



DRAFT

Decommissioning Plan Report

In support of an application for a
Renewable Energy Approval (REA)
Pursuant to Ontario Regulation 359/09

For the

Penn Energy – Van Dorp

SOLAR ENERGY FACILITY

FIT Contract No. F-001573- SPV-130-505

FIT Application No. FIT-FLTV77L



In the
Municipality of Port Hope
Northumberland County
ONTARIO, CANADA

August 21, 2012

(Revised November 5, 2012)



Printed on 100% recycled paper

A note regarding REA application requirements and additional Project Information:

This document is one component of a series of reports and other related documents that, collectively, constitute a complete Renewable Energy Approval (REA) application package which will be submitted to the Ministry of the Environment (MOE) for review and approval. As such, this report is intended to compliment the other documents and may reference and/or rely upon information contained in them; therefore, the contents herein should not be considered independently.

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Notice:

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1.0 INTRODUCTION

Penn Energy Renewables, Ltd. (Penn) has executed a Feed-In-Tariff (FIT) contract with the Ontario Power Authority (OPA) for the construction of a 10 megawatt (MW), ground-mounted, Class 3 solar energy facility west of the populated area of Port Hope, within the limits of the Municipality of Port Hope, Northumberland County, Ontario. The subject lands are located in part of Lots 23 and 24, Concession 2, in the Municipality of Port Hope. The proposed Renewable Energy Generation Facility (REGF or the Facility) would consist of a collection of solar photovoltaic (PV) modules (each approximately 1.00m x 1.67m or 1.00m x 2.00m in dimension) that are grouped into arrays tilted and facing south. These stationary arrays are strung together forming a series of rows oriented east to west. The Environmental Protection Act (EPA or the Act) administered by the Ministry of the Environment (MOE) regulates Renewable Energy Approvals (REAs) under Part V.0.1 of the Act, pursuant to Ontario Regulation 359/09. A proponent of a renewable energy project is required to submit numerous reports as part of an REA application; one of which is a Decommissioning Plan Report (DPR).

According to the MOE's publication "Technical Guide to Renewable Energy Approvals Chapter 7: Guidance for preparing the Decommissioning Plan Report" (2011)...

[a] DPR is required to describe how applicant proposes to restore the project location to a clean and safe condition. This includes retiring the elements of the renewable energy generation facility, restoring the land and water and managing the excess materials and waste. The DPR describes the plans for decommissioning the renewable energy generation facility and is required to contain, at a minimum, the following information:

1. *Procedures for dismantling or demolishing the facility*
2. *Activities related to the restoration of any land and water negatively affected by the facility*
3. *Procedures for managing excess materials and waste*

Although components of the REGF have an estimated useful lifetime in excess of twenty years, twenty years is the term of the FIT contract. If power generation from this facility is no longer necessary at the point of the FIT contract's expiration, the REGF may be decommissioned. This DPR, therefore, is based on the scenario that the FIT contract has expired and not been renewed and that there is no demand for power generation on the site. In such event, upon the request of the landowner, the REGF will be dismantled, any lands and water negatively affected by the REGF will be restored, and the site will be left in a safe and clean condition. It is difficult to predict precise demolition activities, procedures and technologies that may become available over time. Assumptions have been made, therefore, and some task descriptions generalized to allow for a degree of flexibility and innovation regarding dismantling/ demolition means and methods.



The REGF project location is in a rural area.. The current state of the subject lands is a cleared former crop areas. There are no natural or aquatic features within the project location. Outside of the project location are a wetland (approx 82m from the project), a permanent stream (approx 60m), a drainage feature perpendicular to the northern property line that travels under Highway 401 (approx 30m) and generalized significant wildlife habitat in adjacent field meadows. Dependent upon the landowner's proposed land-use following the REGF's lifespan, the site will likely be reverted back to crop use or allowed to naturalize on its own.

2.0 PROCEDURES FOR DISMANTLING/DEMOLISHING THE R.E.G.F.

Decommissioning will most likely occur after operations have ceased and the REGF is no longer generating power. It will consist primarily of dismantling and removing facilities, wiring and equipment as well as land restoration, if necessary. This section also briefly addresses procedures for the unlikely event that the project is abandoned during construction.

2.1 Decommissioning After Ceasing Operation

The likely decommissioning tasks are as follows:

1. The Facility is disconnected from the Hydro One Networks, Inc. (HONI) grid, according to federal and/or provincial requirements and in accordance with HONI procedures and policies.
2. Individual PV modules or panels are disconnected and removed from the site, and shipped, to the extent possible, to recycling facilities for recycling, or for disposal.
3. Electrical cables and equipment owned by Penn shall be removed and recycled, re-used or disposed of off-site. This includes all above-ground electrical structures and wiring, inverters, combiners, low voltage switch gear and transformers and the interconnection substation equipment, if applicable.
4. The collection houses and their foundations (if necessary) shall be removed and recycled, re-used or disposed of off-site.
5. All above-grade PV module array support posts and structures shall be removed and recycled or disposed of off-site.
6. The safety and security fencing shall be removed and recycled, re-used or disposed of off-site.
7. Road connections and internal lanes (and their sub-base materials) used for the project, drainage structures, etc. may be removed, depending on the wishes of the landowner.
8. The site could be converted to other uses in accordance with applicable land use regulations and the landowner's wishes.

2.2 Decommissioning During Construction

It is unlikely that the Facility will have to be dismantled during construction. Should this occur, similar procedures as outlined above and throughout the rest of this report (regarding decommissioning after ceasing operations) would be followed.



3.0 RESTORATION OF LANDS/WATERS NEGATIVELY AFFECTED BY THE R.E.G.F.

Following decommissioning the Facility site will be restored, to the extent possible, to pre-Facility conditions in accordance with local land use laws or regulations and pursuant to the landowner's desires. It is not anticipated that construction, operation or decommissioning of the Facility will have negative effects on water bodies and wetlands. As a result, restoration of water courses or bodies or wetlands either during construction or decommissioning, is not anticipated.

3.1 Lands

The indirect impacts to the land from decommissioning are considered to be local, short-term and negligible. The principal potential impacts to the natural features onsite are as follows:

Generalized Wildlife Habitat (SWH01 in the NHA) – Decommissioning could lead to unintended harm to this habitat without mitigation measures. For instance, during this decommissioning phase, the security fence will be removed and the machinery used for this activity has the potential to harm the area of the habitat closest to the fence.

Wetland (WE01 in the NHA) – Decommissioning could lead to unintended harm to the wetland feature in the northwest corner of the site. For instance, during this decommissioning phase, the security fence will be removed and the machinery used for this activity has the potential to track sediment into the drainage feature area closest to the fence

To mitigate these potential negative environmental effects during decommissioning Penn plans to carry out the following preventive measures:

Modifications of Decommissioning Activities:

- Clearly delineate the limits/perimeter of the area to be cleared to prevent the loss of vegetation and retain trees not intended for removal;
- Establish a clearly delineated 5 m allowance outside of the perimeter fence;
- Install sediment fencing along the project location boundary where adjacent to any area designated as SWH01 (field meadow communities) on Figure 4 of the EIS;
- Install sediment fencing along the project location boundary where adjacent to the wetland designated as WE01 on Figure 4 of the EIS;
- No disturbance is to occur between the project location boundary and the area designated as WO02 on Figure 4 of the EIS;
- No encroachment to be permitted into the woodland designated as WO02 on Figure 4 in the EIS;
- A 30m setback to be implemented from the wetland designated as WE01 on Figure 4 of the EIS;
- Maintain a 30m buffer between project activities and two water features identified in the WA;



- Workers to be instructed to respect the delineated project location boundary;
- Install silt fencing between water features identified in the WA/WBR and project location boundary to control sediment;
- Re-seed/re-vegetate as soon as possible after disturbance with native seed mixes;
- Utilize small machinery outside of perimeter fence during all activities to minimize harm to the root system of trees not intended for removal
- Dust suppression to be performed when required;
- The internal lanes will be left as a farm lane (i.e. unpaved, gravel or dirt road) to allow rainwater to infiltrate the soil; and
- Ensure that properly operating mufflers (i.e. standard OEM, or similar) are used on all project machinery and vehicles to minimize noise impacts.

Refer to the Natural Heritages Assessment Report for potential, additional mitigation measures during decommissioning if needed.

As indicated earlier, depending on the proposed land-use following decommissioning, the site could be reverted back to crop/grazing use or be allowed to naturalize on its own.

3.2 Waters

Impacts on Water Bodies: No water bodies were identified within the project location boundary. Within 120m of the project location, the WA identified one permanent streams connecting to the Port Britain Creek and a drainage ditch under Highway 401. No impacts are anticipated to these streams however, mitigation measures are detailed below to ensure such:

Modifications of Decommissioning Activities::

- Install silt fencing between water features and project location boundary to control sediment;
- Maintain a 30m separation at all times between the project location boundary and the two water features identified in the WA;

Refer to the Natural Heritages Assessment Report for potential, additional mitigation measures during decommissioning if needed.

Depending on the proposed land-use following decommissioning, the site could be reverted back to crop/grazing use or be allowed to naturalize on its own.



4.0 PROCEDURES FOR MANAGING EXCESS MATERIALS AND WASTE DURING DECOMMISSIONING PHASE

As indicated above, the REGF consist of numerous materials that are potentially recyclable, including glass, semiconductor material, steel, and (copper) wiring. After operations have ceased and the REGF is no longer generating power, the component parts after having been dismantled will ideally be recycled or re-used following decommissioning. Beyond the project components, it is not anticipated there will be additional materials or waste as part of decommissioning. Section 3.0 of this report details the steps Penn will take to recycle or dispose of project components following decommissioning.

5.0 MISCELLANEAOUS INFORMATION

5.1 Emergency Response and Communications Plan

For further information on the Emergency Response and Communications Plan please reference the Design and Operations Report.

Given the relative lack of risk involved in dismantling the Facility, it is not anticipated that emergency situations (fire, spills of operating fluids, etc.) will take place. Nevertheless, Penn may prepare a detailed Emergency Response and Communications Plan prior to decommissioning in coordination with local and municipal authorities prior to the start of any decommissioning activity. Such plan could detail communication procedures including a list of relevant emergency contact numbers for Penn and local fire, police and medical agencies, directions to the nearest hospital, and evacuation procedures for each type of emergency. During decommissioning, among other things, signage will be posted listing emergency contact numbers for Penn along with the agencies referenced above.

Prior to the commencement of decommissioning, a fire response plan may be implemented. This will include the notification of appropriate emergency personnel, including the Township Fire Department, to be contacted if a fire occurs at the site.

Similarly, a spill response plan may also be formulated prior to decommissioning. Spills of operating fluids (gasoline, diesel fuel, lubricants) are possible from construction equipment and vehicles. Further, spills of transformer insulating oils are possible.



5.2 Decommissioning Notification

For further information about Decommissioning Notification, please reference the Design and Operations Report. Prior to decommissioning Penn will notify the Ministry of the Environment, the Township (police, fire, medical, etc), the County, and Hydro One Networks, Inc.

5.3 Other Approvals

At decommissioning, it could be a requirement that a Record of Site Condition (O. Reg 153/04) be filed with the MOE. All required local permits with respect to decommissioning will be obtained by Penn.

5.4 Financial Assurance

In consultations with the Ministry of the Environment during the early stages of Penn's due diligence process, it was advised that financial assurance of decommissioning plans would likely not be required. There has since been no information discovered to the contrary.

