Public Community Meeting for Walker BESS 4, Walker BESS 5, and Walker BESS 6



**Proponent: Walker BESS 4 Limited Partnership** 

**Projects: Walker BESS 4** 

**Walker BESS 5** 

Walker BESS 6

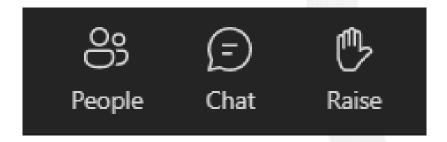
**Technology: Lithium Ion Battery Storage** 





## Meeting Format

- The presentation and the meeting will be recorded.
- The presentation and Meeting minutes will be available on the Project Website(s) after today's session.
- Reminder for everyone to keep their microphones on mute for the duration of the presentation.
- We will pause at various points in the presentation during which attendees can use the "raise your hand" functionality and unmute their mic to provide feedback.
- You can also ask us questions through the chat box.





# Meeting Agenda

- 1. About Us
- 2. What is Battery Energy Storage?
- 3. Why Windsor?
- 4. Walker BESS 4, 5, and 6 Project Development
- 5. Community and Indigenous Engagement Plan
- 6. Questions and Comments



## Purpose of today's Public Community Meeting

Compass Renewable Energy Consulting Inc. ("Compass") is developing three battery energy storage projects in the City of Windsor located at **3940 & 3986 North Service Rd East, Windsor, ON, N8W 5R7** on behalf of Wahgoshig Solar FIT 5 LP.

#### Overview

- The Independent Electricity System Operator ("IESO") is running two Request for Proposals (RFP) for 4,000 MW of new capacity projects in the province.
- The City of Windsor has been identified as a priority region by the IESO.
- Wahgoshig Solar FIT 5 LP is a Qualified Applicant for this procurement and is an affiliate of Compass.
- Walker BESS 4 Limited Partnership has been created by Compass to develop the projects.
- Compass owns and operates over 8 solar energy projects across Canada with a total assets under management of more than \$18 million.
- The Walker BESS 4, 5, and 6 projects will bring significant investment and local benefits including employment, lease payments and spending in the local economy.
- In order to successfully integrate the projects into the City of Windsor, we are seeking Community and Indigenous feedback and support that will inform the development of the projects.



# 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

- 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.
- Track record of success with principles that designed and launched Ontario's renewable and clean energy procurements in the public sector.
- Our projects provide sustainable energy to communities while offering landowners long-term, guaranteed passive income through lease payments.

### About Walker BESS 4 Limited Partnership

 Walker BESS 4 Limited Partnership, created for the development of the Walker BESS 4, 5, and 6 projects, will be the Proponent submitting the project proposals for the IESO's Long-Term Procurements.

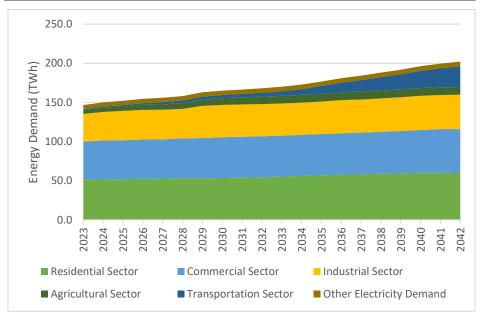


## Ontario's Power Needs

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?

- Increased Economic Activity
- Electrification of Transport
- Agricultural Sector
- Retirement of Generation

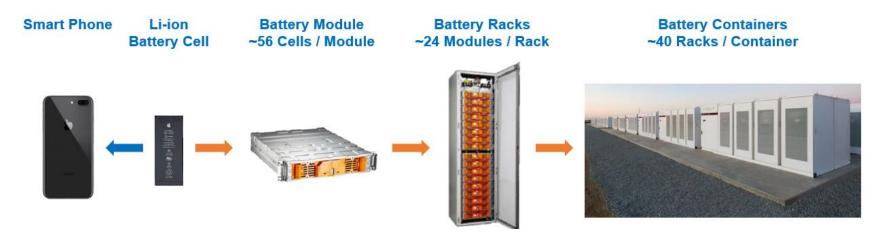
To close this supply gap by 2030, the IESO is planning two major procurement cycles over 2023-24 — the Expedited Long-Term 1 (E-LT1) RFP and the Long-Term 1 (LT1) RFP.

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

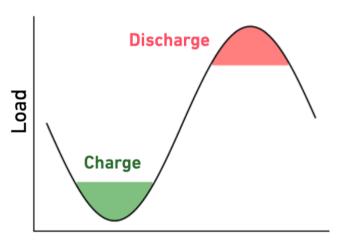


# What is Battery Energy Storage?

## **Battery System Components and Integration**



- Lithium-ion battery cells are the building blocks of Battery Energy Storage Systems (BESS).
- BESS can bridge the gap between high and low demand period, improving the stability and quality of grid power and reducing the price burden on the consumers in the long run.





# 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 2 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 Windsor?

The IESO has identified the "Windsor Pocket" as one of the primary areas of demand growth in the province and has a "strong preference" for new resources in this area.

## Windsor Pocket Stations 115 kV 230 kV ☐ 500 kV Transmission Circuit 115 kV 230 kV 500 kV Underground Cable WALLACEBURG TS KENT TS CHATHAM SS Windsor-Essex Region LAKESHORE TS Windsor Pocket KINGSVILLE TS! Kingsville-Leamington Pocket

Source: Locational Considerations for New Resources, IESO

#### IESO's Locational Rated Criteria

Table 1 | West of Chatham (all are eligible for 4 Rated Criteria points)

Circuit		s	tations		
115 kV	230 kV	Transformer	Switching	DESN	
E8F	C42H (C23Z)	Essex TS	Chatham SS	Belle River TS	
E9F	C43H (C24Z)	Keith TS		Crawford TS	
J3E	C64H (C21J)	Lauzon TS		GM MTS	
J4E	C65H (C22J)	Lakeshore TS		Kent TS	
K2Z	H25J (C21J)			Kingsville TS	
K6Z	H26J (C22J)		Leamington TS		
Z1E	H53 (C23Z)			Malden TS	
Z7E	H54 (C24Z)			South Middle Road TS	
	H38			Tilbury West D3	
	H39			Walker TS #1	
	H75			Walker TS #2	
	H76				

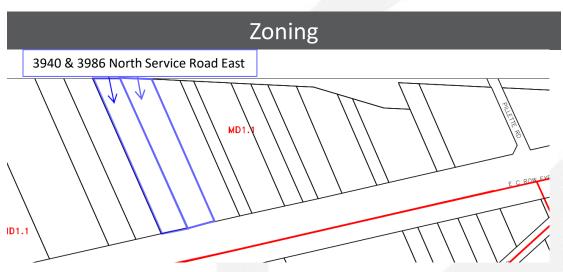
• The IESO has identified the Walker Transformer Station as a connection point worth 4 points for the RFP's locational Rated Criteria.



## About The Walker BESS 4, 5, and 6 projects

Walker BESS 4, 5, and 6 are each proposed to have a maximum nameplate capacity of up to 4.999 Mega-Watt ("MW"). They will be lithium-ion battery storage projects located at 3940 & 3986 North Service Road East, Windsor, ON, N8W 5R7, developed by Walker BESS 4 Limited Partnership ("Proponent").





- Zoning of the properties is Light Industrial with limited Commercial (MD1.1).
- Per Zoning By-law 8600, this zoning allows for Bulk Storage Facility, Food Processing Facility, Manufacturing Facility, Repair Shop – Heavy, Gas Bar.



# Scale Site Map for Walker BESS 4, 5, and 6

#### Walker BESS 5

- Property Outline
- Proposed Site Area
- Onnection Point
- L EnWin Utilities Feeder M26
- WALKER TS





## Local Benefits

Walker BESS 4, 5, and 6 will be a critical infrastructure assets that will provide supply to meet growing power demand, additional revenues for landowners, property taxes for the City of Windsor, and economic activity within the city.

#### **Local Benefits**

- **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, landscaping.
- Financial Property tax benefits, diversified income stream for the landowners that currently have underutilized land.
- Industrial Growth and Diversification Needed energy capacity allows for increased development in Windsor.
- Natural Gas and Transmission Line Offset Distributed energy provides electrical grid support, intelligence, and resilience.



## Environmental Benefits

Battery energy storage can facilitate deeper renewable energy integration in Ontario's grid to help decarbonize our provincial energy system further. Installation of BESS supports the goals and objectives laid out by the City of Windsor's Climate Change plans.

## City of Windsor Climate Change

- In 2005, the City of Windsor started on the path of environmental actions with its first Environmental Master Plan. The City then developed many other plans to help balance the environment with Windsor's economy and social atmosphere.
- The Environmental Sustainability and Climate Change Office has helped make the environment a part of decision making for the City of Windsor. This has been through the creation of many plans and policies, which include:
  - Environmental Master Plan (2017)
  - Climate Change Adaptation Plan (2012)
  - Community Energy Plan (2017)
  - Corporate Climate Action Plan (2017)
  - Report on the State of Our Environment (2017)
  - Green the Fleet Manual (2012)
  - Community Garden Policy
  - Sustainable Purchasing Guide (2015)



## 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**

- ✓ City of Windsor
- ✓ EnWin Utilities
- ✓ Ontario Ministry of Energy
- ✓ Independent Electricity System Operator
- ✓ Ontario Ministry of Environment, Conservation and Parks
- ✓ Electrical Safety Authority



## Safety Features

Walker BESS 4, 5, and 6 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.

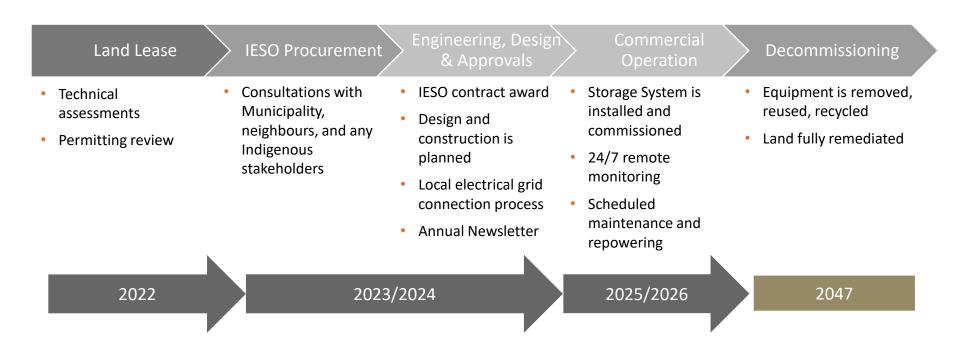
#### Codes & Standards

- 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
- NFPA855 Standard for the Installation of Stationary Energy Storage Systems



## Development Timeline

Successful developments require up to five years to reach commercial operation from initiation. Walker BESS 4, 5, and 6 are expected to come online by 2025-26 and have an operating life of more than 20+ years.





## Community and Indigenous Engagement Plan

Compass, on behalf of Walker BESS 4 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;
- Public Community Meetings, a proposed in-person meeting upon successful contract award through the IESO's procurement process;
- Public Community Meeting Minutes, posted to the Project Website after this meeting; and
- **Project Email**, will accept feedback and provide responses through electronic correspondence

Available on walkerenergystorage4.com, walkerenergystorage5.com, walkerenergystorage6.com



# Thank you

Walker BESS 4: info@walkerenergystorage4.com Walker BESS 5: info@walkerenergystorage5.com Walker BESS 6: Info@walkerenergystorage6.com

If unsure about the project number, please reach out on the first email.

## Contact

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# Appendices

- 1. Minister of Energy's Directive to the IESO
- 2. BESS Frequently Asked Questions
- 3. Automated Fire Safety
- 4. Battery Storage Systems Examples
- 5. 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



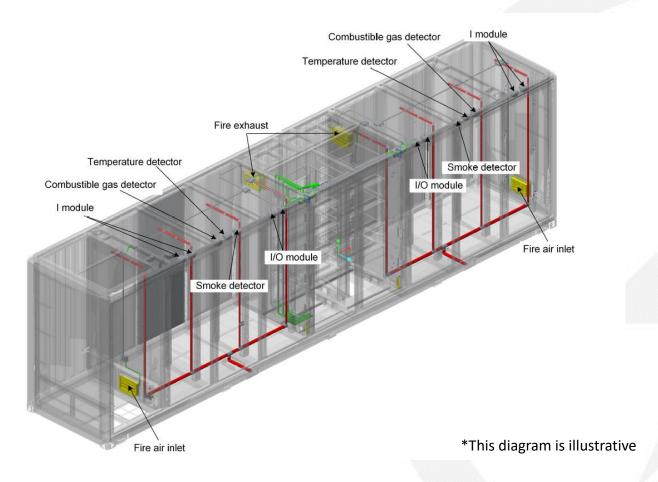
# 2. BESS Frequently Asked Questions

Question	Answer
How safe is a BESS from a fire hazard?	BESS enclosures have built in fire suppression system (FSS) solutions. The FSS system is composed of smoke detectors, gas detectors and aerosols, 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 UL9540 and UL9540A standards to prevent fire spread and suppression at the cell and the BESS system level. The management of any risks starts at the cell level, with selection of battery chemistry, and compliance with local authorities having jurisdiction (AHJs) and global certifications.  Compass has also engaged the local Fire department for a screening of our site and to provide additional training to equip firefighters with knowledge of the BESS fire protection standards.
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 envelop' for the Project location based on zoning, proximity to highways and other factors that may affect sound levels.  Once a survey is conducted, any potential risks of the BESS exceeding the 'noise budget' and violating any provincial norms would be mitigated based on suggested noise mitigation efforts that may be required to successfully secure an environmental permit.
What other assurances that BESS meet these standards?	BESS systems are subject to third party certification to ensure they comply with all of the required codes and standards. The Project will have to secure multiple environmental and electrical permits and complete a successful inspection certification prior to commissioning.



## 3. Automated Fire Suppression

All fire-related components (combustible gas sensor, smoke sensor, temperature sensor, input and output modules, aerosol (if any)) in the BESS system meet UL9540/UL9540A.





# 4. Battery Energy Storage Systems – Lithium-Ion Technology Examples

Project Name	Project Size (MW)	Project Status	Project Address	Project Geolocation
Oneida Battery Storage	250	Contract Negotiation	Haldimand County, Ontario	Latitude: 42.887335° Longitude: -80.119111°
Ameresco Canada – "Project A"	2	Announced	Newmarket, Canada	Latitude: 44° 3' 22.529" N Longitude: 79° 27' 42.149" W
Parry Energy Storage, LP	2	Contracted	5 Elliot House Rd., Seguin, Ontario, P2A 0B2, Canada	Latitude: 45° 18' 9.828" N Longitude: 79° 56' 43.692" W
RES Amphora Ontario	4	Operational	Queen Street Strathroy, Canada	Latitude: 42° 57′ 15.85″ N Longitude: 81° 36′ 43.816″ W
Elmira Energy Storage, LP	2	Contracted	50 Martin's Lane, Elmira, Ontario N3B 2A1, Canada	Latitude: 43° 36' 13.129" N Longitude: 80° 32' 50.395" W
Owen Sound Regulation Services	25	Under Construction	Owen Sound, Ontario, Canada	Latitude: 44° 34' 26.256" N Longitude: 80° 55' 23.772" W

Source: https://gateway.eme.nrc.ca/en/es/demo\_projects?wbdisable=true



## 5. 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



