



Decommissioning Plan Report

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

For the

Penn Energy – S. Glengarry_St. Lawrence-1

SOLAR ENERGY FACILITY

FIT Contract No. F-000627-SPV-130-505
FIT Application No. FIT-F3AP3XM



In the
Township of South Glengarry
United Counties of Stormont, Dundas and Glengarry
ONTARIO, CANADA

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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 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 north of Cornwall, near the village of Martintown, Ontario. The subject lands are located in part of Lots 1-3 Concession 51L (or part of Lots 40, 41 & 41a of Plan 107), in the Township of South Glengarry, geographic Township of Charlottenburgh. 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 Bulletin #4: Guidance for preparing the Decommissioning Plan Report as part of an application under O.Reg.359/09," among other things:

[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 with marginal (non-prime) agricultural land. The current state of the subject lands is a patchwork quilt of existing and former grazing areas, thickets, plantations and some semi-active cropland. The only aquatic feature within the project location is a small, man-made hole (that holds water) originally formed during construction of a jump for an ATV track that will be eliminated during the construction phase. There is evidence of past and current logging. Dependent upon the landowner's proposed land-use following the REGF's lifespan, the site will likely be reverted back to 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 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, minimal restoration of water courses or bodies or wetlands either during construction or decommissioning, is anticipated.

3.1 Lands

The indirect impacts to the land, in particular, the significant woodland, 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:

- Utilize small machinery within 25 m of woodlands when removing the fencing in order to minimize the potential damage to root systems of trees not intended for removal and to reduce any harmful soil compaction; and
- Minimize any backfilling within 25 m of the woodland to minimize potential damage of root systems.

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 agricultural use, naturalized with native trees and shrubs or allowed to naturalize on its own.

3.2 Waters

As noted in Natural Heritage Report, the original footprint of the REGF project location was moved south following the identification of a wetland feature and a 30 m buffer between the delineated wetland boundary and the REGF project location was established. This re-design measure essentially eliminated the potential for direct impact to the wetland feature. The indirect impacts that could take place during decommissioning, prior to mitigation, primarily involve sedimentation, which should be local, short-term and minor. Further, the type of wetland delineated (swamp and marsh) is not sensitive to changes in temperature or nutrient input.

Prior to implementing any mitigation measures, the potential impacts to the wetland during construction and decommissioning are considered to be local, short-term and minor.



Regardless, during decommissioning the following preventative measures shall be taken by Penn, if necessary:

- Utilize small machinery within 30 m of wetland when removing the security fencing in order to minimize potential damage to root systems of trees not intended for removal and to reduce soil compaction;
- Minimize any backfilling within 30 m of the wetland to minimize potential damage of root systems and to ensure that the overland flow continues to flow towards the wetland.

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 grazing use or 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 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.

