CarbonFree Rainy River Project

Decommissioning Plan Report

H375916-0000-840-066-0007

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Table of Concordance

The following concordance table cross-references the contents of this Decommissioning Plan Report with each requirement identified in Table 1 of O. Reg. 359/09 so that the required information can be easily found within this report.

Requirement per Table 1 of O. Reg. 359/09	Report Section
1. Procedures for dismantling or demolishing components of the facility	3, 4
2. Activities related to the restoration of any land and water to bring the site into a condition consistent with the probable future use	3.2, 4.2, 5
3. Procedures for managing excess materials and waste	3.6, 4.3

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1. Introduction

1.1 Background

CarbonFree Rainy River Ltd. (CarbonFree) is proposing to develop an up to 60-megawatt (MW) Class 3 solar photovoltaic (PV) project ("the Project") adjacent to Highway 71 and Mather Rd, in the Township of Chapple, Ontario, approximately 40 km northwest of Fort Frances.

The proposed Project will use solar photovoltaic (PV) technology to generate electricity. The polycrystalline or monocrystalline PV modules will be mounted on aluminum or galvanized steel racking tables. The racking tables will be supported by steel posts which are founded in either concrete slab-on-grade, or foundations buried in the ground to a depth below the frost line. Tracking structures are expected to be oriented to the north-south, tracking the sun movement from east to west. The racks of modules will be arranged in long rows, typically spaced about 6 m apart east-to-west. Electricity generated by solar PV panels will be converted from direct current (DC) to alternating current (AC) by inverters and then stepped up (via pad-mounted inverters, medium voltage transformers and a main substation transformer) to 230 kilovolts (kV) prior to being connected to the existing Hydro One Networks Inc. (HONI) transmission line. A network of underground DC cabling will be required from the termination point of each PV array at combiner boxes to the inverters and MV transformers. The inverters convert the DC electricity to AC and the transformers step up the voltage to 34.5 kV. A network of overhead and underground AC cables will be required to transmit the AC current to the main transformer situated in the substation yard and will then flow through overhead electrical lines to the existing HONI transmission system.

Construction of the Project will commence once all requisite permits have been obtained. It is anticipated that construction of the Project will begin in early 2027 and take between 24 months and 30 months. Project commissioning is anticipated in 2029.

1.2 Objective and Scope

The Decommissioning Plan Report (hereinafter referred to as the "Report") is required as a part of an application all renewable energy projects must submit in order to obtain a REA permit under Ontario Regulation (O. Reg.) 359/09 – *Renewable Energy Approvals Under Part V.01 of the Act*. This Report explains how the Proponent proposes to restore the Project Location at the end of the Project. This includes retiring the elements of the renewable energy generation facility, restoring the land, and managing the excess materials and waste.

In accordance with Table 1 of O. Reg 359/09,the Decommissioning Plan Report provides a description of the following:

- Procedures for dismantling or demolishing components of the facility.
- Activities related to the restoration of any land and water to bring the site into a condition consistent with the probable future use.
- Procedures for managing excess materials and waste.

Section 1 provides the background, introduction and scope of this report. Section 2 describes the probable future use of the project location after the project is decommissioned. Section 3 of the report describes the plan upon the completion of the operations of the facility and Section 4 describes the decommissioning plan if the Project is cancelled during construction. Section 5 provides the activities to be completed in order to restore the land following decommissioning.

2. Probable Future Use of the Facility

It is anticipated that the Project will have a useful lifetime of approximately 35 years, which can be extended with proper maintenance, component replacement and repowering. At that time, the Project will be decommissioned or refurbished depending on market conditions and/or technological changes. For purposes of this Report, it is assumed that the Project will retain a 20-year power purchase agreement with the independent Electrical System Operator (IESO) which may be extended to 35 years. Decommissioning will likely take place after the 35-year operational lifetime concludes or an IESO contract is no longer in place. Site restoration following construction and installation activities will allow agricultural land uses to continue, or be re-established, within the Project Location in areas historically used for agriculture. Upland areas historically forested will likely be utilized for agriculture where lowland areas associated with the Projects transmission line may be left to naturally restore following decommissioning.

3. Decommissioning After Ceasing Operation

The Proponent will ensure that the entire site is restored to a mutually agreed to condition with the landowner and meet the requirements of applicable local, provincial and federal legislation. During all decommissioning and restoration activities, general environmental mitigative measures and management practices would be implemented such as erosion and sediment control, air quality and noise mitigation, and spill prevention. These measures will be similar to those provided in the

- Construction Plan Report (H375916-0000-840-066-0008).
- Design and Operations Report (H375916-0000-840-066-0006).

3.1 Equipment Dismantling and Removal

The following sections describe the process which will be undertaken to remove various components associated with the Project. All decommissioning of electrical devices,

equipment, and wiring/cabling will be in accordance with applicable regulations, standards and guidelines. Any pre-dismantling activities such as electrical decommissioning will include obtaining the required electrical permits and following lockout/tag-out procedures before de-energizing, isolating, and disconnecting electrical devices, equipment and wiring/cabling.

3.2 PV Modules

The PV modules are anticipated to be traditional crystalline (either mono or polycrystalline) technology. All modules will be disconnected, removed from the racks, packaged and transported to a designated location for resale, recycling or disposal. Any disposal or recycling will be in accordance with local by-laws or provincial requirements.

The steel racks supporting the modules will be unbolted; the vertical steel post supporting the racks will be removed, as well as the foundation. Foundation demolition and removal will be done by mechanical equipment (backhoe-hydraulic hammer/shovel). Demolition debris will be transported by truck to an approved disposal area. The connecting underground cables and the junction boxes will be de-energized, disconnected and removed. Equipment and material may be salvaged for resale, scrap value or disposal depending on market conditions.

3.3 Electrical Equipment

Decommissioning will require dismantling and removal of electrical equipment, including inverters, transformers, underground collection system and overhead lines. The equipment will be de-energized, disconnected and transported off site by truck. Prior to the removal of the transformer, any mineral oil will be pumped into a separate industry approved disposal container and sealed to prevent any spill during storage and/or transportation. Equipment and material may be salvaged for resale or scrap value depending on the market conditions.

3.4 Other Components

Removal of all other facility components from the site will be completed including, but not limited to, access roads, drains and culverts, concrete foundations, and fences. Upon request from the landowner, access roads, culverts and ditches may remain. Equipment and material may be salvaged for resale, scrap value or disposal, depending on market conditions.
For safety and security, the security fence will be the final component dismantled and removed from the site.

3.5 Site Restoration

The Project Location will be restored to a clean and safe condition, suitable for the likely future use of the land on which it is located (e.g., agriculture) and as agreed to with the landowners. A restoration plan will be developed and it is anticipated that the following will be undertaken:

- any open trenches/drains excavated will be filled with suitable materials and leveled.
- any roads or embankments will be removed, filled with suitable materials and leveled, unless deemed useful for the future land use of the site and/or if the landowner requests to leave all or a portion of this infrastructure in place.

- any damage to any existing drainage systems caused by the Project will be repaired/restored.
- re-planting of vegetation where possible.

Section 5 provides further details regarding the restoration of lands negatively affected by the Project.

3.6 Management of Waste and Excess Materials

All waste and excess materials will be disposed of in accordance with applicable regulations. Waste that can be recycled under municipal programs will be recycled accordingly. Waste that requires disposal will be disposed of in a provincially licensed facility by a provincially licensed hauler. Although hazardous waste is not anticipated on site, any hazardous waste will be removed from site and disposed of in accordance with provincial requirements.

Typical waste materials and modes of disposal, recycling or reuse are listed in Table 3-1:

Table 3-1: Typical Facility Decommissioning Waste Materials and Modes of Disposal

Component	Disposal Method
Solar Panels	Reuse or recycle
Steel racks and mounts	Salvage for reuse or recycle for scrap
Cabling	Recycle
Inverter step-up transformers, inverters and circuit breakers	Salvage for reuse or recycle for scrap
Concrete foundations	Crush and recycle as granular material
Granular materials	Reuse or dispose in landfill
Geotextile material	Dispose in landfill
Oils/lubricants	Recycle
Hazardous material	Dispose through licensed hauler
Miscellaneous non-recyclable materials	Dispose in landfill

3.7 Emergency Response

The Communication and Emergency Response Plan contained within the Design and Operations Report (H375916-0000-840-066-0006) establishes emergency procedures for effectively responding to accidents and other emergency situations, and for minimizing associated losses. This report focuses on the implementation of the plan during the decommissioning phase of the Project.

Potential emergency scenarios which could occur during the decommissioning phase include fire, personal injury and spills incidents. All Project personnel will be trained in the following emergency response and communications procedures.

3.7.1 Fire

Fire extinguishers will be located in strategic locations, such as Project vehicles. If a fire occurs, Project personnel will attempt to extinguish it, only if it is safe to do so. If there is any risk of personal injury, extinguishing the fire will not be attempted. If a fire cannot be extinguished using the hand-held extinguishers, the Project area will be evacuated and Project personnel will immediately call 911 to summon the local fire department (and ambulance if required). Project personnel will notify inhabitants at all adjacent properties if the fire appears able to move off of the Project site. All staff on site during the life of the Project will be trained in the procedure to deal with a fire and the use of an extinguisher.

During decommissioning, a visible sign will be erected near the front gate of the facility. The sign will include instructions to call 911 and to call a Project phone number should a passerby notice an emergency. In the event of an emergency, Project personnel at site will contact 911 and the Project Manager.

All incidents will be documented and kept on file. Documentation will include date of incident, date of reporting, name of reporter, description of the incident, cause of the incident, actions taken, communications to outside groups and internal personnel and follow-up required.

3.7.2 Personal Injury

The work during the decommissioning phase will be completed by contractors, who will establish their own Health and Safety (H&S) program in accordance with the Ontario Occupational H&S Act. Should a personal injury occur on site that does not require an ambulance, the injured worker will be taken to the local hospital. First-aid supplies and maps to the local hospitals will be kept in the Project trailer. A listing of the Project personnel trained in first aid/CPR will also be posted.

Should a personal injury occur on site that does require an ambulance, Project personnel will call 911 and assist the injured worker as required until emergency personnel arrive.

In all cases of personal injury, the decommissioning Project Manager will be notified immediately.

All incidents will be documented and kept on file. Documentation will include date of incident, date of reporting, name of reporter, name of injured, description of the incident, cause of the incident, actions taken, communications to outside groups and internal personnel and follow-up required, as required by the H&S Regulations.

3.7.3 Spills

Spills and the types of spills that require reporting are defined in the Ontario *Environmental Protection Act* and Ontario Regulation 675/98 Classification and Exemption of Spills and Reporting of Discharges.

Spills are the unintended release/discharge of material to air, land or water. The most likely decommissioning spill scenarios include: the release of sediments to waterbodies, sewage

from portable washrooms and hazardous materials (e.g., compressed gases and petroleum hydrocarbons) from containers or vehicles.

Spill prevention tactics include the following:

- All potentially hazardous materials, fuels and lubricants must be stored in the lay-down area, in a protected/bermed area and at least 50 m from watercourses.
- All refueling and equipment maintenance activities will be conducted at least 50 m from wetlands or water features.
- Vehicles and machinery are to be monitored to ensure they are well maintained and free of leaks.
- Portable toilets will be located no closer than 50 m from a watercourse/drain and will be pumped by an MECP approved hauler to an approved facility.

In the event of an accidental spill, the response plan includes:

- Evaluating the scene for risks to human health and safety.
- Contacting 911 for assistance if there is immediate danger to human health, and notifying anyone who may be directly impacted or is in harm's way.
- Notifying the Project Manager of the incident.
- Containing and cleaning up the spill using on-site spill kit, if it is safe to do so.
- Contacting outside spill response contractor for assistance if required.
- Reporting the spill to the provincial Spills Action Centre (SAC), as required.

A spill kit will be available on site during the decommissioning phase and will contain equipment necessary for spills response. This will include absorbent pads, absorbent broom, polyethylene bags, neoprene gloves, protective goggles, plastic bin or metal drum, and multi-purpose granular sorbents.

Spills that could potentially occur during the life of the Project, and may need to be reported include

- non-approved releases/discharges (including those to land, air and water).
- discharge of fluids greater than 100 L from a vehicle.
- mineral oil releases greater than 100 L from an electrical transformer.
- discharges (including sediment) of any amount to waterbodies.

In the event of a reportable spill (e.g., spills of any volume within water, and spills of >100 L of hydrocarbons on land), the provincial Spills Action Centre (SAC) is to be contacted immediately, as required by provincial regulations.

The MECP Spills Action Centre phone number (1-800-268-6060) will be posted on site.

Documentation for all spill incidents will be kept on file and sent to the MECP, as required. Documentation will include date of incident, date of reporting, name of reporter, description of the incident, cause of the incident, type and amount spilled, actions taken, disposal of contaminated material, communications to outside groups and internal personnel and follow-up required. A designated Site Environmental Inspector will be appointed by the contractor to ensure compliance with these plans and will be responsible for ensuring all site workers know what to do in the event of a spill.

3.8 Communications Plan for Non-Emergencies

During all phases of the Project, including decommissioning, a sign will be erected at the gate of the facility which will include a Project phone number and should the public have any questions, inquiries or complaints. All inquiries will be directed to the Proponent Project Representative who will respond to the inquiry accordingly. All questions, inquiries and complaints will be logged electronically with the following information: date of question, inquiry or complaint, name, phone number, email address of the individual, response, date of response, and any follow-up issues.

During all phases of the Project, including decommissioning, should such conditions arise that the general public requires notification (such as Project changes requiring notifications) the public will be notified through newspaper and direct/general mail out, if required. Should agencies such as the local municipality or the MECP require notification, they will be sent the information directly by email, mail or telephone conversation. All communications will be documented and kept on file by the Proponent.

3.9 Other Approvals

Based on the decommissioning activities anticipated, additional approvals from municipal, provincial or federal agencies are not anticipated.

4. Decommissioning During Construction (Abandonment)

In the event that construction and associated work is not completed, all equipment, foundations and imported material (including roads) will be removed from site in accordance with applicable municipal, provincial and federal requirements.

4.1 Equipment Dismantling and Removal

Equipment dismantling and removal will be determined according to the activities completed and components installed at the time of Project cancellation. Therefore, the plan and related activities as outlined in Section 3.1 will be the same activities implemented if the Project were to be abandoned prior to commencing operations.

4.2 Site Restoration

Site restoration will be determined according to site development to date. Therefore, the plan and related activities as outlined in Sections 3.2 and 5 will be the same activities if the Project were to be abandoned prior to commencing operations.

4.3 Management of Wastes and Excess Materials

Management of waste and excess material will be determined by activities completed and components installed to date at time of abandonment. Therefore, the plan and related activities as outlined in Section 3.3 will be the same activities if the Project were to be abandoned prior to commencing operations.

4.4 Emergency Response and Communications

The same procedure as stated in Sections 3.4 and 3.5 will be followed if the Project were to be abandoned prior to commencing operations.

4.5 Other Approvals

Based on the decommissioning activities anticipated, other approvals from municipal, provincial or federal agencies are not anticipated for the decommissioning of the Project.

5. Restoration of Land Negatively Affected by the Project

Following decommissioning of the Project, if any lands or water features are negatively affected by the Project, the Proponent is committed to restoring the site as close to its pre-construction state as feasible. This would be subject to applicable environmental requirements. Note that as per environmental studies completed for the Renewable Energy Approval, negative impacts to water features are not expected.

The following actions are anticipated to be completed:

- All equipment, foundations and imported material will be removed from site in accordance with applicable to local, municipal, provincial and federal guidelines and regulations.
- Any damage to existing drainage system caused by the Project will be repaired/restored.
- Any excavation and/or trench, not related to the pre-construction drainage, will be backfilled with the appropriate material and graded to original contours, including natural drainage.
- Topsoil will be replaced as required.
- Revegetate exposed areas using an appropriate seed mix that is free of invasive plant species.