

CF Millhaven Battery Energy Storage System

Municipal Report

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Executive Summary – MSR Request & Completion of Project Engagement Activities

Submitted to: Loyalist Township Staff

Subject: Municipal Support Resolution (MSR) – *CF Millhaven Capacity Project*

Proponent: *CF Millhaven Storage Ltd* – a wholly owned entity of CarbonFree

Date: November 26, 2025

1. Purpose of This Submission

The purpose of this executive summary is to confirm that *CarbonFree* has completed Loyalist Township's Municipal Support Resolution (MSR) process for proposed energy projects, including the prescribed community engagement, municipal engagement, and documentation activities. This submission accompanies our formal request for an MSR for the *CF Millhaven Capacity Project* BESS facility proposed within the Township along with our supporting materials and reports from our predevelopment activity including from environmental study, grid connection analysis, site design and IESO LT2c compliance.

2. Summary of the Proposed Project

CarbonFree has been actively studying lands in the Millhaven area since spring 2024 (18months) for the purpose of hosting an energy project. These studies have included environmental, planning, transmission connection and site design. Where we have considered the lands as a site to host a ground mounted solar project we are presenting the project as a Battery energy Storage System for the purposes of this MSR request.

CarbonFree has secured an option to purchase the project lands and will be a long term owner and ratepayer in loyalist Township.

CarbonFree is proposing the development of a 250MW Battery Energy Storage System (BESS) with existing access from Millhaven Rd to the south end of the property, which the proponent will own, and which is adjacent to the Hydro One transmission corridor.

The project is being advanced in alignment with:

- **IESO Long-Term 2 procurement (LT2) capacity requirements**
- **Municipal expectations for siting, safety, and compatibility**
- **The Township's MSR Evaluation Framework and associated guidelines**



The project is also being developed in partnership with *the Mohawks of the Bay of Quinte and Capstone Infrastructure*, a Canadian owned, major operator of energy projects. *The project proposal* includes a proposed **Community Benefit Agreement (CBA)** that will provide annual, long-term, stable funding directly to the Township for the 20 year duration of the IESO contract.

3. Compliance With Loyalist Township's MSR Process

Loyalist Township requires proponents to complete a clear and structured engagement sequence prior to requesting municipal support.

To date, *CarbonFree* has completed **all required steps**, including:

3.1 Pre-Consultation - Municipal Staff

- The project location had been in consideration as a host site for a solar project and consultation with Loyalist staff took place through 2024 into the spring of 2025. CarbonFree decided to not proceed with a solar project and instead considered the site for a BESS project during the summer of 2025 and undertook analysis and engagement activities to assess the viability of the site to host BESS.
- CarbonFree initiated the consultation for the property as a BESS host site in October by submitting a **Pre-Engagement Notice** (IESO standard form) and initiated Initial pre-consultation during the week of October 19 with meetings on October 23, 2025.
- Upon request CarbonFree submitted a Concept Plan of the project to the planning department and engaged the planning consultants Fotenn to assist with the preliminary planning analysis. Staff provided feedback on siting considerations, public-notice expectations, technical review requirements, and preferred engagement format.
- Upon review of public consultation feedback we have revised the concept plan to remove the location of the "Alternate Road" which was a significant concern to local residents and have communicated revisions of the plan to community members for whom we have contact information.
- All items and questions received from Twp staff have been addressed in the materials submitted today.

3.2 Outreach to Council and Senior Staff



- An Introductory project briefing was provided in-person to members of Council *at the Council meeting held November 11, 2025*
- A project overview package was provided to staff and Council

3.3 Public Notification and Engagement

- **Notice of Public Meeting:** Mailed and delivered by the Twp to properties within the Township's required 1km radius week of Nov 03, 2025
- **Project Signage** – a sign was installed on the strip of the property that abuts Millhaven Rd to notify residents and passers by of the project on November 4th (picture attached)
- **Public Open-House:** Held on *November 24, 2025 at the Odessa Agricultural Society building which is located 3.5km from the site* in the format recommended by staff.
 - Display boards, project summaries, and subject-matter experts were available in person to support the event and provide detailed responses to questions and concerns of attendees.
- **Door-knock campaign** conducted within 1km of the project site on Millhaven rd. neighbours of the project were visited by members of CarbonFree's development team to engage on the subject of the project and details of this engagement are contained within the attached engagement report.
- **Project website** <https://cfmillhavenstorage.com/> and email contact were established to support ongoing communication and communication received from the website and the Notice have been responded to and followed up with.
- All public feedback received to date has been documented and will continue to inform the project.

3.4 Consultation & Partnership with Mohawks of Bay of Quinte

- Engagement initiated with *Mohawks of the Bay of Quinte (MBQ)* beginning in April 2025
- Ongoing collaboration includes commitments to training, capacity funding, environmental review participation, archaeological analysis and long-term equity involvement.



- MBQ officially joined the project as a 50.1% equity partner (majority equity holder) week of November 24, 2025.

3.5 Technical Review Preparedness

The following technical documents have been initiated or completed consistent with staff expectations and IESO requirements:

1. Preliminary Environmental Study performed by Hatch including on site and desktop analysis (report attached)
2. Secondary Environmental study (updated) by Hatch.
3. Preliminary Planning assessment by Fotenn planning consultants
4. Hydro One connection consultation
5. Grid Connection Analysis (N-1 Study) by BBA (grid consultants)

4. Community Benefits and Long-Term Municipal Advantages

Consistent with Township expectations and the approaches taken by other LT1/LT2 proponents with Loyalist Township, *CarbonFree* is prepared to enter into a **Community Benefit Agreement (CBA)** which will be intended to provide:

- Annual financial contributions to the Township for the life of the project
- Local contracting and employment opportunities
- Collaborative work with the Township on emergency-response planning and training

The value of the CBA is proposed to be within the range of \$500-1000/MW/yr depending on the ultimate size of the project as reflected in a contract with the IESO should one be issued. The CBA is intended to deliver predictable, long-term revenue for community priorities and is anticipated to be negotiated post IESO contract award.

5. Conclusion and Request

Based on the engagement undertaken, *CarbonFree* can confirm that all engagement steps of the Loyalist Township MSR process have been completed.



In addition to the community engagement, we have invested 18 months of feasibility analysis including environmental and community considerations into the property and include the results of those activities within this summary report.

We respectfully request that staff bring forward our request for a Municipal Support Resolution to Council for consideration in accordance with the Township's process and timelines.

We remain available to participate in any additional discussions with staff, Council, or the community as required.

MUNICIPAL RESOLUTION IN SUPPORT OF PROPOSAL SUBMISSION

Resolution NO: _____ Date: _____

WHEREAS:

1. The Proponent is proposing to construct and operate a Long-Term Capacity Services Project located on Municipal Project Lands, as defined and with the characteristics outlined in the table below, under the Long-Term 2 Capacity Services (Window 1) Request for Proposals ("LT2(c-1) RFP") issued by the Independent Electricity System Operator ("IESO").
2. Capitalized terms not defined herein have the meanings ascribed to them in the LT2(c-1) RFP.
3. The Proponent has delivered, no later than sixty (60) days prior to the Proposal Submission Deadline, a Pre-Engagement Confirmation Notice to an applicable Local Body Administrator in respect of the Municipal Project Lands that includes the details outlined in the table below, except for the Unique Project ID which should only be required as part of the Pre-Engagement Confirmation Notice if available.

Unique Project ID of the Long-Term Capacity Services Project (if available):	LT2c1-3161
Legal name of the Proponent:	CF Millhaven Capacity Ltd.
Name of the Long-Term Capacity Services Project:	CF Millhaven Storage
Technology of the Long-Term Capacity Services Project:	Battery Energy Storage System

Maximum potential Contract Capacity of the Long-Term Capacity Services Project (in MW):	250.00
Property Identification Number (PIN), or if PIN is not available, municipal address or legal description of the Municipal Project Lands: (the "Municipal Project Lands")	PIN: 45129-0215; PT LT 27-28 CON 2 ERNESTOWN AS IN LA81527 N OF 29R216 EXCEPT PT 1 29R638, PT 1 29R7853, PT 3 29R9929; S/T ER16655; S/T ER16792; LOYALIST TOWNSHIP

4. Pursuant to the LT2(c-1) RFP, if the Long-Term Capacity Services Project is proposed to be located in whole or in part on Municipal Project Lands, the Proposal must include Municipal Support Confirmation which may be in the form of a Municipal Resolution in Support of Proposal Submission;

NOW THEREFORE BE IT RESOLVED THAT:

5. The council of _____ supports the submission of a Proposal for the Long-Term Capacity Services Project located on the Municipal Project Lands.
6. This resolution's sole purpose is to satisfy the mandatory requirements of Section 4.2(c)(iii) of the LT2(c-1) RFP and may not be used for the purpose of any other form of approval in relation to the Proposal or Long-Term Capacity Services Project or for any other purpose.
7. The Proponent has undertaken, or has committed to undertake, Indigenous and community engagement activities in respect of the Long-Term Capacity Services Project to the satisfaction of the Municipality.
8. The Municipal Project Lands _____ include lands designated as Prime Agricultural Areas in the _____'s Official Plan.
9. Where the Municipal Project Lands does include lands designated as Prime Agricultural Areas in the _____'s Official Plan as of the date of this resolution:
 - a. The Municipal Project Lands are not designated as Specialty Crop Areas;

- b. The Long-Term Capacity Services Project is not a Non-Rooftop Solar Project;
 - c. The Proponent has satisfied the AIA Component One Requirement to the satisfaction of the Local Municipality; and
- If the Proponent is selected as a Selected Proponent under the LT2(c-1) RFP, the council of _____ will engage in good faith with the Selected Proponent to enable the Selected Proponent to complete the AIA Components Two and Three Requirement

DULY RESOLVED BY THE LOCAL MUNICIPALITY

on the ____ day of _____, 20____

Name: _____

Title:

Name: _____

Title:



Loyalist Township – Council Delegation
CF Millhaven Storage Project
Nov 11, 2025



CarbonFree - Solar & BESS



Ontario Renewable Energy Pioneer

CarbonFree is Canadian with 20 years of success in Ontario, US and Chile proving a solid understanding of the regulatory and development environments



Unique Project Sourcing Strategy

CarbonFree has a team dedicated to identifying and securing high value land, partners and high probability projects



History of Developing Projects with FN Partners

CarbonFree has developed 400MW+ of solar projects with Indigenous partners in Ontario



Financial Success

Working with finance partners and buyers of projects, CarbonFree has learnt what is required to develop and operate long-term, valuable projects



Agenda



1. CarbonFree Experience
2. Project Location
3. Project Concept Plan
4. Community Engagement
5. Safety and Environment
6. Municipal Support Resolution
7. Project Timeline



Property Access is Located on Millhaven rd 1km north of the Transmission Corridor

Development Experience



Local and Relevant Experience

1. Kingston Solar 100MW (2015) – CF was the development partner to Samsung
2. Southgate Solar 50MW (2017) – Ontario's first utility scale Agrivoltaic solar project
3. Chile (2018-2025) – community solar and BESS project development
4. Brandon Rd Solar 50MW (Loyalist Twp 2025-26) –development for IESO Corporate PPA
5. Tamworth Solar 100MW (StoneMills 2025-2026) - development for IESO Corporate PPA



Artistic Rendition of CF Millhaven Storage Project

Millhaven Host Lands and Interconnection



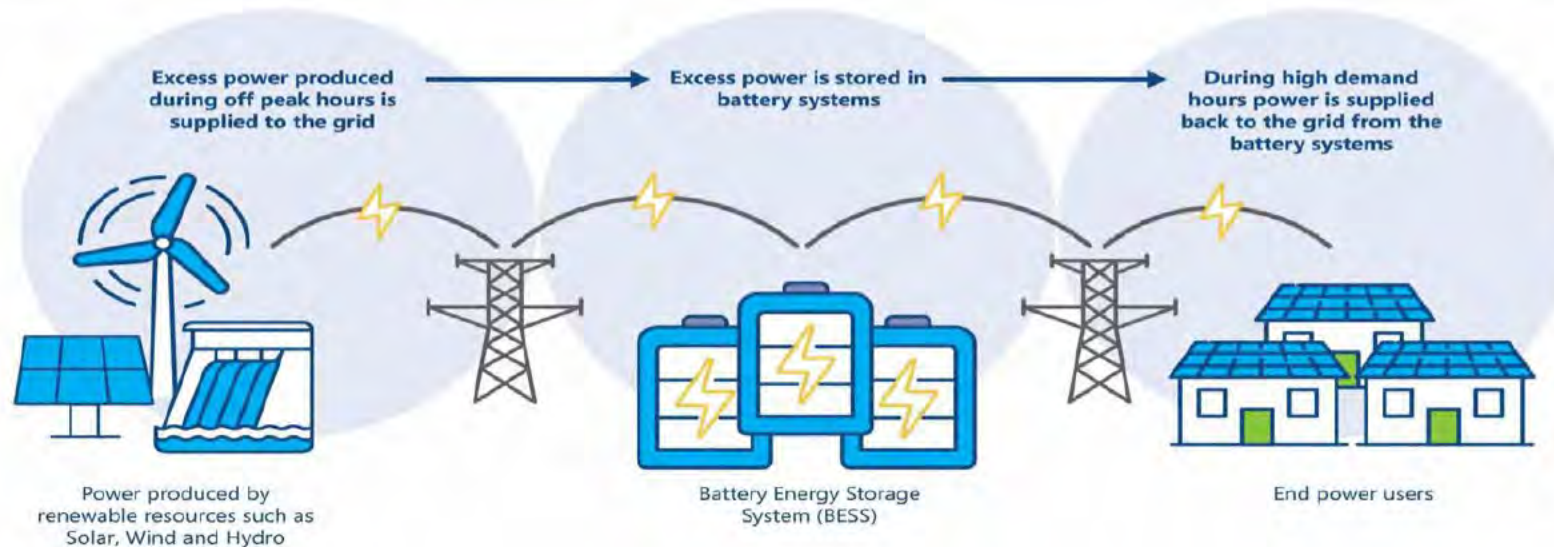
Solar Host Lands	>1km from residences; not road adjacent; Option to Purchase for CarbonFree (To be Landowner)
Project Size(s)	Up to 250MW x 8hr duration
Land Impact	Up to 20 acres, fenced, screened with road access
Land Use	Industrial (No agri component or mixed use potential)
Grid Capacity – Hydro One	3 lines – multi size project scenarios
IESO Energy Auction RFP (LT2c)	Registration: Complete Bid date: Dec 18 2025



Community Engagement



1. Neighbourhood Canvassing – report to follow with all questions/comments received
2. Public Meeting November 24 – Odessa Agricultural Society Fairgrounds
3. Public Website/Project Contact: www.cfmillhavenstorage.com
4. Property Signage - Posted
5. First Nation Partnership / Consultation
6. Municipal Support Resolution – Request December 09



Overview of the Technology



- A Battery System stores electricity using lithium-ion batteries housed in containers (pictured)
- It charges when the electricity grid has surplus (overnight/weekends) and discharges when the grid needs power (weekdays).
- Each container is equipped with a **Battery Management System (BMS)** that monitors temperature, voltage, and performance for safety
- The facility operates automatically, is monitored 24/7 for safety, and produces no emissions as part of operations.



Draft Concept of Battery Installation

Safety Concerns / Risks



Potential Concern	Description	Typical Mitigation Measures
• Thermal Runaway / Fire	A rare but possible event where an overheated cell can ignite.	• Continuous monitoring by BMS • Spacing / barriers between containers • Design compliant to Ontario Fire Code • Emergency response plan and local fire training
• Electrical Safety	Risk of arc flash or electric shock during maintenance.	• Equipment built to Ontario Electrical Safety Code • Lock-out/tag-out procedures • Restricted access / controlled entry • On-site signage and fencing
• Toxic Gases (in fire)	Fire can produce gases such as hydrogen fluoride.	• Gas detection systems • Automatic ventilation and containment • Fire service training and protective protocols • Safe setback from residential and commercial areas (typically >50 m)

Environmental Safety

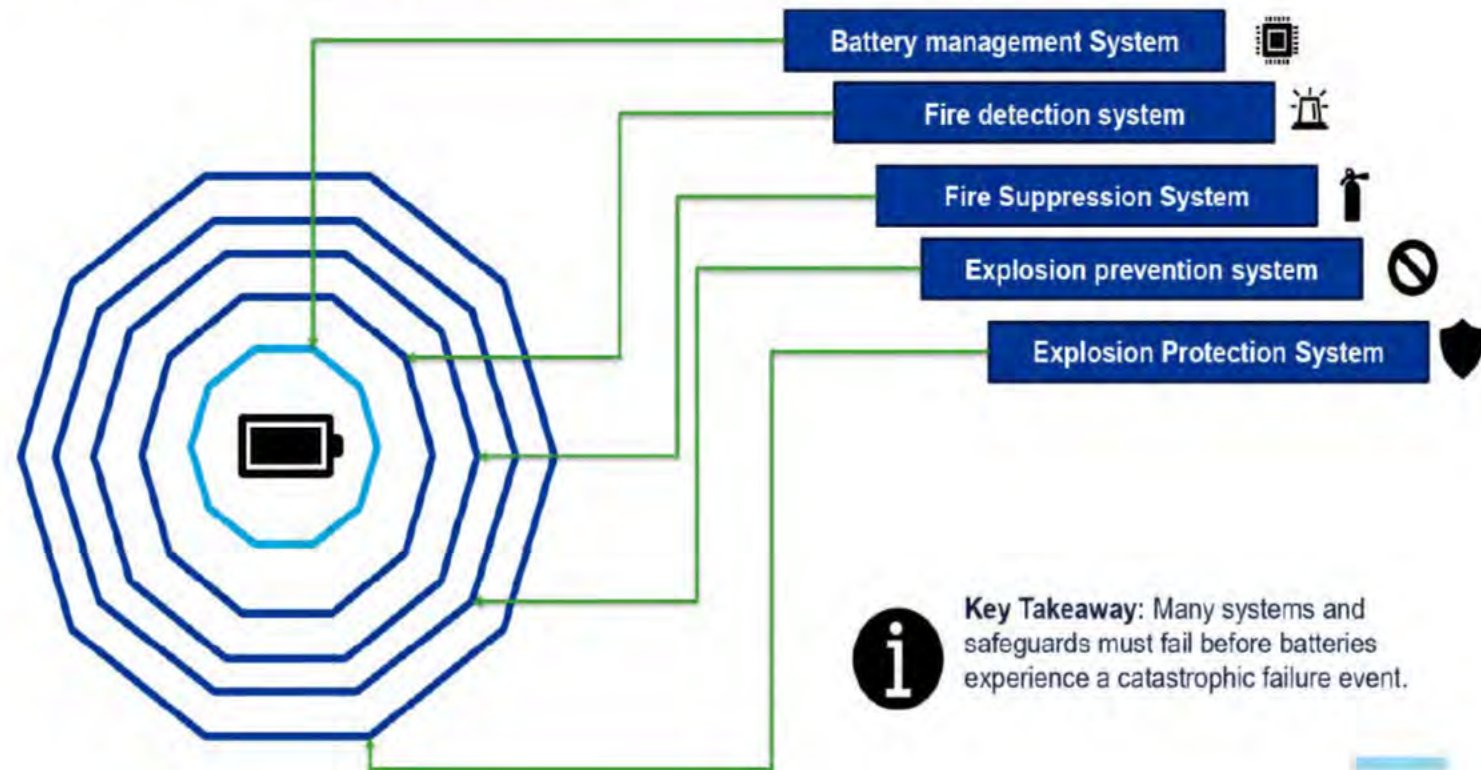


Topic	Potential Impact	Mitigation / Management
• Land and Habitat	Preparation of a 20 acre field area and converting to industrial compound	• Environmental analysis of lands • Community Consultation • Avoid sensitive features and wetlands • Erosion and sediment control
• Water / Soil Protection	Potential spill of electrolyte or transformer oil.	• Impermeable liners under containers • Concrete pads and secondary containment • Spill kits and emergency response procedures • Ongoing monitoring and testing of surrounding land and water features
• Noise / Visual	Low-level equipment hum or visible infrastructure.	• 2km setback from residences • Low-noise cooling systems (<60 dBA) • Site screening, berms, or fencing • Lighting control (no nighttime glare)
• Air & Water Emissions	None during normal operation.	• No combustion or exhaust; zero-emission operation. • No fuel consumption • No liquid or solid discharges
• End-of-Life / Waste	Battery modules contain metals (lithium, nickel, cobalt).	• Recycling through certified facilities (e.g., Li-Cycle in Ontario) • Decommissioning plan filed with regulators

Safety and Risk Mitigation

- Modern Lithium-Ion based BESS projects are **low-impact, zero-emission facilities** when properly designed. With industry-standard fire protection, environmental containment, and community-based emergency planning, they can safely operate on greenfield lands while providing long-term economic and energy benefits.

Layers of safety features in a BESS



Community and Emergency Planning



- **Site Security:** Fenced perimeter, controlled gate access, 24/7 monitoring.
- **Emergency Preparedness:** Joint planning and training with Loyalist fire and emergency services.
- **Communication:** Ongoing updates to community on design, safety systems, and response protocols.
- **Setbacks:** 700Meter setback from residential and commercial facilities; setbacks from all identified environmental features; 120M setback from HydroOne transmission corridor



Typical Containerized Battery Modules

Critical path



1. **Municipal Council Introduction**
2. **Loyalist Staff Consultation**
3. **Community Engagement**
4. **Staff Report**
5. **First Nation Partnership / Consultation**
6. **Municipal Support Resolution Request**
7. **IESO Project Submission**



Ontario Example: Oneida Energy Storage (not a CF project)

Municipal Benefits & Alignment

1. Community Benefits Agreement
2. Local tax revenue
3. Local Contractor opportunity
4. Consistency with municipal energy / climate goals and Official Plan policies
5. Contribution to Ontario grid reliability and local distribution system resilience



Atura/OPG Napanee Energy Centre Phase 1 Construction

Key Dates and Next Steps

1. November – Neighbourhood Canvassing
2. November 24 – Public Meeting (Arena)
3. November – First Nation Partnership
4. November 26 – Staff Report to Council
5. December 09 - MSR Request
6. December 18, 2025: IESO Deadline to Submit for Capacity RFP;
7. September 2026 – IESO Contract Awards
8. 2026-2027 – Municipal Planning; Engineering; Public Consultation; Permitting
9. 2028 - Project Procurement and Construction Start
10. 2029 – Project Testing & Commissioning



CF Public Notice Sign Posted On Millhaven Rd

Contact Us



Doug Deeks

VP, Project Development



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<https://carbonfree.com>



Who is CarbonFree?



Ontario Renewables Pioneer

Founded in Ontario in 2006, CarbonFree is Canadian, privately owned, with 20 years of success developing and financing renewable energy infrastructure across the province.



Unique Project Sourcing Strategy

CarbonFree has a team dedicated to identifying and securing suitable land and partners driven by a deep understanding of the energy market and the regulatory environment



History of Developing Projects with FN Partners

CarbonFree has developed and financed 400MW+ of renewable energy projects with Indigenous partners in Ontario



Operational Success

CarbonFree has a long history of operating renewable energy infrastructure safely and sustainably by partnering with local suppliers, contractors, and communities.



Ontario's Significant Power Needs



Ontario's Independent Electricity System Operator (IESO), has identified the need for new energy and capacity supply in Ontario.



What is causing this Growth?

- Increased Economic Activity
- Population Growth
- Electrification of Transport
- Retirement of Energy Generation Facilities

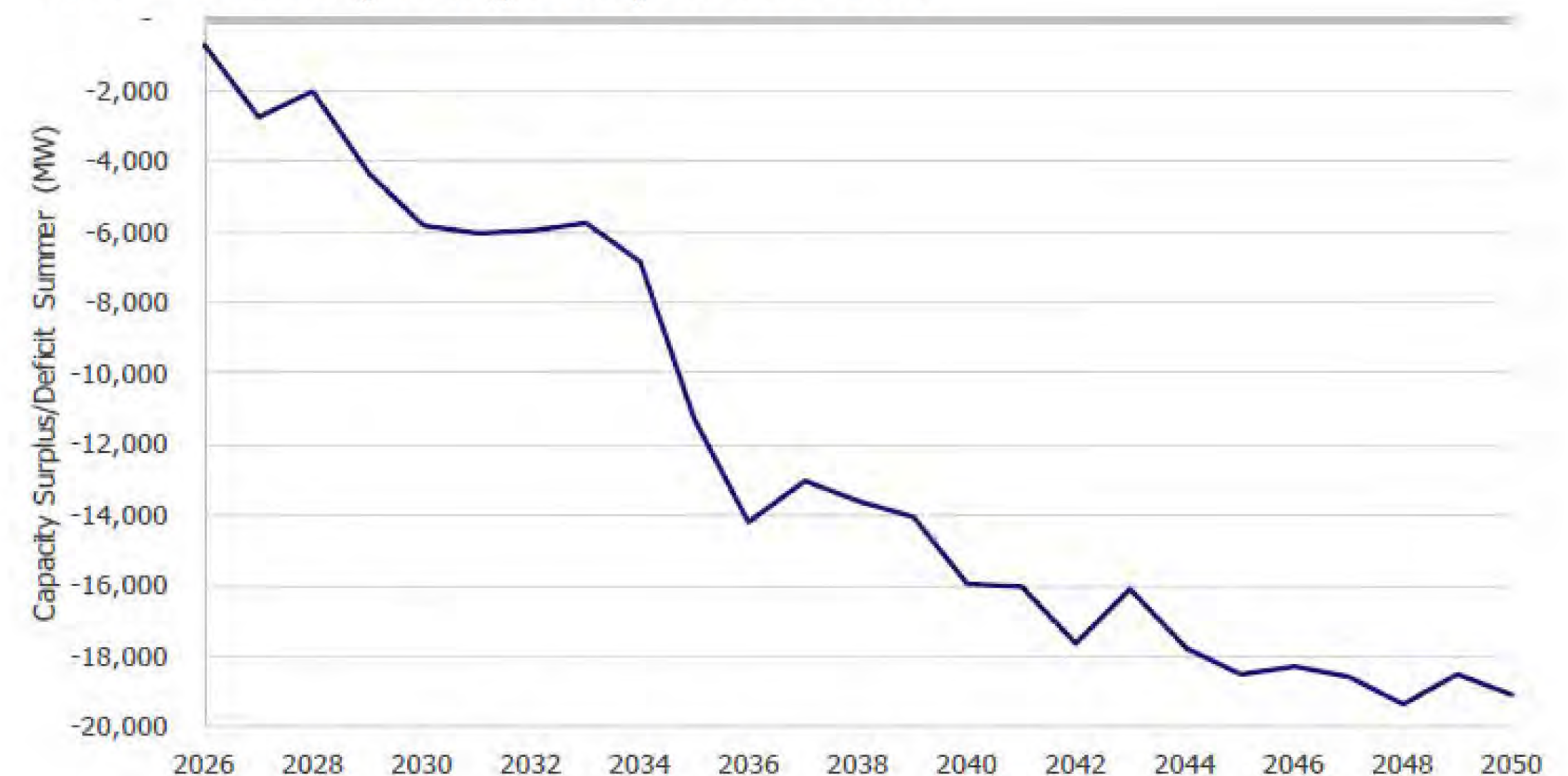
Long-Term 2 Capacity (LT2c)

To close this supply gap, IESO is running competitive procurements. The contracts have a 20-year term. This is a competitive RFP process with the singular goal of reducing ratepayer costs

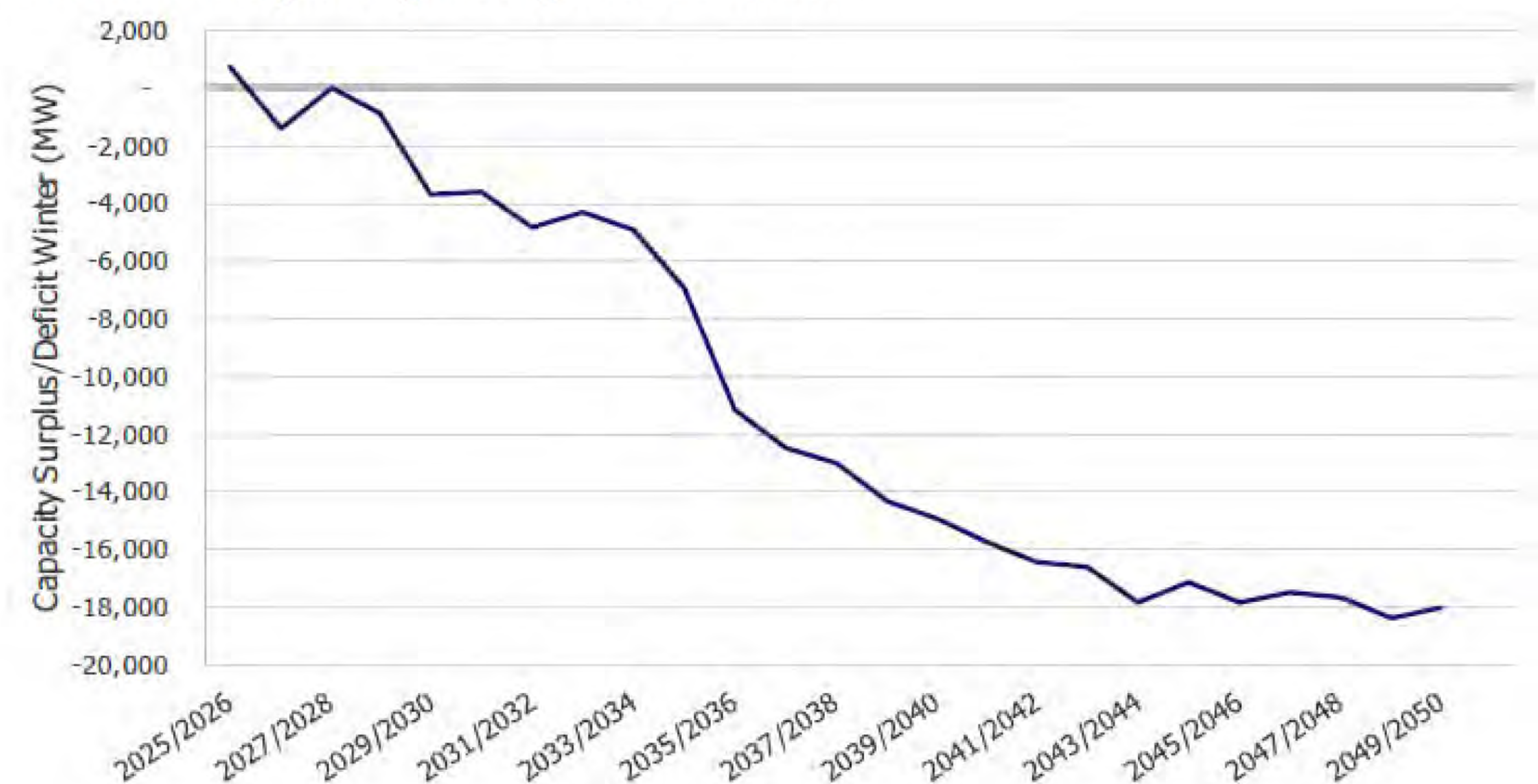
The proposed project will take part in this IESO LT2c RFP process. The proposed project is intended to improve the electrical transmission system in Ontario, addressing weak points in electrical capacity, efficiency and reliability.

By charging during the times of reduced demand and discharging during times of peak demand Batteries offer increased grid efficiency and reduced costs.

Summer Capacity Surplus/Deficit



Winter Capacity Surplus/Deficit



Millhaven BESS Project Location



Millhaven BESS Project Description

The project site is approximately 5 km south of the Town of Odessa in Loyalist Township lands in the traditional territory of the Mohawks of Bay of Quinte (MBQ). The project would advance to permitting if a contract is awarded by the IESO in 2026.

Project Site:

- The project site is on the southern end of the property, set back approximately **1 km from Millhaven Road**.
- The lands are zoned **rural**. The entire facility would occupy approximately **15-25 acres** depending on the size of the awarded contract.
- The site was selected due to its proximity to the transmission corridor and its proximity to both renewable energy and natural-gas based generation facilities

The Battery Energy Storage System (BESS) Facility:

- CarbonFree Millhaven BESS will store and inject up to **250 MW** of power for up to **eight hours**.
- The battery is not in constant use as it discharges when the grid requires additional energy (during peak events) and it charges during periods of low energy demand.
- The storage system will use **Lithium Iron Phosphate (LFP)** batteries which have a lower density and are much safer than NMC batteries common in the last decade.



Map of proposed preliminary location for the proposed CarbonFree Napanee BESS Facility. Map Key: 1 Proposed Site Access Road, 2 Site Entrance, 3 Proposed Facility Site, 4 Battery Field, 5 Substation, 6 Existing Transmission Corridor

Benefits to the Local Community



The project would be a **critical infrastructure asset** that will help meet Ontario's growing power demands, provide additional **revenue** to local community, provide property tax revenue to the township of Loyalist, and will serve a vital role in the process of **Reconciliation** with local First Nations.



First Nation Partnership

The **Mohawks of Bay of Quinte (MBQ)** are a **50% ownership partner** in the project ensuring that significant project revenues remain local to the region and adding a significant step towards the federal commitment to Reconciliation



Municipal Revenue

A **Community Benefit Agreement** is proposed to the Municipal Council, through which the funds provided will be used for upgrading / developing essential services, recreational infrastructure and other priorities identified by the Council



Economic Growth

The Project will drive **local economic growth** through **job creation and increased investment**, driving revenues for surrounding businesses and trades



Meeting Ontario's Energy Needs

The project will **strengthen and diversity Ontario's energy grid** by managing peak loads and maximizing efficiency of other generation sources to avoid risks such as power outages and rolling blackouts.



Regional Energy Centre

The township of Loyalist is emerging as a major energy centre and the addition of battery storage projects solidifies this growing position.

Project Stages & Timeline



* These dates are set by the IESO LT2 process

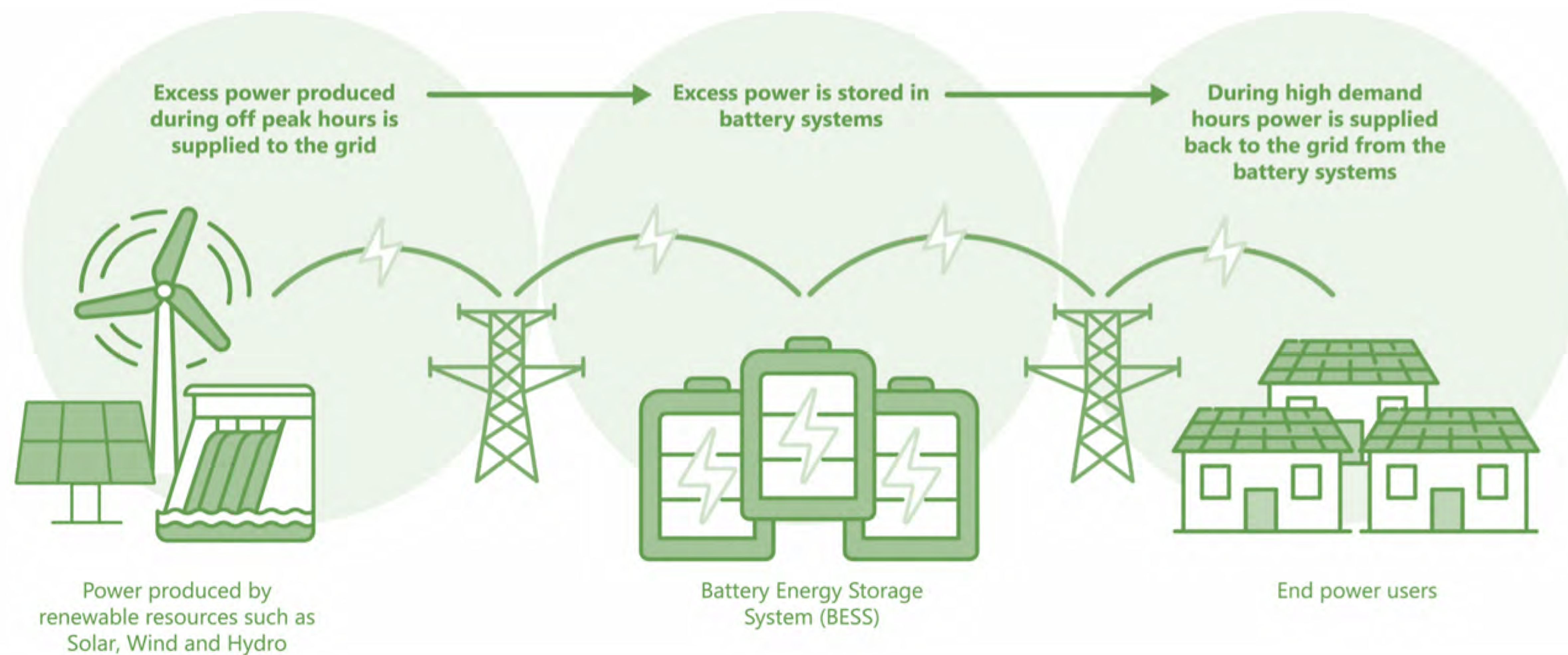
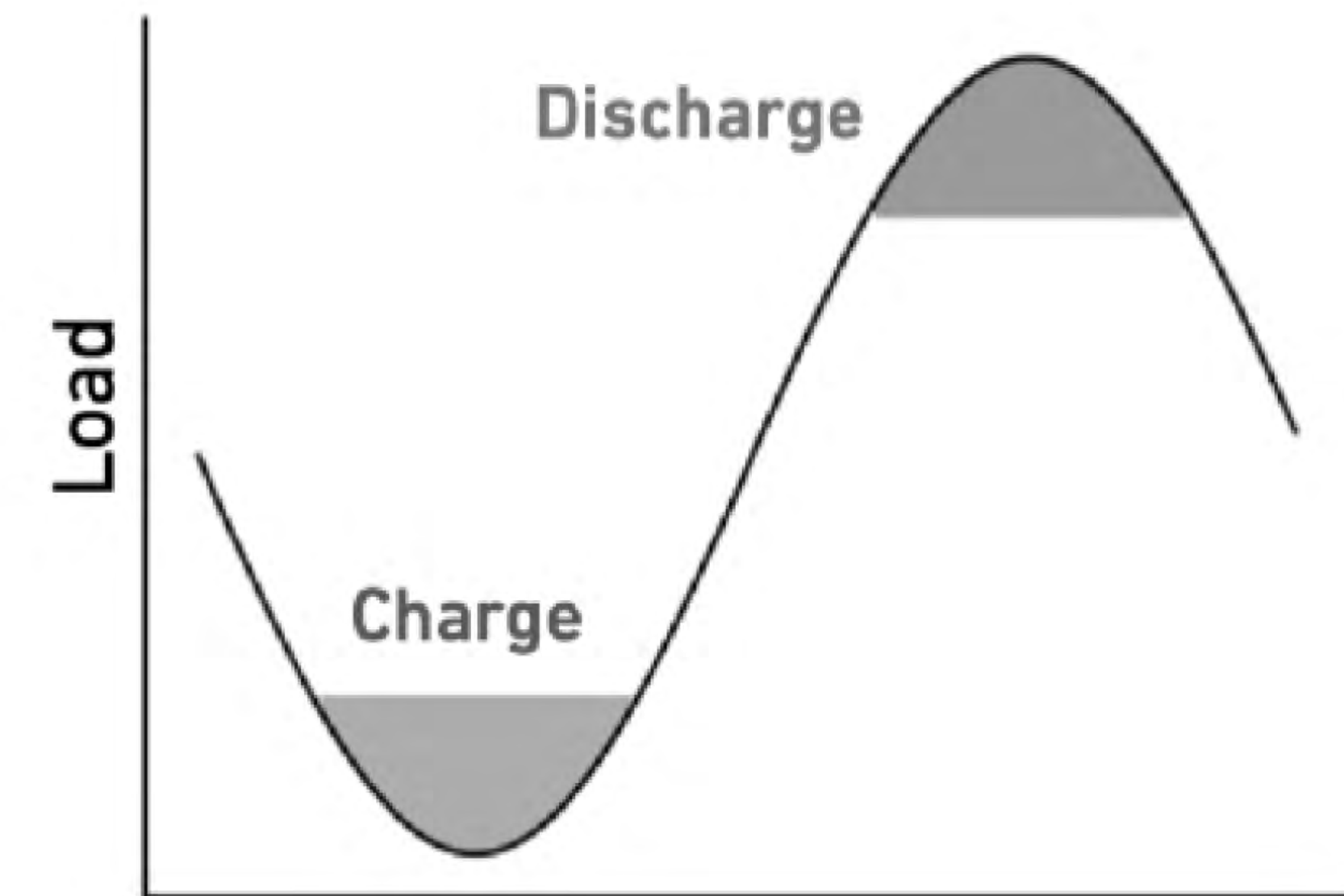
Public input is an important part of the process. We are committed to engaging landowners, public stakeholders, and members of the local community. Our focus is on consistently informing stakeholders of our activities and facilitating their participation through a transparent engagement process.

Our Commitment	
Project Information Notice	Notice was delivered to homes within 1km radius from e proposed Project Site prior to the first Public Meeting. The Notice was also published on the Project Website.
Door to Door	Neighbourhood canvassing conducted prior to the first public meeting, A report with community feedback will be submitted to the municipal staff and Council.
Public Meetings	Tonight’s meeting is the first of several to be conducted during the pre-development phase of the project. Subsequent meetings will be scheduled if the project is awarded a contract.
Municipal Engagement	• Council delegation took place on Nov. 11, 2025 with introduction of the proposed project • Public feedback report to follow first public meeting • Request for Council support er IESO rules - Dec. 9, 2025
Project Website Email	Project Website: www.cfmillhavenstorage.com Direct messaging is available on the project website Project Email: cfmillhavenstorage@carbonfree.com
Stay Informed	We will remain attentive to any questions or concerns that may arise from the local community at any stage of the project’s development. All inquiries will be responded to in a timely manner, and we will ensure that clear and helpful information is always available.

Battery Energy Storage System (BESS)

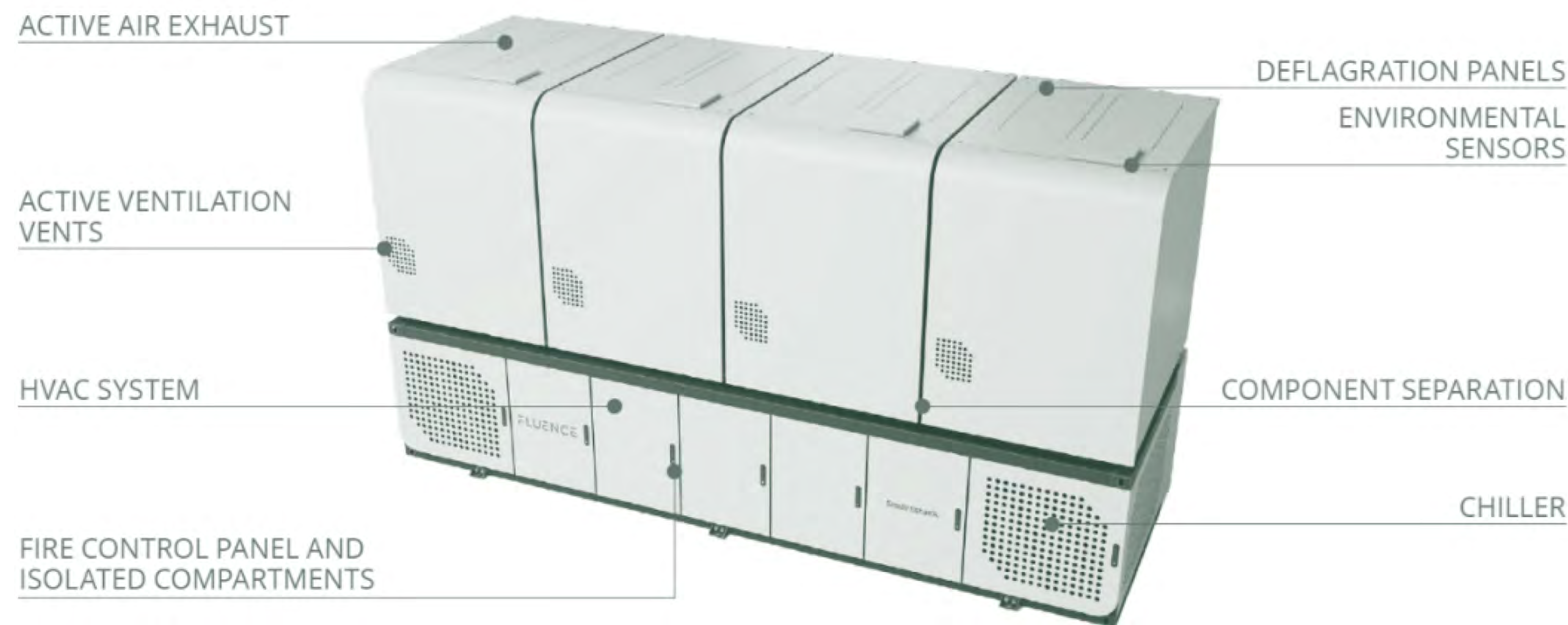
Battery energy storage projects are critical infrastructure assets that provide flexibility and stability to the electrical grid during peak demand periods, avoiding events such as rolling blackouts. Battery energy storage system (BESS) have been procured by the Independent Electricity System Operator (IESO) since 2014.

- The BESS is charged overnight during low demand period.
- Electricity is injected back onto the grid during peak energy demand hours offsetting the need for emissions-intensive generation (natural gas)



What is a BESS?

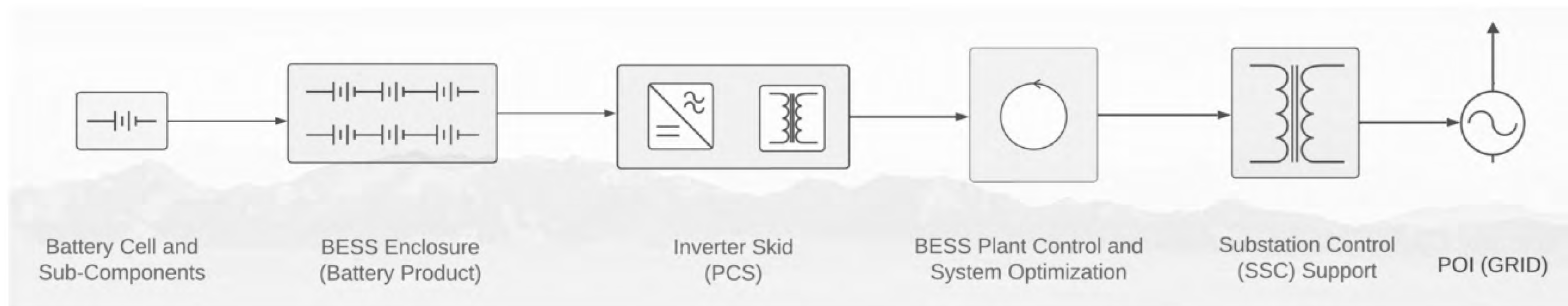
- A Battery Energy Storage System (BESS) is an electrochemical system that utilizes batteries to charge (collect energy) from the power grid, store, and discharge that energy when called upon do so by the grid operator.
- BESS consists of rows of modular, outdoor-rated enclosures roughly the size of shipping containers. These enclosures house lithium-ion batteries, similar to those found in everyday items such as laptops, tablets, cellphones, electronic toothbrushes, and other household power tools.
- For the proposed project, the batteries will use lithium iron phosphate (LFP) technology, which has a lower energy density and is therefore less likely to overheat.



An example of a BESS unit that may be used in the facility.

What other components are used in a BESS facility?

In addition to the Battery Energy Storage System (BESS) enclosures that contain the battery cells that store energy, the facility will also include inverters, medium voltage transformers, monitoring/control enclosures, and a high-voltage substation. The facility may also include space for storage, a small operations room, back-up power, and networking equipment.



An example layout of BESS units, inverters, and transformers that may be used in the facility.

Stationary Battery Energy Storage Systems are subject to several local and modern safety standards that work to identify and mitigate the risks of thermal events and other environmental risks.

The proposed project will be a state-of-the art development equipped with safeguards to protect against operational risks, and designed to meet or exceed internationally accredited codes and standards. Compliance will be certified and assessed by independent and qualified third parties.

Multiple regulatory bodies oversee the development of BESS projects. The project design and operations will be subject to regulatory review and oversight, and we will be actively engaging with regulators to ensure we are satisfying regulatory requirements.

Codes and Standards

- National Building Code
- National Fire Code Canada
- NECB 2017 National Energy Code of Canada for Buildings
- ULC -Underwriters Laboratories of Canada
- UL 1741 Standard for Inverters, Converters, Controllers, and Interconnections
- UL 1973 Standard for Batteries for Use in Stationary, Vehicle Auxiliary Power and Light Electric Rail (LER)
- UL 9540 Standard for Energy Storage Systems and Equipment
- UL 9540A Test Method for Evaluating Thermal Runaway Fire Propagation in Battery Energy Storage Systems
- NFPA855 Standard for the Installation of Stationary Energy Storage Systems

Authorities Having Jurisdiction

- Local Municipality
- Ontario Ministry of Energy
- Independent Electricity System Operator
- Ontario Ministry of Environment, Conservation and Parks
- Electrical Safety Authority



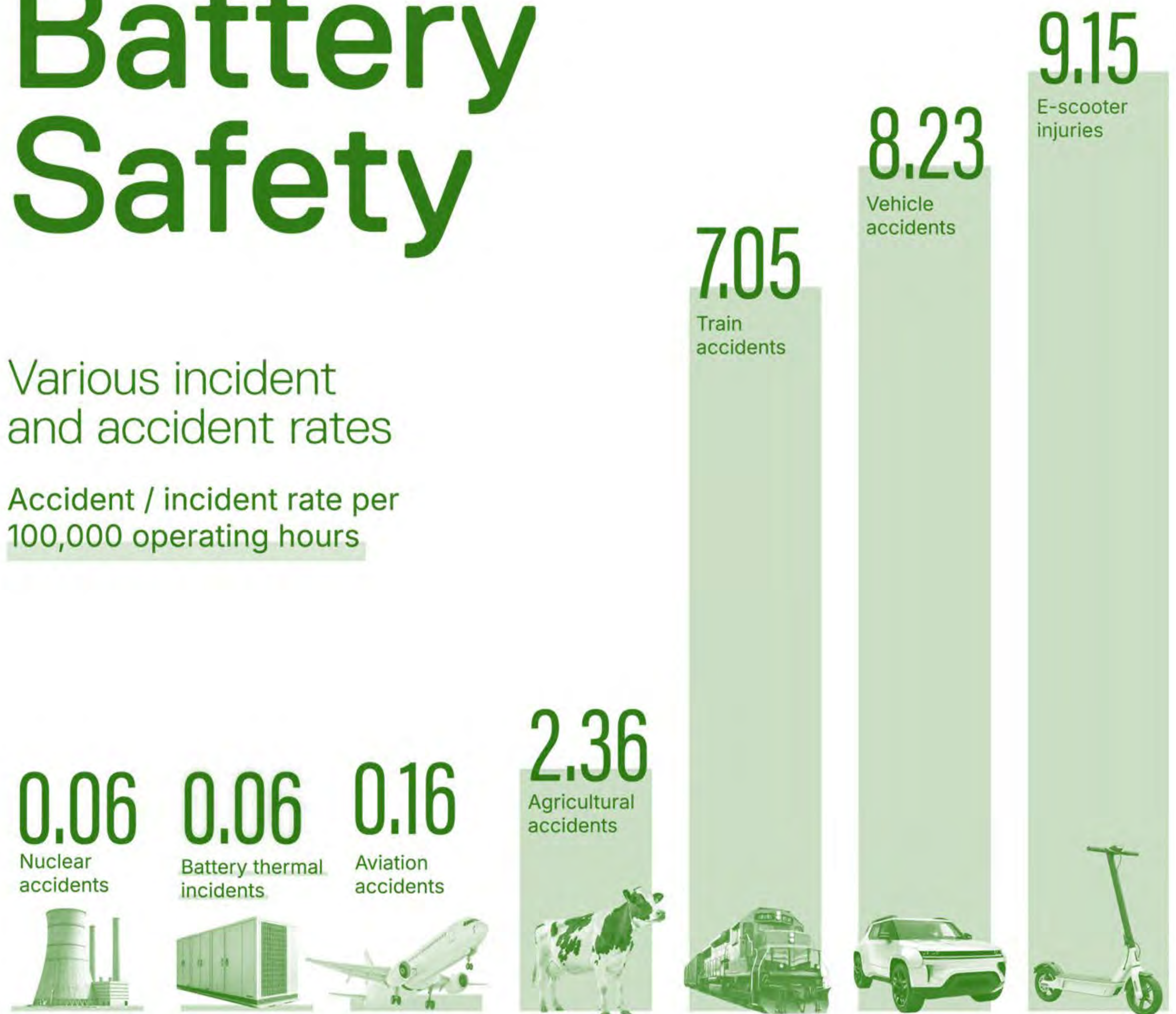
Safer Technology

- Battery chemistries are shifting to types that are much less prone to thermal runaway. Older generation systems have typically been nickel-magnesium-cobalt (NMC) chemistries, but more modern systems like ours are increasingly using much safer lithium-iron-phosphate (LFP) batteries.
- Management systems are improving every year and can better detect overheating, overcharging and short circuits, and even predict when a failure may happen.
- Modular designs of batteries, often inside shipping containers, prevent fires from spreading by isolating the event to a single container, or even a single unit within a container.

Battery Safety

Various incident and accident rates

Accident / incident rate per 100,000 operating hours



Source: Federal Railroad Administration, National Transportation Safety Board, National Association of City Transportation Officials, BESS Failure Incident Database

Noise - Construction and Operation

- A detailed **noise impact assessment** will be completed as part of the **necessary environmental permitting prior to construction**. As a part of the study, ambient noise levels will be measured, noise receptors (including homes) will be mapped, and any other factors that may impact the propagation of noise will be accounted for.
- Installation of berms, noise barriers, vegetation or other **mitigation measures** may be incorporated based on the noise study results and **permitting requirements**.
- The proposed location of the facility is significantly **set back from the road and neighboring residences**. This substantially reduces the resulting noise levels at the road.
- If the project proceeds, construction activities would take place only during **permissible hours**.
- The main source of noise during operation is the **air conditioning /HVAC** systems on the battery containers. An individual BESS unit can produce up to 75 decibels at 1 meter distance when running at full load - similar to the noise level of a vacuum cleaner. At 500 meters, the sound level would be expected to **drop below the typical nighttime background noise** in a rural setting, before accounting for baffling from the surrounding environment or mitigation measure required by the noise study.



Artistic rendition of a typical rural battery project

FIRE PREVENTION AND MITIGATION



PREVENTION

MITIGATION

EQUIPMENT SELECTION

SITE DESIGN

CONTINUOUS MONITORING

FIRE SUPPRESION

INCIDENT RESPONSE PLANNING

- | | | | | |
|---|---|--|---|--|
| <ul style="list-style-type: none">• Field Tested Equipment with a long safety track record. Working with two of the best BESS suppliers in the world with tens of operating facilities and thousands of BESS units deployed.• Safer Lithium Iron Phosphate (LFP) type battery cells which have a substantially lower risk of thermal runaway events compared to older generation Nickel Manganese Cobalt (NMC) type cells.• Integrated extensive safety and fire prevention systems with redundancy and back-up. | <ul style="list-style-type: none">• Site design will be informed by Hydro One's BESS Fire Protection Risk & Response Assessment Standard requirements. Prepared by the Fire & Risk Alliance.• Codes and Standards
National Fire Code of Canada,
Ontario Fire Code,
NFPA 855 Standard for the Installation of Energy Storage Systems,
UL 9540: Standard for Energy Storage Systems and Equipment,
UL 1973: Standard for Batteries,
UL 9540A: Standard for Test Method for Evaluating Thermal Runaway Fire Propagation | <ul style="list-style-type: none">• The Facility including every individual BESS unit will be continuously monitored by experts 24/7 to ensure that any potential issues are identified and addressed from an early stage before a failure occurs.• Systems can be controlled, isolated, and shutdown remotely.• Redundant internet connectivity and back-up power to maintain remote control in case of a failure. | <ul style="list-style-type: none">• Equipment designed to prevent unit-to-unit fire propagation.• Fire Alarm System. Provides both prevention and mitigation functions by shutting down the batteries in the event of an alarm.• Venting System. Maintains combustible gasses within 25% of lower flammable limit in case of a thermal run-away event.• Deflagration Panels. Redundant safety system designed to vent out the gases generated during deflagration event. | <ul style="list-style-type: none">• Fire Department/First Responder Training and Site Familiarization Drills: Industry best practices based on Emergency Response Plan and Full-Scale Fire Test experience.• Subject Matter Expert availability to provide support to Incident Commander in case of an event.• Emergency Response Planning. The facility does not go into operation without having a site-specific emergency response and evacuation plan. |
|---|---|--|---|--|

CONTINUOUS MONITORING

The Facility including every individual BESS unit will be continuously monitored by experts 24/7 to ensure that any potential technical issues or security issues are identified and addressed from an early stage before a failure occurs.

- An Energy Management System (EMS) will monitor status of all BESS equipment and report any fault detected to the operator immediately. It will proactively analyze operating data to optimize system health and identify potential issues from early stage
- A Battery Management System (BMS) will monitor and track critical parameters of each individual battery, and report operating limits, alarms, rapid fault isolation on rack and enclosure level



An example of fire safety systems in a typical BESS unit that may be used in the facility.

CarbonFree is working **with Hatch** to conduct environmental assessments for the project site. Hatch is an Ontario based, employee-owned, engineering services firm.

Battery projects are classified as **electrical transmission infrastructure**, and are subject to the Ministry of the Environment, Conservation and Parks Class Environmental Assessment for Minor Transmission Facilities (“**Class EA**”).

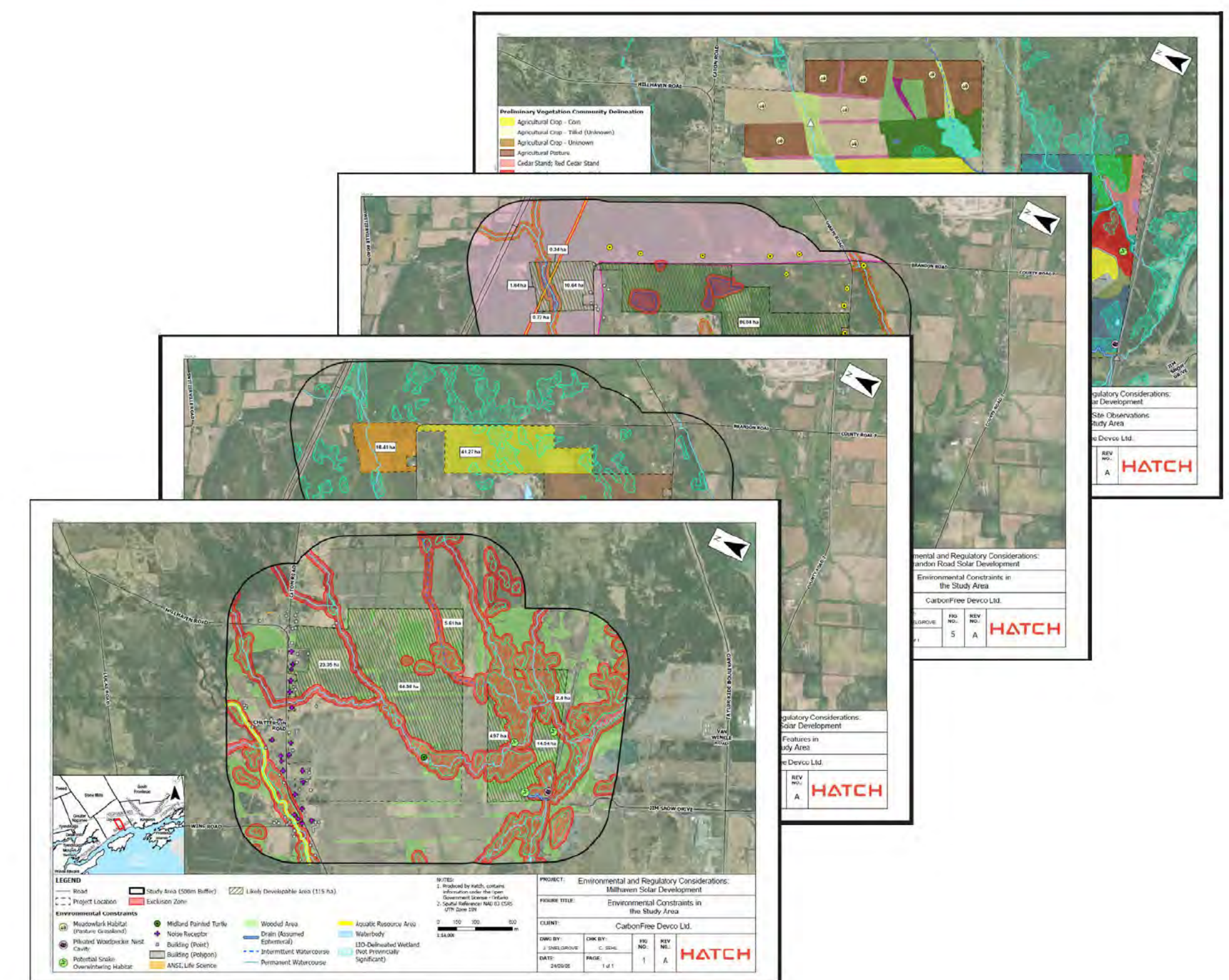
The Class EA is an environmental assessment process under the Ontario Environmental Assessment Act for projects that have predictable and manageable environmental effects.

The Class EA assesses a range of environmental factors and should there be an unexpected result, further studies are undertaken and mitigation measures are implemented.

Key Features of a Class Environmental Assessment

- Pre-approved process under the Ontario Environmental Assessment Act
- Requires proponents to follow a **phased planning process**, including:
 - Assessing potential environmental impacts
 - Identifying and evaluating alternatives
 - Consulting with the public, Indigenous communities, and agencies
 - Documenting findings in an Environmental Study Report (ESR) or similar document
 - Includes mechanisms for resolving concerns.

HATCH



Limited Local Disruption and Impacts



- **Visual Impact.** We recognize the importance of the local landscape. The project is designed with a low-profile layout where the most equipment is only 3 meters tall. The strategic use of existing vegetation, and new perimeter screening with native trees and shrubs will blend the facility into the surroundings as much as possible.
- **Limited Lighting.** Site lighting will be strictly for safety and security, designed to minimize "light pollution" and intrusion on neighboring properties. We will use fully shielded, downward-facing fixtures that focus light only where needed (e.g. entrance gates) and employ motion-sensing technology to keep lighting at low levels.
- **Limited Traffic.** Once the facility is operating, traffic will be very limited since it is operated remotely and does not require regular deliveries or shipments. Significant traffic will be limited to the main construction phase, and scheduled maintenance a few times a year over the project's year lifespan. A Traffic Management Plan will be implemented to manage construction vehicle routes and schedules, minimizing impacts on local roads.
- **Physical Security.** The safety and security of the community and the facility are a top priority. The site will be surrounded by a robust, non-climbable perimeter fence with controlled access. Security will include features like intrusion detection systems, cameras, and regular 24/7 remote monitoring to ensure the site remains secure at all times.
- **Air Quality.** Emissions during construction are primarily dust and vehicle exhaust, which will be localized, temporary, and will have minimal impact. A dust management plan will be in effect during construction to limit dust emissions.
- **Zero Emissions During Operation.** Unlike fossil fuel power plants, manufacturing plants, or warehouses, our facility has zero emissions during operation. It does not burn any fuel.



Artistic rendition of a typical rural battery project

- **No Groundwater Extraction.**

Battery facilities do not use groundwater during construction or operation, or at any other time. If water is required during construction, it will **NOT** be pumped from wells, aquifers, or water bodies.

- **No Water Use During Operation.**

Unlike data centers or manufacturing plants, battery facilities **do not consume water** during operation. During construction water use would be limited to site preparation (e.g. dust control) and concrete. Any water required would be brought in on tanker trucks.

- **Drainage and Stormwater Management Plans.**

A Stormwater Management Plan will be designed to control the quantity, rate, and quality of any runoff from the site. This will include features such as sedimentation and erosion controls during construction and permanent features as required like vegetated swales or retention basins to manage post-construction flow.

- **Containment For Working Fluids.**

Liquids are limited to the air conditioning units and the transformers and would be designed with containment trays that can capture more than the total volume of the liquid in case of a leak. The liquids are cooling fluid (e.g. a water-glycol mixture, like antifreeze) and transformer insulating oil common to electrical installations. Where possible, we try to use biodegradable natural oil in our transformers.

- **Compliance with Ontario Regulations and Permitting.**

Necessary permits would be obtained from several levels of government, including the municipality, the Ministry of the Environment, Conservation and Parks (MECP), and the local conservation authority. The project's water and stormwater management plans will be designed to comply with the applicable provincial regulations, including the Environmental Protection Act and the Ontario Water Resources Act.

- **Minimal Impact on Permeability.**

The project design will aim to maintain natural ground permeability. Strategies include the use of existing access roads, using gravel in low-traffic areas, and maximizing the use of vegetated, permeable surfaces to maintain similar rates of natural groundwater drainage and recharge.



PROFILE

A publicly-traded developer and long-term owner-operator of renewable and thermal power projects, including wind, solar, run-of-river hydro, biomass, & natural gas cogeneration.

Based in Ontario

- Capstone has been a major player in the Ontario renewable energy market since 2005 when our 99 MW Erie Shores Wind Farm began commercial operation
- Our business is built on the strong foundation created through the success of our 20 power facilities operating in the province
- Our people work and live in the communities where we operate, and we actively support community-level initiatives

Capstone in Ontario by the numbers

450+MW

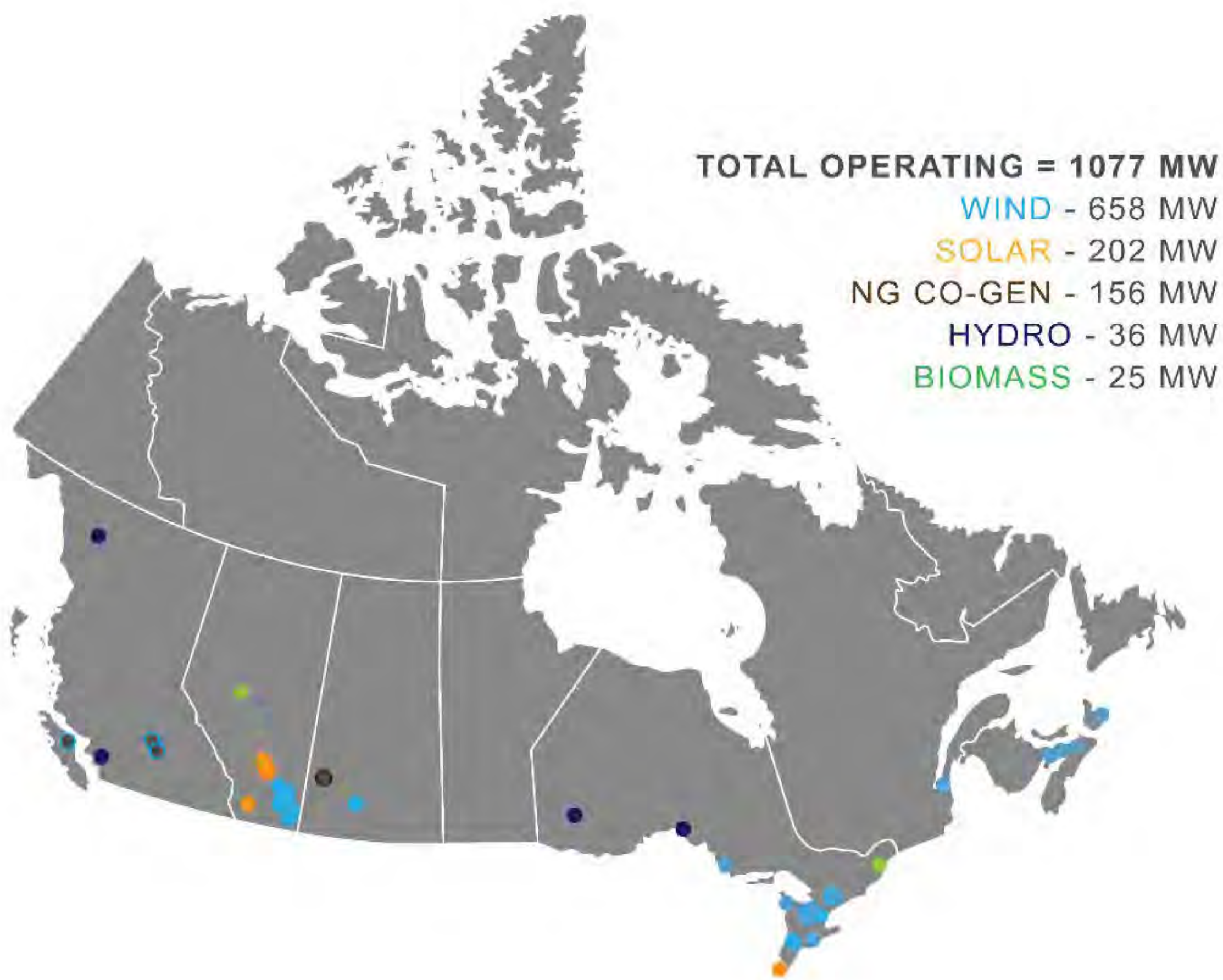
Gross installed capacity, more than 50% of our Canada-wide footprint

950 GWh+

Clean electricity generated in Ontario every year. This is enough to power 90k+ households annually

120 FT Staff

With our Head Office in Toronto and 20 of 36 facilities, Ontario is home 2/3 of our employees



KEY STATS

1,077 MW

Gross installed capacity across Canada

~5 GW

Current development project pipeline in Canada & US

36 Facilities

Proven track record of Operational and HSE Excellence

CF Millhaven Battery Energy Storage System

LOYALIST TOWNSHIP – PROJECT CONCEPT PLAN

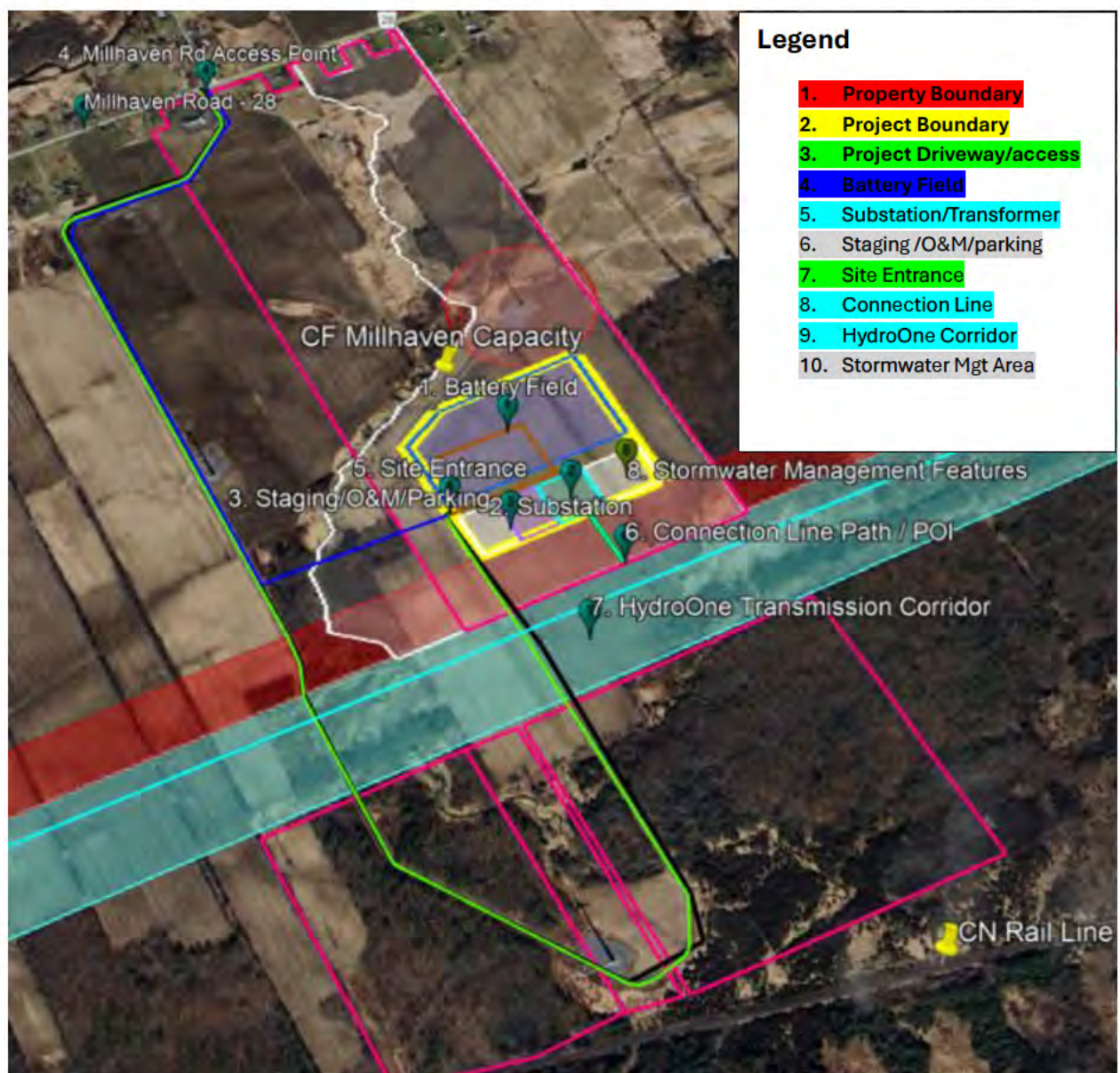
DOUG DEEKS - CARBONFREE

Project Location



FIGURE 1: CF MILLHAVEN 250MW BESS LOCATION
ADDRESS: MILLHAVEN RD ODESSA ON K0H2H0

Project Detail: PIN- 451290215



Project Concept Plan and Overview

- Project purpose: To provide long-duration grid capacity, reliability services, and energy shifting to support the IESO LT2c procurement.
- Typical operation: Charge during low-demand hours (overnight-weekend / low-price) and discharge during peak demand or when instructed by IESO/market operator.
- Expected construction duration: ~12–18 months (site prep, civil, installation, commissioning - 2027).

Site plan Figure 2

Map key:

1. Battery Field (rows of containers housing battery units)
2. BESS Substation & step-up transformer(s)
3. Staging / laydown/parking/Operations building
4. Municipal Road entrance
5. Site entrance / interior access road
6. Route to POI / tap line to transmission corridor
7. HydroOne Transmission Line Corridor

Key Project Components

1. Battery Field — Modular containerized battery units. Arranged in rows with internal access roads and separation distances for safety and maintenance. Containers house battery racks, inverters/PCS and HVAC/controls.
2. Transformer Station (TS) — Step-up transformer(s) convert site MV to transmission voltage required at the Point of Interconnection (POI). The TS is in a fenced, secured yard

FIGURE 2: CARBONFREE CONCEPT PLAN – 250MW CF MILLHAVEN BESS

PROPERTY: 451290215



with oil containment and spill prevention.

3. Switchyard & Interconnection — High-voltage equipment, relays and protection, and the tap line connection to the nearby transmission corridor or substation. This is coordinated with the utility and built to strict safety standards.
4. Control / Operations Building — Offices, control room (SCADA/EMS), maintenance workshop, and parking. This is a small building with limited staff
5. Fire Protection — Fire water tank and hydrant network; separation corridors and access lanes sized for emergency vehicles. Project includes emergency response planning and coordination with local fire services.
6. Stormwater Management — Basins, swales and erosion control to manage runoff and protect local waterways. Designed to meet municipal stormwater and environmental requirements.
7. Access & Security — Controlled entry gate, perimeter fencing, security cameras and lighting designed to minimize offsite light spill.
8. Tap Line / Route to POI — The route of the short connection line to the transmission corridor or substation is shown; where possible, the route uses existing utility corridors to reduce new disturbance.

Area allocation (approx.)

- Battery field (containers + access lanes): ~15 acres
- Transformer station & switchyard: ~1 acres
- Control building & parking: ~0.5 acre
- Stormwater / environmental buffers: ~2 acres
- Landscaping, setbacks & security: ~2 acres
- Total (illustrative): ~20 acres

Safety & community protections

- The site uses engineered fire separation, monitoring systems, and onsite suppression water supply. Battery systems include thermal monitoring and automatic shutdown protocols.
- The project will develop an Emergency Response Plan with the local fire department and first responders. Training and site familiarization will be provided for emergency personnel.
- The project is setback >1km from nearest residential and commercial neighbours and from the nearest municipal road. Noise from inverters and transformers will be controlled

via equipment selection, acoustic enclosures and landscaping buffers; expected operational noise is typically below municipal limits at property lines.

- Visual impact minimized with landscaping, low-height equipment placement and dark-sky-compliant lighting.



October 31, 2025

NOTICE OF PUBLIC OPEN HOUSE & STUDY COMMENCEMENT

Class Environmental Assessment for Transmission Facilities

CF Millhaven Capacity Project – Loyalist Township, Ontario

Public Open House: Nov 24 - Odessa Agricultural Society Fairgrounds, 231 Main Street Odessa

Dear Resident,

CF Millhaven Capacity Ltd. (“the Proponent”), a subsidiary of CarbonFree Inc., is proposing to develop a battery energy storage facility (the “Project”) in Loyalist Township, County of Lennox and Addington, Ontario.

This Project is being advanced in response to the Independent Electricity System Operator (IESO) Long-Term 2 Capacity Services Request for Proposals (LT2 (C-1) RFP) — a province-wide initiative supporting grid reliability and Ontario’s transition to clean, dependable energy.

About the Project

The proposed **CF Millhaven Capacity Project** will store and release electricity to the provincial grid to help balance supply and demand — charging during periods of lower demand and discharging during peak times to improve overall system stability.

Key preliminary details include:

- **Location:** Approximately 866 Millhaven Road, Loyalist Township (see Figure 1).
- **Capacity:** Up to 250 megawatts (MW) of discharge capacity.
- **Site area:** Up to 25 acres.
- **Interconnection:** Connection to the existing 230 kV Hydro One transmission **corridor** located immediately south of the site.
- **Major components:** Battery enclosures, inverters, transformers, internal access roads, cabling, a 230 kV transmission station (substation), protection and safety systems, and associated infrastructure.

1 ST. CLAIR AVE W, SUITE 801 ▪ TORONTO, ON ▪ CANADA M4V 1K6

T 416 975-8800 ▪ info@carbonfree.com

The final site layout will be determined through further engineering, environmental assessment, and community consultation.

Construction is anticipated to begin in late 2027, with an in-service date targeted for 2029, subject to regulatory approvals and a successful outcome under the LT2 (C-1) RFP.

Environmental Assessment Process

As part of this development, the Proponent is:

1. Requesting a Municipal Support Resolution (MSR) from Loyalist Township, as required by the IESO LT2 (C-1) RFP.
2. Commencing a Class Environmental Assessment for Transmission Facilities (Class EA for TF) in accordance with Ontario's Environmental Assessment Act.

This Class EA process applies to routine transmission projects with predictable, manageable environmental effects. It provides a transparent framework for identifying potential environmental impacts and developing appropriate mitigation or protection measures.

Hatch Ltd. has been retained as the Proponent's environmental consultant for this process.

Public Open House Nov 24 - Odessa Agricultural Society Fairgrounds

Members of the community are invited to attend a Public Open House to learn more about the Project, meet the Project Team, and provide feedback.

Date: Monday, November 24, 2025

Time: 6:00 PM – 8:00 PM

Location: Odessa Agricultural Centre, 231 Main Street Odessa K0H 1G0

Information panels and representatives from CarbonFree will be available to answer questions and record comments.

Have Your Say

We welcome your input and questions as we plan this Project and its environmental review.

Please submit comments or requests for information by **November 30, 2025**

Contact:

CF Millhaven Capacity Ltd.

c/o CarbonFree Inc.

Email: **info@cfmillhavencapacity.com**

Project website: www.cfmillhavencapacity.com

Freedom of Information and Protection of Privacy Act

All personal information collected for this Project will be used in accordance with the Freedom of Information and Protection of Privacy Act (Ontario). Information collected during consultation may be included in Project documentation and may become part of the public record unless otherwise requested.

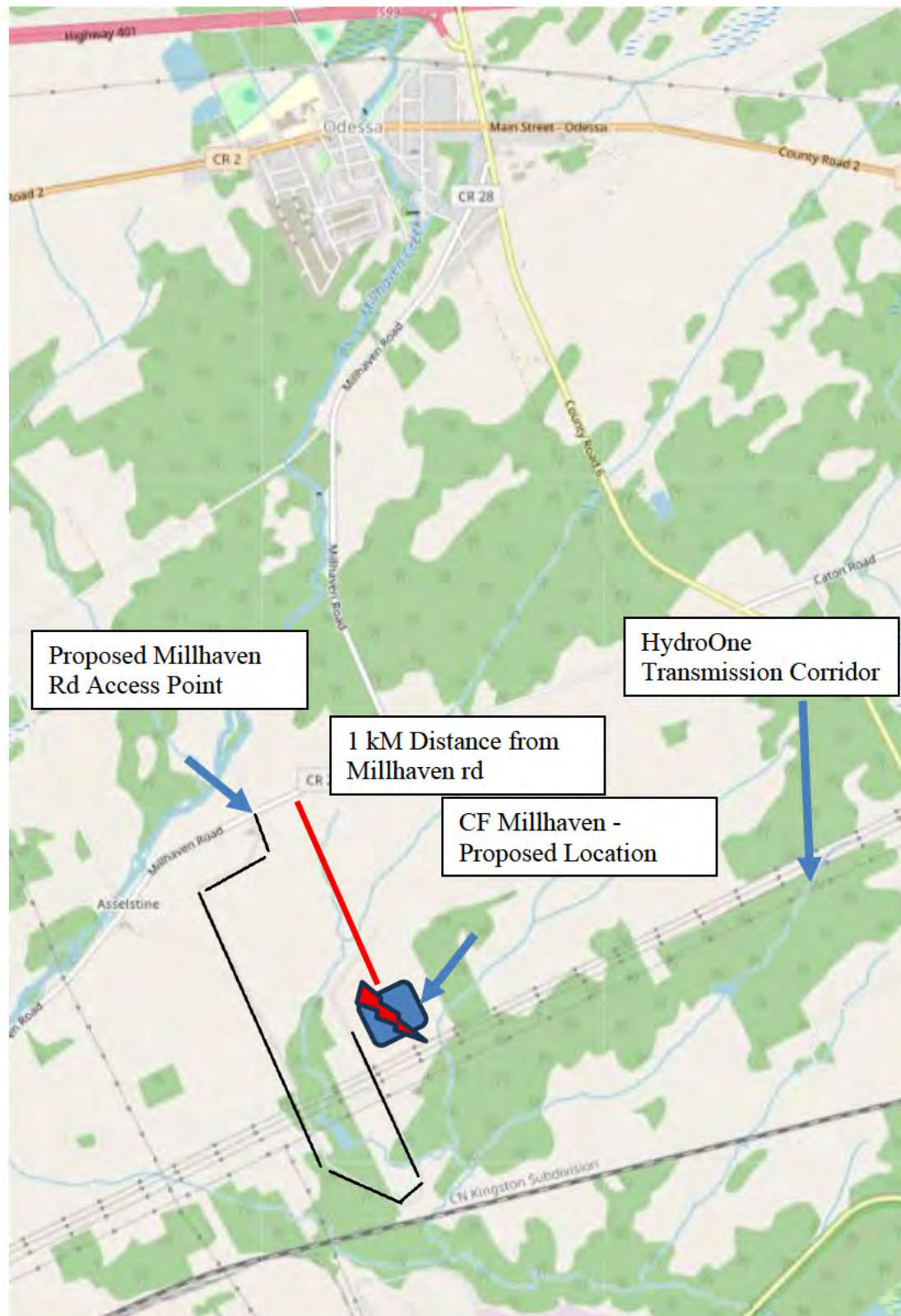
We look forward to meeting with community members and hearing your views on this proposed Project.

Sincerely,

The CF Millhaven Capacity Project Team

CarbonFree Inc.

Project Location



October 30, 2025

Notification of Registration for LT2(c-1) RFP

Proponent Legal Name: CF Millhaven Capacity Ltd.

Unique Project ID: LT2c1-3161

Emma Coyle
emma@carbonfree.com

Laurence Goldberg
lgoldberg@carbonfree.com

This notice was delivered electronically to the email addresses noted above.

Hello,

All capitalized terms used in this notice, unless otherwise stated, have the meanings ascribed to them in the LT2(c-1) RFP. This notice is delivered per Section 3.4(d) of the LT2(c-1) RFP.

Congratulations, you have successfully registered the identified Long-Term Capacity Services Project for the purposes of this LT2(c-1) RFP listed below. Successful registration does not confirm that the Long-Term Capacity Services Project satisfies the eligibility requirements specified in Section 2.1 of the LT2(c-1) RFP, and the Proponent is responsible for ensuring that the Proponent and its Proposal, if any, comply with the requirements of the LT2(c-1) RFP. Please find your Unique Project ID below for your prospective Proposal submission under the LT2(c-1) RFP. Prospective Proponents are reminded that the Proposal Submission Deadline for the LT2(c-1) RFP is December 18, 2025 at 3:00 PM EPT and that the communications rules under Section 3.5 of the LT2(c-1) RFP are currently applicable.

LT2(c-1) RFP Registration

Proponent Name	CF Millhaven Capacity Ltd.
Project Name	CF Millhaven Storage
Unique Project ID	LT2c1-3161

Thank you,
Long-Term RFP Procurement Team
Independent Electricity System Operator (IESO)
Web Page: [Long-Term 2 RFP](#)



Independent Electricity System Operator
1600-120 Adelaide Street West
Toronto, ON M5H 1T1
t 416.967.7474
www.ieso.ca



BY EMAIL

rmurphy@loyalist.ca

October 17, 2025

Rebecca Murphy
Chief Administrative Officer
Loyalist Township
Box 70, 263 Main Street
Odessa, Ontario K0H 2H0

Re: CF Millhaven Capacity Ltd. Pre-Engagement Confirmation Notice under the LT2(c-1) RFP

Dear Ms. Murphy

The Proponent (defined below) is proposing to construct and operate a Long-Term Capacity Service Project located on Municipal Project Lands, as defined and with the characteristics outlined in the table below, under the Long-Term 2 Capacity Service (Window 1) Request for Proposals (“LT2(c-1) RFP”) issued by the Independent Electricity System Operator (“IESO”).

We, the Proponent, intend to submit a Proposal under the LT2(c-1) RFP and seek to confirm applicable land-use details in relation to the Municipal Project Lands identified below.

Unique Project ID of the Long-Term Capacity Services Project	Not Available
Legal Name of the Proponent	CF Millhaven Capacity Ltd.
Name of the Long-Term Capacity Project	CF Millhaven Storage
Technology of the Long-Term Capacity Project	Battery Energy Storage System
Maximum potential Contract Capacity of the Long-Term Capacity Project (in MW)	250 MW
Property Identification Number (PIN), or if PIN is not available, municipal address or legal description of the Municipal Project Lands (“ Municipal Project Lands ”)	PIN 451290049 PIN 451290214 PIN 451290215 PIN 451290216

We intend to undertake community engagement in respect of the Long-Term Energy Project and appreciate your confirming the applicable land-use details in relation to the Municipal Project Lands.

As we move forward with more events and outreach, we will be happy to coordinate with you and receive your feedback in respect of our planned engagements.

Yours truly,

CF MILLHAVEN CAPACITY LTD.

Per: _____

Name: Daniel Soper

Title: Director

I have the authority to bind the Proponent



CarbonFree

Ontario Transmission Capacity Map
Ontario Sites

Technical Report
N-1 Injection Capacity Study

BBA Document No. / Rev.: 8576002-000000-47-ERA-0001 / R00
July 19, 2024

Final



Prepared by:
Ebrahim Mohammadi, Ph.D.

Prepared by:
Martin Jaimes, B.Eng.

Reviewed by:
Nishant Gehani, P.Eng.
PEO No. 100159415



REVISION HISTORY

Revision	Document Status – Revision Description	Date
R00	Final	2024-07-19

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Use of this document acknowledges acceptance of the foregoing conditions.



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APPENDICES

Appendix A:	Switzerville SLD
Appendix B:	Loyalist SLD



1. Introduction

CarbonFree is seeking to develop utility-scale solar project(s) in Ontario. The project(s) may be bid into the IESO's currently ongoing round of energy procurement, Long-Term 2 (LT2). CarbonFree analyzed the available injection capacity at two sites located in IESO's East region using BBA's Ontario Transmission Capacity Map Tool. Upon passing initial screening, it requested BBA to perform a further N-1 injection capacity study at these two sites. This report summarizes the N-1 results obtained from our injection study. GPS coordinates of the project sites, and the proposed lines to connect were provided to BBA.

Table 1: Project definitions

Project Name	IESO Zone	Connection Circuit	POI Voltage (kV)	Target capacity (MW)	Connection configuration
Switzerville	East	Q6S	115	Not provided	T-tap
Loyalist	East	X4H	220	Not provided	T-tap



Disclaimer:

This study is performed to aid CarbonFree's assessment of the viability of its proposed project site. The results of this study should be used in conjunction with inputs obtained from other sources before making a final assessment on the viability of the interconnection location. Due to the nature of transmission planning studies and variations in study methodologies, it is possible to derive results which may vary from the outcomes presented in this report. This study was performed on a best-effort basis and BBA does not take any responsibility resultant from outcomes arising from the use of the study's results. Additionally:

- 1. This study is not an alternative for or an exact mimic of a future deliverability assessment by the IESO.*
- 2. This study is not an alternative for, nor a predictor of the results obtained from a future System Impact Assessment (SIA) or Connection Impact Assessment (CIA). Due to the limited scope of this study, it is entirely possible that the results conveyed in this study may vary from the results of the SIA / CIA.*
- 3. Consistent with the objective, only steady state power flow studies were carried out. Transient stability studies were not part of the scope of this report.*
- 4. Existing queued generation is limited to publicly available data provided by the IESO. Specifically, the results in the region would be significantly impacted if new facilities (load or generation) are queued ahead of the proposed project.*
- 5. Impact of transmitter-specific criteria such as special protection system and remedial action schemes is not within scope of study.*
- 6. Separate guidance must be obtained from the transmitter to consider the short-circuit impact and limitations within the study area.*



2. General area description

The two project sites are both located within 20 km west of Kingston, Ontario in the townships of Switzerville and Loyalist. The SLD for the electrical areas of study are provided in Appendix A and B.

The region around these two sites includes several generators namely Lennox GS, Napanee CGS, Amherst Island Wind, Wolfe Island Wind and Kingston Solar. Additionally, one new storage project, namely Napanee BESS (265 MW) and one new gas project, namely Napanee Gas Plant Expansion (430 MW) were recently approved by the IESO to connect and are currently in the generation queue. The impact of existing and queued generation mentioned above has been considered in our analysis.

It should also be noted that circuit Q6S is currently listed under "Circuits to Avoid" in the IESO's preliminary connection guidance document dated April 16th, 2024. In discussions with CarbonFree, it was highlighted that the criteria for categorizing circuits as "circuits to avoid" in this document are broad and conservative. These criteria are likely not applicable to generation connection requests outside the LT2 procurement. This is primarily because the IESO aims to ensure new contracted generation facilities are as free from curtailment as possible and unlikely to necessitate any grid upgrades to accommodate them.

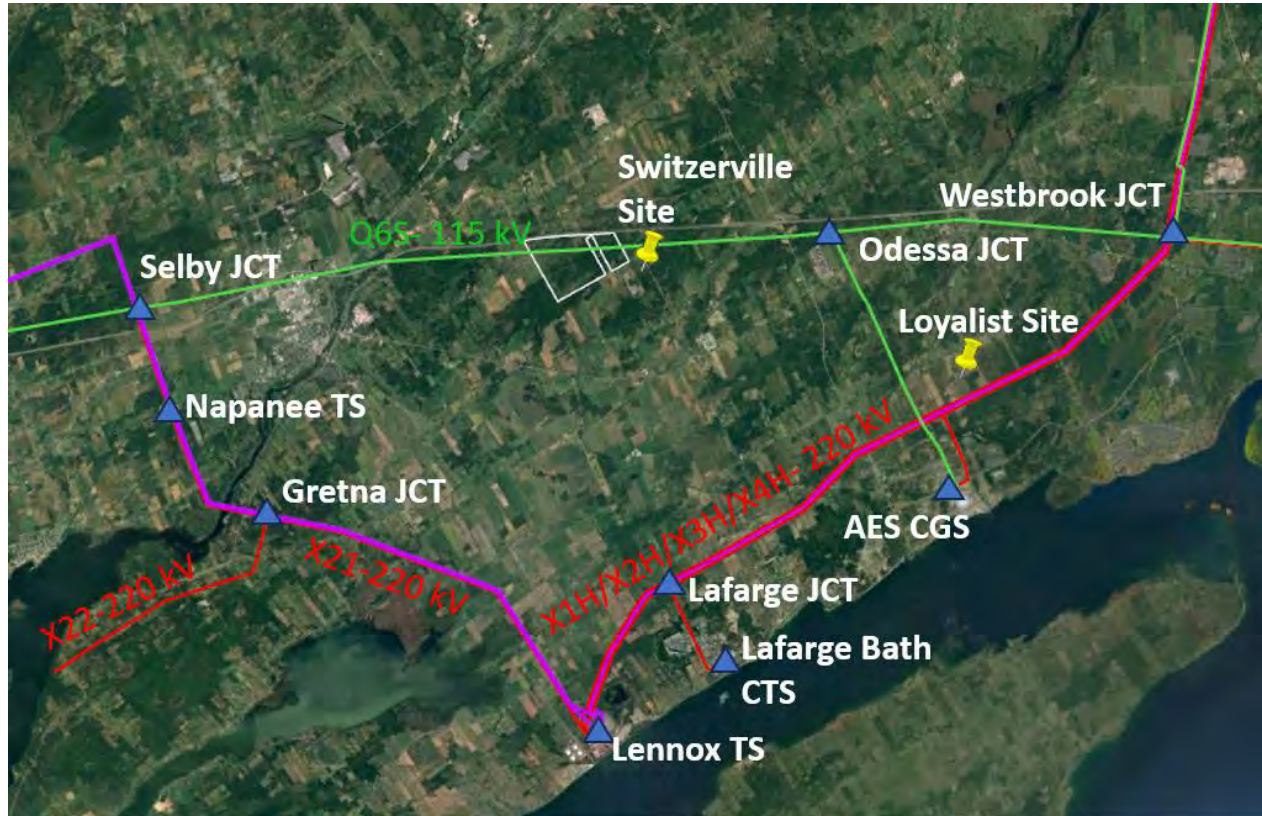


Figure 1: CarbonFree project locations and associated transmission lines

3. Methodology / Assumptions

Simulations were run to gradually inject active power at the selected node in increments of 10 MW until the max injection limit (150MW for 115kV and 500 MW for 230 kV lines) was reached, or overloading occurred in the branches (lines or transformers), whichever occurred first. The same power flow base cases were utilized as those used in the Transmission Capacity Tool for the LT2 energy stream. The base case contains transformers and lines which are already overloaded. As these conditions already exist in the base case, we only consider them as a stopping criterion if their loading increases beyond a fixed threshold.

The list of lines connected to the region near the study area and their corresponding line ampacities are provided in Table 2. For exact electrical location of the buses given in the following table, refer to the SLD in Appendix A.



Table 2: Line Ampacities near study region

Line ID	Area	Length (mile)	Rating (MVA)
Q6S	Between Odessa JCT to Selby JCT	12.43	132.9
X4H	Between Lennox TS to Westbrook JCT	7.11	724

4. Results

Table 3: Odessa JCT to Selby JCT N-1 Results (Q6S)

Contingency				
From Bus Number	To Bus Number	From Bus Name	To Bus Name	Max Injection (MW)
155226	155264	CATARAQUI_TS118.	RAILTON_J 118.	>=150
155226	155270	CATARAQUI_TS118.	WESTBRK_JQ3K118.	>=150
155226	155271	CATARAQUI_TS118.	WESTBRK_JQ6S118.	70
155229	155280	SIDNEY_TS 118.	DALE_J_P3S 118.	>=150
155280	155282	DALE_J_P3S 118.	PT_HOPE_P3S 118.	>=150
155296	155297	AMHERST_JCT 118.	AMHERST_CSS 118.	>=150
155275	155296	INVISTA_J 118.	AMHERST_JCT 118.	>=150
155263	155271	ODESSA_J 118.	WESTBRK_JQ6S118.	70
155296	155300	AMHERST_JCT 118.	Q6S_STRM60_J118.	>=150
155227	155280	DOBBIN_TS 118.	DALE_J_P3S 118.	>=150
155243	155246	HARROWSMTH_J118.	HINCHINBR_DS118.	>=150
155228	155270	FRONTENAC_A2118.	WESTBRK_JQ3K118.	>=150
155227	155278	DOBBIN_TS 118.	DOBBIN_DSJP4118.	>=150
155228	155264	FRONTENAC_A2118.	RAILTON_J 118.	>=150
155263	999991	ODESSA_J 118.	Tap1_118.	140
155243	155264	HARROWSMTH_J118.	RAILTON_J 118.	>=150
155254	155265	MILLTOWN_J 118.	SELBY_J_Q6S 118.	120
155229	155254	SIDNEY_TS 118.	MILLTOWN_J 118.	120
999991	155265	Tap1_118.	SELBY_J_Q6S 118.	120
155245	155284	HILTON_J_P4S118.	VERNONVIL_J 118.	>=150



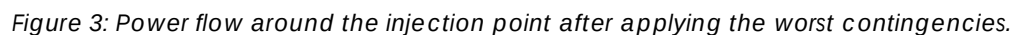
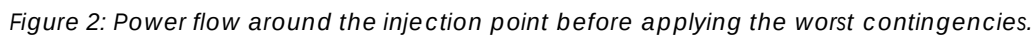
155229	155245	SIDNEY_TS 118.	HILTON_J_P4S118.	>=150
155268	155284	TCPL_COB#136118.	VERNONVIL_J 118.	>=150
155281	155284	DALE_J_P4S 118.	VERNONVIL_J 118.	>=150
155263	155275	ODESSA_J 118.	INVISTA_J 118.	>=150
155228	155233	FRONTENAC_A2118.	BATTERSEA_DS118.	>=150
155254	155269	MILLTOWN_J 118.	TCPL_BEL#139118.	>=150
155228	155231	FRONTENAC_A2118.	NOVELIS_CTS 118.	>=150
155229	155253	SIDNEY_TS 118.	LODGEROOM_DS118.	>=150
155262	155277	NORTHBROOK 118.	NORTHBROOK_J118.	>=150
155253	155262	LODGEROOM_DS118.	NORTHBROOK 118.	>=150
155243	155244	HARROWSMTH_J118.	HARROWSMITH 118.	>=150
155245	155249	HILTON_J_P4S118.	ENBRG_HILTON118.	>=150
155274	155275	NPIF_CGS_Q6S118.	INVISTA_J 118.	>=150
155298	155299	AMHERST_CGS 118.	AMHERST_PHJ1118.	>=150
155297	155299	AMHERST_CSS 118.	AMHERST_PHJ1118.	>=150

*Tap1_118. is the injection point.

For the specified section of Q6S line (Between Odessa JCT to Selby JCT), the following contingencies (line sections between ODESSA JCT and CATARAQUI TS) determined the lowest injection capacity of 70 MW.

- Line between CATARAQUI_TS118. (155226) and WESTBRK_JQ6S118. (155271).
- Line between ODESSA_J 118. (155263) and WESTBRK_JQ6S118. (155271)

Considering each of the above contingencies, if the injection capacity is increased beyond 70 MW, an overload is observed in the line sections between ODESSA JCT and SIDNEY TS (line between Tap1_118. and SELBY_J_Q6S 118., line between SELBY_J_Q6S 118. and line between MILLTOWN_J 118. and SIDNEY_TS 118.) The following figures show the power flow (after adding the new simulated generation to the point of interconnection) with and without the worst above contingencies.





Based on the above figures, before applying the worst contingencies, a part of the injected power at the point of interconnection (POI) flows towards ODESSA JCT and another part flows towards Sydney TS and therefore, overload is not observed in line sections between POI and Sydney TS corridor. However, after applying the worst contingencies, the total injected power to the POI plus the power coming from AMHERST generation station flows from POI to Sydney TS; As a result, overload is observed in this corridor.

Table 4: Lennox TS to Westbrook JCT N-1 Results (Line X4H)

Contingency				
From Bus Number	To Bus Number	From Bus Name	To Bus Name	Max Injection (MW)
155096	155106	GRETNAL_J_X21220.	NAPANEE_X21 220.	>=500
155094	155138	GARDINERX4T4220.	GARDINER_JX4220.	>=500
155150	155151	KINGSOLJ_X3H220.	KING_SOL_CGS220.	>=500
155097	155107	GRETNAL_J_X22220.	NAPANEE_X22 220.	>=500
155068	155102	LENNOX_TS 220.	LAFARGE_JX2H220.	>=500
155068	155101	LENNOX_TS 220.	LAFARGE_JX1H220.	>=500
155065	155067	CATARAQ_JX4H220.	HINCHINBROOK220.	>=500
155062	155067	CATARAQJ_X1220.	HINCHINBROOK220.	>=500
155092	155119	NPIF_J_X2H 220.	WESTBRK_JX2H220.	>=500
155092	155102	NPIF_J_X2H 220.	LAFARGE_JX2H220.	>=500
155068	155096	LENNOX_TS 220.	GRETNAL_J_X21220.	>=500
155064	155067	CATARAQ_JX2H220.	HINCHINBROOK220.	>=500
155090	155101	NPIF_J_X1H 220.	LAFARGE_JX1H220.	>=500
155063	155150	CATARAQJ_X3220.	KINGSOLJ_X3H220.	>=500
155068	999992	LENNOX_TS 220.	Tap2 220.	>=500
155063	155067	CATARAQJ_X3220.	HINCHINBROOK220.	>=500
155068	155097	LENNOX_TS 220.	GRETNAL_J_X22220.	>=500
155068	155150	LENNOX_TS 220.	KINGSOLJ_X3H220.	>=500
155065	155120	CATARAQ_JX4H220.	WESTBRK_JX4H220.	>=500
999992	155120	Tap2 220.	WESTBRK_JX4H220.	>=500
155062	155090	CATARAQJ_X1220.	NPIF_J_X1H 220.	>=500
155102	155121	LAFARGE_JX2H220.	LAFAR_BATHX2220.	>=500
155092	155128	NPIF_J_X2H 220.	NPIF_J_X2HSW220.	>=500



155101	155103	LAFARGE_JX1H220.	LAFAR_BATHX1220.	>=500
155097	155124	GRETN_A_J_X22220.	LG_REACH_E22220.	>=500
155120	155138	WESTBRK_JX4H220.	GARDINER_JX4220.	>=500
155095	155138	GARDINERX4T1220.	GARDINER_JX4220.	>=500
155096	155123	GRETN_A_J_X21220.	LG_REACH_E21220.	>=500
155090	155127	NPIF_J_X1H 220.	NPIF_J_X1HSW220.	>=500
155056	155067	EASTON_JL22H220.	HINCHINBROOK220.	>=500
155067	155082	HINCHINBROOK220.	BNNKBRN_JH27220.	>=500
155067	155301	HINCHINBROOK220.	STONEML_JCT 220.	>=500
155067	155087	HINCHINBROOK220.	CROSBY_JL21H220.	>=500
155067	155086	HINCHINBROOK220.	CROSBY_JL20H220.	>=500
155124	155126	LG_REACH_E22220.	LG_REACH_W22220.	>=500
155123	155125	LG_REACH_E21220.	LG_REACH_W21220.	>=500
155094	155130	GARDINERX4T4220.	WOLFE_ISLAND220.	>=500

* Tap2 220. is the injection point.

Based on the above results, no limiting contingencies were observed for injection power to the POI (up to 500 MW) and no overload is observed. For all contingencies, the injection capacity is the maximum of 500MW that has been considered for the simulations.

5. Conclusion

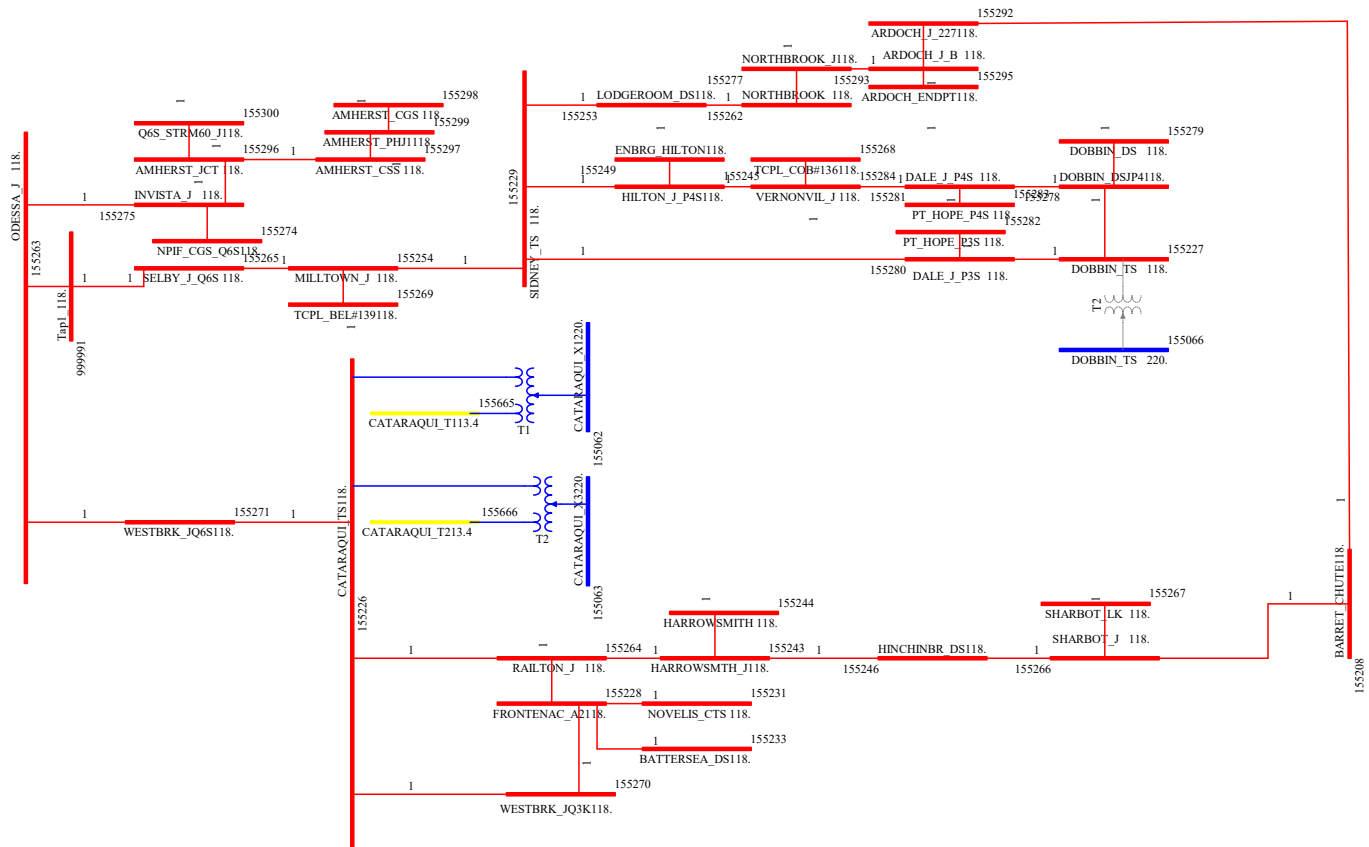
For the specified section of Q6S line (between Odessa JCT to Selby JCT), the following contingencies (line sections between ODESSA JCT and CATARAQUI TS) determined the lowest injection capacity of 70 MW.

- Line between CATARAQUI_TS118. (155226) and WESTBRK_JQ6S118. (155271).
- Line between ODESSA_J 118. (155263) and WESTBRK_JQ6S118. (155271)

For the specified segment line segment X4H-1 (from Lennox TS to Westbrook JCT), contingencies do not limit the injection capacity and it reaches 500MW that has been considered as the maximum injection capacity limit for the simulations.

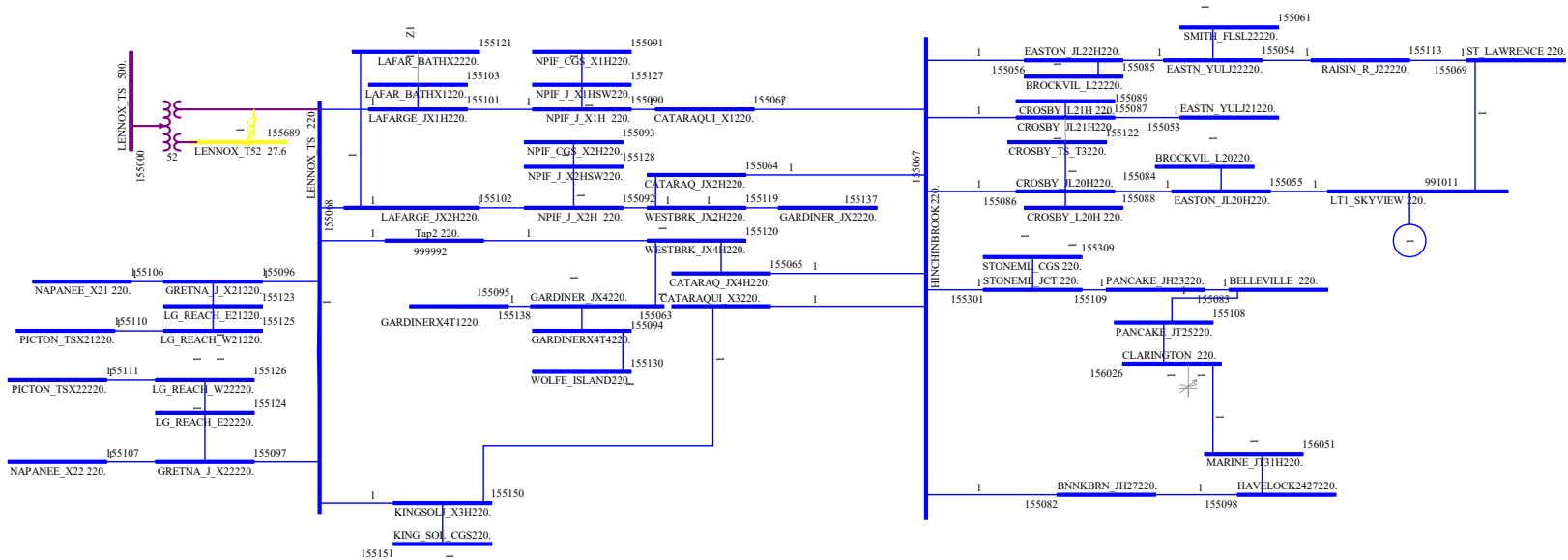


Appendix A: Switzerville SLD





Appendix B: Loyalist SLD



Project Memo

H376595

November 21, 2025

To: CarbonFree Devco Ltd.

From: Christopher Sehl

CarbonFree Devco Ltd. CarbonFree BESS Developments

Battery Energy Storage System: Regulatory Review Memorandum Millhave and Napanee

1. Introduction

Hatch Ltd. (Hatch) has been retained by CarbonFree Technology Devco Ltd. (CarbonFree) to assist with an initial stage of environmental due diligence of several properties proposed to be utilized for Battery Energy Storage Systems (BESS) (hereinafter referred to as the “Project”). The Project is proposed to be located across multiple parcels of land located within The Town of Greater Napanee and Loyalist Township (hereinafter referred to as the “Napanee Project properties” and “Millhaven Project properties”). Each of the Project properties consists primarily of rural zoned lands as depicted in within the Figures of Appendix A.

This memorandum provides an overview of the applicability of federal, provincial, and municipal environmental legislation for each Project, assesses the risk to both Project feasibility, identifies potential red flags to development, and recommends next steps.

2. Methodology

2.1 Desktop Review

Hatch conducted a review of publicly available information to identify site-specific environmental and regulatory constraints for both Project properties, including:

- Municipal Zoning By-law and Official Plan;
- Species at Risk records;
- Land Information Ontario (LIO) Database (Environmental Features);
- Ministry of Natural Resources and Forestry (MNR) mapping, forestry and wetland information;
- Site drainage features; and
- Indigenous lands.

If you disagree with any information contained herein, please advise immediately.

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2.2 Identification of ‘Developable Areas’

Hatch has utilized publicly available data sources from Section 2.1 to identify “Developable Areas”. Specifically, “Likely Developable Areas”, which are defined as areas with no known technical fatal flaws based on the results of the desktop review and reconnaissance. In addition, Hatch has identified additional areas “Potentially Developable Areas” which are associated with areas that would likely require additional measures to comply with typical setbacks outlined in municipal Official Plan documents or the Environmental Screening Criteria associated with the Hydro One Municipal Class Environmental Assessment (2024) (Class EA). Figures 1 and 3 in Appendix A outline the Developable Areas and potential constraints associated with the Project properties.

Additional field efforts to verify potential constraints and potential impacts are recommended to further refine constraints associated with the Developable Areas.

2.3 Preliminary Environmental and Regulatory Review Findings

Following the desktop review, Hatch has prepared this memorandum, which contains the following:

- A summary of environmental and regulatory considerations, including matrix of permitting and approval requirements;
- A map of the Project properties and surrounding 300-m buffer (Study Area) and reflective of potential development constraints (Appendix A);
- A review of the Project properties as it pertains to consideration of Indigenous Lands; and
- Recommendations for next steps where environmental surveys are warranted to navigate the municipal permitting processes or the Class EA screening requirements.

3. Preliminary Environmental and Regulatory Review Findings

3.1 Permitting and Approval Requirements

The following subsection summarizes the various federal, provincial, and municipal planning policies and regulations that have the potential to apply to the Project.

3.1.1 Environmental Assessment Requirements

3.1.1.1 Impact Assessment Act

The *Impact Assessment Act* (IAA), which repealed and replaced the *Canadian Environmental Assessment Act* (2012) on August 28, 2019, dictates the process necessary for assessing impacts of major projects and projects that are carried out on federal lands. The impact Assessment Agency of Canada (IAAC, or the “Agency”) is the regulatory body that is responsible for the management and coordination of Impact Assessments (IA) under the IAA. The Agency has the power to delegate any part of an IA to a provincial government or an Indigenous governing body.

Both Projects do not meet the definition of a Designated Project under the IAA (S.C. 2019) and are not located on federally owned land, accordingly, an approval under the IAA is not required.

3.1.1.2 *Environmental Assessment Act*

3.1.1.2.1 Transmission Facilities

The *Environmental Assessment Act* (EAA) intends to protect, conserve and provide wise management of the environment in Ontario. Whereas large complex projects are typically subject to an individual EA process, Class EAs permit group projects with known environmental effects to proceed in a streamlined manner.

Hydro One's Class Environmental Assessment for Transmission Facilities (2024) (the Class EA) applies to the following undertakings:

- Establishing a new temporary transmission line that has a nominal voltage of greater than or equal to 115 kilovolts (kV) and is greater than 2 kilometers (km) in length;
- Refurbishing an existing transmission line that has a nominal operating voltage of greater than or equal to 115 kV and is greater than 2 km in length;
- Establishing a new transmission station that has a nominal operating voltage of greater than or equal to 115 kV; and
- Expanding an existing transmission station, where the expansion involves the acquisition of land, and the transmission station has a nominal operating voltage of greater than or equal to 115 kV.

It is anticipated that the development of either Project will require a connection to the existing transmission line having a nominal operating voltage of less than 500 kV, and the establishment of a transmission station with a nominal operating voltage of greater than or equal to 115 kV and less than 500 kV, which typically are available to be screened through the Class EA Screening Process.

The Class EA Screening Process involves the following:

- Issuance of a notice of commencements.
 - ♦ Issued to relevant regions of the MECP EA branch, adjacent landowners, relevant First Nations, municipalities, relevant commissions (i.e., Niagara Escarpment Commission), Conservation Authorities, Impact Assessment Agency of Canada (where relevant), relevant Indigenous communities.
- Creation of a screening report which evaluates the proposed Project against 16 screening questions as laid out in the Class EA.
 - ♦ This screening report will include a discussion of potential alternatives and the base need for the Project.
- Notice of successful screening completion.

If either Project cannot satisfy the Class EA screening questions, it must be carried forward to the full Class EA process. In addition, if an interested or affected party during the Class EA Screening Process identifies potential direct or indirect effects that cannot be mitigated, including potential adverse effects on Aboriginal or treaty rights, the proponent will subject the project to a Full Class EA Process as described in this document. Should the concern raised by an interested or affected party be later resolved, the proponent may revert back to the Class EA Screening Process.

3.1.2 Permits and Approvals

3.1.2.1 Species at Risk Review

Species at Risk Act

The federal *Species at Risk Act* (SARA) provides a framework to ensure the survival of wildlife species and the protection of natural heritage in Canada. Under SARA, the Federal government has responsibility for wildlife as follows:

- Wildlife on federal lands;
- Aquatic species; and
- Migratory birds protected by the *Migratory Bird Convention Act* (MBCA).

Species listed under SARA are defined as species at risk (SAR) of disappearing from Canada. Specifically, SARA contains prohibitions against the killing, harming, harassing, capturing, taking, possessing, collecting, buying, selling, or trading of individuals of Endangered, Threatened and Extirpated Species listed in Schedule 1 of the Act. The Act also contains a prohibition against the damage or destruction of their residence (e.g., nest or den).

The prohibitions in SARA apply throughout Canada to all aquatic species and migratory birds (as listed in the MBCA) regardless of whether the species are resident on federal, provincial, public or private land. This means that if a species is listed on Schedule 1 of SARA and is either an aquatic species or a migratory bird, there is a prohibition against harming it or its residence. For all other listed species, the Act's prohibitions only apply on federal lands.

It is noted that the SARA also contains a provision to protect species designated as Endangered or Threatened by a provincial or territorial government when found on federal lands. Furthermore, in certain circumstances, the responsible minister may apply SARA prohibitions to protect any other species listed in Schedule 1 of SARA when found on private lands, provincial lands, or lands within a territory, if provincial/territorial laws do not effectively protect the species or its residence.

Established under the SARA, the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) assesses species published under Schedule 1, 2 and 3 under the SARA. A summary of potential SAR for the Study Areas is presented in Table 3-1. It is noted that the SARA also contains a provision to protect species designated as Endangered or Threatened by a provincial or territorial government when found on federal lands.

Neither Project's properties are on federal lands, and the Project's are not anticipated to be subject to requirements under the SARA. In certain circumstances, the responsible minister

may apply SARA prohibitions to protect any other species listed in Schedule 1 of SARA when found on private lands, provincial lands, or lands within a territory, if provincial/territorial laws do not effectively protect the species or its residence, however the likelihood of this being applicable to the Project is anticipated to be low. Hatch has reviewed critical habitat areas related to bird species regulated under SARA to confirm if potential mechanisms exist for federal regulation following the finalization of the provincial changes to the *Species Conservation Act*.

Ontario Endangered Species Act

The *Ontario Endangered Species Act* (ESA) was passed into law in 2007 and came into effect on June 30, 2008. Under the ESA, there are more than 200 species in Ontario that are identified as extirpated, endangered, threatened, or of special concern. Species that are listed as threatened or endangered receive full protection under the Act, while those listed as special concern do not. Section 9 of the ESA generally prohibits the killing or harming of a threatened or endangered species, as well as the destruction of its habitat. Section 10 of the ESA prohibits the damage or destruction of the habitat of species listed as endangered and threatened. Habitat is broadly characterized within the ESA as the area prescribed by O. Reg. 242/08 as the habitat of the species or an area on which the species depends directly or indirectly, to carry on its life processes, including reproduction, rearing of young, hibernation, migration or feeding. Activities with the potential to impact the habitat of species protected under the Act may require a permit prior to conducting those activities.

Recent updates to the Ontario ESA have been made to shift many permit requirements to a registration-first model, allowing projects to proceed upon registration rather than awaiting ministerial approval. Where registration alone cannot adequately avoid or mitigate negative environmental effects, permitting may still be required. The ESA is expected to eventually be repealed and replaced by the *Species Conservation Act* (SCA) (tentatively in January 2026). The SCA is intended to replace certain permitting and conditional exemption processes with a standardized approach to species recovery and protection measures.

A summary of potential SAR for the Study Area is presented in Table 3-1.

3.1.2.1.1 Desktop Records Review

A desktop records review was completed to screen for natural heritage features within 1 km of the Project properties such as potential SAR presence (threatened or endangered), SAR habitat (threatened or endangered), and sensitive or significant environmental features such as wetlands, waterbodies and Areas of Natural or Scientific Interest (ANSIs). Sources reviewed for natural heritage information included, but were not limited to the following:

- MNR Natural Heritage Information Centre (NHIC);
- Ontario breeding Bird Atlas (OBBA);
- eBird – Custom Selection;
- Ontario Reptile and Amphibian Atlas;
- INaturalist – Review of observations within 1 km of the Project properties;

- Department of Fisheries and Oceans (DFO) Species at Risk Mapping tool – Custom Selection;
- COSEWIC technical summaries;
- Ministry of Environment, Conservation and Parks (MECP) Species at Risk in Ontario list;
- Canadian Important Bird Areas (IBA) Map; and
- Lower and upper tier Official Plans.

3.1.2.1.2 Results

Based on the results of the desktop records review, Table 3-1 provides a summary of SAR with the potential to be present within the Study Area for both Project properties, as well as mitigation/avoidance strategies and next steps.

Table 3-1: Species at Risk with the Potential to be Present within the Study Area and Proposed Next Steps

Common Name	Scientific Name	Source	SARO	COSEWIC	SARA	Habitat	Potential	Site/ Rationale	Preliminary Avoidance/Mitigation Considerations	Proposed Next Steps
Birds										
Eastern Meadowlark	<i>Sturnella magna</i>	NHIC, INaturalist, Ebird, OBBA	THR	THR	THR	Eastern Meadowlarks breed primarily in moderately tall grasslands, such as pastures and hayfields, but are also found in alfalfa fields, weedy borders of croplands, roadsides, orchards, airports, shrubby overgrown fields, or other open areas. Small trees, shrubs or fence posts are used as elevated song perches.	Low	Millhaven: based on past site visits the farm fields selected for the Project do not contain crops suitable for nesting Napanee: The site lacks extensive grasslands suitable for species.	Avoid clearing during April-July.	N/A
Bobolink	<i>Dolichonyx oryzivorus</i>	NHIC, Ebird, OBBA	THR	THR	THR	Historically, Bobolinks lived in North American tallgrass prairie and other open meadows. With the clearing of native prairies, Bobolinks moved to living in hayfields. Bobolinks often build their small nests on the ground in dense grasses. Both parents usually tend to their young, sometimes with a third Bobolink helping.	Low	Millhaven: based on past site visits the farm fields selected for the Project do not contain crops suitable for nesting Napanee: The site lacks extensive grasslands suitable for species.		
Least Bittern	<i>Ixobrychus exilis</i>	NHIC	THR	THR	THR	Found in a variety of wetland habitats, but strongly prefers cattail marshes with a mix of open pools and channels. This bird builds its nest above the marsh water in stands of dense vegetation, hidden among the cattails.	Low	Millhaven: limited cattail marshes are present in proximity to proposed site. Napanee: Limited Wetland habitat is present on site. Habitat may exist south of likely interconnection points to the existing transmission line.	Avoid encroachment of wetlands.	Assess unevaluated wetlands if required for Project footprint.

Common Name	Scientific Name	Source	SARO	COSEWIC	SARA	Habitat	Potential	Site/ Rationale	Preliminary Avoidance/Mitigation Considerations	Proposed Next Steps
Pileated Woodpecker	<i>Dryocopus pileatus</i>	OBBA	-	-	-	Pileated Woodpeckers live in mature deciduous or mixed deciduous-coniferous woodlands of nearly every type. This species can also be found in younger forests with scattered, large, dead, or dying trees, as well as decayed downed trees. Throughout their range, Pileated Woodpeckers can also be found in suburban areas with large trees and patches of woodland.	Likely	Millhaven: Pileated Woodpecker activity has been observed in adjacent forest habitats but is unlikely to be impacted by the proposed footprint Napanee: Deciduous forests and thickets occur throughout the site that likely support Pileated Woodpecker	Screen site prior to clearing for potential nesting activities. Avoid vegetation clearing within restricted timing windows for Nesting Zone C2 (April 1 to August 31) to avoid contravention of the MBCA.	Complete a field visit to screen the area for potential nesting cavities.
Eastern Whip-poor-will	<i>Antrostomus vociferus</i>	OBBA	SC	THR	THR	The Eastern Whip-poor-will is usually found in areas with a mix of open and forested areas, such as savannahs, open woodlands, or openings in more mature, deciduous, coniferous and mixed forests. It forages in these open areas and uses forested areas for roosting (resting and sleeping) and nesting. It lays its eggs directly on the forest floor, where its colouring means it will easily remain undetected by visual predators.	Moderate	Millhaven: Species is unlikely to be present in proximity to the Millhaven site. Napanee: Open forest habitats are present that could support the species.	Avoid vegetation clearing within restricted timing windows for Nesting Zone C2 (April 1 to August 31) to avoid contravention of the MBCA.	N/A

Common Name	Scientific Name	Source	SARO	COSEWIC	SARA	Habitat	Potential	Site/ Rationale	Preliminary Avoidance/Mitigation Considerations	Proposed Next Steps
Grasshopper Sparrow	<i>Ammodramus savannarum</i>	NHIC, OBBA	SC	SC	-	Lives in open grassland areas with well-drained, sandy soil. It will also nest in hayfields and pasture, as well as alvars, prairies and occasionally grain crops such as barley. It prefers areas that are sparsely vegetated. Its nests are well-hidden in the field and woven from grasses in a small cup-like shape. The Grasshopper Sparrow is a short-distance migrant and leaves Ontario in the fall to migrate to the southeastern United States and Central America for the winter.	Moderate	Millhaven: Large portions of the site are not suitable for grassland bird species Napanee: The area contains some open pasture and grassland areas that could be suitable to support the species	Avoid vegetation clearing within restricted timing windows for Nesting Zone C2 (April 1 st to August 31 st) to avoid contravention of the MBCA.	N/A
Wood Thrush	<i>Hylocichla mustelina</i>	NHIC, OBBA	SC	THR	THR	The Wood Thrush lives in mature deciduous and mixed (conifer-deciduous) forests. They seek moist stands of trees with well-developed undergrowth and tall trees for singing perches. These birds prefer large forests but will also use smaller stands of trees. They build their nests in living saplings, trees or shrubs, usually in sugar maple or American beech.	Likely	Millhaven: Likely to occur in adjacent forest habitats given presence of moist wooded areas with preferred tree species as common associates. Napanee: Mixed forests including moist areas exist throughout the site.	Avoid vegetation clearing within restricted timing windows for Nesting Zone C2 (April 1 to August 31) to avoid contravention of the MBCA.	N/A
Eastern Wood-pewee	<i>Contopus virens</i>	NHIC, OBBA	SC	SC	SC	The eastern wood-pewee lives in the mid-canopy layer of forest clearings and edges of deciduous and mixed forests. It is most abundant in intermediate-age mature forest stands with little understory vegetation.	likely	Likely to occur at both sites given frequent occurrence of intermediate-age and mature forest edges.	Avoid vegetation clearing within restricted timing windows for Nesting Zone C2 (April 1 to August 31) to avoid contravention of the MBCA.	N/A
Golden-winged Warbler	<i>Vermivora chrysoptera</i>	OBBA	SC	THR	THR	Golden-winged Warblers prefer to nest in areas with young shrubs surrounded by mature forest – locations that have recently been disturbed, such as field edges, hydro or utility right-of-ways, or logged areas.	High	Habitat suitable for all life processes are present on both sites or in directly adjacent lands.	Avoid vegetation clearing within restricted timing windows for Nesting Zone C2 (April 1 to August 31) to avoid contravention of the MBCA.	N/A

Common Name	Scientific Name	Source	SARO	COSEWIC	SARA	Habitat	Potential	Site/ Rationale	Preliminary Avoidance/Mitigation Considerations	Proposed Next Steps
Canada Warbler	<i>Cardellina canadensis</i>	OBBA	SC	SC	THR	The Canada Warbler breeds in a range of deciduous and coniferous, usually wet forest types, all with a well-developed, dense shrub layer. Dense shrub and understory vegetation help conceal Canada Warbler nests that are usually located on or near the ground on mossy logs or roots, along stream banks or on hummocks. It winters in South America.	Moderate	Millhaven: A well-developed shrub layer is lacking in all wet forest types found on-site which greatly limits potential for nesting. The proposed site largely avoids potential habitat. Napanee: N/A	Avoid vegetation clearing within restricted timing windows for Nesting Zone C2 (April 1 to August 31) to avoid contravention of the MBCA.	N/A
Bald Eagle	<i>Haliaeetus leucocephalus</i>	OBBA, eBird	SC	NAR	-	Bald Eagles typically nest in forested areas adjacent to large bodies of water such as rivers, lakes, ponds. They typically avoid nesting around heavily developed and populated areas when possible. Bald Eagles are tolerant of human activity when feeding, and may congregate around fish processing plants, dumps, and below dams where fish concentrate. Bald Eagles prefer tall, mature coniferous or deciduous trees that afford a wide view of the surroundings for perching. In winter, they can also be seen in dry, open uplands if there is access to open water for fishing.	Site 1: Moderate	Millhaven: Lack of large water bodies and nesting features present on site. Hydro poles in adjacent lands provide some limited nesting opportunity. Napanee: Some nesting opportunities may exist within the forested area of the site given proximal wetlands and significant watercourses.	Avoid vegetation clearing within restricted timing windows for Nesting Zone C2 (April 1 to August 31) to avoid contravention of the MBCA.	Napanee: Complete a site investigation to review the area for potential nesting activity.
Barn Swallow	<i>Hirundo rustica</i>	NHIC, OBBA	SC	THR	THR	Prefers open habitats (farmlands, wetlands, road ROW, forest clearings). Nests are built on human-made structures and ledges (inside/outside buildings, barns, under bridges, in culverts). Requires wet sites with nearby mud to build nests.	Moderate	Anthropogenic structures that may be suitable for nesting occur in proximity to both sites. It is unlikely nesting will be impacted by the proposed Projects.	Avoid the destruction of any anthropogenic features with observed nesting.	

Common Name	Scientific Name	Source	SARO	COSEWIC	SARA	Habitat	Potential	Site/ Rationale	Preliminary Avoidance/Mitigation Considerations	Proposed Next Steps
Louisiana Waterthrush	<i>Parkesia motacilla</i>	NHIC, OBBA	THR	THR	THR	The Louisiana waterthrush is usually found in steep, forested ravines with fast-flowing streams. Although it prefers running water, especially clear, coldwater streams, it also less frequently inhabits heavily wooded, deciduous swamps having large pools of open water. It nests among the roots of fallen trees, in niches of stream banks, and in or under mossy logs.	Low	Millhaven: The proposed footprint is outside of areas likely to support the species. Napanee: N/A	Avoid encroachment of wetlands. Avoid vegetation clearing within restricted timing windows for Nesting Zone C2 (April 1 to August 31) to avoid contravention of the MBCA.	N/A
Rusty Blackbird	<i>Euphagus carolinus</i>	OBBA	NAR	SC	SC	The Rusty Blackbird breeds in habitats that are dominated by coniferous forest with wetlands nearby. During the winter, it is found in wet woodlands, swamps, and pond edges, often foraging in agricultural lands. In Ontario, the breeding range is found in the Hudson Bay Lowlands and northern Boreal Shield ecozones.	Confirmed	Millhaven: A Rusty Blackbird was heard calling during the past site reconnaissance at Millhaven. While habitat is suitable for foraging and stop-over, breeding on site is unlikely given the area is outside of the Hudson Bay Lowlands and northern Boreal Shield ecozones. Napanee: N/A	Avoid vegetation clearing within restricted timing windows for Nesting Zone C2 (April 1 to August 31) to avoid contravention of the MBCA.	N/A
Loggerhead Shrike	<i>Lanius ludovicianus</i>	NHIC, OBBA	END	END	-	In Ontario, the Loggerhead shrike prefers pasture or other grasslands with scattered low trees and shrubs. It lives in fields or alvars (areas of exposed bedrock) with short grass, which makes it easier to spot prey. It builds its nest in small trees or shrubs and hunts by waiting patiently in tree branches until it swoops down and attacks its unsuspecting prey – usually large insects, such as grasshoppers.	Low	Millhaven: Despite some suitable features for foraging occurring on site, the distinct lack of exposed bedrock and shrubs throughout most of the property limit potential. Napanee: N/A	N/A	N/A

Common Name	Scientific Name	Source	SARO	COSEWIC	SARA	Habitat	Potential	Site/ Rationale	Preliminary Avoidance/Mitigation Considerations	Proposed Next Steps
						Loggerhead shrikes also require spiny, multi-branched shrubs (usually Hawthorn species) where they can impale their prey prior to consumption. Barbed wired fencing can also be used for this.				
Snapping Turtle	<i>Chelydra serpentina</i>	NHIC, ORAA, iNaturalist	SC	SC	SC	Prefer shallow waters so they can hide under the soft mud and leaf litter, with only their noses exposed to the surface to breathe. Omnivores feeding on vegetation, small vertebrates, and invertebrates. Require loose substrates on land for egg deposition. Hibernation takes place at the bottom of waterbodies.	Moderate	Millhaven and Napanee Presence of adjacent streams, watercourses and wetlands are likely suitable for specie.	Avoid encroachment on wetlands and watercourses. Follow MNRF guidance for the installation of reptile and amphibian exclusion fencing during construction.	Turtle nesting surveys may be requested by the municipality within an EIS pending final footprint of Napanee site.
Blanding's Turtle	<i>Emydoidea blandingii</i>	NHIC, ORAA	THR	END	-	Blanding's turtles prefer shallow water with high densities of aquatic vegetation. They are known to have high fidelity, travelling long distances to nesting sites. They overwinter at the bottom of permanent waterbodies.	Moderate	Millhaven: Unlikley to be impacted the selected Project footprint. Napanee: The Napanee River north of the site likely contains potential habitat for the species. Some potential exists within watercourses and wetlands south of the existing transmission line.		
Midland Painted Turtle	<i>Chrysemys picta marginata</i>	NHIC, ORAA	SC	SC		Painted turtles inhabit waterbodies, such as ponds, marshes, lakes and slow-moving creeks, that have a soft bottom and provide abundant basking sites and aquatic vegetation. These turtles often bask on shorelines or on logs and rocks that protrude from the water. The midland painted turtle hibernates on the bottom of waterbodies.	Moderate	Millhaven: Unlikley to be impacted the selected Project footprint. Napanee: The Napanee River north of the site likely contains potential habitat for the species. Some potential existis within watercourses and wetlands south of the existing transmission line.	Avoid encroachment on wetlands and watercourses. Follow MNRF guidance for the installation of reptile and amphibian exclusion fencing during construction.	Turtle nesting surveys may be requested by the municipality within an EIS pending final footprint of Napanee site.

Common Name	Scientific Name	Source	SARO	COSEWIC	SARA	Habitat	Potential	Site/ Rationale	Preliminary Avoidance/Mitigation Considerations	Proposed Next Steps
Eastern Musk Turtle	<i>Sternotherus odoratus</i>	NHIC	SC	SC	SC	Eastern Musk Turtles are found in ponds, lakes, marshes and rivers that are generally slow-moving have abundant emergent vegetation and muddy bottoms that they burrow into for winter hibernation. Nesting habitat is variable, but it must be close to the water and exposed to direct sunlight. Nesting females dig shallow excavations in soil, decaying vegetation and rotting wood or lay eggs in muskrat lodges, on the open ground or in rock crevices.	Moderate	Millhaven: Unlikely to be impacted the selected Project footprint. Napanee: The Napanee River north of the site likely contains potential habitat for the species. Some potential exists within watercourses and wetlands south of the existing transmission line	Avoid encroachment on wetlands and watercourses. Follow MNRF guidance for the installation of reptile and amphibian exclusion fencing during construction.	Turtle nesting surveys may be requested by the municipality within an EIS pending final footprint of Napanee site.
Northern Map Turtle	<i>Graptemys geographica</i>	ORAA	SC	SC	SC	The Northern Map Turtle inhabits rivers and lakeshores where it basks on emergent rocks and fallen trees throughout the spring and summer. In winter, the turtles hibernate on the bottom of deep, slow-moving sections of river. They require high-quality water that supports the female's mollusc prey. Their habitat must contain suitable basking sites, such as rocks and deadheads, with an unobstructed view from which a turtle can drop immediately into the water if startled.	Moderate	Millhaven: Waterbodies and streams present on site are too small and shallow to support the species. Adjacent wetland may provide some habitat. Napanee: The Napanee River north of the site likely contains potential habitat for the species. Some potential exists within watercourses and wetlands south of the existing transmission line.	Avoid encroachment on wetlands and watercourses. Follow MNRF guidance for the installation of reptile and amphibian exclusion fencing during construction.	Turtle nesting surveys may be requested by the municipality within an EIS pending final footprint of Napanee site.
Eastern Ribbonsnake	<i>Thamnophis saurita</i>	ORAA	SC	SC	-	The Eastern Ribbonsnake is usually found close to water, especially in marshes, where it hunts for frogs and small fish. A good swimmer, it will dive in shallow water, especially if it is fleeing from a potential predator. At the onset of cold weather, these snakes congregate in underground burrows or rock crevices to hibernate together.	Millhaven Low	Millhaven: Presence of mosaic of habitats suitable for all life processes adjacent to the site. However, known occurrences in the area are nearing historic (one record in 2010) so potential is limited. Napanee: N/A	N/A	N/A

Common Name	Scientific Name	Source	SARO	COSEWIC	SARA	Habitat	Potential	Site/ Rationale	Preliminary Avoidance/Mitigation Considerations	Proposed Next Steps
Amphibians										
Western Chorus Frog Great Lakes St. Lawrence Canadian Shield population	<i>Pseudacris maculata</i> pop. 1	On site observations	NAR	THR	THR	Vernal breeding species that prefer temporary or ephemeral streams and water bodies in forested or open areas. They can be found in marshes, floodplains, slough forest, agricultural fields, roadside ditching and more.	High	Millhaven: Habitat suitable for all life processes is present on site. Chorus frogs were heard calling near in the southernmost marshes on site. Napanee: Wetland areas to the southern end of the site are likely suitable.	Avoid alteration of hydrology a encroachment of wetlands. Follow MNRF guidance for the installation of reptile and amphibian exclusion fencing during construction.	Municipal EIS requirements may result in Anuran Call surveys.
Insects										
Monarch	<i>Danaus plexippus</i>	NHIC, observations	SC	END	SC	In Canada, Monarchs are most abundant in southern Ontario and Quebec where milkweed plants and breeding habitat are widespread.	High	Millhaven: Suitable habitat for the growth of several milkweed species is present on site. Napanee: N/A	Avoid damage to areas conducive to Milkweed growth (forest edges, meadow, swamps and marsh).	
Mammals										
Little Brown Myotis	<i>Myotis lucifugus</i>	Project experience	END	END	END	Bats are nocturnal. Roosting occurs in treed environments (usually large diameter trees), rock crevices, select attics, abandoned buildings, barns, and bat houses in colony format to raise their young. Foraging occurs typically over water, along waterways, and forest edges. Little Brown Bats hibernate most often in caves or abandoned mines that are humid and remain above freezing.	High	Millhaven: N/A not proposed in wooded areas. Napanee: deciduous and mixed forest present likely presenting some level of bat maternity roost habitat.	Time tree removal to avoid the bat active season (April 1 to September 30 in Southern Ontario) if the removal is considered to avoid impairing or eliminating the function of habitat for supporting bat life processes (e.g. remove, stub, etc. a proportionally small number of potential maternity or day roost trees in treed habitats which would not result in fragmentation/barriers).	Complete detailed leaf-off habitat surveys, to determine potential impacts. If the active bat season can be avoided, and potential maternity roost habitat is low acoustic studies may not be required
Northern Myotis	<i>Myotis septentrionalis</i>	Project experience	END	END	END	Northern Myotis are associated with boreal forests, choosing to roost under loose bark and in the cavities of trees. Rarely using manmade structures for roosting. Foraging usually occurs over rivers, forest gaps, edges, and along trails. These bats hibernate most often in caves or abandoned mines.	High	Millhaven: N/A not proposed in wooded areas Napanee: deciduous and mixed forest present likely presenting some level of bat maternity roost habitat.		Areas found to have potential habitat and require clearing to have acoustic monitoring surveys completed during the month of June.
Hoary Bat	<i>Lasiurus cinereus</i>	Project experience	END	END	Under consideration	Migratory species whose foraging and maternity roost habitat overlaps with	High	Millhaven: N/A not proposed in wooded areas		

Common Name	Scientific Name	Source	SARO	COSEWIC	SARA	Habitat	Potential	Site/ Rationale	Preliminary Avoidance/Mitigation Considerations	Proposed Next Steps
						Myotis sp., choosing to roost under loose bark and in the cavities of trees. Treed habitat in coniferous and deciduous forests with dense clusters of foliage in the crown of the candidate tree, typically larger in diameter and tall. Occasionally roosts in shrubs. Habitat generalist. Foraging occurs in open areas such as wetlands, grasslands, and open fields with patchily distributed trees. Does not overwinter in Ontario.		Napanee: deciduous and mixed forest present likely presenting some level of bat maternity roost habitat.		
Eastern Red Bat	<i>Lasiurus borealis</i>	Project experience	END	END	Under Consideration	Migratory species whose foraging and maternity roost habitat overlaps with Myotis sp, choosing to roost under loose bark and in the cavities of trees.	High	Millhaven: N/A not proposed in wooded areas. Napanee: deciduous and mixed forest present likely presenting some level of bat maternity roost habitat.		
Silver-haired Bat	<i>Lasionycteris noctivagans</i>	Project experience	END	END	Under Consideration	Migratory species whose foraging and maternity roost habitat overlaps with Myotis sp, choosing to roost under loose bark and in the cavities of trees.	High	Millhaven: N/A not proposed in wooded areas Napanee: deciduous and mixed forest present likely presenting some level of bat maternity roost habitat.		
Tri-colored Bat	<i>Perimyotis subflavus</i>	Project experience	END	END	END	During the summer, the Tri-colored Bat is found in a variety of forested habitats. It forms day roosts and maternity colonies in older forest and occasionally in barns or other structures. They forage over water and along streams in the forest. At the end of the summer, they travel to a location where they swarm; it is generally near the cave or other underground location where they will overwinter.	High	Millhaven: N/A not proposed in wooded areas. Napanee: deciduous and mixed forest present likely presenting some level of bat maternity roost habitat.		
Eastern Small-footed Myotis	<i>Myotis leibii</i>	Project Experience	END	N/A	NAR	In the spring and summer, eastern small-footed bats will roost in a variety of habitats, including in or under rocks,	High	Millhaven: N/A not proposed in wooded areas.		

Common Name	Scientific Name	Source	SARO	COSEWIC	SARA	Habitat	Potential	Site/ Rationale	Preliminary Avoidance/Mitigation Considerations	Proposed Next Steps
						in rock outcrops, in buildings, under bridges, or in caves, mines, or hollow trees. In the winter, these bats hibernate, most often in caves and abandoned mines. They seem to choose colder and drier sites than similar bats and will return to the same spot each year.		Napanee: deciduous and mixed forest present likely presenting some level of bat maternity roost habitat.		

3.1.2.2 *Fisheries Act*

The federal *Fisheries Act* provides protection to fish and fish habitat such that:

- “No person shall carry on any work, undertaking or activity other than fishing that results in the death of fish” [Section 34.4 (1)]
- “No person shall carry on any work, undertaking or activity that results in harmful alteration, disruption or destruction of fish habitat.” [Section 35(1)]
- Fish habitat is defined by the Act as “water frequented by fish and any other areas on which fish depend directly or indirectly to carry out their life processes, including spawning grounds and nursery, rearing, food supply and migration areas”.

The *Fisheries Act* requires that any development project avoid causing the death of fish, or a Harmful Alteration, Disruption or Destruction (HADD) of fish habitat unless authorized by the Minister of Fisheries and Oceans. This applies to any works being undertaken in or near waterbodies that supports fish habitat as defined in the Act. If mitigation measures cannot be applied, and residual effects will cause death to fish, or result in a HADD, then a Request for Review must be submitted to the DFO. If the DFO identifies that the Project is likely to result in the death of fish or a HADD of fish habitat, an authorization (i.e., approval) for the Project will be required and as a result, offsetting measures may also be required.

Any water body or watercourse that contains fish, or indirectly supports fish, as described in the *Fisheries Act*, is provided protection under the Act.

Based on a review of the proposed Project sites, a 30-m setback is likely possible to remove potential concerns regarding impacts to fish habitat.

3.1.2.3 *Migratory Birds Convention Act*

The *Migratory Birds Convention Act* (MBCA) protects migratory bird populations by regulating potentially harmful anthropogenic activities. The MBCA and the Migratory Birds Regulations (MBR) are federal legislative requirements that are binding on the public and all levels of government, including federal and provincial governments.

The bird species that are protected are listed under Article I of the MBCA, are native or naturally occurring in Canada, and are known to occur regularly in Canada. The legislation protects certain species, controls the harvest of others, and prohibits commercial sale of all species. As described in Section 6 of the associated MBR:

Subject to Subsection 5(9), no person shall:

- Disturb, destroy or take a nest, egg, nest shelter, Eider Duck shelter or duck box of a migratory bird; or
- Have in his possession, a live migratory bird, or a carcass, skin, nest, or egg of a migratory bird except under authority of a permit therefor.

The “incidental take” of migratory birds and the disturbance, destruction or taking of the nest of a migratory bird is prohibited. “Incidental take” is the killing or harming of migratory birds

due to actions, such as economic development, which are not primarily focused on taking migratory birds. No permit can be issued for the incidental take of migratory birds, their nest or their eggs as a result of economic activities. These prohibitions apply throughout the duration of the year.

Environment and Climate Change Canada (ECCC) and the Canadian Wildlife Service (CWS) have compiled nesting calendars that show the variation in nesting intensity by habitat type and nesting zone, within broad geographical areas distributed across Canada. While this does not mean nesting birds will not nest outside of these periods, the calendars can be used to greatly reduce the risk of encountering a nest. It is noted that ECCC advises that avoidance is the best approach.

The MBCA is applicable to the Site and accordingly, any vegetation removal is recommended to occur outside of the breeding and nesting period (generally early April to late September in any given year). However, should vegetation removal be necessary during the recognized breeding window, a nest sweep must be conducted by a qualified biologist to ensure proposed cleared areas do not contain active nests and young. Note that while the core breeding and nesting calendar developed by ECCC is a guideline for peak breeding activity, the MBCA protects birds year-round.

3.1.2.4 *Fish and Wildlife Convention Act*

The *Fish and Wildlife Conservation Act* (FWCA) provides a framework for the governance of fish and wildlife management in Ontario. It is administered by the MNR, and provides guidance on licensing, reporting, and limits for hunting and/or trapping game wildlife. Additionally, the FWCA provides the MNR with the authority to issue licenses and other authorizations under this legislation and the Ontario Fishery Regulations (2007).

As there is no need to conduct dewatering and associated fish capture and relocation (e.g., as part drain works) a License to Collect Fish under O. Reg. 664/98 of the FWCA is not anticipated to be required.

3.1.2.5 *Conservation Authorities Act*

3.1.2.5.1 Millhaven

The Millhaven Project falls within the jurisdiction of the Cataraqui Region Conservation Authorities (CRCA). The Proposed project footprint largely falls outside of the expected regulated area of the CRCA aside from proposed access roads. It is expected that with mitigation and proper design permit activities may be avoidable with the CRCA. Where necessary, they will be minor permit applications expected to require information typically required for municipal building permits.

3.1.2.5.2 Napanee

The Napanee Project falls within the jurisdiction of Quinte Conservation. Large portions of the north and southern extents of the Napanee Project property, including the existing transmission line fall within the regulated boundary of Quinte Conservation. Consultation with Quinte Conservation is expected to be required prior to commencing permitting activities to understand input requirements to permitting applications. The regulated area, buffered from

the Napanee River is related to the 1:100-year flood plain. Floodplain mapping may be warranted to further refine this boundary, pending Project siting.

The Napanee Project properties and Millhaven Project properties fall within the Quinte Conservation and the CRCA jurisdiction, respectively.

The Quinte Conservation regulated area covers a substation portion of the Napanee Project property, therefore it has been assumed that a “Major Application” permit will be required through Quinte Conservation.

3.1.2.6 *Environmental Protection Act and Ontario Water Resources Act*

Emissions or releases to the natural environment are permitted through the *Environmental Protection Act* or *Ontario Water Resources Act* as managed by the MECP. For BESS Projects, this is typically associated with stormwater discharge, substation containment and treatment systems and noise/odour emissions to air. The type of permit varies depending on the type of emission and magnitude.

3.1.2.6.1 Environmental Compliance Approval

In accordance with the Ontario Water Resources Act, it is anticipated that an industrial sewage works Environmental Compliance Approval (ECA) will be required for both Projects. An industrial sewage works ECA will be required for the construction, establishment, and operation of new sewage works. This includes the replacement and alteration of existing sewage works and the collection, transmission, treatment, and disposal of sewage. In addition, the permit will be required for any planned discharge of sewage (i.e., drainage or storm water) to the natural environment.

It should be noted that ECA's often have extensive review periods associated with them. On average, the MECP will take approximately 3 months to review an initial application. However, several rounds of review should be accounted for to resolve the Ministry's comments.

3.1.2.6.2 Environmental Activity Sector Registration

A Noise Impact Assessment will be undertaken to assess the potential effects of both Projects on existing and potential future sensitive receptors (based on the zoning classification of the surrounding land). Noise emissions will be compared to the exclusion limits for the appropriately classified residential receptors in accordance with the MECP NPC-300 protocol.

If the noise impact assessment determines that the anticipated noise impact from facility exceeds MECP acceptable levels at the respective receptors, recommendations will be made to mitigate the noise impact on these receptors. These may include, but not be limited to:

- Noise barriers;
- Noise enclosures for the inverters and transformers; and
- Noise silencers or noise reduction kits for the different equipment.

The proposed Projects will also require registration on the Environmental Activity and Sector Registry (EASR) for noise emissions as per Ontario Regulation 1/17. This registration will

permit air and noise permissions from low-risk activities resulting from Project activities provided the noise impact assessment indicates compliance with NPC 300 levels.

A 500-m setback is from existing buildings within Appendix A, Figure 1. It should be noted that this is a general estimation, and modelling of proposed equipment and locations is required to understand what appropriate setbacks are necessary or whether additional mitigation measures such as noise walls are required. Without performing this activity, it is difficult to assess appropriate setbacks from noise generating sources. The 500 m has been set to publicly available layers outlining buildings; however, these may not qualify as receptors in all cases. Similarly vacant lots or other sensitive land uses (campgrounds) where buildings are not shown have not been incorporated as part of this screening. More detailed analysis may be necessary to quantify the likelihood of being able to site the facility on the Napanee site without noise attenuation mitigation (i.e., noise wall or berm).

To avoid the need for detailed noise impact assessments, a 1,000-m setback is required from noise generating equipment to potential receptors, which is unlikely to be feasible at the Napanee site.

3.1.2.7 *Official Plan and Municipal Zoning By-Law*

3.1.2.7.1 The Town of Greater Napanee

The Town of Greater Napanee Official Plan (2014) indicates the Project parcels are generally zoned as rural. Based on the text within the Official Plan a rezoning application will likely be necessary to permit the site for the Project. A building permit is generally required and consultation with the municipality/fire department is recommended to ensure alignment on emergency response requirements and fire code requirements.

Additionally, multiple constraint layers have been indicated on the Official Plan schedules that should be noted:

- **Zoned Environmental Protection Area:** Described as areas that are located within 30 m of a watercourse where further development should not be permitted. This area overlaps with previous constraints outlined within this memo and is shown on Figure 1. Development within this area appears to be avoidable based on a preliminary review. Development within this area will require justification as to why it cannot be located elsewhere as well as an Environmental Impact Study (EIS). The successful completion of the EIS does not guarantee acceptance from the municipality.
- **Environmentally Sensitive Area:** Described as include significant woodlands, significant valley lands, significant wildlife habitat, unevaluated wetlands, adjacent lands within 120 m of the following features: a provincially significant wetland, provincially significant life science ANSI, significant valley lands, significant woodlands, significant wildlife habitat, fish habitat, and adjacent lands within 50 m of a provincially significant earth science ANSI. Development or alteration of Environmentally Sensitive Areas may be permitted in accordance with the underlying land use designation, only if it is demonstrated by an appropriate study or studies that there will be no negative impacts on features and functions as further defined in this Plan. An EIS would be required to outline how the area can be developed responsibly without impacts to the relevant sensitive

feature. These areas have been outlined on Figure 1 and have been correlated with potentially developable areas. Further consultation with the municipality may be necessary to understand the extent and location of the specific environmental feature to comment on the likelihood of a successful development application.

- **Closed Waste Disposal Site:** A Closed Waste Disposal Site has been depicted within the Official Plan. The Official Plan indicates council must consult with the Ministry of Environment Conservation and Parks regarding the compatibility of proposed developments with closed waste disposal sites. A development application for lands within a waste management influence area shall not be approved unless it is demonstrated that measures may be implemented to mitigate potential environmental and nuisance effects associated with the use of adjacent lands for waste management purposes. It should be noted that excess soils where required to be removed from the site may also carry additional disposal expenses pending the quality of the material required to be removed. The Closed Waste Disposal Site and associated 500-m radius area has been reflected on Figure 2. Further discussion with the municipality area warranted to understand the limitations and risks associated with utilizing this area. The area shown on Figure 2 is for information purposed only and has not been factored into the developable area calculations.
- **Aggregate Reserve Area:** Areas of high aggregate potential where establishing aggregate uses may be appropriate, may be permitted in accordance with the underlying land use (rural) provided that no proposed use which would preclude the economical future use of these lands for mineral extraction is permitted. Given the BESS Project is expected to be temporary in nature, it is unlikely that its development will preclude future resource extraction. Further consultation with the municipality is warranted to understand the potential limitations of developing this area. The area shown on Figure 2 is for information purposed only and has not been factored into the developable area calculations.

A revised official plan has been made public for review in May of 2024. The official plan website noted that the plan was expected to be approved in 2024 but has still yet to be finalized as of November 2025. Although not finalized the following potential constraints were noted:

- **Significant Woodlands:** The proposed site contains mapped significant woodlands. An assessment by a qualified biologist is required to confirm the presence of significant woodlands and where present an EIS is required to outline how impacts to woodlands can be avoided. Per the Official Plans setbacks from Significant Woodlands are 120 m.
- **Unstable Bedrock (known Karst Topography):** The municipality may require additional geotechnical or karst surveys as well as set some limitations on material storage restrictions in the area.
- **Abandoned Mine site (located within 1 km):** The official plan will require consultation with the Ministry of Northern Development, Mines and Natural Resources to understand potential impacts associated with the abandoned mine. This is unlikely to be a significant consideration.

- Wetlands associated with the southern portion of the property have been mapped as a waterbody within the revisions to the Official Plan.
- Waterbodies and Fish Habitat where present are stated to require a 120-m setback. An EIS is required to work within this setback.
- Generally, proposals are required to complete an assessment of whether significant wildlife habitat may be present on site and respect a 120-m setback. Where present, an EIS is required to work within the 120-m setback.

3.1.2.7.2 Loyalist Township

Loyalist Township Official Plan Schedule A and Zoning By-Law indicate, the property is designated as Rural, with the permanent and intermittent watercourses identified as part of an Environmental Protection Zone.

Based on past consultation with Loyalist Township, lands designated as Rural within the Site may be permitted for the Project, if the zoning is amended to industrial land use designation. A building permit is generally required and consultation with the municipality/fire department is recommended to ensure alignment on emergency response requirements and fire code requirements.

The Loyalist Township Zoning By-Law designates the watercourse running through the Site as Environmental Protection zone. According to the Loyalist Township Official plan, the permitted uses of Environmental Protection designations are those which enable the preservation and conservation of the natural environment. The plan states “Structural development related to the supply of water for human or wildlife communities or flood control structures may also be permitted. Infrastructure shall, wherever possible, be located outside lands designated Environmental Protection”, meaning development and site alteration are not permitted on the lands within the Environmental Protection designation. A satisfactory Environmental Impact Assessment (EIA) would be required to work within these areas. Based on the preliminary footprint this does not appear to be necessary. Hatch has assumed a setback of 30 m, in alignment with the REA and CRCA regulation setbacks for wetlands and watercourses (see Figure 1).

Based on a preliminary review of Loyalist Township Official Plan (2022) Schedules K, the majority of the Loyalist Township (including the Site) is considered a highly vulnerable aquifer area, and a significant groundwater recharge area. New development within significant groundwater recharge areas and highly vulnerable aquifers that involve potential contaminants where they would constitute a drinking water threat may be subject to site plan control and risk management measures to protect the groundwater. An aquifer vulnerability and karst assessment report (as per Policy 5.2.5 p) may be required. The Township will provide notice of decision for any approvals that involve potential contaminants to the CRCA to facilitate monitoring of the implementation of this policy. Municipal consultation should be undertaken to confirm requirements.

3.1.3 Summary Developable Area

3.1.3.1 Napanee Project

The Developable areas associated Napanee Project properties have been divide into two categories. The Likely Developable Areas are defined as area that falls outside of the Environmental Protection Area, Environmentally Sensitive Areas defined by the relevant Official Plan as well as a 30-m setback from all present watercourses and wetlands available through public resources. The total Likely Developable Area is 4.32 ha.

The Potentially Developable Areas are defined as area that falls within constraint areas that contains some risk to development, however, may be permitted through the completion of additional studies or permits. This area is largely associated within the Environmentally Sensitive Areas but outside the Environmental Protection Areas within the relevant Official Plan. The total Potentially Developable Area is 17.90 ha.

Appendix A contains figures depicting the areas of Likely or Potentially Developable Areas and the Potentially Developable Areas and the associated constraints.

Overall, the following volumes of developable area are expected to be available as defined in Section 2.3 and shown in Appendix A.

3.1.3.2 Millhaven Project

The Likely Developable Areas for the Millhaven Project properties are defined as areas outside of the 30-m setbacks associated with wetlands, waterbodies and Environmental Protection Areas as defined by the relevant Official Plan (completely overlaps with 30 m setbacks). The total Likely Developable Area is 41.29 ha.

The Likely Developable Areas for the Millhaven Project properties are defined as areas outside of the 30 m setbacks associated with wetlands, waterbodies and Environmental Protection Areas as defined by the relevant Official Plan (completely overlaps with 30-m setbacks). The total Potentially Developable Area is 30 ha.

3.2 Permit Matrix

Table 3-2 provide an overview of the permits deemed to be applicable to the Project, along with relevant considerations, respectively per Site.

Table 3-2: Preliminary Project Permit Matrix

Legislation	Agency	Permit, Approval or Authorization	Likelihood	Rationale and Considerations Schedule Considerations
<i>Federal</i>				
<i>Fisheries Act</i>	DFO	Request for Review.	Potentially required.	Potentially required if encroaching on permanent and/or intermittent watercourses. This is primarily associated with access roads within the Millhaven Project Layout. This can be avoided through the use of clear span bridge designs.
<i>Migratory Birds Convention Act</i>	ECC	Compliance with the migratory breeding bird timing windows.	Required.	Required for Site preparation activities that could result in destruction of nests or individuals. May influence construction schedule. Detailed search for any pileated woodpecker nests within any planned cleared area ahead of construction.
<i>Provincial</i>				
<i>Environmental Assessment Act</i>	MECP	Hydro One Class Environmental Assessment Screening.	Required.	Required for establishing a substation between 115 kV to 500 kV.
<i>Endangered Species Act/ Species Conservation Act</i>		ESA Permit(s) or <i>Species Conservation Act</i> Registration.	Potentially required.	Based on the results of Hatch's review, the development of the Project may require approval under the ESA, dependent on sitting considerations, because potential to have adverse effects on SAR habitat within the study area. See Table 3-1 for preliminary avoidance/mitigation considerations and recommended next steps.
<i>Environmental Protection Act</i>	MECP	Environmental Compliance Approval: Noise and Air Emissions, Industrial Sewage.	Required.	An Environmental Compliance Approval for noise and emissions is likely required for the substation associated with the proposed Project. This is related to emissions generated by future transformers. In addition, the facility will be required to comply with NPC-300 which will require noise studies to be completed to demonstrate the ability of the facility to meet required noise thresholds at sensitive receptors including adjacent vacant lots. An Environmental Compliance Approval for Industrial Sewage is required for any treatment system and discharge to the natural environment. This is typically associated with stormwater management infrastructure and secondary containment designs associated with substation transformers.
<i>Conservation Authorities Act</i>	Quinte Conservation or CRCA	Conservation Authority Permit.	Unlikely to be required.	Required if work is planned within 30 m of a wetland or waterbody or other hazard lands
<i>Ontario Heritage Act</i>	Ministry of Citizenship and Multiculturalism	Archaeological Assessment Registration Letter.	Likely to be required.	Required in areas associated with the Project footprint.

Legislation	Agency	Permit, Approval or Authorization	Likelihood	Rationale and Considerations Schedule Considerations
<i>Municipal</i>				
Planning Act	Napane and Loyalist Official Plan	Environmental Impact Assessment	Potentially required.	Where the Project falls within the Environmental Protection Area of the Loyalist Official Plan, or where the Project properties falls within the Environmentally Sensitive Area Overlay.
		Zoning amendments	Required.	Zoning by-laws currently designate all Project properties as rural and will be subject to zoning by-law amendments.
Local Bylaw	Napane and Loyalist Official Plan	Building Permit	Required.	

3.3 Indigenous Lands Review

The following section summarizes Hatch's review of the Sites as it pertains to consideration of Indigenous Lands defined within the IESO RFPs. The use of the IESO's LT2 RFP definition of Indigenous Lands has been selected as an approximation to indicate the potential for the Project to affect lands or resources used for traditional purposes by Indigenous people in Ontario.

Table 3-3: Summary of the Site as it pertains to "Indigenous Lands" defined within the IESO's LT2 RFP

Criteria	Located on Project Site (Yes/No)	Rationale
(a) "reserve land" as set out in the Indian Act, RSC 1985, c I-5;	No	As per the <i>Indian Act</i>, RSC 1985, c I-5, reserve land means "(a) a tract of land, the legal title to which is vested in Her Majesty, that has been set apart by Her Majesty for the use and benefit of a band, and (b) except in Subsection 18(2), Section 20 to 25, 28, 37, 38, 42, 44 to 51 and 58 to 60 and the regulations made under and of those provisions, includes designated lands." The Project properties are located within the Crawford's Purchases (1783) area. Based on the First Nations and Treaties Map (Government of Ontario, 2022) and the Canadian Geographic Indigenous peoples Atlas of Canada (The Royal Canadian Geographical Society, 2018) for this Treaty area, the Project Site is not whole or in part located on "reserve lands" as set out in the <i>Indian Act</i>.
(b) "designated lands" as set out in the Indian Act, RSC 1985, c I-5;	No	As per the <i>Indian Act</i>, RSC 1985, c I-5, designated lands means "a tract of land or any interest therein the legal title to which remains vested in Her Majesty and in which the band for whose use and benefit it was set apart as a reserve has, otherwise than absolutely, released or surrendered its rights or interests, whether before or after the coming into force of this definition." The Project properties are located within the Crawford's Purchases (1783) area. Based on the First Nations and Treaties Map (Government of Ontario, 2022) and the Canadian Geographic Indigenous peoples Atlas of Canada (The Royal Canadian Geographical Society, 2018) for this Treaty area, the Project Site is not whole or in part located on "designated lands" as set out in the <i>Indian Act</i>.
(c) "special reserves" as set out in s. 36.1 of the Indian Act, RSC 1985, c I-5;	No	As per the <i>Indian Act</i>, RSC 1985, c I-5, "special reserves" means "Where lands the legal title to which is not vested in Her Majesty had been set apart for the use and benefit of a band before the coming into force of this section, the effect of Section 36 of this Act, as it read immediately before the coming into force of this section, continues in respect of those lands and that Act applies as though the lands were a reserve within the meaning of this Act." The Project properties are located within the Crawford's Purchases (1783) area. Based on the First Nations and Treaties Map (Government of Ontario, 2022) and the Canadian Geographic Indigenous peoples Atlas of Canada (The Royal Canadian Geographical Society, 2018) for this Treaty area, the Project Site is not whole or in part located on "Special Reserve" as set out in the <i>Indian Act</i>.

If you disagree with any information contained herein, please advise immediately.

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Criteria	Located on Project Site (Yes/No)	Rationale
(d) fee simple lands that are held in trust for the benefit of a First Nation in Ontario that is a "band" as defined in the <i>Indian Act</i> , RSC 1985, c I-5, provided that those lands are the subject of an application or proposal by such First Nation to have Canada set the lands apart as reserve lands pursuant to Canada's "Additions to Reserve Policy" (2016) or the Addition of Lands to Reserves and Reserve Creation Act, SC 2018, c27;	No	As per the <i>Indian Act</i>, RSC 1985, c I-5, band means "a body of Indians (a) for whose use and benefit in common, lands, the legal title to which is vested in Her Majesty, have been set apart before, on or after September 4, 1952, (b) for whose use and benefit in common, moneys are held by Her Majesty, or (c) declared by the Governor in Council to be a band for the purposes of this Act." Further, an Addition to Reserve is "a parcel of land added to the existing reserve land of a First Nation or that creates a new reserve" (Government of Canada, 2019). The full list of Additions to Reserve found on the Government of Canada website (https://sac-isc.gc.ca/eng/1466532960405/1611939046478) was consulted in order to determine if any Addition to Reserve lands were located within the footprint of the Site. No addition to Reserve lands were identified within the Project properties.
(e) Crown lands or other lands that Canada has agreed to recommend be set apart as reserve for a First Nation in Ontario that is a "band" as defined in the <i>Indian Act</i> , RSC 1985, c I-5 in settlement of such First Nation's land claim; or	No	According to the Crown Land Use Policy Atlas provided by the Ministry of Northern Development, Mines, Natural Resources and Forestry, there is no Crown lands located in southern Ontario that includes the Project properties. Through a desktop review, it is assumed that there are no Crown lands that Canada has agreed to recommend be set apart as reserve for a First Nation in Ontario.
(f) "settlement lands" transferred to the Algonquins of Ontario or its Institutions pursuant to the Algonquins of Ontario Treaty with Canada and Ontario ("Treaty"), or otherwise held by the Algonquins of Ontario or its institutions pursuant to the Treaty, for the benefit of one or more of the Algonquins of Ontario communities or Treaty beneficiaries.	No	The Algonquins of Ontario Settlement Area is comprised of nine million acres within the watershed of the Kichi-Sibi and the Mattawa River in Ontario, encompassing Ontario's largest land claim negotiation. Through a desktop review, it is assumed that the Project properties are not whole or in part located within the Algonquins of Ontario Treaty Land Claim Settlement Area Boundary.

4. Schedule

The following tentative schedule has been built based on past Hatch experience. It is based on a best-case scenario associated with past agency review times. It is assumed that no major comments, or objections are raised through the Class Environmental Assessment process, municipal permitting processes or by relevant agencies. It also assumes that the facility can be designed within recommended setbacks from natural features and can be designed to be NPC-300 compliant. The schedule has been built with an assumed start date of January 2026.

Environmental Approvals and Engineering Activities		2026												2027		
		Q1			Q2			Q3			Q4			Q1		
		J	F	M	A	M	J	J	A	S	O	N	D	J	F	M
Preliminary Site Investigations	Preliminary Site Investigation to Verify Potential Constraints															
HONI Class Environmental Assessment Screening	Creation of Stakeholder Engagement List															
	Notice of Class Environmental Assessment Screening															
	Screening Report (Contingent on SAR, Municipal EIS or															
	Notice of Class Environmental Assessment Finalization															
Permitting Activities	Environmental Review of Proposed Layout															
	Municipal consultation (Finalize Municipal Permit EIS Requirements)															
	Municipal Zoning Approvals															
	Municipal Site Plan/Building Permit Approval															
	Conservation Authority Approval (where needed)															
	Municipal Approval of EIS (where needed)															
	Acoustic Assessment															
	Environmental Compliance Approval															
Archaeological and Cultural Heritage Assessment	Stage 1 Archaeological Assessment															
	Stage 1-2 Archaeological Assessment															
	Acceptance of Archaeological Assessment															
Engineering to Support Permitting Activities	Desktop Review Activities															
	Conceptual Layout Review, Site Plan															
	Acoustic Assessment															
	Site Grading and Drainage Design															
	Stormwater Management Design															
	Substation Main Power Transformer Containment															
Additional Permitting Efforts	Targeted SAR or Natural Heritage Site Visits (where needed)															
	SAR or EIS permitting (where needed)															

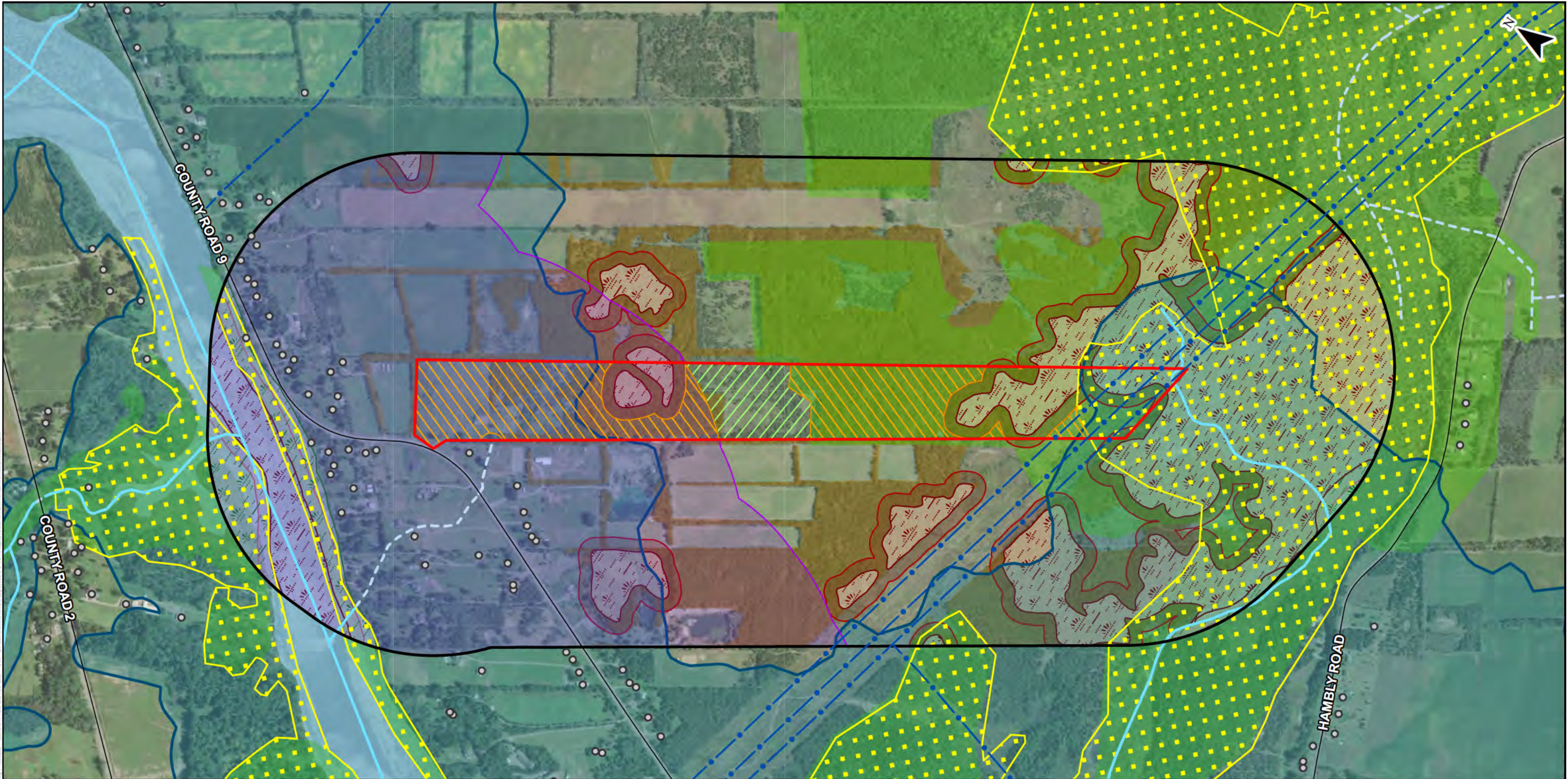
5. Recommendations

The following provides a summary of recommendations:

- With respect to requirements under the *Fisheries Act*, a general 30-m setback from wetlands and waterbodies (including ditches) is recommended to avoid the potential for adverse effects to shoreline vegetation and water quality which may constitute fish habitat or supporting fish habitat.
- Any vegetation removal is recommended outside of the bird and bat breeding and nesting periods (generally early April to late September). However, should minor vegetation removal be necessary during the recognized breeding window, a nest sweep must be conducted by a qualified biologist to ensure proposed cleared areas do not contain active nests and young.
- Hatch has assumed that no development within 30 m of a wetland will occur requiring permitting through the relevant conservation authority.
- A Noise Impact Study for transformers should be completed in accordance with standards put in place by NPC-300.
- The Napanee Project properties site should be investigated to better classify the likelihood of Significant Wildlife Habitat or Species at Risk Habitat, specifically bat species.
- If Project designs encroach on any wetlands mapped on the LIO unevaluated wetland layer, that boundaries be re-assessed through detailed Ecological Land Classification or the Ontario Wetland Evaluation System to determine actual wetland boundaries and associated setbacks required.
- Archaeological Assessments involving test-pitting may be required within the proposed Project footprint. Costs associated with test-pitting can be significant and it is therefore recommended that cost estimates be obtained by licensed consulting Archaeologist to gain certainty on the level of effort.
- Stormwater and substation containment Environmental Compliance Approvals are long lead time review permits with the MECP. They have a guaranteed review window of 1 year and provided a complete application. This work should be advanced to the extent possible.
- Municipal engagement should be completed as soon as feasible to better understand potential needs for EIS studies, specifically at the Napanee site given the Official Plan revisions in process.

Appendix A

Figures



LEGEND			
Building	Potentially Developable Area	Quinte Conservation Regulated Area	
Utility Line	Likely Developable Area	Provincially Significant Wetland	
Road	Environmentally Protected Area	Unevaluated Wetland (30m Buffer)	
Watercourse (Intermittent)	Environmentally Sensitive Area	Waterbody	
Watercourse (Permanent)	Minimum Expected Acoustic Setback	Wooded Area	
Study Area (500m Buffer)			
Project Location			

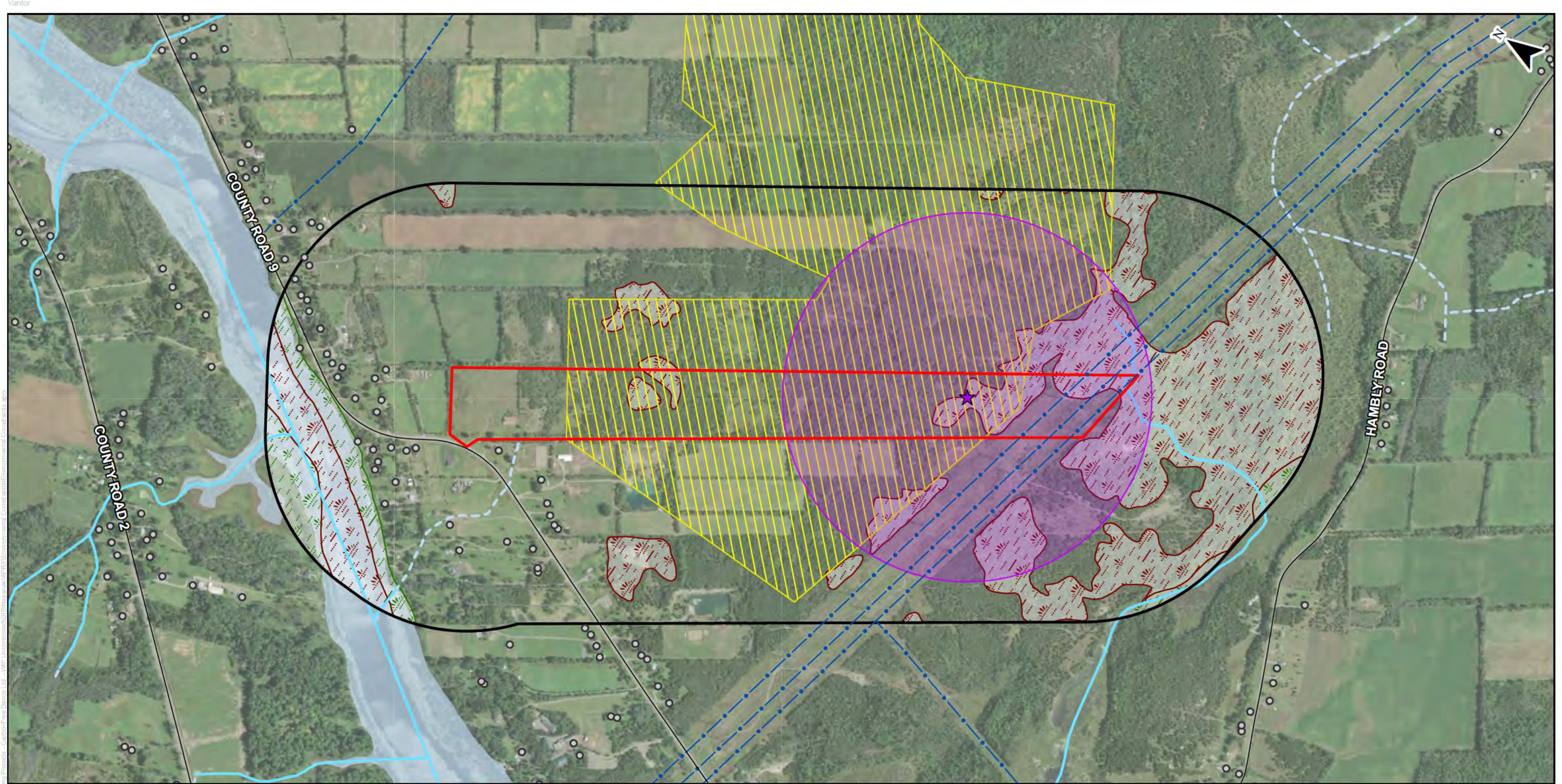
NOTES:
1. Produced by Hatch, contains information licensed under the Open Government Licence – Ontario
2. Spatial referencing: NAD 1983 CSRS UTM Zone 18N
3. Environmentally protected areas identified from Town of Greater Napanee Official Plan, Schedule A - Land Use Plan
4. Environmentally sensitive areas identified from Town of Greater Napanee Official Plan, Schedule B - Environmental and Resource Constraint Areas
5. Quinte Conservation Regulated Area identified from Quinte Conservation Screening Limit GIS Viewer O. Reg 41/24

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m

1:9,000

PROJECT: Napanee BESS Screening				
FIGURE TITLE: Environmental Constraints in the Study Area				
CLIENT: CarbonFree Devco Ltd.				
DWG BY: V. BAXTER	CHK BY: C. SEHL	FIG NO.: 1	REV NO.: 1	
DATE: 20/11/25	PAGE: 1			



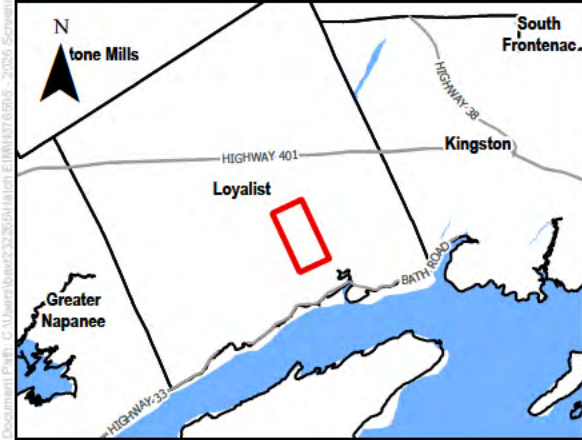
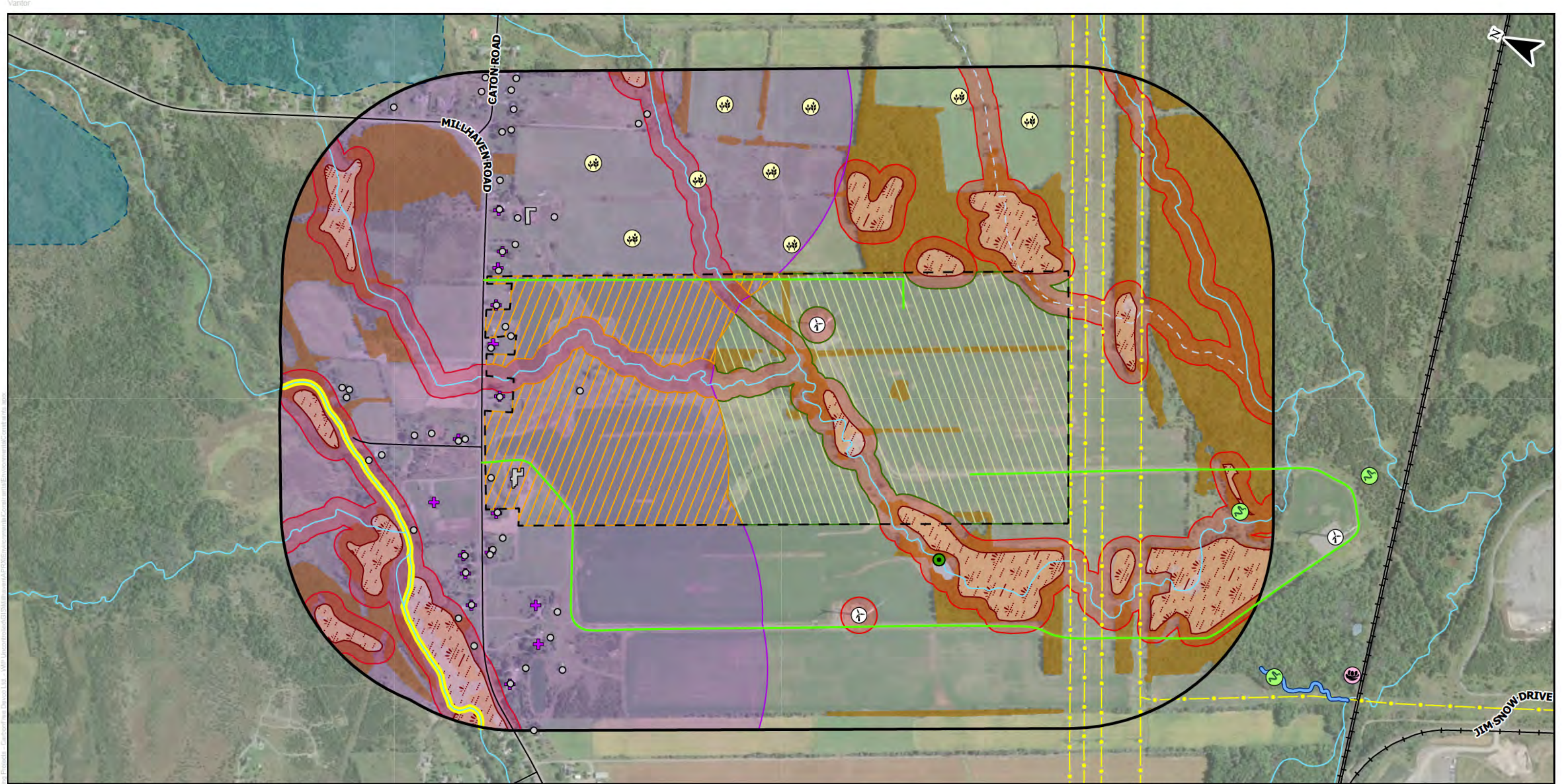
LEGEND			
○ Building	— Watercourse (Permanent)	■ Waste Disposal Site (500m Buffer)	■ Provincially Significant Wetland
★ Waste Disposal Site	— Study Area (500m Buffer)	■ Unevaluated Wetland	■ Waterbody
— Utility Line	— Project Location		
— Road	— Aggregate Reserve		
--- Watercourse (Intermittent)			

NOTES:

1. Produced by Hatch, contains information licensed under the Open Government Licence – Ontario
2. Spatial referencing: NAD 1983 CSRS UTM Zone 18N
3. Environmentally protected areas identified from Town of Greater Napanee Official Plan, Schedule A - Land Use Plan
4. Environmentally sensitive areas identified from Town of Greater Napanee Official Plan, Schedule B - Environmental and Resource Constraint Areas

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PROJECT:		Napanee BESS Screening			
FIGURE TITLE:		Additional Municipal Constraints in the Study Area			
CLIENT:		CarbonFree Devco Ltd.			
DWG BY:	CHK BY:	FIG NO.:	REV NO.:	HATCH	
V. BAXTER	C. SEHL	2	1		
DATE:	PAGE:				
20/11/25	1				



LEGEND

○ Building (Point)

✚ Noise Receptor

⦿ Meadowlark Habitat (Pasture Grassland)

⦿ Pileated Woodpecker Nest Cavity

⦿ Potential Snake Overwintering Habitat

⦿ Existing Turbine

⦿ Midland Painted Turtle

— Access Road

— Aquatic Resource Area

— Drain (Assumed Ephemeral)

— Utility Line

— Rail

— Road

--- Intermittent Watercourse

— Permanent Watercourse

⦿ Project Location

⦿ Study Area (500m Buffer)

⦿ Likely Developable Area

⦿ Potentially Developable Area

ANSI, Life Science

Building (Polygon)

Exclusion Zone

Unevaluated Wetland

Waterbody

Wooded Area

Minimum Expected Acoustic Setback

NOTES:

1. Produced by Hatch, contains information licensed under the Open Government Licence – Ontario

2. Spatial referencing: NAD 1983 CSRS UTM Zone 18N

0 125 250 500 m

1:9,000

PROJECT: Millhaven BESS Screening				
FIGURE TITLE: Environmental Constraints in the Study Area				
CLIENT: CarbonFree Devco Ltd.				
DWG BY: V. BAXTER	CHK BY: C. SEHL	FIG NO.: 3	REV NO.: 1	HATCH
DATE: 20/11/25	PAGE: 1			

Open House Summary — Proposed Millhaven BESS Project

Date: November 24, 2025, **Location:** Odessa Agricultural Society

Executive summary

CarbonFree Technology Inc. and Capstone Infrastructure Corporation co-hosted a public open house on November 24, 2025, at the Odessa Agricultural Society to share detailed information about a proposed Battery Energy Storage System (BESS) near Millhaven, Loyalist Township, and to collect formal public feedback. Open-house format with 20 poster boards around room perimeter and staffed stations for one-on-one discussions. Attendees could review posters at their own pace and speak directly with project team members. The event attracted 24 members of the public (including some Loyalist Township staff). Poster boards and staff presented project information and answered questions. Feedback forms and voluntary sign-in sheets were made available; five attendees provided emails on sign-in, and three feedback sheets were completed (two with contact details). The meeting remained calm and constructive. There were 3 formal feedback sheets submitted, 2 of which provided contact information. There were 5 official sign-ins on the sign-in sheet. All who provided feedback and who provided contract information have been sent a follow-up via email. Posters at the meeting have been uploaded to the Project website: CFmillhavenstorage.com

Hosts and on-site project team

- **Hosts:** CarbonFree Technology Inc. and Capstone Infrastructure Corporation.
- **On-site team members:**
 - o Lewis Angel — Stakeholder Relations Coordinator (CarbonFree)
 - o Doug Deeks — VP, Project Development (CarbonFree)
 - o Emma Coyle — VP, Legal (CarbonFree)
 - o Maged Sami — VP, Engineering (CarbonFree)
 - o Megan Hunter — Senior Manager, Communications (Capstone Infrastructure Corporation)

Feedback Mechanisms

- Feedback mechanisms available at the event:
 - o Voluntary sign-in sheets (5 sign-ins included email addresses and were followed up by email)
 - o Formal feedback sheets (3 completed, 2 provided contact information and were followed up by email)
 - o Informal verbal comments and Q&A with project staff

Report date: November 26, 2025

BESS - Open House Questions/Comment Summary		
BESS Subject Area	Public Question/Concern	Project Response
Access Road	The proposed Alternate Access Road will disturb immediate neighbours.	The Alternate Access Road has been eliminated from consideration. The project Concept Plan has been revised to not include it as a potential feature. The project will use the existing wind farm access road and there is expected to be no access road construction as part of the project construction. The existing wind farm access road provides direct access to the proposed entrance to the battery project.
Noise Impact	What will the noise level be and how will it be mitigated?	Noise regulations as part of permitting (pre-construction / pre-permit to proceed) are strict and require both on-site noise studies and restrictive allowance on acoustic levels at local receptors. The project is set back 1,000meters (1 km) from Millhaven Rd and the nearest houses/receptors, which is significantly greater than the recommended average setbacks needed to reduce noise levels to below regulated levels. The proposed setback from Millhaven Rd, combined with noise mitigation design features including earthen berm and vegetated boundary on the north and western project perimeter, is expected to produce a sound mitigation effect that will result in no audible noise from the facility during operation.
Local Traffic increase/Impact	There is already growing traffic and Millhaven Rd is actively used by cycling groups, children, dog walkers, etc.	During construction, there will be project-specific traffic using the access road. Once operational, the facility will have minimal traffic, as these facilities are managed remotely on a 24/7 basis.
Environmental protection	How will the construction and operation impact the local environment; what protections will be in place?	Environmental site studies, consultation with CRCA, MNRF, MBQ (Mohawks of Bay of Quinte) and the Township will take place as part of the site investigation and permitting of the project. Environmental protection is rigorous within the permitting process and this project will not fall into any "fast track" processes for major projects as proposed by federal and provincial levels of government (which could be perceived to affect the rigour of the environmental review, design and permitting processes). The proposed lands have been under study for more than 18 months and both desktop and on-site investigations and reporting have been conducted by Hatch. These studies and their associated reports are publicly available on the project website.
Groundwater/Aquifer Impact	The road construction and project construction will impact the recharge of the local aquifer (and thus well water viability).	Road construction is expected to be limited to access within the project area. The plan for a new access road (the "Alternate Access Road") has been eliminated. There is not expected to be any land disturbance outside of the project area. The design of the project will use permeable surface (e.g., gravel vs concrete) in all possible aspects of the project to reduce impact to natural water flow as much as possible. Hydrological study and impact plan is a required part of permitting and the project will have to demonstrate that it will have a low impact to water resources and flows as part of permitting.
Visual / light pollution	This project will disturb the night sky experience with lighting; will it be visible?	The project is not illuminated at night with surround flood lighting (or equivalent) and it is not expected to have any impact on the night sky experience of the broader neighbourhood. Security lighting at the maintenance building and gate will be installed, however these will be down-direction lighting stands with the intent to light the ground/door areas and not the above ground area.
Prime Agricultural Loss	The location is currently prime farm land (corn field).	The project has specifically avoided use of any lands zoned as prime agricultural land and the soil class of the site does not include prime agriculture designation. It will be sited on approximately 20 acres of land that is currently actively farmed and that acreage will be displaced from production.
Fire/Safety	Fire is a known risk and there is a fuel pipeline running through the property - could a fire spread and does the presence of the pipeline exacerbate the risk?	The presence of the commercial pipeline that runs through the north of the property approximately 800 metres north of the project fence does not pose an increased risk to the area with the presence of the BESS and the very limited risk of a BESS related fire. Permitting screening would prevent such a risk from being realized.
Community Benefit	What are the benefits and how will they trickle down to the neighbourhood?	A Community Benefits Agreement has been proposed to the municipality which will provide annual revenue for the life of the project. This revenue will be in addition to the increased property tax that will occur when the project lands are reclassified for utility use (higher tax rate). Trades and resources from the region and from MBQ will be sought as part of construction and later as part of operating and maintenance activities. Since MBQ will be a majority equity owner (50.1%) of the project, a proportionate share of the project's investment returns will remain local and will not flow out of the region.
Reason For Location - why here?	Why put the project at this location; would be better in an industrial area?	The IESO is seeking the lowest cost of energy and capacity resources in order to meet government commitments to ratepayer relief and has designed its procurements to meet both the cost targets and as well as the practical targets of where it needs energy and capacity resources located. The accessibility to a major transmission corridor which has been designed to and is capable of receiving more energy than it currently manages is the primary reason for the selection of the location. CarbonFree's familiarity with the broader area both from the electrical grid, the permitting regime, and the environmental characteristics of the area from its experience developing Kingston Solar and more recent projects that are in early stage development provides confidence that the project is well-sited and viable to deliver on the province's energy needs.
End of Life - Decommissioning	What protection is there that the project will not end up derelict and become the responsibility of Loyalist (and its ratepayers)?	CarbonFree will be the long term landowner (and not a land tenant) of the property and at the end of life of the project, the land remains the asset to be protected. Several layers of permitting with covenants to require that decommissioning plans and financing are in place to manage both the removal of the project and the effective restoration of the site back to its previous use (Agriculture). Aspects of the design and construction will include the preservation of site topsoil (stored onsite as the earthen berm), and the designed removal of features like foundations (concrete), access roads (gravel), fencing and operational infrastructure (electrical cable, connections).
Jobs and local (neighbourhood) benefit	What benefit will the immediate neighbourhood gain?	At this time a neighbourhood benefit has not been defined, however there are a few considerations that have been discussed with some of the attendees at the public meeting and via other correspondence as well as with Township staff. CarbonFree is committed to work with the community and the Township to determine an appropriate local benefit.

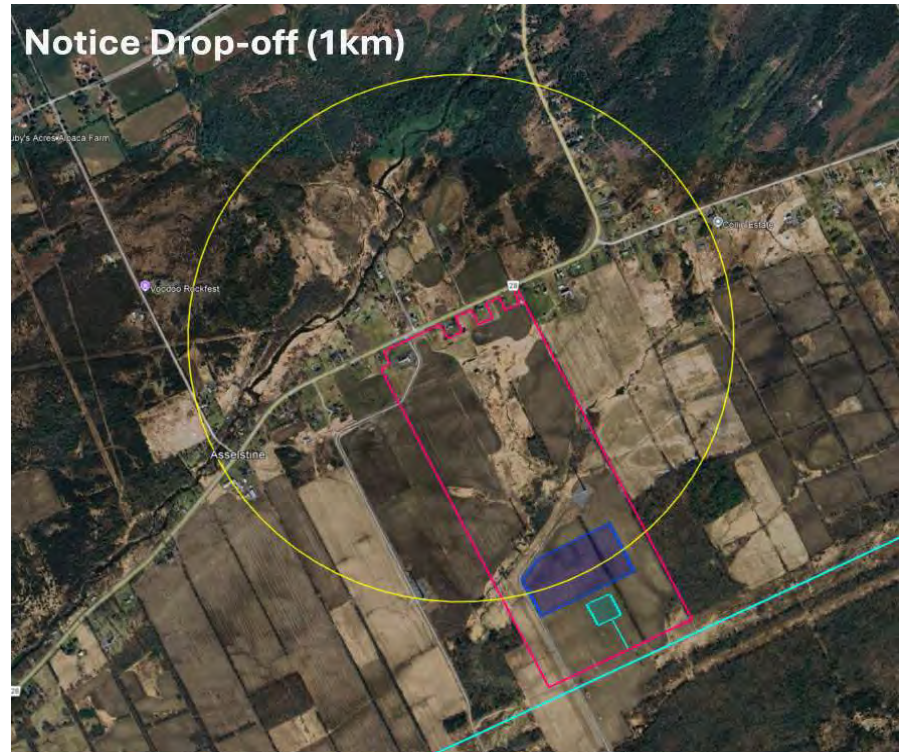
Quantitative Summary

Canvassing (Door Knocking)	250 meter radius of parcel	26 homes	12 responses
Public Meeting	24 community members attended		
Project Website	1 Response		
Notification dropoffs	550 meter radius of parcel		

Door Knocking - 250 Meter Radius



Notice Drop-off (1km)



Time/Date	Property	Response/No Response	Name	Comment/Questions
12:25pm, Nov 20	736 Chatterson Rd.	Response	Did Not Provide	•Adult son was working on the property and answered the door •Parents were not home •Basic questions of Bess construction timeline •Does not see his parents being opposed; he will let them know carbon free dropped by
3:29pm, Nov 20	780 Millhaven Rd.	Response	Did Not Provide	· No comment on Bess, they support the project · Wind access Rd. is well used by locals · [REDACTED] has put up a no trespassing sign
4:10pm, Nov 20	920 Millhaven Rd.	Response	[REDACTED]	· Asking what is the battery chemistry · Concern of visual impact from back porch · Clarification of what Bess is, questions if it was a storage facility or EV manufacturing facility · most comment that access Rd. is well used by locals · asking if we are contract ING locally, using local service providers · asking about chemicals on site and in battery containers · asking about ISO contract duration, lifetime of BESS
3:15pm, Nov 20	800 Millhaven Rd.	Response	Did Not Provide	· Asking why the road is planned next door with concerns over construction traffic · Asking about safety risk to community from Bess, concerns of fire, explosion, effects on water table · They will be attending the public meeting
2:27pm, Nov 20	829 Millhaven Rd.	Response	Did Not provide	· They are fine with projects development · They understand the need and the benefits of BESS · some concern over property value · Happy that it will create jobs during construction · CBA should be spent on a new local hockey rink/arena
3:15pm, Nov 20	812 Millhaven Rd.	Response	[REDACTED]	· Does not want us to build a road next to home for access · Fears us heading water vein, complaints that local services would not be able to fix it · Explanation that we are liable for damages · They are on their third well right now · Cannot guarantee construction workers safety from guard dog (also a service dog) · they fought against wind project, lost, can hear them if the blades are pointing in a certain direction or depending on which way the wind is blowing · concerns over noise from Bess
12:07pm, Nov 20	711 Chatterson Rd	Response	[REDACTED]	· Asking if the Bess has anything to do with the EV plant, if they are connected in some way · general construction timeline questions of the ESS · Questions on if water is being drawn from water table · not for or against the development of the Bess project · No other concerns
10:23am, Nov 20	914 Millhaven Rd.	Response	[REDACTED]	· Approves of project · Once the project is operational it will be difficult to notice
10:50am, Nov 20	907 Millhaven Rd.	Response	[REDACTED]	· Worried about fire, house resale value · Asking why this is happening, questions about ISO LT2C process · Asking why the project is not located on industrial land · Asking where is the water coming from to put out a possible fire · Comments that the fire department isn't big enough, questions about how long annual funding lasts · Asking if it is drawing well water · Questions aren't security, would prefer a physically manned site
11:31am, Nov 20	897 Millhaven Rd.	Response	[REDACTED]	· Asking if we were the same developer/Project as Northland Power · Questions on how other neighbours were feeling about the BESS development · Does not feel for or against development of BESS
11:50am, Nov 20	895 Millhaven Rd.	Response	Did Not Provide	Did not want to talk
11:52am, Nov 20	896 Millhaven Rd.	No response	N/A	
11:53am, Nov 20	880 Millhaven Rd.	No response	N/A	

11:57am, Nov 20	867 Millhaven Rd.	No response	N/A	
12:05am, Nov 20	866 Millhaven Rd.	No response	N/A	
12:19pm, Nov 20	725 Chatterson Rd.	No response	N/A	
12:21pm, Nov 20	728 Chatterson Rd.	No response	N/A	
12:25pm, Nov 20	736 Chatterson Rd.	No response	N/A	
2:22pm, Nov 20	840 Millhaven Rd.	No response	N/A	
2:27pm, Nov 20	829 Millhaven Rd.	No response	N/A	
2:30pm, Nov 20	826 Millhaven Rd.	No response	N/A	
2:37pm, Nov 20	812 Millhaven Rd.	No response	N/A	
3:15pm, Nov 20	800 Millhaven Rd.	No response	N/A	
3:24pm, Nov 20	794 Millhaven Rd.	Response	Did Not Provide	Did not want to talk
3:26pm, Nov 20	792 Millhaven Rd.	No response	N/A	
4:02pm, No 20	770 Millhaven Rd.	No response	N/A	
1:17pm, Nov 8	CF Millhaven Website	Response		"This project is directly behind my property at 826 Millhaven Road. I will be opposing the placement of this project and the detrimental effects it will have, not only on the environment but on my rural property aesthtic and value. Should you wish to dicuss purchasing my property for no less than 2.5M, please contact me at your earliest convinience."

CarbonFree Comment Sheet

November 24, 2025

1. Please provide any comments, questions or concerns you feel should be considered by CarbonFree.

Why is this being built in this location when on the other side of the tracks there is already windmills solar panels and transmission lines. May not going off Taylor Kidd.
I do not want a road in to this beside my house where my small grandchildren play.
These are known to be dangerous to the environment and health hazards. And catch on fire.

2. Please provide your name and contact information below (OPTIONAL):

Name	Mailing Address	Phone
	800 Millhaven Rd. Odessa, Ontario K0N 3M0	



CarbonFree Comment Sheet

November 24, 2025

1. Please provide any comments, questions or concerns you feel should be considered by CarbonFree.

- Concerns about Real Estate Values of surrounding homes on Millhaven Rd + Caton Rd.
- Many environmental concerns if a fire on this project starts. Our understanding is there only is a plan to let this burn and protect properties around project. Especially with project proposed being so close to water way (Millhaven Rd. Creek).
- Concerns about noise pollution to surrounding houses / neighbors road - this is a Rural area and quiet!! now + people choose Rural for the quiet!

2. Please provide your name and contact information below (OPTIONAL):

Name	Mailing Address	Phone
	1000 Millhaven Rd. Odessa	



CarbonFree Comment Sheet

November 24, 2025

1. Please provide any comments, questions or concerns you feel should be considered by CarbonFree.

This has absolutely no business in a residential area

2. Please provide your name and contact information below (OPTIONAL):

Name	Mailing Address	Phone



CarbonFree

Public Feedback Sign-In

November 24, 2025

No.	Name	Mailing Address	Email
1		880 Millhaven Road	
2		352 County Road 4	
3		752 Canton Rd	
4		1069 Millhaven Rd.	
5		867 Millhaven Rd.	
6		1164 Millhaven Rd.	



Hi [REDACTED],

Thank you very much for coming to our meeting on Monday.

My name is Lewis Angel, I am a stakeholder coordinator at CarbonFree Technology.

To answer your questions:

1. The IESO (the provincial electricity system operator) has an urgent need for electricity generation and capacity (BESS) resources in the region and has put out an RFP for such infrastructure. This project location satisfies a number of provincial needs, including the capacity of the system, proximity to a transmission line which has capacity to support the project, and it is located in an area with existing electricity infrastructure. This project will improve the reliability of the electricity regional grid and with its small footprint and setback from other properties will cause minimal disturbance to the area. That said, we appreciate that all projects like this are not particularly welcome and we are motivated to minimize the disturbance and impact that this project would potentially incur.
2. Regarding the road, we can remove that concern as we have been able to secure access along the same corridor as the wind access road. This is a change we have made based on feedback from the public meeting and door knocking campaign where a new entrance and associated construction and heavy use would be highly disturbing.
3. BESS projects are benign when operational. The footprint of the site will be approximately 25 acres. The protection of the environment and the neighbourhood is of highest importance to us and is heavily regulated at the provincial and municipal and CRCA levels. We will be using top-tier suppliers with state of the art technologies, with fire suppression, detection and monitoring to mitigate the risk of problems. There will be no liquids on site other than biodegradable oil inside the utility transformers. While there have been recorded BESS fires, the technology involved was of a different chemistry and design and both system design and regulations have made vast changes. There have been no BESS related fires recorded in Ontario with lithium based technology. The Lithium Iron Phosphate technology is less dense and protected from overheating when compared to the Nickel Manganese Cobalt batteries that dominated the industry in the last 10 years and for which much has been made of shortcomings including fire. They are tested to contain the very unlikely event of a fire to a single container, without propagation to other containers. There is a long list of fire and safety codes from a number of authoritative bodies that the technology needs to pass in order to be permitted and then constructed. You can find the list of applicable codes on our website [here](#), please scroll to "Project Resource" and download "CF Storage Public Meeting Boards".

If you have any other questions or concerns, please do not hesitate to reach out.

All the best,

Lewis



Lewis Angel
Stakeholder Engagement Coordinator, CarbonFree
Group

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Good evening,

Thank you very much for attending our public meeting for the proposed BESS project in Millhaven on Monday.

My name is Lewis Angel, I am a stakeholder coordinator at CarbonFree Technology. Please feel free to send any questions, comments or concerns my way. We will be presenting to the Loyalist council on December 9th to request a Municipal Support resolution. If successful, this Project would be bid to the IESO LT2(c-1) RFP submission date of December 18, 2025. We will likely hear from the IESO of a contract decision by June 2026.

Thanks again,

Lewis



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Stakeholder Engagement Coordinator, CarbonFree
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Hi [REDACTED]

Thank you very much for coming to our meeting on Monday.

My name is Lewis Angel, I am a stakeholder coordinator at CarbonFree Technology.

To answer your questions:

1. While there is very little information of how BESS projects affect property value, the technology presents little disturbance once operational - there are no emissions, processes, vibrations and it will not be visible. This is an unmanned site with only scheduled site maintenance. There will be no traffic caused by the BESS when up and running.
2. BESS projects are benign when operational. The footprint of the site will be approximately 25 acres. The protection of the environment and the neighbourhood is of highest importance to us and is heavily regulated at the provincial and municipal and CRCA levels. We will be using top-tier suppliers with state of the art technologies, with fire suppression, detection and monitoring to mitigate the risk of problems. There will be no liquids on site other than biodegradable oil inside the utility transformers. While there have been recorded BESS fires, the technology involved was of a different chemistry and design and both system design and regulations have made vast changes. There have been no BESS related fires recorded in Ontario with lithium based technology. The Lithium Iron Phosphate technology is less dense and protected from overheating when compared to the Nickel Manganese Cobalt batteries that dominated the industry in the last 10 years and for which much has been made of shortcomings including fire. They are tested to contain the very unlikely event of a fire to a single container, without propagation to other containers. There is a long list of fire and safety codes from a number of authoritative bodies that the technology needs to pass in order to be permitted and then constructed. You can find the list of applicable codes on our website [here](#), please scroll to "Project Resource" and download "CF Storage Public Meeting Boards".
3. With green screening and an earthen berm surrounding the project, noise levels will be kept at a minimum. Perhaps most importantly, there are provincial noise regulations that the Project will have to meet as part of the permitting process. A noise study will be conducted which will affect the site design to ensure that there is no noise received by neighbourhood homes. The site will have to be compliant with codes and standards that are enforced by the Ministry of Environment (provincial). These standards exist so that neighbours are not affected by noise emitted from the Project.

If you have any other questions or concerns, please do not hesitate to reach out.

All the best,

Lewis



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First iteration of Millhaven BESS sign posted on proposed site. November 4, 2025



Second iteration of Millhaven BESS sign posted on proposed site. November 17, 2025



Public meeting setup, Nov 24, 2025



Meeting was held at the Odessa Agricultural Society Fairgrounds