



Penn Energy- Van Dorp
SOLAR ENERGY FACILITY

in the Municipality of Port Hope
Northumberland County
FIT Application No. FIT-FLTV77L
FIT Contract No. F-001573- SPV-130-505

Waterbodies Assessment
Record Review
DRAFT

Prepared for: Penn Energy Renewables Ltd.
620 Righters Ferry Road, Bala Cynwyd, PA 19004

Submitted by: Niblett Environmental Associates Inc.
PN 10-066

October 2012



Niblett Environmental Associates Inc.
Biological Consultants

October 18, 2012

PN 10-066

Penn Energy Trust
620 Righters Ferry Road
Bala Cynwyd, PA 19004

Attention : Mr. Glen Tomkinson

**RE: Penn Energy- Van Dorp
SOLAR ENERGY FACILITY
in the Municipality of Port Hope, Northumberland County
FIT Application No. FIT-FLTV77L
FIT Contract No. F-001573- SPV-130-505**

**Water Bodies Assessment
Records Review-DRAFT**

Dear Mr. Tomkinson:

We are pleased to submit the Water Bodies Assessment Records Review Draft Report for the proposed Van Dorp solar energy facility as part of the Natural Heritage Assessment for this project.

The report follows the outline provided in the MNR Natural Heritage Assessment Manual.

If there are any comments or questions on the content please contact us.

Yours very truly,

Chris Ellingwood
President and Sr. Terrestrial and Wetland Biologist

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1.0 Introduction

Penn Energy Renewables Ltd. has obtained a Feed-In-Tariff (FIT) contract from the Ontario Power Authority for the construction of a 10 MW (AC) solar PV renewable energy generation facility near the town of Port Hope (Figure 1). The project area is located on part of Lots 23 and 24, Concession 2 in the geographic Township of Hope in Northumberland County, known municipally as 2300 Wesleyville Road. The facility consists of single photovoltaic (PV) modules that are approximately 3 ft. x 5 ft. in dimension. Modules are grouped in arrays (8-24 each) which are aligned in rows; these rows are separated by access aisles approximately 12 ft. in width. The project area will consist of 55, 000 PV modules and 10-15 modular collection houses. The Environmental Protection Act (EPA) administered by the Ministry of the Environment (MOE) regulates the issuance of a Renewable Energy Approval (REA). The requirements applicants must meet to receive an REA are outlined in the REA Regulation (Ontario Regulation 359/09). The REA regulation requires that applicable renewable energy projects complete a Natural Heritage Assessment (NHA), which identifies natural features and provincial parks and conservation reserves near the proposed Project Location. Subsection 30 (1) of the REA regulation requires proponents of Class 3 solar projects to undertake a Water Body Records Review to identify whether the project is:

- i) In a water body
- ii) Within 120 m of the average annual high water mark of a lake, other than a lake trout lake that is at or above development capacity
- iii) Within 300 m of the average annual high water mark of a lake trout lake that is at or above development capacity
- iv) Within 120 m of the average annual high water mark of a permanent or intermittent stream, or
- v) Within 120 m of a seepage area (O. Reg. 359/09, s. 30. Table).

Subsection 30 (2) of the REA regulation requires the proponent to prepare a report “setting out a summary of the records searched and the results of the analysis” (O. Reg. 359/09). This Water Body Records Review Report has been prepared to meet these requirements.

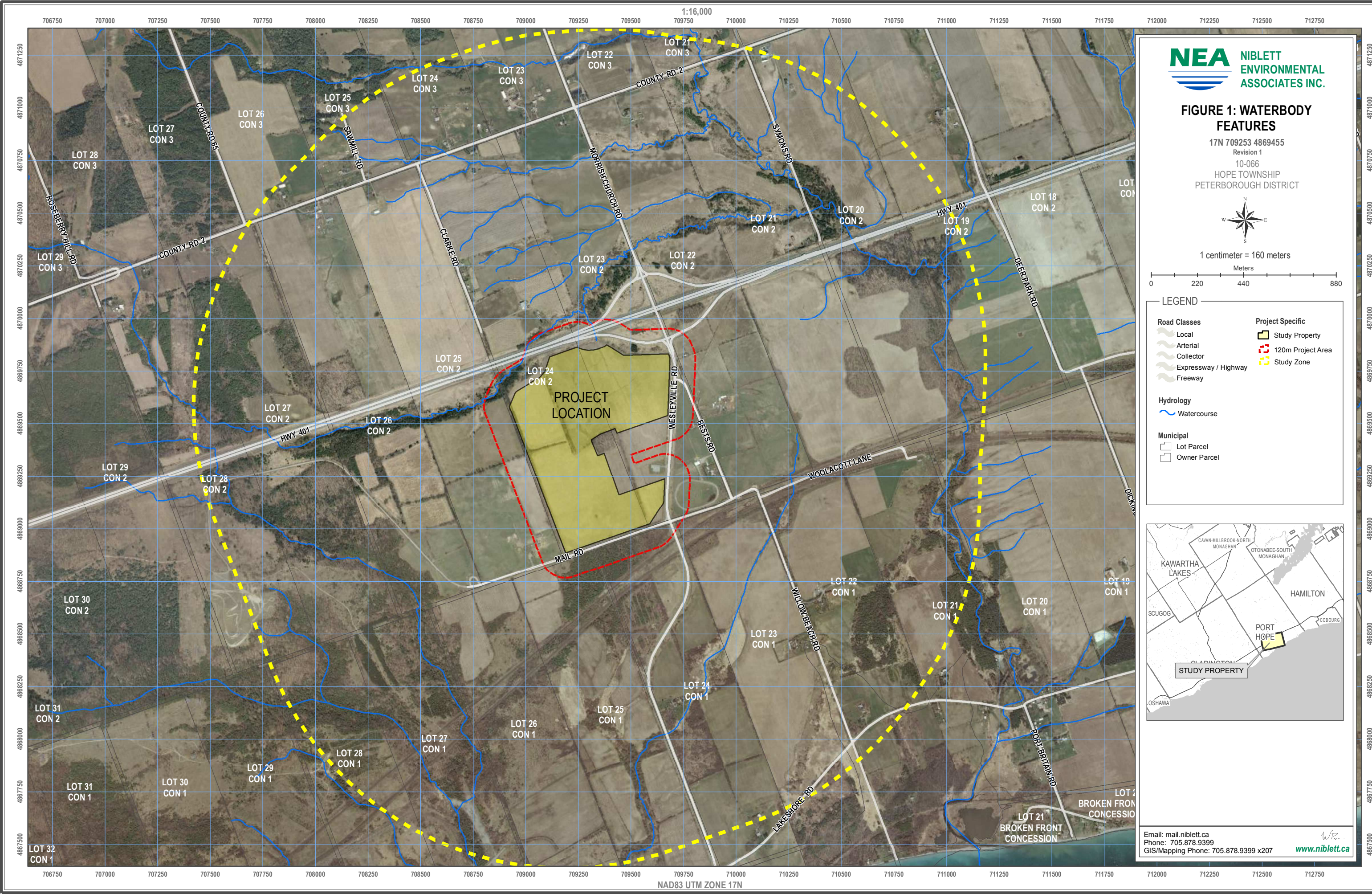
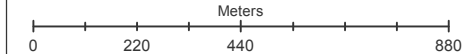


FIGURE 1: WATERBODY FEATURES

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HOPE TOWNSHIP
PETERBOROUGH DISTRICT

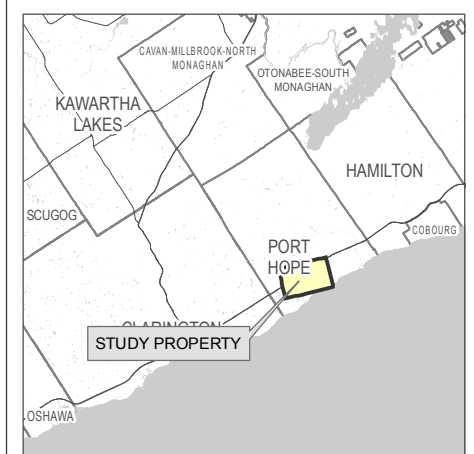


1 centimeter = 160 meters



LEGEND

- | | |
|----------------------|-------------------------|
| Road Classes | Project Specific |
| Local | Study Property |
| Arterial | 120m Project Area |
| Collector | Study Zone |
| Expressway / Highway | |
| Freeway | |
| Hydrology | |
| Watercourse | |
| Municipal | |
| Lot Parcel | |
| Owner Parcel | |



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2.0 Results

Records that were reviewed and assessed can be found in the following sections. This purpose of this section is to determine whether any water body features exist on or adjacent to the project location. The definition of a water body is stated in Section 1 (1) of the REA regulation:

water body includes a lake, a permanent stream, an intermittent stream and a seepage area but does not include,

- A) Grassed waterways,*
- B) Temporary channels for surface drainage, such as furrows or shallow channels that can be tilled and driven through,*
- C) Rock chutes and spillways,*
- D) Roadside ditches that do not contain a permanent or intermittent stream,*
- E) Temporarily ponded areas that are normally farmed,*
- F) Dugout ponds, or*
- G) Artificial bodies of water intended for the storage, treatment or recirculation of runoff from farm animal yards, manure storage facilities and sites and outdoor confinement areas.”*

Records of water body features were searched for within 1 km of the project location boundary. Several agencies were consulted via internet and verbal communication. Records were sought out from Ministry of Natural Resources, Ministry of the Environment, Ontario Ministry of Agriculture, Food and Rural Affairs, Federal Government, The Regional Municipality of Durham, Lake Simcoe Region Conservation Authority. The results will be discussed in the following section.

No planning boards, local roads boards or local services boards that contain jurisdiction of the Project study area.

2.1 Ministry of Natural Resources

The following online sources were reviewed from the Ontario Ministry of Natural Resources:

- Ontario Base Maps (OBM) and natural feature layers from Land Information Ontario (LIO)

The OBM mapping identified several water body features within 1 km of the project location.

Sixteen (16) watercourses in total were identified within the 1 km surrounding the project location. All of the identified water body features to the north and east were tributaries of Port Britain Creek, those found to the west were part of the Wesleyville Creek system.

- One watercourse was found to the south-west of the property, approximately 734 m from the project location boundary.
- One watercourse was found in the north-west corner of property, within project boundary (0 m)
- Seven tributaries found to the north of the property, approximately 233 m, 383 m, 468 m, 500 m, 687 m, 738 m and 935 m away from the project location boundary.
- Three tributaries were found to the north-east of the property, approximately 388 m, 557 m and 845m from the project location boundary
- Two tributaries were found to the east of the property, approximately 642 m and 636 m from the project location boundary
- One to the south of the property, approximately 998 m from the project location boundary

Of those found within the 1 km radius of the project location, one was found within 120 m from the project location boundary

- One watercourse was found in the north-west corner of property, within 120 m of the project location boundary (approximately 60 m from project location boundary).

2.2 Ministry of Environment

An information request was sent to the Ministry of Environment for water body features within a minimum distance of 1 km from the project location via email dated April 16, 2012. Several attempts to contact the Ministry of Environment were made via telephone however no response was obtained.

2.3 Ontario Ministry of Agriculture, Food and Rural Affairs

The following online sources were reviewed from the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA):

- Rural Drainage Mapping (http://www.lio.ontario.ca/imf-ows/imf.jsp?site=ads_en)

The OMAFRA mapping identified thirteen (13) water body features (same as LIO) within 1 km of the project location.

Of the thirteen water body features one watercourse was located within 120 m from the project location.

2.4 Federal Government

The following federal government websites were reviewed to determine if any records regarding water body features on or adjacent to the project location were available:

- Natural Resource Canada (NRCAN) National Topographic System (NTS) topographic maps (<http://atlas.nrcan.gc.ca/site/english/maps/topo/map>)
- DFO Aquatic Species at Risk Distribution Mapping available from Conservation Ontario website (<http://www.conservation-ontario.on.ca/projects/DFO.html>)

Natural Resource Canada mapping identified twelve water body features within 1 km of the project location boundary. Of the twelve identified, one of them was located within 120 m of the project location. The watercourse to the south-west was a tributary of the Wesleyville Ravine. All of the other features identified were tributaries of Port Britain Creek.

Thirteen identified water body features were found within 1 km of the project location boundary, found on the Conservation Ontario mapping. Of this again, one was found within 120 m of the project location boundary.

2.5 Conservation Authority Records

The watershed map of Ganaraska Region Conservation Authority was reviewed to determine if any water body features were located a maximum of 1 km from the project location boundary. Mapping was available at: http://www.grca.on.ca/downloads/maps/GRCA_Jurisdiction_Map.pdf.

An email request for further information pertaining to water body features within 1 km of the project area was sent to GRCA on April 16th, 2012.

The mapping resulted in the same information as found in the mapping above from Conservation Ontario. Thirteen water body features were found within the 1 km distance from the project location boundary.

No response from GRCA was obtained.

2.6 Municipal Records

Information from the Municipality of Port Hope and Northumberland County was reviewed online to determine if any water body features existed within a 1 km radius around the project location.

2.6.1 Municipality of Port Hope

The Official Plan was consulted, Schedule C (Land Use), indicating there were 13 water body features located within 1 km of the project location. Of those 13 all were tributaries and one was found within 120 m of the project location.

2.6.2 Northumberland County

There is no Official Plan for Northumberland County.

2.6.3 Other Contacts

The project location is not located in an area which contains a Local Services Board, Planning Authority or Local Roads Board and therefore was not contacted as part of the completion of this process. The project area was also not located in the Niagara Escarpment Plan therefore the Commission was not contacted in this process.

No lakes were identified within the 1 km area surrounding the project location therefore MNR was not contacted to determine Lake Trout Lakes as this was not applicable to this project.

3.0 Summary

Table 1 outlines the results of the Records Review in regards to the water body features. A map of the identified water body features that are located within 1 km of the project location is provided in Figure 1.

Table 1. Records Review Summary of water body features within 1 km of the Project Location.

Required Determinations for Water bodies in proximity to the Project Location		
Is the project location in a water body?	No	No water bodies were identified within the project location
Is the project location within 120 m of the average annual high water mark of a lake, other than a lake trout lake that is at or above development capacity?	No	No lakes were identified on or within 120 m of the project location.
Is the project location within 300 m of the average annual high water mark of a lake trout lake that is at or above development capacity?	No	No lake trout lakes were identified within 300 m of the project location
Is the project location within 120 m of the average annual high water mark of a permanent or intermittent stream?	Yes	Two tributaries were identified within 120 m of the project location.
Is the project location within 120 m of a seepage area?	No	No seepage areas were identified on or within 120 m of the project location

A site investigation is required as the next step to ground truth any identified features through the Records Review and to verify if any additional water body features exist on and/or within 120 m of the project location.

A site investigation report is required as part of Section 31 of the REA regulation. In the completion of this report NEA will:

- i) Confirm the water body features identified during the Records Review
- ii) Identify corrections to be made from information in this report
- iii) Confirm whether any water body features are found within the project area
- iv) Confirm the boundaries of any water body feature identified within 120 m of the project area, and
- v) Measure the distance from the project area to any identified water body feature (average annual high water mark)

4.0 References

- Government of Ontario. 2009. Ontario Regulation 359/09 made under the Environmental Protection Act 2007, Renewable Energy Approvals under Part V.0.1 of the Act. September 8, 2009 version. Printed in the Ontario Gazette: October 10, 2009. Available on-line at [Http://www.elaws.gov.on.ca/htym/source/regs/english/2009/elaws_src_regs_r09359\)e.htm](http://www.elaws.gov.on.ca/htym/source/regs/english/2009/elaws_src_regs_r09359)e.htm)
- Ganaraska Region Conservation Authority. 2007. Ganaraska Region Conservation Authority Watershed Map. Available on-line at: http://www.grca.on.ca/downloads/maps/GRCA_Jurisdiction_Map.pdf. Accessed on April 10, 2012.
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