



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 – Roseplain

SOLAR ENERGY FACILITY

FIT Contract No. F-001557- SPV-130-505

FIT Application No. FIT-F7TMB91



In the
Town of Uxbridge, The Regional Municipality of Durham
ONTARIO, CANADA

May 21, 2012

(Revised November 5, 2012)



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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 FIT contract with the Ontario Power Authority (OPA) for the construction of a 6.5 MW, ground-mounted, Class 3 solar energy facility located southwest of the populated center of the Town of Uxbridge, within Regional Municipality of Durham, Ontario. The subject lands are located in part of Lot 22 Concession 3, in the Town of Uxbridge. The proposed Renewable Energy Generation Facility (REGF or the Facility) would consist of a collection of solar photovoltaic (PV) modules (each approximately 1.00 m x 1.67 m or 1.00 m x 2.00 m 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 crop land. There are no aquatic features within the project location. Dependent upon the landowner's proposed land-use following the REGF's lifespan, the site will likely be reverted back to crop/grazing 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 impact to the woodland associated with decommissioning this project is unintended harm to trees that are not planned for removal. 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 woodland closest to the fence. Therefore during decommissioning Penn plans, to the extent possible, to carry out the following preventive measures:

- Clearly delineate the limits/perimeter of the area to be cleared to prevent the loss of vegetation not intended for removal. Workers to be instructed on the importance of avoiding entrance into the demarcated area;
- Implement and maintain a 30m Vegetation Protection Zone (VPZ) from the outermost tree trunks/feature for the areas identified in the NHA. Daily visual monitoring of work area to ensure VPZ is maintained;
- Ensure no work or project activities are conducted within any of the designated VPZs or designated significant wildlife habitat for species of conservation concern; and
- Refer to the Natural Heritages Assessment Report for potential, additional mitigation measures during decommissioning if needed.

Additional Modifications of Construction Activities - Raptor Wintering Area

If Raptor Wintering Area is confirmed is confirmed and deemed significant by 2013 surveys, the following shall also be implemented:

- during construction if raptors hunting in construction zone, limit disturbances in that area;
- do not disturb or flush raptors if perched on equipment or feeding on prey on ground. Allow them to leave on their own; and
- if raptor found injured, report incident to site supervisor and contact MNR or rehabilitation centre.



As indicated earlier, depending on the proposed land-use following decommissioning, the site could be reverted back to agricultural use, naturalized with native trees and shrubs or allowed to naturalize on its own.

Treatment Technologies:

- Fueling and maintenance activities would occur within an area where sediment erosion control measures and all precautions have been made to prevent oil, grease, antifreeze or other materials from inadvertently entering the ground or the surface water flow. Storage and disposal of petroleum, oil and lubricants, and equipment fuelling is not allowed within 120m of any significant natural feature, watercourse of waterbody as identified in the NHA; and
- Monitor area for leakage, in the unlikely event of spillage halt all construction activities and corrective measures must be implemented. Any spills must be immediately reported to the MOE Spills Action Centre (1.800. 268.6060).

Scheduling and Operational Changes:

- Conduct construction activities during daylight hours whenever possible to minimize light impacts to wildlife.

3.2 Waters

Not applicable, there are no water features located on or adjacent to the Project Location.

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 MISCELLANEOUS 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.

