

Project Report

March 12, 2026

## **CarbonFree Kynoch Ltd. CarbonFree Kynoch**

Distribution  
Local Indigenous Communities  
and Regional Stakeholders

### **Summary of Technical Reports**

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| March 12, 2026 | B           | Client Review   | N. Simpson         | C. Sehl           | S. Thompson        |
| March 11, 2026 | A           | Internal Review | N. Simpson         | C. Sehl           | S. Thompson        |
| <b>DATE</b>    | <b>REV.</b> | <b>STATUS</b>   | <b>PREPARED BY</b> | <b>CHECKED BY</b> | <b>APPROVED BY</b> |
|                |             |                 |                    |                   |                    |

## Report Disclaimer

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## 1. Introduction

CarbonFree Kynoch Ltd. (CarbonFree or the Proponent) is proposing a 154-megawatt (MW) solar photovoltaic (PV) project adjacent to Highway 554 in the unincorporated District of Algoma, Ontario. The Project will require a Renewable Energy Approval as per Ontario Regulation (O. Reg.) 359/09 - Renewable Energy Approvals under Part V.0.1 of the *Environmental Protection Act*.

The term "Project Location" is defined by O. Reg. 359/09 as: "A part of land and all or part of any building or structure in, on or over which a person is engaging in or proposes to engage in the project and any air space in which a person is engaging in or proposes to engage in the project" The Project Location is shown on Figure 1 of Appendix A.

The proponent has retained Hatch Ltd. to prepare the Renewable Energy Approval application including the necessary technical reports and on site surveys.

In accordance with O. Reg 359/09, this document summarizes each of the draft technical reports (with the exception of the Consultation Report) that will be included as part of the Renewable Energy Approval application package submitted to the Ministry of Environment, Conservation and Parks (MECP). Comments and feedback received from Indigenous communities, municipalities, and the public will be considered and incorporated by the Project team prior to the final public meeting for the Project and submission of the Renewable Energy Approval application to the MECP.

Summaries of the following documents have been provided in the sections below:

- Cultural Heritage Evaluation Report
- Archaeological Assessment Report
- Waterbody Assessment Report
- Natural Heritage Assessment Report
- Construction Description Report
- Design and Operations Report
- Decommissioning Plan Report
- Acoustic Assessment Report

## 2. Cultural Heritage Evaluation Report

### 2.1 Purpose of the Assessment

The assessment was undertaken to:

- Identify any buildings, structures, cultural landscapes, or features with cultural heritage value or interest.
- Determine whether the proposed solar project could impact such resources.
- Meet REA requirements under Sections 19–23 of Ontario Regulation 359/09 related to heritage and protected properties.

Archaeological resources were assessed separately under a combined Stage 1 and 2 Archaeological Assessment.

## 2.2 Methodology

The evaluation followed provincial requirements and guidance under the Ontario Heritage Act, including:

- Ministry of Citizenship and Multiculturalism Standards and Guidelines for Conservation of Provincial Heritage Properties (2010, 2014).
- Ontario Regulation 9/06 – Criteria for Determining Cultural Heritage Value or Interest.
- Review of historical sources, digital heritage databases, and previous land-use information.
- Field inspections completed between August 26 and September 30, 2025.
- Completion of both the REA Heritage Screening Checklist and the provincial Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes.

The study also acknowledged federal EA considerations requiring attention to cultural and historical values important to Indigenous groups, including sacred places, cultural landscapes, and traditional land-use areas. This work will continue through Indigenous engagement as the project progresses.

## 2.3 Findings

The research and field assessment concluded that:

- The parcels assessed consist primarily of hayfields and forested land. The area is not surrounded by significant development. No existing buildings, structures, or infrastructure associated with historic settlement or industry were observed. There are no indications of defined cultural heritage landscapes within or adjacent to the project area.
- None of the parcels contain built heritage resources.
- No cultural heritage landscapes were identified on or near the project lands.
- No buildings, structures, monuments, or landscape features are present that meet the criteria for cultural heritage value or interest under provincial regulation.
- Screening checklists did not identify any triggers requiring further cultural heritage evaluation.

Accordingly, the project lands do not contain cultural heritage resources, nor do they exhibit potential for such resources based on provincial criteria.

### **3. Archaeological Assessment Report**

The Stage 1 and Stage 2 Archaeological Assessment for CarbonFree Kynoch were conducted to identify any existing or potential archaeological resources within the Project Location and to outline appropriate measures for their protection or management. This work was completed in accordance with the under Sections 19-23 (Protected Properties, Archaeological, and Heritage Resources) of O. Reg. 359/09 and the Ontario Heritage Act.

As part of the regulatory process, the assessments are submitted to the Ministry of Tourism, Culture and Sport (MTCS) for review. Once the MTCS has completed its evaluation and has accepted the report for inclusion in the Ontario Public Register of Archaeological Reports, the REA documentation can be made public.

The Stage 1 and Stage 2 Archaeological Assessment consisted of archival research, review of local history, aerial imagery, historic and topographic maps, and a field inspection with a shovel testing program. The database for known archaeological sites registered in the province was examined to identify previous sites within the development and within 1 km of the surrounding location. The nearest registered archaeological site is located approximately 7 to 10 km away on Cumming's Lake

#### **3.1 Stage 1 Archaeological Assessment**

For this Stage 1 AA, the proposed study area was plotted on satellite imagery using Geographic Information System (GIS) software and examined. This analysis includes the review of the highest quality available topographic data and geospatial layers from Ontario GeoHub or OGSEarth to identify possible existing features of archaeological potential within or near the study area. A property inspection was conducted to determine the conditions of the study area and assess the nature, extent, and degree of disturbance. The Stage 1 findings are as follows:

- Parcel A: The western bank of a relic river intersects the southwest corner of the parcel. As a feature of archaeological potential, test pit survey is required for part of the parcel. No other feature of archaeological potential was observed during the property inspection
- Parcel B: No features of archaeological potential were noted during the property inspection. However, portions of the eastern edge of the parcel are within 150 m of the western bank of a relic river. Therefore, test pit survey is required.
- Parcel C: Areas along Kynoch Creek and its tributary retained archaeological potential, test pit survey is required.
- Parcel D: The property inspection confirmed archaeological potential along Kynoch Creek. No other features of archaeological potential were noted.
- Parcel E: No features of archaeological potential were noted during the property inspection, and therefore it was determined that no test pit survey was required.

Based on findings from Stage 1, test pit surveys were conducted during Stage 2.

#### **3.2 Stage 2 Archaeological Assessment**

The Stage 2 property survey was conducted in accordance with the Standards outlined in Sections 2.1.5 Alternative strategies for special survey conditions: Test pit survey in

northern Ontario and on Canadian Shield terrain and Sections 2.1.6 Alternative strategies for special survey conditions: Test pit survey in areas with complex combinations of archaeological potential of the SGCA. Findings are as follows:

- Test pit survey is still required for a portion of parcel A and parcel B.
- No archaeological resources were recovered from the test pit survey of parcel C and parcel D.
- Test pit survey was not required for parcel E.

### **3.3 Recommendations**

Therefore, no further archaeological assessment is required for parcels C, D, or E; test pit survey is still required for parcel A and parcel B; and partial clearance is recommended for these parcels, with a 20 m buffer applied to the areas noted to retain archaeological potential.

Should there be any alteration to the plans of this development as it is represented in this report, additional archaeological assessment may be required based on the presence of archaeological potential as outlined in the 2011 Standards and Guidelines for Consulting Archaeologists.

## **4. Acoustic Assessment Report**

The design of the system intentionally sited noise making equipment (e.g., inverters) in the interior of the Project Location to maximize the distance between this equipment and sensitive receptors such as nearby residences. An acoustic Assessment Report was produced to identify the noise generating equipment expected to be in use during operation of the facility and confirm noise levels will not exceed NPC-300 requirements at the proximal noise receptors.

### **4.1 Noise Source Summary**

- **Solar Panel Arrays:**  
Panel racks will be fitted with a single axis tracker that rotates from east to west during the day, following the sun, and is idle overnight. The tracker motor operates briefly to tilt the panels into an optimal position for solar radiation exposure throughout the day, adjusting approximately every hour during the period of sunrise to sunset. The estimated daily energy consumption is 0.04 kWh per tracker motor. Due to their relatively small size and brief operation, the tracker motors are considered insignificant community noise emission sources.
- **Inverter - Transformer Power Conversion System:**  
4.4 MW AC inverters convert the direct current (DC) supplied by the PV modules to AC. A 4.4 MVA (Megavolt-ampere) three-phase, liquid filled transformer will then 'step up' the voltage to 34.5 kV. Each installation will consist of a Sungrow Power Supply SC4400 or equivalent power conversion system (PCS) that combines the inverter and medium voltage transformer in single container skid.

Noise from the PCS inverter comes from its air-cooling fans while noise from its medium voltage transformer is largely from the magnetostriction hum. Due to the

tonal nature of the magnetostriction hum, a 5 dB tonal penalty is added to the noise emission of entire PCS.

- **Switch Gear:**  
The local panel array and substation switch gears are a combination of switches, fuses and circuit breakers used to safely isolate arrays or the entire facility for maintenance. Switch Gear control panel cooling fans are small and are located indoors. Therefore, the switch gears are considered insignificant community noise emission sources.
- **Substation Transformer:**  
The Facility contains one large 155 MVA transformer that will 'step up' the voltage from 34.5 kV to 230 kV. The substation transformer noise was calculated using the NEMA TP-80050 standard with a 5 dB tonal penalty added for its magnetostriction hum. Additional substation yard components such as the switchgear, communication tower, and line reactors are considered insignificant noise sources.
- **Ancillary Distribution Lines:**  
Above ground ancillary distribution lines connecting the local panel switch gears to the substation will not emit significant amounts of isolator corona noise due to a relatively low AC line current and voltage (34.5 kV). Therefore, the noise from the ancillary distribution lines is considered insignificant.

## 4.2 Assessment Criteria

The MECP publications; NPC-300 - Environmental Noise Guideline - Stationary and Transportation Sources - Approval and Planning provides guidance on control of industrial noise emissions for Ontario and Technical Guide to Renewable Energy Approvals provide noise limits according to the surrounding POR classification.

Sound Level limits respected the Class 3 performance limits for rural receptors at different times of the day. A conservative assessment limit of 40 dBA was used at all receptor locations under the likely potential for the Facility to operate, sometime throughout its lifecycle, at full power generation for at least 1 hour during the evening period.

## 4.3 Conclusions

Based on the project design which has sought to maximize the setback of noise making equipment from local residences, the proposed Project is expected to be compliant with the community noise limits identified in the MECP Technical Guide to Renewable Energy Approvals and Environmental Noise Guidelines NPC-300 for the predictable worst-case operating condition.

## 5. Water Body Assessment Report

The purpose of the Water Body Assessment Report is to identify what surface water features (i.e. lakes, ponds, rivers, creeks, permanent or intermittent watercourses, Lake Trout Lakes) may be present within 120 m of the Project Location (300 m for Lake Trout Lakes). This is done through a Records Review (desktop) study and on Site Investigations. Once identified, the distance between the proposed Project and the waterbody is detailed. When the Project Location is within 120 m, impacts to the feature are assessed and mitigation measures are prescribed to ensure the system design is

appropriate. These mitigation measures are summarized in the report and become an obligation of the issued REA permit.

## **5.1 Records Review**

The records review involved an assessment of publicly available records maintained by both government and non-government sources, such as MNR Land Information Ontario mapping, Ontario Ministry of Agriculture, Food and Rural Affairs online drainage mapping, LIO data for Lake Trout Lakes in Ontario, and satellite imagery.

The records review identified three water features located within 120 m of the Study Area. Kynoch Creek and two tributaries (Tributaries A and B) are present in the northwest parcel of the Project Location. Tributary A intersects with the Project Location, while Tributary B is present within 30 m. The main body of Kynoch Creek is within 120 m of the westernmost parcels of the Study Area and Project Location at various locations. The Little White River is a major watercourse flowing north to south, intersecting with the northeastern parcel of the Study Area. Finally, Watercourse A, which includes four in-line beaver ponds, intersects with the Project Location in the northeast parcel and flows into the Little White River.

## **5.2 Site Investigation**

The Little White River, as well as the main body of Kynoch Creek were both confirmed to be present near the northeast boundary of the Project Location and west of the Project Location respectively. Kynoch Creek Tributaries A and B were both absent during the site investigation. Watercourse A was additionally confirmed to be present as an ephemeral first order tributary associated with several beaver ponds and flowing into the Little White River.

## **5.3 Potential Impacts**

Potential impacts to waterbodies include an increase in surface water runoff from the Project Location, erosion of soils resulting in sedimentation of receiving waterbodies/watercourses, and impacts to surface water quality due to accidental spills.

## **5.4 Mitigation Measures**

Industry best management practices (BMPs) related to sediment, erosion, groundwater, and stormwater management mitigation have been included within the Construction Plan (H376108-0000-840-066-0003) Design and Operations (H376108-0000-840-066-0006) and Decommissioning Plan (H376108-0000-840-066-0007) Reports. The Design and Operations Report will include a Stormwater Management Plan which will generally maintain drainage patterns throughout the Project Location. Sediment and erosion control measures will be implemented where watercourses are within 120 m of the Project Location. Existing infrastructure will be used to separate surface runoff away from existing waterbodies. In all most cases, the Project will be setback a minimum of 30 m from all waterbodies. In one instance, an access road and overhead utility line will need to cross Kynoch Creek

## **6. Natural Heritage Assessment Report**

The Natural Heritage Assessment Report documents the process that is undertaken as part of the Renewable Energy Approval to document wildlife habitats in proximity to the

Project Location, and where necessary identify potential impacts to the habitats and prescribe mitigation measures to avoid or minimize impacts to present wildlife habitats.

## 6.1 Records Review

The Records Review determined that the Project Location is not within 50 m of any Provincial Parks, Conservation Reserves, or Areas of Natural and Scientific Interest (ANSIs). Several unevaluated northern wetlands and potential wildlife habitat were identified within 50 m of the Project Location based on provincial databases. In addition, no Important Bird Areas occur within 50 km of the site. No provincially significant wetlands or mapped significant wildlife habitats were previously identified; however, the Renewable Energy Approval regulations definition of wildlife habitat is general and requires field investigations to confirm potential presence or absence.

## 6.2 Site Investigations

Field surveys confirmed multiple wetlands (named Wetlands 1–6) within and adjacent to the Project Location, including both coniferous and mixed wood swamps, thicket swamps, and beaver influenced features. Two additional wetlands (>2 ha) were identified; one desktop mapped wetland was not present in field verification.

Field studies identified candidate Significant Wildlife Habitat (cSWH) for::

- Amphibian Breeding Habitat (Woodland) for Gray Treefrog, Spring Peeper and more in Wetlands 1, 2, and 3
- One raptor nest (Broad winged Hawk), requiring confirmation of activity
- Potential bat maternity roost habitat within several woodland ecosites
- SoCC habitat for Bobolink, Eastern Meadowlark, Canada Warbler, and Wood Thrush
- Potential Bald Eagle/Osprey habitat adjacent to the Little White River

Additional studies (breeding birds, turtles, bats) confirmed site usage by multiple species, though no turtle observations or colonial nesting birds were documented.

## 6.3 Evaluation of Significance

Evaluation against provincial criteria (SWH Ecoregion 5E) identified:

- Significant Amphibian Breeding Habitat – Wetlands 1–3 met criteria to be considered SWH.
- Significant Woodland Raptor Nesting Habitat – Broad winged Hawk nest to be treated as significant observed to be inactive.

Generalized SWH – Treated as significant due to potential presence, including:

- Bat maternity roost habitat
- Bald Eagle/Osprey nesting/perching potential
- Multiple SoCC bird habitats (grassland and woodland species)

These candidate or generalized SWH features and all wetlands over >2 ha were assumed to be significant and were considered for potential impacts and prescribed appropriate mitigation through the Environmental Impact Study.

## **6.4 Environmental Impact Study (EIS)**

The Environmental Impact Study assessed potential impacts of the solar facility and transmission line on significant wetlands and wildlife habitats.

### **6.4.1 *Potential Impacts to Amphibian Breeding Habitat (wetlands)***

The following potential impacts were identified related to Amphibian Breeding Habitat (wetlands) in proximity to the solar facility and transmission line portions of the Project

- Soil compaction during construction
- Disturbance to drainage patterns
- Increased sediment or dust
- Incidental take due to vehicle strikes

### **6.4.2 *Potential Impacts to Significant Wetlands***

The following potential impacts were identified related to wetlands in proximity to the solar facility and transmission line portions of the Project

Potential Impacts:

- Soil compaction during construction
- Disturbance to drainage patterns
- Increased sediment or dust

### **6.4.3 *Potential Impacts to Generalized SWH***

#### **6.4.3.1 *Bat maternity roost habitat***

- Potential roost habitat occurs site wide but is widely distributed regionally.
- Primary risk is removal of cavity trees/snags.
- Retain snags outside project footprint where feasible

#### **6.4.3.2 *SoCC bird habitat***

- Grassland birds (Bobolink, Eastern Meadowlark) – habitat loss where meadows overlap the footprint.
- Woodland birds (Canada Warbler, Wood Thrush) – habitat where deciduous forest overlaps with the footprint, minimal loss is expected
- Maintain buffers around confirmed broad-winged hawk nest site (100 m if active)

## **6.5 Mitigation Measures**

Key mitigation measures include:

- Timing restrictions:
  - ◆ No tree or vegetation clearing between April 15–August 31 (bird nesting & bat maternity roost restricted activity windows).
  - ◆ Grassland clearing outside April 15–July 31 where applicable.

- Buffers and erosion controls:
  - ◆ 30 m setback from wetlands for solar components.
  - ◆ Sediment and erosion control plans; spill prevention protocols.
- Wildlife protection:
  - ◆ Pre construction nest surveys.
  - ◆ Equipment cleaning to reduce invasive species spread.
- Spill prevention procedures
- Dust suppression (e.g., water application on roads)
- Maintaining natural drainage patterns throughout the Project Location

These restrictions will eliminate direct impacts to bat or birds, limiting impacts to the loss or temporary loss of the habitat associated with the Project Location. The solar facility portion of the Project Location was modified to allow for a 30 m vegetated buffer between construction activities and the wetlands. Where the Project Location extends within 50 m of the features, sediment and erosion controls will be put in place to minimize these impacts to the wetland.

The Environmental Impact Study determined that the Project can be constructed, operated, and decommissioned with minimal residual effects on significant natural features when recommended mitigation measures are implemented. Impacts to Significant Wildlife Habitat, will be minimized, reversible and localized through the implementation of mitigations and respecting restricted timing windows.

## 6.6 Overall EIS Conclusion

With the planned setbacks, protective buffers, and mitigation measures, the project is expected to avoid significant impacts on wetlands, wildlife habitat, woodlands, and Species of Conservation Concern.

## 7. Construction Plan Report

### 7.1 Overview of Construction Activities

Construction will occur in four phases:

- Phase 1 – Site Preparation:

Vegetation clearing (~January–March 2027), installation of perimeter fencing, establishment of temporary laydown areas, grading, drainage improvements, and construction of up to five permanent access roads from Frog Creek Road, Highway 611, McFee Road, Kliner Road, and Hayes Road. Sediment and erosion controls will be installed prior to ground disturbance.

- Phase 2 – Construction & Installation:

Installation of foundations for inverters, transformers, and trackers; mounting of approximately 346,000 PV modules; installation of DC/AC cabling; construction of the substation yard including ground grid, containment system, and transformer

infrastructure; and installation of the short connection line to the existing 230-kV Hydro One line (~April – December 2027). Heavy equipment such as excavators, graders, cranes, compactors, and transport trucks will be used.

- Phase 3 – Testing & Commissioning:

DC and AC system testing prior to energization, with additional commissioning after grid connection to verify performance and meet system operator requirements (~March – June 2028).

- Phase 4 – Site Restoration:

Removal of temporary infrastructure, reuse of stored topsoil, soil loosening where necessary, and re-vegetation. Areas beneath the solar arrays will be seeded to support agrivoltaic uses such as grazing. “Green screens” of trees will be selectively installed in visually sensitive areas where existing vegetation or hedgerows are absent..

Construction hours will generally be 7:00 a.m.–7:00 p.m., Monday to Friday, with occasional extended hours as needed. Workforce hiring will prioritize local labour, including Indigenous community members.

## 7.2 Potential Environmental Effects

Key considerations identified include:

- Soils: Potential compaction, rutting, and erosion from equipment; mitigated through stockpiling topsoil, using sediment controls, and minimizing exposed soils.
- Vegetation: removal of meadow, shrub, and forested areas; dust-related temporary impacts; effects are reversible.
- Wetlands & Watercourses: Minimum 30-m setbacks, erosion controls, and restricted laydown placement reduce risks of sedimentation or drainage alteration.
- Wildlife: Temporary disturbance and low likelihood of incidental take; vegetation clearing scheduled outside the April 15–August 31 nesting and maternity period or requiring pre-clearing surveys.
- Air Quality & Noise: Temporary increases in dust, exhaust emissions, and noise; managed by best practices such as watering roads, covering stockpiles, limiting idling, and daytime-only work.
- Traffic & Roads: Short-term increases in traffic may cause delays or road wear; highway routes will be used where possible.
- Spills: Risk from fuel or chemical leaks; mitigated through spill plans, containment, and rapid response.

Residual effects after mitigation are anticipated to be low and short-term.

### **7.3 Mitigation Measures**

Key mitigation measures include:

- Erosion and sediment controls such as silt fencing, stabilized entrances, and phased grading
- Wildlife protection measures including scheduling clearing outside sensitive periods
- Setbacks and buffers for wetlands and watercourses
- Dust and noise controls during active construction
- Traffic management measures and coordination with road authorities
- Fencing, signage, and security measures to ensure public safety
- Spill prevention and response plans with appropriate buffer distances from water features

### **7.4 Materials, Equipment, and Construction Logistics**

Materials, equipment and construction logistics include:

- No temporary water takings are required; all water will be trucked to site.
- Laydown areas will be gravelled selectively for equipment staging and storage.
- Construction wastes (e.g., broken modules, packaging, cables) will be sorted and disposed of in accordance with provincial regulations.
- Hazardous materials such as fuel, oils, and lubricants will be stored in contained areas at least 50 m from water features.

### **7.5 Environmental Monitoring**

Environmental monitoring during construction will include:

- Regular inspections of erosion controls, drainage features, and vegetation
- Daily checks for wildlife interactions, including incidental take
- Monitoring dust and noise concerns using a complaint-response process
- Spill monitoring and reporting where required
- Monthly documentation of mitigation effectiveness and corrective actions

## **8. Design and Operations Report**

### **8.1 Project Overview**

The facility consists of nine PV arrays, 36 inverter-transformer units, a high-voltage substation, underground and overhead electrical cabling, and both temporary and permanent access roads. The project area is characterized by agricultural land, pasture, and deciduous forest/forestry activities, with rural residential properties and farmland within 300 m. Natural features, including wetlands, watercourses, and candidate Significant Wildlife Habitat have informed the facility design and setbacks.

The project requires no on-site water supply, wastewater treatment, waste processing, or air-emitting equipment. A Stormwater Management Plan will ensure that natural drainage patterns are maintained and that runoff does not negatively affect downstream features.

## 8.2 Facility Design

Key components include:

- Solar PV Modules: Approximately 299,000 mounted on racks mounted on tracking structures.
- Inverters & Transformers: 36 4.4-MVA inverter-transformer units stepping output to 34.5 kV.
- Substation: An approximately 172-MVA transformer stepping voltage to 230 kV; containment includes a reinforced concrete oil-retention pit.
- Access Roads: Up to six permanent entrances from highway 554.
- Drainage & Stormwater: Minimal grading, with runoff directed to existing ditches; vegetated ground cover beneath arrays to prevent erosion.
- Security: Perimeter chain-link fencing (~2 m with barbed wire), gated access, and optional security lighting/cameras.
- Overhead and underground utility lines connecting the five panel array areas.

## 8.3 Operations & Maintenance

The facility will be remotely monitored and visited regularly by maintenance personnel.

Routine tasks include:

- Regular inspections of PV modules, wiring, inverters, transformers, vegetation, and drainage features.
- Vegetation management through mowing or agrivoltaic activities. Herbicides may only be used in rare occurrences for the control of invasive species.
- Panel cleaning only if necessary, using water supplied by truck—no chemicals.
- Transformer inspections quarterly with remote SCADA monitoring occurring at all times.
- Winter snow clearing on access roads and selective manual clearing on panels if needed.

Unplanned maintenance will be performed as needed, using qualified personnel and stocked spare parts to minimize downtime.

## 8.4 Environmental Effects Monitoring Plan

A comprehensive assessment identified potential effects related to soils, vegetation, wildlife, wetlands, surface water, groundwater, noise, dust, and socio-economic factors.

Mitigation measures include:

- Setbacks: Minimum 30-m buffers from waterbodies and wetlands.

- Erosion & Sediment Controls: Silt fencing, stabilized entrances, vegetated buffers, berms, and inspections.
- Spill Prevention: Fuel storage and refueling ≥50 m from water features, spill kits on-site, and required reporting to the Spills Action Centre.
- Wildlife Protection: Reduced vehicle speeds, awareness signage, and monitoring for incidental wildlife encounters.
- Noise Management: Compliance with MECP NPC-300 guidelines, daytime maintenance, and complaint-response processes.
- Land Use Considerations: Agrivoltaics incorporated where feasible to retain agricultural function.

With mitigation, all residual effects are expected to be low, localized, and manageable.

## 8.5 Monitoring Program

During operations, regular monitoring will include:

- Inspection of erosion controls, drainage features, and vegetation.
- Wildlife interaction documentation and reporting.
- Visual checks on fuel storage, transformer containment, and spill-prevention measures.
- Dust and noise monitoring supported by a public complaint-response system.

Annual operations reporting with adaptive management for any emerging effects

## 8.6 Emergency Response and Communications Plan

A site-wide Emergency Response Plan covers fire, spills, and personal injury. Measures include:

- Fire extinguishers on-site, emergency response protocols, and trained personnel.
- Spill response kits, containment procedures, and reporting requirements.
- Health & Safety programs for all personnel.

For public communication, a 24-hour contact number will be posted at the facility entrance. All inquiries and complaints will be logged, addressed, and documented. Public notifications (if required) will be issued through mail, email, or local publications.

## 9. Decommissioning Report

### 9.1 Project Lifespan and Future Land Use

The facility is expected to operate for approximately 35 years, after which it may be refurbished or fully decommissioned depending on market conditions or technological changes.

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 (i.e., agriculture) and as agreed to with the landowners.

## 9.2 Removal of Infrastructure

When the facility is decommissioned:

- **Solar Panels (PV Modules):**  
PV modules will be disconnected, removed from racking, packaged, and transported off-site for resale, recycling, or disposal, in accordance with applicable municipal and provincial requirements
- **Racking, Posts, and Foundations:**  
Steel racks will be unbolted and removed. Steel posts and foundations will be extracted or demolished using mechanical equipment such as a backhoe with hydraulic hammer. Concrete debris will be hauled to an approved disposal area and recycled where feasible.
- **Electrical Equipment:**  
Inverters, transformers, underground collection lines, and overhead AC lines will be de-energized, isolated, disconnected, and transported off-site. Transformer oils will be drained into approved sealed containers to prevent spills.
- **Other Components:**  
Access roads, culverts, drains, concrete foundations, and fences will be removed unless landowners request that certain roads or infrastructure remain. For safety, the perimeter fence will be the final removal.

## 9.3 Waste Management

All waste materials will be handled according to municipal and provincial rules. Reuse and recycling will be prioritized; disposal will occur at licensed facilities using licensed haulers. Hazardous waste is not expected but will be managed according to provincial requirements if encountered. Typical solar facility waste and disposal techniques:

- Solar panels: reuse or recycle
- Steel racks/mounts: salvage or scrap recycling
- Cables: recycling
- Transformers, inverters, breakers: salvage or scrap recycling
- Concrete: crushing and recycling as granular material
- Geotextile: landfill disposal
- Oils/lubricants: recycling
- Miscellaneous non-recyclables: landfill

## 9.4 Site Restoration

After equipment removal, the site will be restored to a safe and stable condition consistent with future planned land uses. Activities may include:

- Filling and leveling any trenches, excavations, or disturbed areas
- Removing roads/embankments where requested by landowners or no longer needed for land use.

- Repairing any drainage systems damaged by the project
- Planting or reseeded disturbed areas with appropriate vegetation

## 9.5 Communications

Emergency procedures from the Construction and Design & Operations Reports will remain in place during operation:

- **Fire Response:**  
Fire extinguishers staged in vehicles and strategic locations; staff attempt suppression only when safe. If a fire spreads or poses danger, personnel evacuate and call 911. Emergency signage will be posted at the facility entrance.
- **Personal Injury:**  
Contractors will implement Health & Safety programs in accordance with the Ontario Occupational Health & Safety Act. First-aid supplies and hospital maps will be available on site. Ambulances will be called for serious injuries.
- **Spills:**  
Spill procedures will follow provincial legislation (EPA, O. Reg. 675/98). Spill prevention includes setback distances from watercourses and proper storage of hazardous materials. Any reportable spills will be reported to the Ontario Spills Action Centre. Spill kits will be available onsite.

All incidents (fire, injury, spills) will be documented and retained.

A project phone number will be posted publicly at the facility's main gate for emergencies or inquiries.

## 9.6 Communications

During decommissioning:

- A sign with a project phone number will be posted at the facility gate.
- All public questions, complaints, and responses will be logged electronically and responded to.
- Public and agency notifications will be issued if required.
- All communications will be documented and retained.

## 9.7 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.