Welcome

to the

Oxford Battery Energy
Storage Project

Open House

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About Boralex

Canadian-based company

Major player in renewable energy in
North America and **Europe**

More than **30 years** of experience, including
10 years in Ontario

3,051 MW of installed capacity

We **develop, build and operate** wind, solar,
storage and hydro electricity generation systems

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Boralex around the World

An international presence with strong growth potential

Guided by social and environmental values, Boralex provides its customers with clean energy in the most competitive way possible. The Corporation generates profitable and sustainable growth, thereby creating and sharing value while respecting its stakeholders.

Total installed capacity

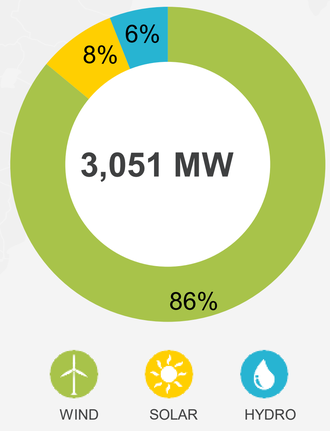
3,051 MW

2,613 MW	255 MW	178 MW	5 MW

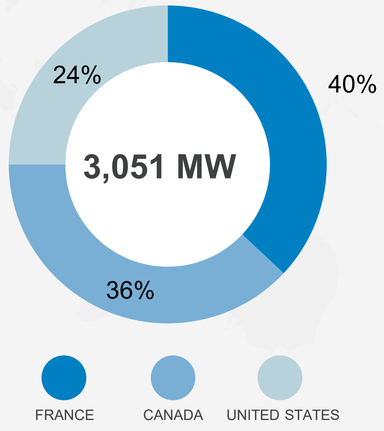
Portfolio of projects in development and construction

6.2 GW

Segment breakdown



Geographic breakdown



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Our Corporate Social Responsibility Commitments

Our strategy includes 10 CSR priorities that support the strategic directions of our plan.

E ENVIRONMENT

- Responsible use of Resources
- Biodiversity
- Climate change adaptation
- Greenhouse gas emissions (scopes 1 and 2)

S SOCIETY

- Inclusion, Diversity and Equal opportunity
- Health and Safety
- Community and territory consultation and involvement

G GOVERNANCE

- Responsible Corporate Governance
- Ethics in Business and Behaviour
- Sustainable procurement

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Why Battery Energy Storage Systems (BESS)

- Enables electricity to be stored during times of excess supply and released when the electrical grid needs it the most.
- Supports grid reliability.
- Reduces the cost for rate payers by reducing the reliance on natural gas and discharging energy when it is most needed.
- Provides an alternative to building new transmission lines.
- Reduces greenhouse gas emissions.
- Addresses the Ontario energy capacity need with its exceptional scalability, compact footprint and cost-effectiveness.

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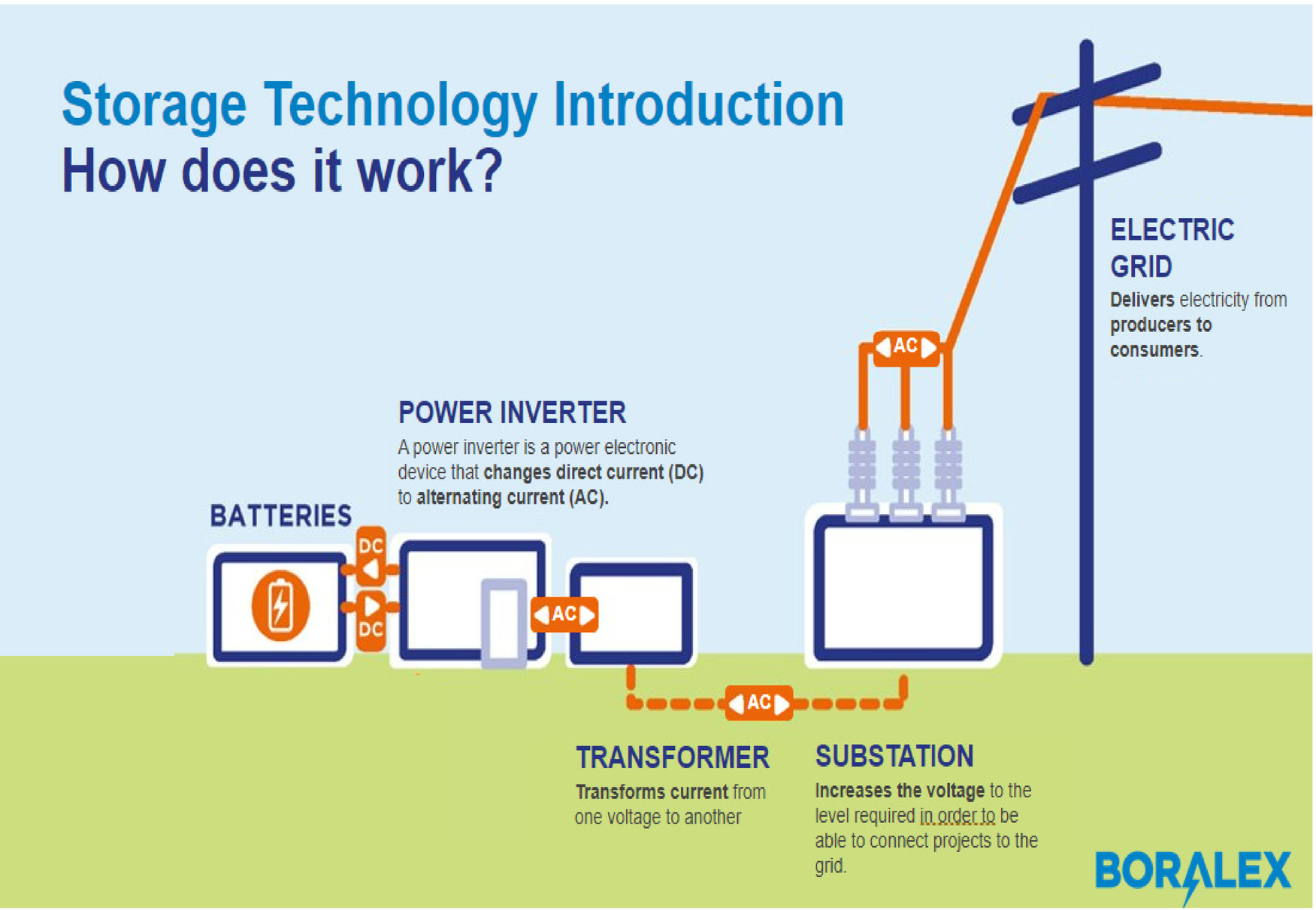
How it works?

Energy storage is the Process of capturing and retaining energy at one point in time, so that it can be used at another point in time.



- Energy is generated from sources including wind, solar, natural gas, hydro and nuclear.
- This energy enters the grid
- The energy is constantly metered and monitored by a battery management system.
- If there is a surplus energy, energy from the grid is converted from AC to DC for storage in the BESS.
- The energy is stored and the battery management system continuously monitors and controls the flow of energy and optimizes how batteries are charged/ discharged.
- When there is a need for more energy on the grid, energy is discharged from the BESS and converted from DC to AC to feed back into the grid.

Building a BESS Facility

The steps to construct a BESS facility include:

Civil Work: The ground is prepared to ensure the facility is built on a flat surface.

Perimeter Fencing: A fence and safety signage is installed around the perimeter of the facility.

Foundation Work: Concrete slabs or helical piles will be installed as foundations that will accommodate the battery modules and electrical components.

Battery Installation: Modular containers that host the batteries are installed in conjunction with a power conversion system (PCS) and transformer.

Electrical Components: Balance of electrical equipment includes a project substation with High Voltage metering, breakers, main power transformer and control building. Alternating current (AC) collection cables are used to interconnect the project substation to the battery system rows.

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What a BESS Project Looks Like

The footprint of battery energy storage infrastructure is small compared to other forms of energy.

Each BESS container is equipped with a monitoring system and automatic shut off systems for enhanced safety.

Boralex will work with authorities to ensure a safe and reliable system that meets all required regulations.

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BESS Benefits

Employment

Creating jobs in host communities: ~ 75 Jobs created during construction. **~ 1-2 full time employees** for operation.

Economy

Procuring local: Expect to procure **materials and services** from host communities (e.g. aggregates, civil works, machinery).

Consumer

Reduce energy bills: Significant benefits to **Ontario's ratepayers** by **reducing the need and cost** associated with using gas-fired power plants during times of peak demand.

Environment

Sustainable Energy: Fosters **penetration of renewable energies** by reducing carbon emissions from traditional energy systems (e.g. fossil fuels).

Supporting the Local Community

Boralex is dedicated to being a good neighbour and an integrated part of the community.

Every year we support local non-profit organizations, charities, and events that contribute to the vitality of the area.

We believe a successful project benefits the entire host community.

Context for Battery Energy Storage Systems (BESS) in Ontario

- Ontario is entering a period of emerging electricity system needs that will require new electricity resources **this decade**.
- To address this need, The Independent Electricity System Operator (IESO) is competitively securing up to **4,000 MW** through the **first long term request for proposals** process (LT RFP).
- In 2022, the IESO held an expediated process, E-LT1 RFP, securing up to 1,500 MW of capacity, 900 MW to come from energy storage.
- As part of the E-LT1 RFP, Boralex was **the Leading Awardee**, with **Two Storage Projects Totaling 380 MW Selected by IESO**

  ✓ Hagersville Battery Energy Storage Park is a 300 MW, four-hour duration battery storage project near the Town of Hagersville, Haldimand County, Ontario.

  ✓ Tilbury Battery Storage Project is an 80 MW, four-hour duration battery storage project near existing Hydro One infrastructure in the Municipality of Lakeshore, Ontario.

- The IESO is now holding another competitive procurement, **LT1 RFP**, to secure up to 2,500 MW of capacity, of which **1,600 MW** is to come from energy storage.

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IESO LT1 RFP Draft Procurement Schedule

May 2023
Draft RFP & Contract Posted

June 2023
LT1 RFP Deliverability Test Submission

September 2023
Final LT1 RFP & Contract Posted

September 2023
LT1 RFP Deliverability Test Results Concluded

December 2023
LT1 RFP Proposal Submission Deadline

Q1/Q2 2024
LT1 RFP Contract Award Announcement

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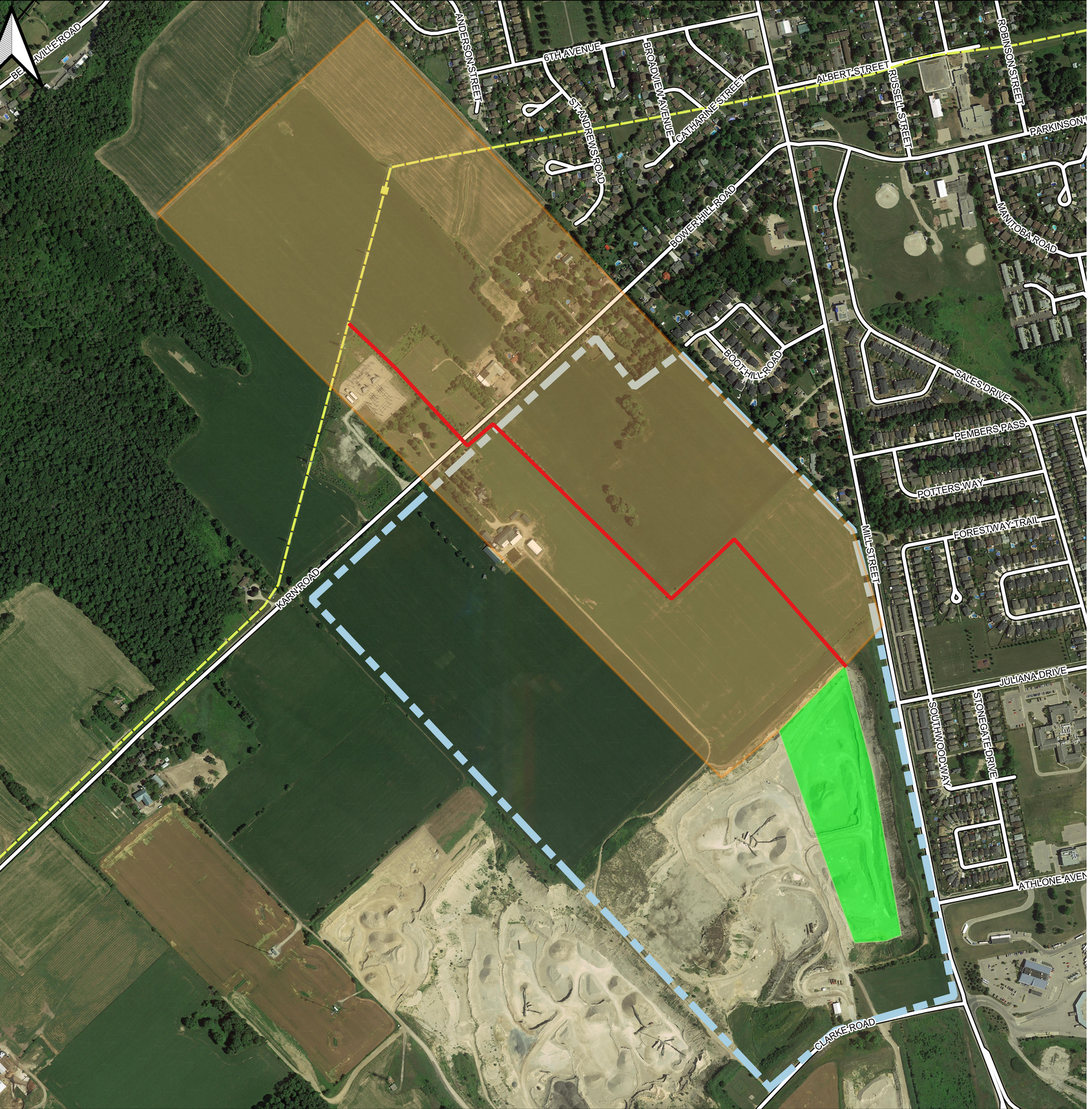
Why South-West Oxford

- Through ongoing discussions and the guidance from South-West Oxford, it was determined that an **ideal location** for a battery project would be to utilize depleted aggregate land.

- Utilizing aggregate-depleted land for a battery energy storage project **minimizes environmental impact and repurposes non-arable land**, reducing conflicts with agricultural or ecological interests.

- The inherent sound barriers formed by the surrounding aggregate pit walls make this **site naturally conducive to sound reduction.**

- After **outreach with several** area companies, Hydro One, aggregate operators, the landowner's family and South-West Oxford staff, the site was selected.



Oxford Battery Energy Storage Project

- Located in the **Township of South-West Oxford**
- Connecting to the existing 115kV transmission line.
- Capacity targeting **75-125 MW** capacity for 4 hours
- Approx. **12 acres** anticipated footprint

Project Site

Project area

Proposed Layout

Battery containers and associated infrastructure

Proposed line of interconnection*

*Alternate routes under consideration

Area under consideration for alternative interconnection routes

Existing infrastructure

Transmission line

Road

Railway

0 100 200 m

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Permitting Process Overview

Environmental

- **Class Environmental Assessment (EA)** for Minor Transmission Facilities to be obtained from the Ministry of Environment, Conservation and Parks (MECP)
- **Environmental Compliance Approval (ECA)** for noise to be obtained from the MECP
- **Municipal building permits** Other permits and approvals as determined by baseline condition characterization

Construction

Implement standard construction mitigation practices

Elements that will be carefully considered

- Air Quality
- Sound
- Environment & Wildlife
- Local Traffic Safety
- Fire Management
- Erosion and Sediment Control

Operation

Comply with requirements

Procedures that will be carefully enforced

- Emergency Response
- Fire Management
- Sound
- Environment
- Vegetation Management

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Anticipated Timeline

Q3 2023
Host Public Open House

Preliminary Environmental studies

Q1/Q2 2024
IESO award contacts

Q1/Q4 2025
Detailed Design & Engineering & Permitting

2027/2028
Anticipated COD

2023 2024 2025 2026 2027

ONGOING ENGAVEMENT PROCESS

Q4 2023
IESO RFP

Submission

Q2 to Q4 2024
Complete technical studies

Draft Environmental Screening Report

Q2 2026
Start construction

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Our Commitment to Fire Safety

Prevention

- Retained a **verified third-party Fire Safety Expert.**
- Selecting BESS equipment designed to meet **National Fire Code of Canada, NFPA 68 and/or 69 standards.**
- Batteries are designed and manufactured to **adhere to and pass evolving safety tests** prior to operation including **UL 9540 and UL 9540A.**

Monitoring & Detection

- Thermal **management systems (fans, ventilations, cooling)** to maintain safe operating temperatures.
- In equipment **safety controls (sensors)** to detect potential abnormal battery behaviours.
- Control room **monitors to detect potential** variances in battery behaviors.

Emergency Response

- Prepare **comprehensive emergency response plan** in collaboration with third-party Fire Safety Experts and local fire departments.
- Provide rigorous **Safety Training for first responders & onsite** personnel.

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Thank You!

Have more questions or looking for additional information?

Please visit Boralex's project website for Oxford

https://www.boralex.com/projects/oxford/

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