar Inc., as general partner for and on behalf of
Nanticoke Solar Limited Partnership
700 University Ave.
Toronto, Ontario
M5G 1X6

Project Location: Nanticoke Solar Project
Part of Lots 7, 8, 9, 10, 11, 12, Concenssion 1
Haldimand County

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 44 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 "Acoustic Assessment Report- Nanticoke Solar" dated October 2017, prepared and signed by Slavi Grozev, P.Eng. Arcadis Canada Inc.;

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 February 22, 2017, and signed by Carlo Crozzoli, Vice President, Nanticoke Solar LP, and all supporting documentation submitted with the application, including amended documentation submitted up to the date this Approval is issued;

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 Nanticoke Solar Inc., as general partner for and on behalf of Nanticoke Solar LP,

the partnership under the laws of Ontario, 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 fourteen (14) inverter clusters 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;

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. "IEEE Standard C57.12.90" means the IEEE Standard Test Code for Liquid-Immersed Distribution, Power, and Regulating Transformers, 2015;

22. "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;

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 and Schedule C of this Approval;

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 document;

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. "Professional Engineer" has the same meaning as in O. Reg. 359/09;

33. "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;

34. "Sound Level" means the A-weighted Sound Pressure Level;

35. "Sound Level Limit" is the limiting value described in terms of the one hour A-weighted Equivalent Sound Level L_{eq};

36. "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;

37. "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 (μPa);

38. "Sound Pressure Level" means twenty times the logarithm to the base 10 of the ratio of the effective pressure (μPa) of a sound to the reference pressure of 20 μPa;

39. "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

(3) 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:

(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 retirement date of the entire Facility, or part of the Facility, review the report included in the Application and entitled "Decommissioning Plan Report" dated February 2017, and prepared by Arcadis, 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 February 2017, and prepared by Arcadis, 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 February 2017, and prepared by Arcadis, and any directions provided by the Director or District Manager.

A7. The Company shall provide the Director and the District Manager 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.

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.

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 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, 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(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 Director and the District Manager 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 – WATER TAKING ACTIVITIES

E1. The Company shall carry out water taking activities in accordance with the Application.

F - GROUNDWATER

F1. The Company shall implement the groundwater monitoring plan described in the report included in the Application and entitled "Proposed Groundwater Monitoring Plan for a Proposed Solar Farm, Scoping Report – Nanticoke Solar Project, Nanticoke, Ontario", dated August 8, 2017, and prepared by Angela Gulley, P.Geo., and Megan Coyle, P.Geo.

F2. The Company shall ensure that the Facility's solar panel support posts are not installed into surface of the bedrock. Within (1) month of the completion of the construction of the Facility, the Company shall submit to the District Manager a written confirmation signed by an individual who has the authority to bind the Company confirming that the solar panel support posts are not installed into surface of the bedrock.

G – SURFACE WATER

G1. The Company shall implement any proposed mitigation measures, contingency measures, and monitoring described in the report included in the Application and entitled "Water Assessment and Water Body Report Nanticoke Solar", dated August 2017, and prepared by Beacon Environmental Limited and Arcadis.

G2. Within 30 days of the issuance of this Approval, the Company shall submit a surface water monitoring plan to the District Manager. The surface water monitoring plan shall include, at a minimum:

(1) continuous stream flow and water quality monitoring for a minimum of four (4) years, including one (1) year pre-development, at the following locations:

(a) Water Course 2 (the permanent tributary flowing across the site eastward to Hickory Creek) shall be monitored at the upstream and downstream ends at the project location boundaries. At a minimum, monitoring parameters shall include total suspended solids, temperature, hardness and organic nitrogen.

(b) Water Course 7 (an intermittent stream flowing east to Hickory Creek from the site along its southern boundary) shall be monitored at the upstream and downstream ends at the project location boundaries. At a minimum, monitoring parameters shall include total suspended solids, temperature, hardness and organic nitrogen.

(c) Outfalls 1 and 2 as defined in the report included in the Application and entitled "Conceptual Stormwater Management Plan Report", dated August 2017, prepared by Arcadis. At a minimum, monitoring parameters shall include total suspended solids, temperature, hardness and organic nitrogen.

(d) If construction begins within one (1) year of the pre-development monitoring period, a nearby surface water course with similar hydrology and sub-watershed characteristics shall be monitored in addition to the water courses described in Condition G2(1)(a), G2(1)(b), and G2(1)(c) to collect background (unimpeached reference data) to which impacted stations data will be compared to evaluate adverse effects.

(2) identification of monitoring frequency and trigger concentrations,

(3) identification of contingency measures to be implemented should trigger concentrations be exceeded or an adverse effect to surface water quality be observed,

(4) the requirement that a qualified person undertake the monitoring.

G3. The Company shall not commence construction of the Facility (including any site preparation, site clearing, or site grading) unless the surface water monitoring plan described in Condition G2 has been approved in writing by the District Manager.

H – STORMWATER MANAGEMENT

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 and maintenance of the Facility, and submit the plan to the Director prior to the commencement of construction of the Facility.

H3. The stormwater management and erosion and sediment control plan shall be prepared by a qualified Professional Engineer and shall:

(1) include details related to site-specific erosion and sediment control measures, stormwater management measures, spill control, contingency measures, monitoring, monitoring frequency, and the requirement for a Qualified Inspector to do the monitoring; and

(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.

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 installed.

H5. The Company shall implement the approved stormwater management and erosion and sediment control plan during the construction, installation, use, operation and maintenance of the Facility.

I – SEWAGE WORKS OF THE TRANSFORMER SUBSTATION SPILL CONTAINMENT FACILITY

I1. 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 stoned (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 stoned (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 I4; 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.

I2. 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 I4, 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.

I3. 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.

I4. 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:

Effluent Parameters	Measurement Frequency and Sample Points	Sample Type
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 I3, 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 I4, 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.

I5. The Company shall comply with the following methods and protocols for any sampling, analysis and recording undertaken in accordance with Condition I4:

(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.

J – NATURAL HERITAGE

J1. The Company shall implement and proposed mitigation measures, contingency measures, and monitoring described in the report included in the Application and entitled "Natural Heritage Assessment and Environmental Impact Study Nanticoke Solar Project", dated February 28, 2017, and prepared by Beacon Environmental Limited.

K – ENDANGERED SPECIES ACT REQUIREMENTS

K1. The Company shall ensure that activities requiring authorization under the *Endangered Species Act, 2007* will not commence until necessary authorizations are in place.

L – ARCHAEOLOGICAL RESOURCES

L1. 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.

L2. 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.

M – PETROLEUM RESOURCES

M1. The Company shall ensure that development of the Facility does not occur within 75 metres of any petroleum well or work, as defined under the *Oil, Gas and Salt Resource Act,* unless a Professional Engineer prepares, signs, and stamps a report with a clear statement that each petroleum well or work identified within the 75 metre setback will not have a negative effect on the development and vice versa. The report prepared in accordance with this condition shall be kept at the Facility within five (5) business days of its completion for the life of the project and shall be produced to the Ministry upon request.

N – TRAFFIC MANAGEMENT PLANNING

N1. Prior to commencement of construction of the Facility, the Company shall prepare a Traffic Management Plan and provide it to Haldimand County.

N2. Within three (3) months of having provided the Traffic Management Plan to Haldimand County, the Company shall make reasonable efforts to enter into a Road Users Agreement with Haldimand County.

N3. If a Road Users Agreement has not been signed with Haldimand County within three (3) months of having provided the Traffic Management Plan to Haldimand County, the Company shall provide a written explanation to the Director as to why this has not occurred.

O – INDIGENOUS CONSULTATION

O1. 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.

O2. 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.

O3. 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.

O4. The Company shall invite members of Indigenous communities to participate in further archaeological fieldwork.

O5. 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.

P – OPERATION AND MAINTENANCE

P1. 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.

P2. The Company shall:

(1) update, as required, the manual described in Condition P1; and

(2) make the manual described in Condition P1 available for review by the Ministry upon request.

P3. The Company shall ensure that the Facility is operated and maintained in accordance with the Approval and the manual described in Condition P1.

Q – RECORD CREATION AND RETENTION

Q1. 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.

Q2. A record described under Condition Q1(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.

Q3. The Company shall retain, for a minimum of five (5) years from the date of their creation, all records described in Condition Q1, and make these records available for review by the Ministry upon request.

R – NOTIFICATION OF COMPLAINTS

R1. The Company shall notify the District Manager of each complaint within two (2) business days of the receipt of the complaint.

R2. The Company shall provide the District Manager with the written records created under Condition Q2 within eight (8) business days of the receipt of the complaint.

R3. 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.

S – CHANGE OF OWNERSHIP

S1. 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) fourteen (14) arrays of photovoltaic (PV) modules with nine (9) inverter clusters containing two (2) 2.2 megavolt-amperes (MVA) inverters and one (1) 4.4 megavolt-ampere (MVA) transformer and remaining five(5) inverter clusters, containing one (1) 2.2 megavolt-amperes (MVA) inverters and one (1) 2.2 megavolt-ampere (MVA) transformer; and

   (b) Associated ancillary equipment, systems and technologies including, but not limited to, one (1) 50 megavolt-ampere (MVA) transformer substation, on-site access roads, below and above grade cabling, and below and above grade distribution and transmission lines,

   all in accordance with the Application.

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

Source ID	Maximum Sound Power Level (dBA)	Easting (m)	Northing (m)	Source description
Is1	100.4	578,754	4,740,641	2.2 MVA, Inverter 1
Is2	100.4	578,761	4,740,641	2.2 MVA, Inverter 2
Tx1_2	84.2	578,758	4,740,641	4.4 MVA, Inverter 1 and 2 Transformer
Is3	100.4	578,662	4,740,330	2.2 MVA Inverter 3
Tx3	80.2	578,665	4,740,330	2.2 MVA, Inverter 3 Transformer
Is4	100.4	578,823	4,740,323	2.2 MVA, Inverter 4
Is5	100.4	578,830	4,740,323	2.2 MVA, Inverter 5
Tx4_5	84.2	578,827	4,740,323	4.4 MVA Inverter 4 and 5 Transformer
Is6	100.4	579,010	4,740,323	2.2 MVA, Inverter 6
Is7	100.4	579,017	4,740,323	2.2 MVA Inverter 7
Tx6_7	84.2	579,014	4,740,323	4.4 MVA Inverter 6 and 7 Transformer
Is8	100.4	579,182	4,740,323	2.2 MVA, Inverter 8
Is9	100.4	579,188	4,740,323	2.2 MVA, Inverter 9
Ts8_9	84.2	579,185	4,740,323	4.4 MVA Inverter 8 and 9 Transformer
Is10	100.4	579,366	4,740,323	2.2 MVA, Inverter 10
Is11	100.4	579,372	4,740,323	2.2 MVA, Inverter 11
Tx10_11	84.2	579,369	4,740,323	4.4 MVA, Inverter 10 and 11 Transformer
Is12	100.4	579,477	4,740,400	2.2 MVA, Inverter 12
Tx12	80.2	579,474	4,740,400	2.2 MVA, Inverter 12 Transformer
Is13	100.4	579,589	4,740,400	2.2 MVA, Inverter 13
Tx13	80.2	579,586	4,740,400	2.2 MVA, Inverter 13 Transformer
Is14	100.4	579,705	4,740,400	2.2 MVA, Inverter 14
Tx14	80.2	579,702	4,740,400	2.2 MVA, Inverter 14 Transformer
Is15	100.4	578,024	4,739,460	2.2 MVA, Inverter 15
Tx15	80.2	578,021	4,739,460	2.2 MVA, Inverter 15 Transformer
Is16	100.4	578,033	4,739,231	2.2 MVA, Inverter 16
Is17	100.4	578,040	4,739,231	2.2 MVA, Inverter 17
Tx16_17	84.2	578,036	4,739,231	4.4 MVA, Inverter 16 and 17 Transformer
Is18	100.4	578,202	4,739,231	2.2 MVA, Inverter 18
Is19	100.4	578,208	4,739,231	2.2 MVA, Inverter 19

Tx18_19	84.2	578,205	4,739,231	4.4 MVA, Inverter 18 and 19 Transformer

Table B1: Coordinates of the Equipment and Noise Specifications(continued)

Source ID	Maximum Sound Power Level (dBA)	Easting (m)	Northing (m)	Source description
Is20	100.4	578,361	4,739,231	2.2 MVA, Inverter 20
Is21	100.4	578,367	4,739,231	2.2 MVA, Inverter 21
Tx20_21	84.2	578,364	4,739,231	4.4 MVA, Inverter 20 and 21 Transformer
Is22	100.4	578,510	4,739,231	2.2 MVA, Inverter 22
Is23	100.4	578,516	4,739,231	2.2 MVA, Inverter 23
Tx22_23	84.2	578,513	4,739,231	4.4 MVA, Inverter 22 and 23 Transformer
TF50	101.8	577,739	4,739,090	HV Transformer - 50MVA

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

SCHEDULE C

Noise Control Measures

Acoustic Barrier

A) **Inverter cluster 10 and 11**

For inverter cluster 10 and 11, one (1) 3.25 metres high, 18 metres long acoustic barrier, positioned as per Table (5) and drawing in Appendix C of Acoustic Assessment Report. The acoustic barriers shall be continuous without holes, gaps and other penetrations, and having a surface mass density of at least 20 kilograms per square metres.

B) **Inverter cluster 14**

For inverter cluster 14, one (1) 3.0 metres high, 12 metres long acoustic barrier, positioned as per Table (5) and drawing in Appendix C of Acoustic Assessment Report. The acoustic barriers shall be continuous without holes, gaps and other penetrations, and having a surface mass density of at least 20 kilograms per square metres.

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 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. Conditions C1 and C2 are 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. Condition C3 is 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, J, K, M, and N 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 L is included to protect archaeological resources that may be found at the project location.

11. Condition O is included to ensure continued communication between the Company and interested Aboriginal communities.

12. Condition P 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.

13. Condition Q 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.

14. Condition R 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.

15. Condition S 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, *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**

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 , 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 21st day of February, 2018

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

MZ/
c: District Manager, MOECC Hamilton
Gillian MacLeod, Nanticoke Solar Inc.

APPENDIX B: EQUIPMENT

Tipping Bucket Rain Gauge

This tipping bucket rain gauge provides inexpensive, accurate rainfall measurement. Precipitation is collected in the funnel and measured by the calibrated tipping bucket.

For each 0.254 mm (0.01 inch) of precipitation, the bucket tips, emptying the bucket and operating the output switch.

Mounts utilizing three mounting legs with 6.3 mm (0.025 inch) diameter holes on a 241 mm (9.5 inches) diameter circle. Includes 7 m (24 feet) cable.

FEATURES

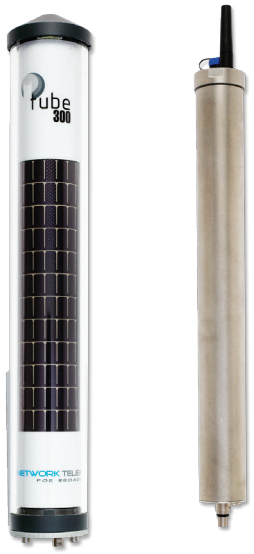
- Inexpensive, accurate rainfall measurement
- Simple, rugged design
- Sealed magnetic reed output switch

SPECIFICATIONS

Description	Sensor type	tipping bucket rain gauge
	Applications	precipitation measurement
	Sensor range	unlimited- tipping action dumps precipitation from bucket
	Instrument compatibility	• NRG Symphonie PLUS Logger equipped with a Rain Gauge SCM Item 3149 • NRG Symphonie Logger equipped with a Rain Gauge SCM Item 3149
Output signal	Signal type	switch closure (momentary single pole, normally open

110 Riggs Road · Hinesburg · VT 05461 USA · TEL (802) 482-2255 · FAX (802) 482-2272 · EMAIL sales@nrgsystems.com

		(SPNO) contact), typical closure time is 0.1 second
	Transfer function	0.254 mm (0.01 inches) of rain per switch closure
	Accuracy	+/- 2%, up to 50.8 mm (2 inches) per hour
	Calibration	factory calibrated
	Resolution	0.254 mm (0.01 inches) of rain
	Drift	• requires regular cleaning to ensure proper operation • recalibration is only necessary if the sensor is physically damaged
Power requirements	Supply voltage	• Excitation Supply 5 V DC to 12 V DC typical • Overvoltage protection clamps at 27 V DC
	Supply current	dry contact, 0.5 A maximum
Installation	Mounting	• three mounting legs with bolt holes • holes are 6.3 mm (0.25 inches) diameter on a 241 mm (9.5 inches) diameter circle
Environmental	Operating temperature range	0 °C to 45 °C
Physical	Connections	2 conductor cable from switch (red wire, black wire)
	Cable length	7 m (24 feet)
	Dimensions	• 360 mm (15 inches) overall assembly height • 203 mm (8 inches) diameter catchment area
Materials	Enclosure	anodized and powder-coated aluminum, thermoplastic, stainless steel fasteners
Shipping	Shipping weight	5.3
	Shipping volume	1.36



Cellular Network Telemetry Systems

Quickly connect to remote monitoring stations by using cellular network technology. Economical, secure telemetry systems reduce data collection costs by providing real-time access to data, event notifications, and system status updates. Superior power supply management ensures long-lasting, independent operation at remote sites.

Real-Time Data

- Easily integrate systems into HydroVu data services for real-time evaluation of site data and conditions.
- Receive automatic data log uploads to your email, FTP site, or other current data management platform at customized intervals.
- Never miss a data point. The system recognizes missed data and sends that data on the next transmission.

Real-Time Decisions

- Integrate with HydroVu for up-to-date access to your data in the format you want, whenever and wherever you are, while simplifying the task of filtering the data for important results.
- Quickly respond to user-defined field events or to tampering. Automatic alarm notifications are sent to your email or phone via text message.
- Significantly reduce site visits. Receive system status updates, diagnose problems, and perform preventative and corrective maintenance from your office.

Tube Systems: For in-well deployments and low-profile installations, choose the battery-powered Tube 300R. For high-frequency sampling, choose the solar-powered Tube 300S.

Cube Systems: For sites that require multiple sensors, choose the battery-powered Cube 300R or the solar-powered Cube 300S. Connect up to five instruments to one Cube.

Both the Tube and Cube Systems offer data logging and transmission, and alarm notifications for parameter thresholds, instrument malfunction, and tampering detection.

Real-Time Support

- Receive free, 24/7 technical support and online resources.
- Order instruments and accessories from the In-Situ website.
- Troubleshoot deployment issues by using an external mode.
- Duplicate logs on the data logger and the telemetry system for confidence in the most remote locations.

Applications

- **Long-term groundwater and surface-water monitoring**
- **Event notification-crest stage gages, flood warning system, storm surge, slope stabillity**
- **Mine dewatering and acid mine drainage**
- **Stormwater management**
- **Tide gaging**

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1-970-498-1500 (U.S.A. and international)
WWW.IN-SITU.COM

Cellular Network Telemetry Systems

Spec Sheet

In-Situ

General	Tube 300R	Tube 300S	Cube 300R	Cube 300S
Operating ranges[1]	Temp: -20-70° C (-4-158° F) Humidity: 95% max. n.c.	Temp: -20-70° C (-4-158° F) Humidity: 95% max. n.c.	Temp: -20-70° C (-4-158° F) Humidity: 95% max. n.c.	Temp: -20-70° C (-4-158° F) Humidity: 95% max. n.c.
Diameter, maximum	Tube: 5 cm (1.97 in.) Top cap: 5.2 cm (2.05 in.)	Tube: 7 cm (2.75 in.) Top cap: 7.5 cm (2.95 in.) (with solar panel)	NA	NA
Dimensions	Length: 48 cm (18.9 in.)	Length: 48 cm (18.9 in.)	20 x 18 x 8.5 cm (7.87 x 7.1 x 3.35 in.)	36 x 24 x 13 cm (14.2 x 9.4 x 5.1 in.)
Weight with battery	1730 g (3.81 lbs)	1670 g (3.68 lbs)	1345 g (2.965 lbs)	3100 g (6.83 lbs)
Materials	Stainless steel	Methacrylate, 5 mm thick	GW PLAST 75	GW PLAST 75
Ratings	IP68 (cannot operate submerged)	IP65	IP65	IP65
Power Internal Battery	Battery Lithium 10.8V / 19000 mAh	Solar panels integrated NiCd 7.2V / 1400 mAh	Battery Lithium 10.8V / 19000 mAh	Solar panels integrated NiCd 7.2V / 1400 mAh
Connectors	1 twist-lock connector	1 twist-lock connector	5 twist-lock connectors	5 twist-lock connectors
Operation Time	Up to 5 years when logging every 10 min. and uploading data 1/day	Solar panel power: Unlimited, depending on sunlight exposure and programmed activities	Up to 5 years when logging every 10 min. and uploading data 1/day	Solar panel power: Unlimited, depending on sunlight exposure and programmed activities
Common Specs				
Sensor compatibility	Aqua TROLL® 100/200 Data Loggers; Aqua TROLL 400 Multiparameter Instrument; Aqua TROLL 600 Multiparameter Sonde, BaroTROLL® Data Logger; Level TROLL 400/500/700/700H Data Loggers; Rugged Troll 200; RDO Pro-X			
Communication Antenna	GSM quad band—850, 900, 1800, 1900 MHz (capable of GPRS, SMS, email, and FTP); 2G available SMA connector with stud antenna or optional external antenna for Tube 300R			
Data access/storage Data access Data storage Data format	Via email or FTP; via cable; and real-time via GSM/GPRS direct call or HydroVu data services SD Flash memory, 512 MB (not replaceable) CSV file			
Programming Programming mode Operation mode	Through ANT tool communication software, via cable, or remotely via landline or GSM modem Through communication software tool via direct connection to a PC or remotely though GSM modem or landline modem. 1. Up to 8 programmable events/day; data transmission; or SMS transmission 2. Automatic data logging (reading interval: 1 minute to 24 hours) 3. Alarm transmission (SMS) 4. Data logging and batch transmission of stored data. Connect up to 5 probes and log all available (includes data from internal barometric pressure sensor).			
Interfaces Serial Interfaces	RS232 or RS485 software selectable (with automatic RS232 switching when a PC connection is detected)			
Alarm capability Capacity Sources SMS limits	The unit can generate an alarm if tilted or disconnected; if exceeds critical temperature values or parameters threshold values; or if battery levels reach critical. Via SMS. 2 recipients Up to 8 alarm sources Can be programmed			
Real-time clock/calendar	Built-in			
Sensors	Built-in barometric pressure sensor included with non-vented systems, which automates barometric pressure compensation for non-vented water level sensors. Built-in temperature sensor			
Warranty	**1 year**			
Notes	* Refer to Alarms section in manual. Alarm sources: reset, temperature, tilt sensor, data send failure, low battery, probe reading out of range, tamper, log memory full or error, and probe reading error Specifications subject to change without notice			

CE FC

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APPENDIX C: RECORD KEEPING

Surface Water Monitoring Plan Record Keeping Sheet

Site Name: Nanticoke Solar

Date:

Time on Site: Start time: Finish time:

Weather:

Sampler Name:

Sampling ID	Collection Time	Sample Collection (Y/N)	Water Level (m)	Photo Collection (Y/N)	Additional Notes
WC-2a					
WC-2b					
WC-7a					
WC-7b					
WC-HCa					
WC-HCb					