

Municipal Council Support Resolution Request for Battery Energy Storage System



Prepared for – Township of North Glengarry

September 20, 2023

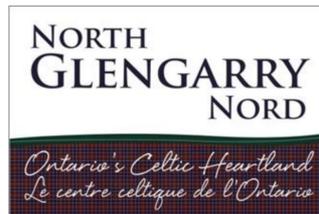


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Executive Summary

Compass Renewable Energy Consulting Inc. (“Compass”) is developing a battery storage project in your municipality located at **Parcel Number 67101-0176 (Mainville Road/Skye Road), North Glengarry, Ontario** and is requesting a Municipal Council Support Resolution in support of this project.

Why the request for a municipal council support resolution?

- The Independent Electricity System Operator (“IESO”) is running its second procurement for new capacity projects in the province, the Long-Term 1 RFP, for which proposals will be due on December 12, 2023.
- Wahgoshig Solar FIT5 LP, a Compass-affiliate, is a Qualified Applicant for this procurement.
- Based on IESO’s guidance, grid infrastructure in Township of North Glengarry can support new electricity capacity.
- Compass has secured a lease on behalf of **North Glengarry BESS Limited Partnership**, the special purpose vehicle (SPV) developing the project located at **Parcel Number 67101-0176, North Glengarry, ON K0C 2B0**.
- This infrastructure project will bring significant investment and local benefits including employment, lease payments and spending in the local economy.
- Your support will mean our project will have the best opportunity to get built in your community, as opposed to in another municipality.

Introduction to Compass Energy Consulting

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

Over a Decade of Energy Development in Ontario

- An industry leader in renewable and clean energy development across Ontario, having achieved a 100% success rate in conversion of submissions to Contract awards in the recently concluded first procurement round, the Expedited Long-Term 1 RFP.
- We have developed over 100 renewable energy projects in Canada representing over 100 megawatts (MW) in the last 6 years and supported the development of over 2,000 MWs for our clients.
- Track record of success with principles that designed and launched Ontario's renewable and clean energy procurements in the public sector.
- Our projects provide clean, renewable energy to communities while offering land-owners long-term, guaranteed passive income through lease payments.

Compass Battery Energy Storage Systems – In Development

An industry leader in renewable and clean energy development across Ontario, Compass achieved a 100% success rate in conversion of submissions to Contract awards in the recently concluded first procurement round, the Expedited Long-Term 1 RFP.

Success in the previous IESO Procurement

- On behalf of Wahgoshig Solar FIT5 LP, Compass submitted four (4) battery energy storage system proposals into the Expedited Long Term 1 (E-LTI) procurement, **all of which were contracted.**
- The list of Compass' E-LTI project is below:

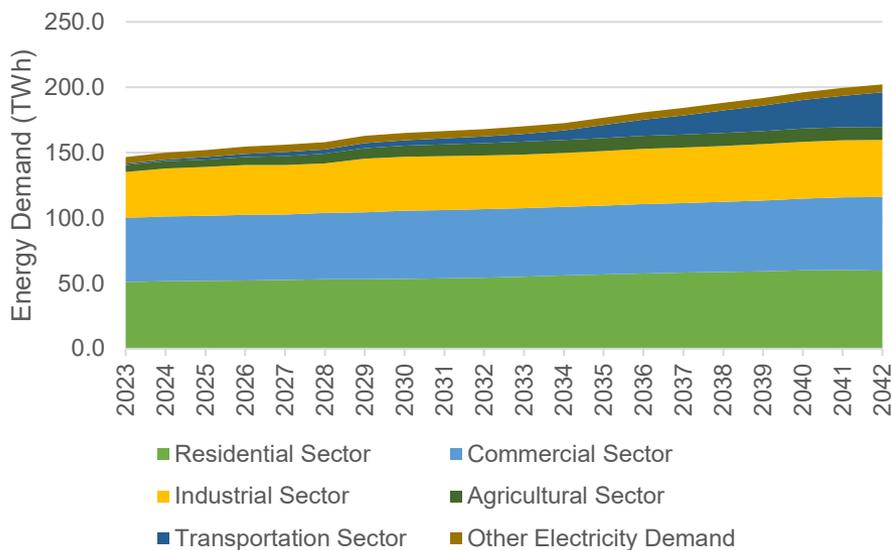
Project Name	Project Size (MW)	Project Status	Project Location	Project Website
Walker BESS 4	4.999	Contracted	Windsor, Ontario	www.walkerenergystorage4.com
Walker BESS 5	4.999	Contracted	Windsor, Ontario	www.walkerenergystorage5.com
Walker BESS 6	4.999	Contracted	Windsor, Ontario	www.walkerenergystorage6.com
Almonte BESS	4.999	Contracted	Mississippi Mills, Ontario	www.almonteenergystorage.com

Provincial Need for Power / Capacity

Ontario's Independent Electricity System Operator (IESO) 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.



Ontario's Forecast Demand Growth



Where is this supply gap coming from?

- **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** – increased in greenhouse sector (food and cannabis)
- **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.

Why Battery Storage?

Battery storage projects provide flexibility to electricity systems by storing low-cost power and providing it during peak periods when the grid needs it the most. Battery storage has been procured by the IESO since 2014.

Battery Storage Project Characteristics

- **Small Footprint Size:** 1 – 5 acres
- **Secure:** Project is fenced in and locked.
- **Operations:**
 - Project is 24/7 remote monitored and controlled. Operations and maintenance contractors are locally based in Ontario.
 - Scheduled site visits occur 4 times a year.
- **Noise:** Each container or battery storage cabinet will have its own HVAC system and meet provincial sound limits.
- **Design:** Battery does not power onsite operations directly; it flows to the grid.

Look and Feel

- The project will consist of painted, 20 ft containers, electrical equipment and a transformer.
- The containers will rest on a concrete pad and be interconnected.
- The containers will then connect to the transformer before going out to the grid.



Why your municipality?

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



Local Electrical Benefits

- Our proposed project is located opposite the St. Isidore Transformer station. We propose a connection to the distribution feeder M5.
- The Project has been submitted into the IESO's Long-Term 1 Deliverability Test which confirmed it can connect to the M5 feeder.

Regulatory Oversight

Compass has made careful note of the regulatory bodies that it must engage to secure the permits and approvals.

Authorities Having Jurisdiction

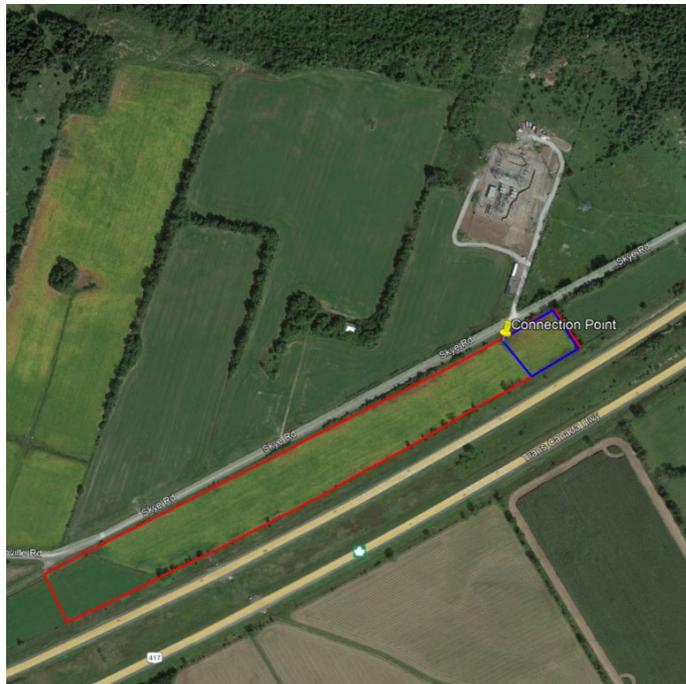
- ✓Township of North Glengarry
- ✓**North Glengarry Fire Department**
- ✓Hydro One
- ✓Ontario Ministry of Energy
- ✓Independent Electricity System Operator
- ✓Ontario Ministry of Environment
- ✓Local Conservation Authorities
- ✓Electrical Safety Authority

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.

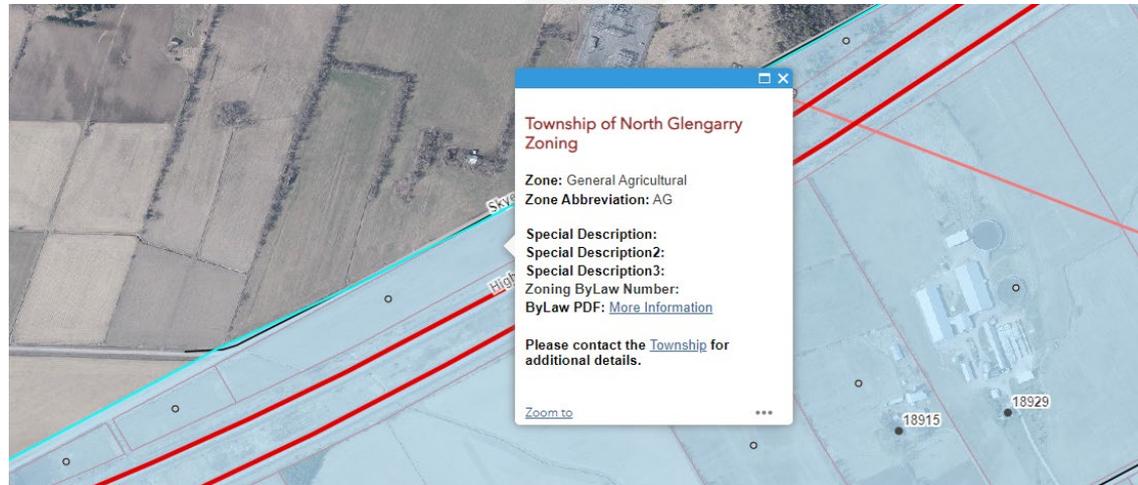
About The Project

The project will be located on Parcel Number 67101-0176, North Glengarry, ON K0C 2B0. It will take advantage of connecting to the Hydro One power lines on Skye Road running along the north of the property.

North Glengarry BESS



Zoning



- Zoning of the property is General Agricultural (AG).
- Per Zoning By-Law No. 39-2000, the AG zoning allows for grain drying, sawmill, tile drainage, wayside quarry, communications facility, maple sugar operation, etc.

Local Benefits

Local benefits associated with the project are key infrastructure within the Township to provide power to meet growing demand, provide additional revenues for landowners, property taxes for the Township of North Glengarry and economic activity within the Township.

Local Benefits

- **Employment** - High skill, 'green' collar jobs in construction – civil works, mechanical installation, electrical connection, landscaping.
- **Financial** – Property tax benefits, diversified income stream for rural landowners, especially on underutilized land.
- **Industrial Growth and Diversification** - Needed energy capacity allows for increased development in your municipality.
- **Natural Gas and Transmission Line Offset** - Distributed energy provides electrical grid support, intelligence, and resilience.

Municipal Council Support Resolution

Compass, on behalf of North Glengarry BESS Limited Partnership, is requesting a municipal council support resolution to support this project in obtaining rated criteria points in the IESO procurement.

Why provide a municipal council support resolution?

- The IESO's Long Term 1 procurement provides rated criteria points for Municipal Council Support Resolutions, which will help ensure your municipality benefits from the investment in a battery storage project.
- The Township of North Glengarry is a priority area of growing electrical demand and requires additional supply resources during peak demand times that will be provided for by this battery storage project.
- North Glengarry BESS Limited Partnership will provide economic and tax benefits to the Township of North Glengarry for 20 plus years.
- North Glengarry BESS Limited Partnership supports a variety of your municipal plans and objectives by supporting greater adoption of renewable energy and sustainability.
- North Glengarry BESS Limited Partnership needs the council support resolution passed before November 2023 to allow us to prepare our full proposal in advance of the IESO submission date of December 12, 2023.

Thank you

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Compass Renewable Energy Consulting

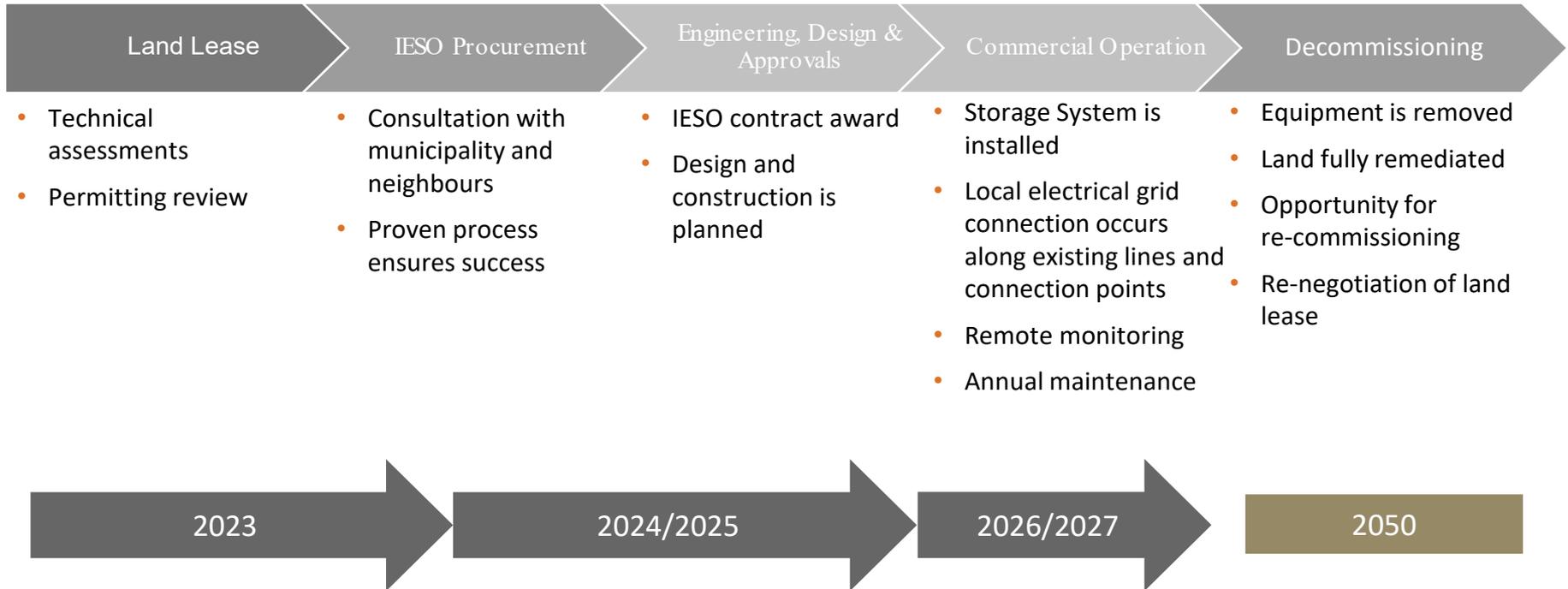
192 Spadina Ave., Suite 506, Toronto, ON, M5T 2C2



Appendices

1. Development Timeline
2. Safety
3. Service Commitment
4. Decommissioning

1. Development Timeline



Successful developments require up to four years to reach commercial operation.

2. Safety - BESS Safety Systems

Battery energy storage systems are subject to a number of third-party standards to ensure safe operation and prevent damage to the BESS and land.

Codes and Standards that apply to BESS

- National Building Code
- National Fire Code Canada
- UL 9540 Energy Storage Safety Systems
- UL9540A Standard for Test Method for Evaluating Thermal Runaway Fire Propagation in BESS
- NFPA 855 - Installation of Stationary Energy Storage Systems
 - NFPA - Standard on Explosion Prevention Systems
- UL 1973 Batteries for use in Stationary and Motive Auxiliary Power Applications
- UL 1741 - Inverters, Converters Controllers and Interconnection System Equipment
- Ontario Electrical Safety Code
- Ontario Distribution System Code

2. BESS Safety Questions and Answers

Question	Answer
<p>What if there is a fire in the BESS?</p>	<p>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.</p>
<p>Can the batteries leak and impact the ground / ground water?</p>	<p>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.</p> <p>Other potentially hazardous wastes would include fire residue, fire debris, fire extinguishing agents leading to contamination of soil and underground water via leaching, burying, dissolution, infiltration and run off. The management of these risks starts at the cell level, with selection of battery chemistry, and compliance with local AHJs and global certifications. This is where UL9540A certification becomes critical to BESS projects. Any other hazardous leaks will be contained in the enclosure.</p>
<p>What other assurances that BESS meet these standards?</p>	<p>BESS systems are subject to third party certification to ensure they comply with all of the required codes and standards. For example, third party Evaluation Services performs an assessment on the sites to ensure compliance with relevant codes.</p>

3. 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.
- Physical security measures, and live performance monitoring

Updates & Transparency

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



4. Decommissioning

BESS facilities have an expected lifespan of 20 + years, or more, with equipment replacement and repowering. At the time of decommissioning, the installed components will be removed and reused/recycled, where possible, and the site restored. All removal of equipment will be done in accordance with the applicable regulations and manufacturer recommendations. **The below summarizes the decommissioning procedure that would be enacted at end of project life .**

BESS - Disconnect all above ground wirings. Remove all BESS enclosures and support structures.

Medium Voltage (MV) Stations, Substation – Disconnect and remove all electrical equipment. Remove inverter and associated equipment. Remove high-voltage substation transformer. Remove concrete foundations for MV Stations and substation components.

Access roads and other components – Consult with the landowner to determine if access roads should be left in place for their continued use. If roads are to be removed, the aggregate materials will be excavated by a backhoe/front-end loader, along with any underlying geotextile fabric. Compacted areas restored.

Underground cables - Underground electrical lines running between inverters and the substation will be removed. All foundation materials removed.