

# Public Community Meeting for North Glengarry BESS



Proponent: **North Glengarry BESS Limited Partnership**  
Project Name: **North Glengarry BESS**  
Max. Nameplate Capacity: **17 Mega Watts**  
Technology: **Lithium-Ion Battery Storage**  
Project Email: [info@northglengarryenergystorage.com](mailto:info@northglengarryenergystorage.com)

October 18, 2023

# Meeting Format

- The presentation will be made available on the Project website shortly after today's session.
- The meeting minutes will be made available on the Project website within a week of today's session.
- We will pause at various points in the presentation **for any questions.** Please introduce yourself and ask your question.
- Question-and-Answer session will be held after the presentation.

# Meeting Agenda

1. About Us
2. What is Battery Energy Storage?
3. Why North Glengarry?
4. North Glengarry Project Development
5. Community and Indigenous Engagement Plan
6. Questions and Comments
7. Appendices
  - i. Minister of Energy's Directive
  - ii. BESS Frequently Asked Questions (FAQ)
  - iii. Compass' Service Commitment

# Purpose of today's Public Community Meeting

Compass Renewable Energy Consulting Inc. (“Compass”) is developing a battery energy storage project in the Township of North Glengarry located at **Parcel Number 67101-0176, North Glengarry, ON, K0C 2B0**, on behalf of North Glengarry BESS Limited Partnership (the “Proponent”).

## Overview

- The Independent Electricity System Operator (“IESO”) is running two Request for Proposals (RFP) for 4,000 Mega Watts (MW) of new capacity projects in the province.
- As Canada’s energy sector decarbonizes, the Township of North Glengarry can support added capacity resources such as battery energy storage systems (BESS) due to the anticipated increase in regional electricity demand in the near future.
- North Glengarry BESS Limited Partnership is a special-purpose-vehicle created to develop the project.
- Wahgoshig Solar FIT5 LP (“Wahgoshig Solar”), an affiliate of North Glengarry BESS, is a Qualified Applicant for the IESO’s Long Term procurement.
- Compass currently operates 8 solar energy projects across Canada with a total assets under management of more than \$18 million.
- The North Glengarry BESS project will bring investment and local benefits including employment and spending in the local economy.

# About Compass Energy Consulting

Compass has been consulting and developing energy projects in Ontario for over 10 years. We have experience across the development lifecycle from pre-screening, contracting, construction, commissioning and operations.

## 10+ years Experience in Energy Development in Ontario

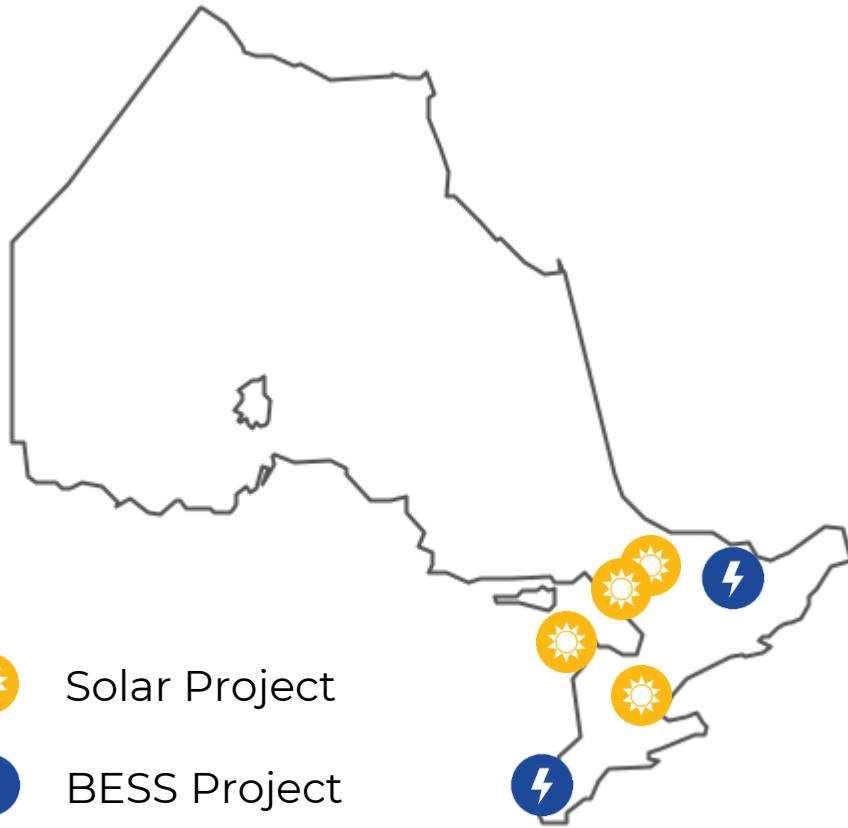
- **In the recently concluded E-LTI RFP, we supported the development and bid submission of four (4) BESS projects in Windsor and East Ontario, all of which were successful and awarded IESO contracts.**
- We have developed over 100 renewable energy projects in Ontario representing over 100 megawatts (MW) in the last 6 years and supported the development of over 2,000 MWs for our clients.
- Our projects provide sustainable energy for the Province while generating economic value for the local community.

## About North Glengarry BESS Limited Partnership

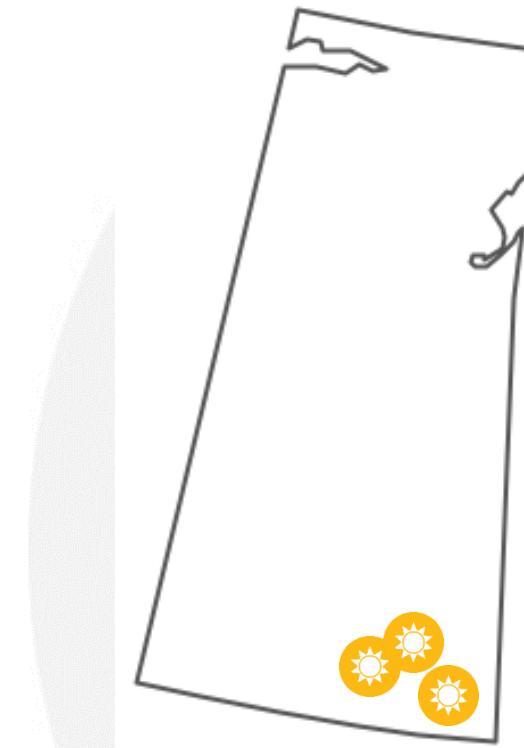
- North Glengarry BESS Limited Partnership, created for the development of the proposal for the IESO's Long-Term Procurement.

# Compass' Projects in Canada

Ontario



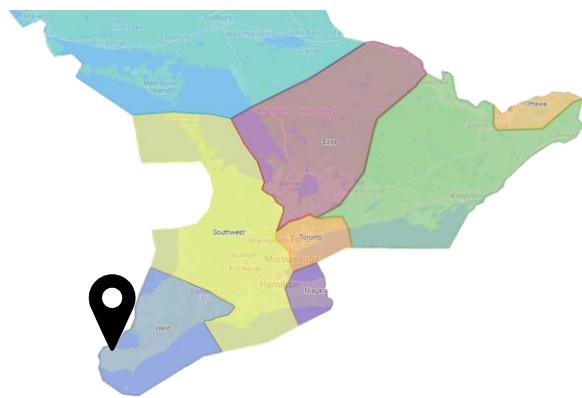
Saskatchewan



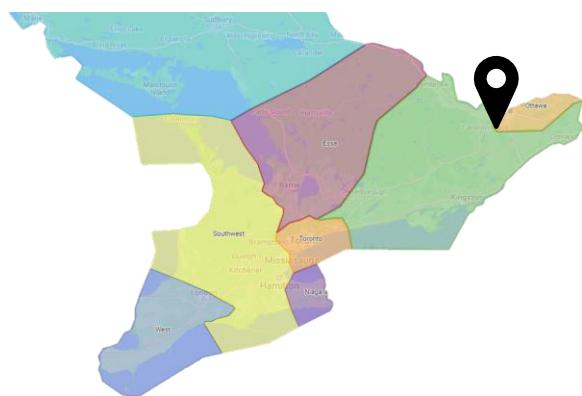
# Success in previous IESO Procurement

On behalf of Walker BESS 4 Limited Partnership, Compass submitted four (4) battery energy storage system proposals into the Expedited Long Term 1 (E-LTI) procurement, **all of which were awarded and have executed a contract.**

## Walker BESS 4, 5, and 6



## Almonte BESS



<b>Location</b>
<b>Capacity</b>
<b>IESO Zone</b>
<b>Connection Partner</b>
<b>Anticipated Start</b>

Windsor, Ontario
3 x 4.749MW @ 4 hours
West
EnWin Utilities
2025

<b>Location</b>
<b>Contract Capacity</b>
<b>IESO Zone</b>
<b>Connection Partner</b>
<b>Anticipated Start</b>

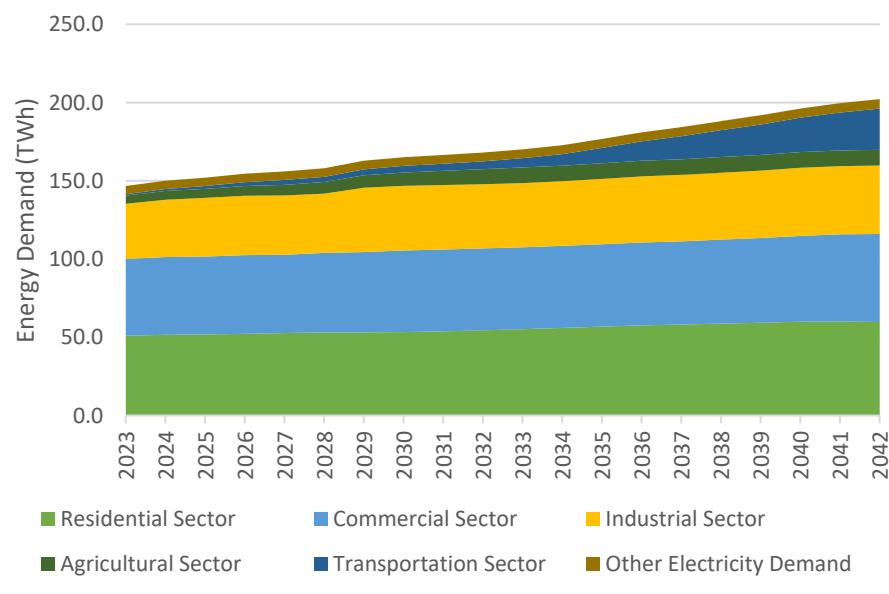
Mississippi Mills, Ontario
4.749MW @ 4 hours
East
Hydro One
2025

# Ontario's Power Needs

Ontario's Independent Electricity System Operator (IESO) has identified the urgent need to bring 4,000 megawatts (MW) of new supply onto the electricity grid by 2030 as energy demand is expected to grow 30% over 20 years.



## ON's Energy Demand Forecast



## What is causing this growth?

- **Provincial Growth** – residential and commercial sectors are growing, so does their electrical demand
- **Electrification of Transport** – transition from internal combustion to electric vehicles and buses
- **Agricultural Sector** – increase in greenhouse sector
- **Retirement of Generation** - the Pickering Nuclear Generating Station along with other expiring natural gas and other contracts has left a material supply gap in Ontario.

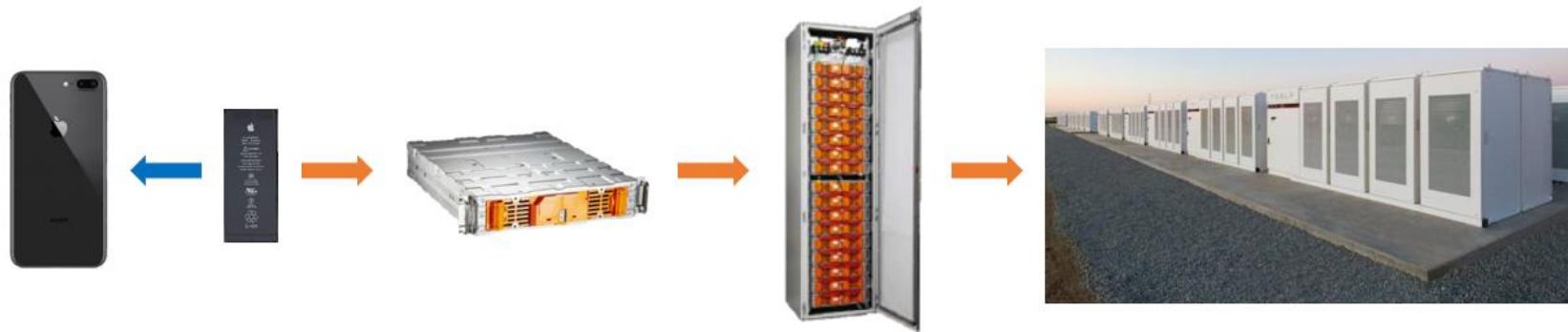
To close this supply gap by 2030, the IESO planned two major procurement cycles over 2023-24 – the *Expedited Long-Term 1 (E-LTI) RFP* and the *Long-Term 1 (LTI) RFP*.

Wahgoshig Solar FIT5 LP, a Compass-affiliate, is recognized as a Qualified Applicant for both procurements, having the experience and capability to construct new projects in the Province.

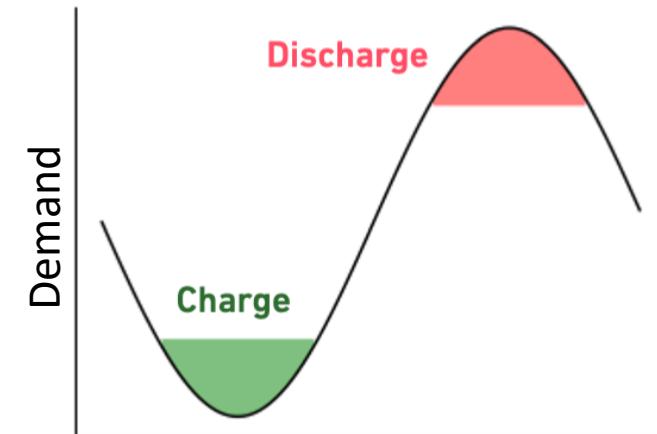
# What is Battery Energy Storage?

## Battery System Components and Integration

**Smart Phone**      **Li-ion Battery Cell**      **Battery Module**  
~56 Cells / Module      **Battery Racks**  
~24 Modules / Rack      **Battery Containers**  
~40 Racks / Container



- Lithium-ion battery cells are the building blocks of Battery Energy Storage Systems (BESS).
- BESS take power from the grid (charge) when demand is low and put power back on the grid when demand is high (discharge).
- BESS improve the stability and quality of grid power and reducing the price burden on the consumers in the long run.
- BESS has been procured by the IESO since 2014.



# What is Battery Energy Storage?

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

## Battery Storage Characteristics

- **Small Footprint Size:** 1 – 5 acres
- **Secure:** Projects are fenced in and locked.
- **Operations:**
  - Projects will be 24/7 remote monitored and controlled. Operations and maintenance contractors are locally based in Ontario.
  - Multiple scheduled site visits every year.
- **Design:** Each container or battery storage cabinet will have its own HVAC system and meet provincial sound limits.
- **Safety:** Projects will be built to comply with several accredited international standards to ensure safe operation and prevent damage to the BESS and land.

## Look and Feel

- The projects will consist of painted, 30 to 40 ft containers, electrical equipment and a transformer.
- The containers will rest on a concrete pad or steel piles and be electrically interconnected.
- The containers will then connect to the transformer before going out to the grid.



# Why North Glengarry?

The IESO has identified that the grid infrastructure in the North Glengarry region can support the addition of new capacity resources to take on the growing power demand in the province.

St. Isidore TS



## Decarbonizing the Electricity Grid

- Our proposed Project Site is located opposite the St. Isidore Transformer station which connects to the Province's power transmission network.
- Per the IESO's Deliverability Test process results, North Glengarry BESS is able to connect up to 17MW on Hydro One's distribution circuits that pass along the Project Site on Skye Road.
- The North Glengarry BESS project, among other electricity storage sites, will address emerging Provincial and regional electricity needs for the coming decades.

# About the North Glengarry BESS Project

North Glengarry BESS is proposed to have a maximum nameplate capacity of up to 17 Mega-Watt (“MW”). It will be a lithium-ion battery storage project located at Parcel Number 67101-0176, North Glengarry, ON K0C 2B0, developed by North Glengarry BESS Limited Partnership (the “Proponent”).

## North Glengarry BESS Limited Partnership



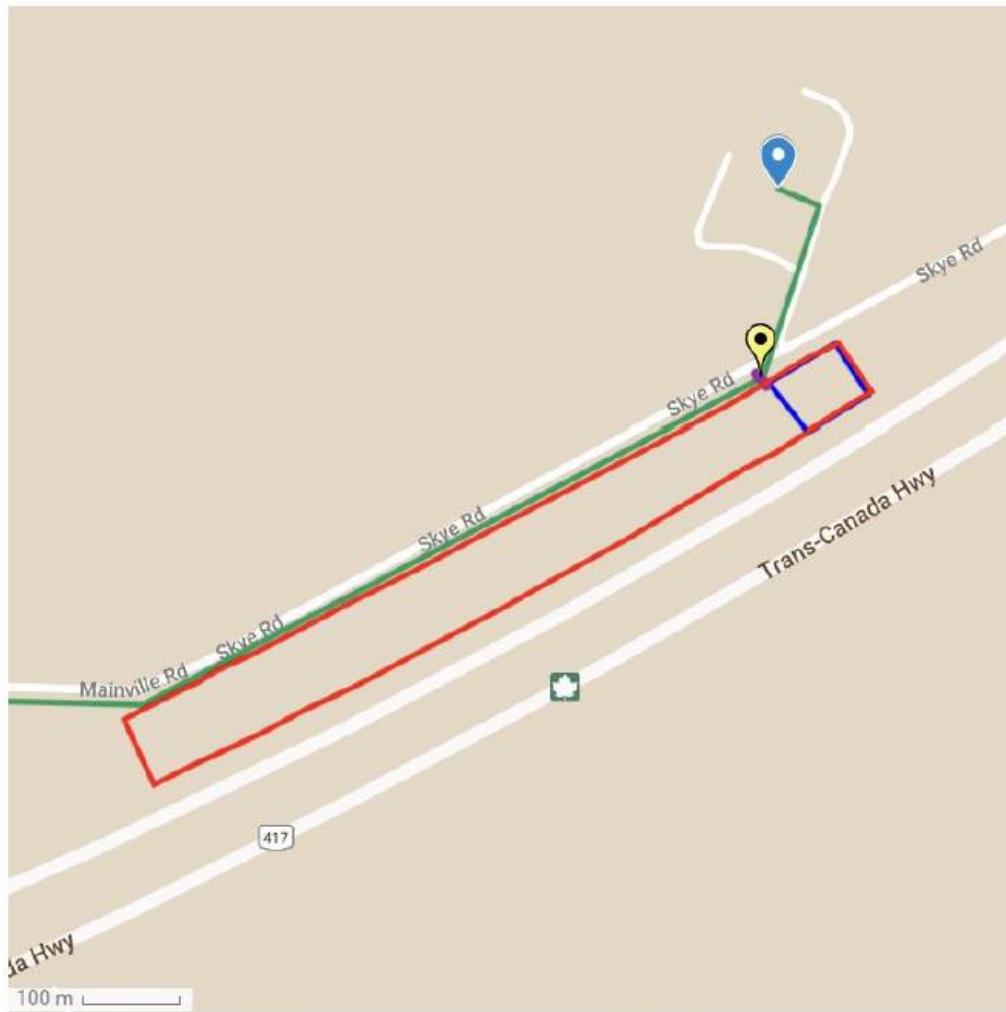
- The proposed development area is on the eastern border of the property, and the project will connect into the power distribution lines from the neighbouring St. Isidore Transmission Station.
- The proposed project nameplate capacity will be up to 17 Mega Watts (MW).

**Red** - Property Outline  
**Blue** - Proposed Project Site  
**Yellow** - Access Road  
**Purple** - Connection Line  
**Yellow** - Connection Point

# Scale Site Map for North Glengarry BESS

## North Glengarry BESS

- Property Outline
- Proposed Project Site
- Connection Point
- Distribution Line
- Connection Line
- St. Isidore TS



# Local Benefits

North Glengarry BESS will be a critical infrastructure asset that will provide supply to meet growing power demand, additional revenues for landowners, property taxes for the Township of North Glengarry, and economic activity within the region.

## Local Benefits

- **Natural Gas and Transmission Line Offset** - Distributed energy resources provide electrical grid support, intelligence, and resilience.
- **Grid Capacity** – Batteries help to provide power when needed and help prevent rolling blackouts, power brown outs, and grid failure.
- **Employment** - High skill, sustainability jobs in construction – civil works, mechanical installation, electrical connection, and landscaping.
- **Financial** – Property tax benefits, diversified income stream for the landowners.
- **Industrial Growth and Diversification** - Needed energy capacity allows for increased development in the region.

# Environmental Benefits

Battery Energy Storage Systems support the renewable energy integration and provide intelligent resilience to the regional electricity grid. North Glengarry BESS will further support the energy goals laid out by the plans from the Township of North Glengarry.

## Township of North Glengarry's Policies

In 2023, the Township of North Glengarry started on its **2023-2027 Strategic Plan** that focused on encouraging activity that can help North Glengarry Grow, Foster, and Champion. A high amount of importance was given to development strategies that are to be implemented through the Transport & Infrastructure Action Plan, and the Economic Development Action Plan.

The Township of North Glengarry has been through the creation of many plans and policies about renewable energy, energy efficiency, sustainability, and climate change, which include:

- **Community Improvement Plan (2016)**
- **Energy Conservation and Demand Management Plan (2019)**
- **Commercial Gap Analysis (2022)**

Battery Energy Storage Systems support the integration of flexible generation resources and provide intelligent resilience to the regional electricity grid. North Glengarry BESS will further support the electrification of transport and the environmental sustainability goals laid out by the plans from the Township of North Glengarry.

# Regulatory Compliance

We have made careful note of the regulatory bodies that it must engage to secure the required permits and approvals for a battery energy storage Project.

## Authorities Having Jurisdiction

- ✓ Township of North Glengarry
- ✓ **North Glengarry Fire Department**
- ✓ Hydro One
- ✓ Ontario Ministry of Energy
- ✓ Independent Electricity System Operator
- ✓ Ontario Ministry of Environment, Conservation and Parks
- ✓ Electrical Safety Authority
- ✓ Local Conservation Authorities
- ✓ Other AHJs identified through project development activities

Compass will consult with North Glengarry Fire Department to ensure the preparedness of the Emergency Response Plan and adequate National Fire Protection Association (NFPA) compliance training for Fire Stations.

# Safety Features

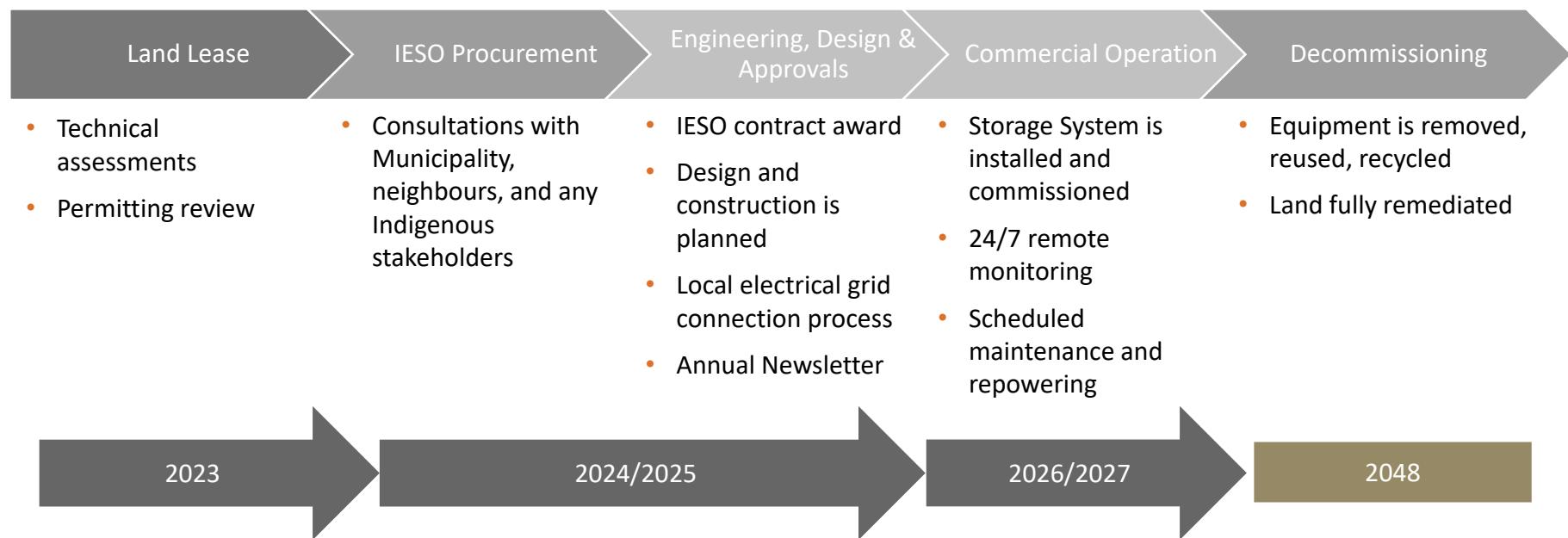
North Glengarry BESS will be a state-of-the-art development that complies with internationally accredited codes and standards developed to safeguard energy storage systems from operational risks. The system will be certified by an independent third-party for compliance.

## Codes & 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
- NFPA 855 Standard for the Installation of Stationary Energy Storage Systems

# Development Timeline

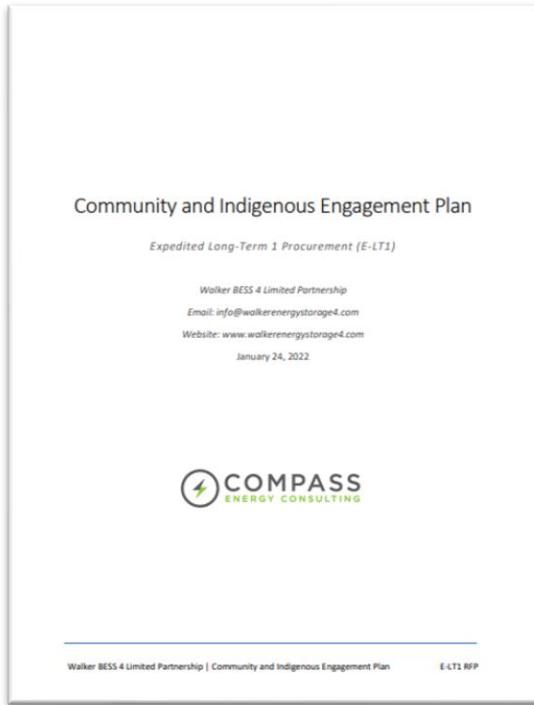
Successful developments require up to five years to reach commercial operation from initiation. North Glengarry BESS is expected to come online by 2027 and have an operating life of more than 20+ years.



# Community and Indigenous Engagement Plan

Compass, on behalf of North Glengarry BESS Limited Partnership, has issued a Community and Indigenous Engagement Plan for each project available on the Project Websites. We invite you to read these documents to understand more about our public engagement process.

## Our Public Engagement Process Tools



- **Project Website**, hosts details about the Project and status of development activities, Notice of Public Community Meeting, Community and Indigenous Engagement Plan, regularly updated FAQ section, project Contact details;
- **Notice of Public Community Meeting**, posted to the Project Website, mailed to the mandatory stakeholders as defined by the IESO;
- **Project Open House**, an in-person open house to discuss the project with Community stakeholders
- **Public Community Meeting**, an in-person meeting to discuss the project with Community stakeholders
- **Public Community Meeting Minutes**, posted to the Project Website after the Public Community meeting; and
- **Project Email**, will accept feedback and provide responses through electronic correspondence

Available on [northglengarryenergystorage.com](http://northglengarryenergystorage.com).

# Thank you

**North Glengarry BESS:** [info@northglengarryenergystorage.com](mailto:info@northglengarryenergystorage.com)

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# Appendices

1. Minister of Energy's Directive to the IESO
2. BESS Frequently Asked Questions
3. Compass' Service Commitment

# 1. Minister of Energy's Directive

On October 7, 2022, Ontario's Minister of Energy, Hon. MPP Todd Smith, issued a directive to the to procure new electricity resources, with a minimum of 1,500 MW for standalone energy storage out of 4,000 MW.



## MOE's Directive to the IESO

### MINISTER'S DIRECTIVE

#### TO: THE INDEPENDENT ELECTRICITY SYSTEM OPERATOR

I, Todd Smith, Minister of Energy ("Minister"), hereby direct the Independent Electricity System Operator ("IESO") pursuant to section 25.32 of the *Electricity Act, 1998* (the "Act") in regards to the procurement of electricity resources to ensure the reliable operation of Ontario's electricity system in response to ongoing and growing electricity needs expected in the future and require IESO to report back on certain questions respecting electricity as set out in this Directive pursuant to section 25.4 of the Act, as follows:

#### IV. Procurement Eligibility and Target Capacity

11. The Expedited Process, Upgrades Solicitation, and LT1 RFP shall be open to all resource types that meet the mandatory criteria established by the IESO, which may include renewable energy, energy storage, hybrid renewable energy with storage, biofuels and natural gas-fired generation.
  
12. The Expedited Process, Upgrades Solicitation, and LT1 RFP shall have a combined target capacity of approximately 4,000 MW, out of which the target capacity for i) standalone energy storage projects shall be a minimum of 1,500 MW and ii) natural gas-fired generation shall be no more than 1,500 MW.

<https://www.ieso.ca/en/Corporate-IESO/Ministerial-Directives>

## 2. BESS Safety Questions and Answers

Question	Answer
What if there is a fire in the BESS?	Avoiding a fire starts with battery chemistry. Lithium Iron Phosphate (LFP) have a lower energy density and no cobalt so are less likely to overheat. In addition, BESS enclosures have built in fire suppression system (FSS) solutions. The FSS system is composed of temperature sensors, smoke detectors and gas detectors, whose main function is to prevent fire spread in time when any open flame signal or gas signal appears in the battery system and sent out fire signal to EMS system. BESS are certified to UL 9540 and 9540 A standards to prevent fire spread and suppression at the cell and the BESS system level. The selected battery chemistry LFP releases less gas during thermal runaway meaning less possibility of a fire.
Can the batteries leak and impact the ground / ground water?	These BESS do not use lead acid batteries, and therefore do not leak. Mechanical failures include physical damage could create heat or a fire. Hazards associated with lithium-ion battery energy storage systems are centered on the flammable organic electrolyte and its highly reactive electrodes. However, if the batteries are punctured, there is a risk of electrolyte to be exposed to air, which will result in chemical reaction, leading to thermal runaway and combustion.
What is the noise and visual impact of BESS?	As a part of the Environmental Assessment permitting process, we will conduct a Noise Impact Assessment for the Project. As a part of this report, the ambient noise survey will identify the 'noise envelope' for the Project location based on zoning, proximity to highways and other factors that may affect sound levels.  We expect the noise envelope for this project to be 40 decibels at the nearest home or receptor. 40 dba is equivalent to a library, refrigerator, quiet street at night.

# 4. Compass' Service Commitment

We believe in the importance of transparency when communicating with all stakeholders and tying our success to their success.

## System Design Consultation

- Design adapted to site requirements and local building by-laws
- Layout review and consultation with landowner
- Engineered construction plan accepted by local building department
- Long-term, dependable designs

## Risk Mitigation & Minimal System Impact

- Scheduled Operation & Maintenance
- System insurance and liability insurance. Building owner named as 3<sup>rd</sup> party insured
- Physical security measures, and live performance monitoring

## Updates & Transparency

- Compass provides monthly project updates during the development and construction of the project
- Clarity for landlords to understand project progress

