



# Proposed Trail Road BESS Project Community Meeting

Tuesday, November 28, 2023



# Welcome to the Trail Road BESS Community Meeting

Please sign in upon arrival – thank you for attending.

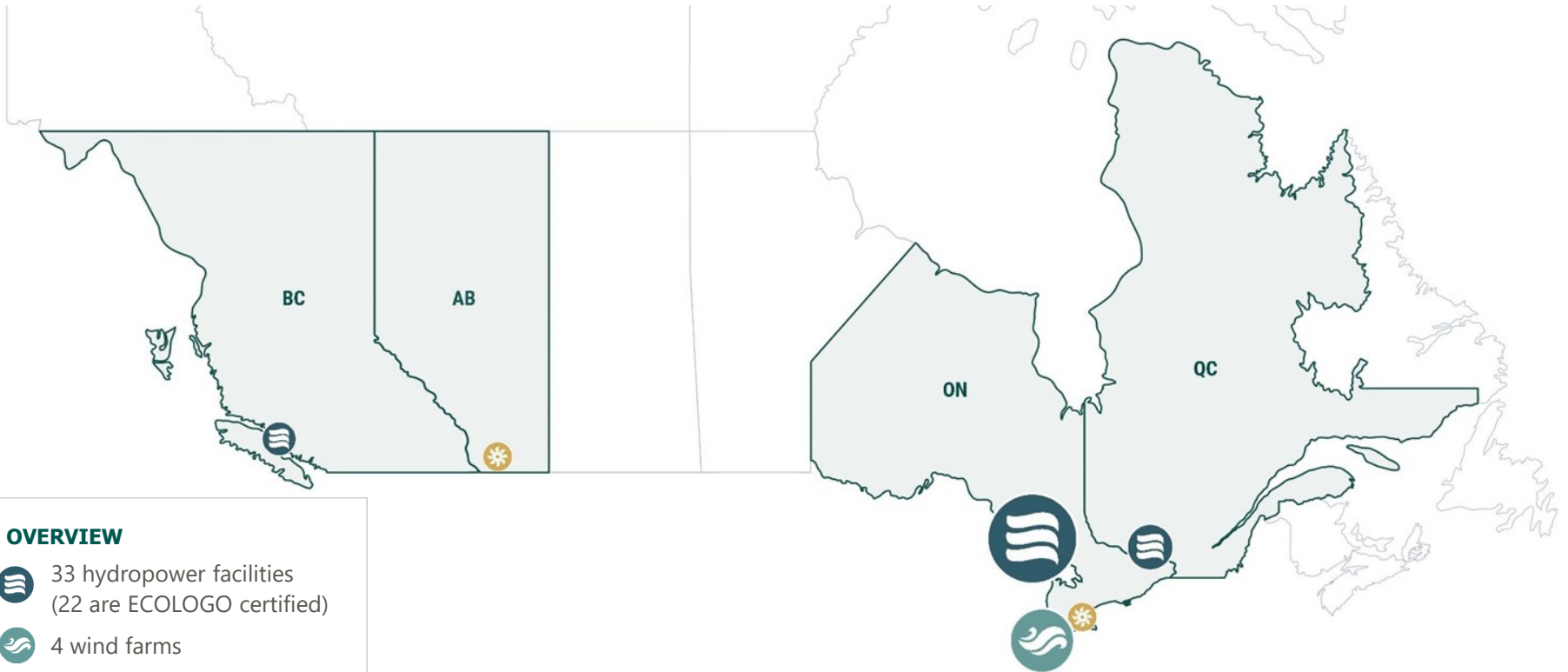
## Meeting Agenda

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Open opportunity to engage project team members	6:30 – 7:00 pm
Project presentation	7:00 – 7:30 pm
Question and answer session	7:30 – 8:30 pm

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# Canadian Presence



## OVERVIEW

-  33 hydropower facilities  
(22 are ECOLOGO certified)
-  4 wind farms
-  24 solar sites  
(commercial and distributed)

**TOTAL: 1,912 MW**

**QUICK  
FACTS**

**62**

Renewable facilities

**~500**

Employees

**100+**




Local charities  
supported

**600,000**

Homes powered

# Our Presence in Ontario

## OVERVIEW

-  21 hydropower facilities  
(13 are ECOLOGO certified)
-  4 wind farms
-  24 solar sites  
(commercial and distributed)

**TOTAL: 1,448 MW**



AUBREY FALLS, 162 MW



PRINCE WIND, 189 MW

# Our Philosophy

The foundation of our approach to doing business is a collaborative strategy to operating sustainably.



**Operating  
Sustainably**



**Partnering  
Locally**



**Developing  
Collaboratively**



# A Uniquely Positioned Partner

## Evolugen's capabilities include:

- Extensive experience owning and operating renewable assets
- Broad expertise in project development across multiple technologies
- Low-risk developer with reputation for delivering on-time and on-budget
- Significant experience partnering with host communities and First Nations
- Committed to long-term and sustainable partnerships
- Execution excellence in complex business environments
- Sophisticated in-house trading, risk management and control centre capabilities
- Robust Health Safety Security & Environment (HSS&E) policy supported by our Environmental, Social & Governance program



# Independent Electricity System Operator (IESO) LT1 RFP

**Ontario recently launched a competitive procurement process, called the long-term request for proposals, LT1 RFP.**

After more than a decade of strong supply, Ontario is entering a period of **emerging electricity system capacity needs**, driven by:

- Increasing demand
- Retirement of the Pickering nuclear plant
- Refurbishment of other nuclear generating units, as well as
- Expiring contracts for existing facilities

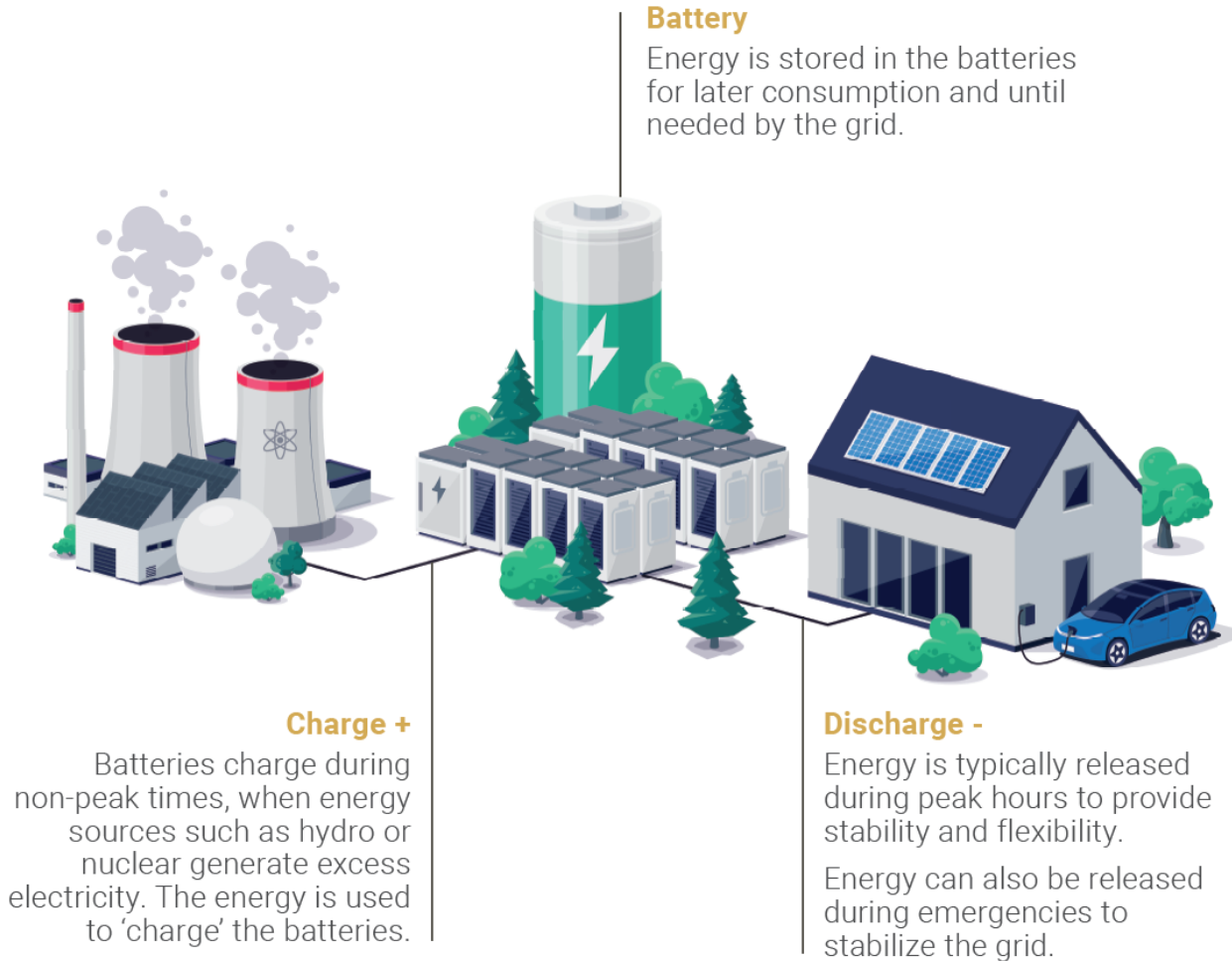
To address these needs, the Ontario Independent Electricity System Operator (IESO) is continuing their competitive procurement process through the Long-Term Request for Proposals for **~2,500 MW of year-round renewable energy** (1,600 MW of energy storage and 900 MW of natural gas).

- Projects must obtain all relevant permitting licenses and conduct mandatory environmental assessments to ensure compliance with current regulatory framework



# How BESS Projects Work

Energy storage adds grid capacity, enhances flexible grid operations and avoids greenhouse gas (GHG) emissions in Ontario by reducing the need for carbon-intensive power plants during times of peak demand.





# Trail Road BESS Project Overview

Project consists of installing battery modules, additional power equipment, light civil, safety, and security infrastructure.



In the  
**feasibility**  
stage

Sits on **~8**  
**acres** of an  
~53-acre site

**Interconnects** to  
the grid using the  
nearby 230 kV circuit

Adds up to **150 MW**  
of capacity and **600**  
**MWh** of energy storage

Annual local  
community  
contribution of **\$150K**



# What BESS Facilities Look Like



Operational 100 MWh facility, Texas

## Why this Location

**We're exploring all options to be an economic driver in the community, working with the City of Ottawa, First Nations and our partners to explore sustainable solutions.**

### **The Trail Road BESS Project:**

- Is positioned near an existing 230 kV transmission line with available capacity to support a 150 MW BESS
- Is located on Rural Land, avoiding development on agricultural land, to conform with the City of Ottawa's Official Plan
- Is situated more than 700 meters from the nearest residential home to lower the impact of noise and visual obstructions
- Is located 30 minutes from our head office



# Trail Road BESS Project Highlights



Project adds **renewable capacity and storage** to meet Ontario's rising energy demands, especially during peak-periods, reducing the chance for power outages.



Project represents a **local innovative low-carbon solution**, supporting sustainability efforts by **reducing reliance on higher carbon** intensive facilities.



Project is in the **feasibility stage**; subject to the IESO determining the Project to be best for Ontario ratepayers.



**Community benefit fund** will be established to ensure contributions from the Project into the local community to support various programs and initiatives, and additionally, will contribute **property taxes** to the City of Ottawa.

# Community Benefit Fund

We strongly believe in being an active partner in the Ottawa region.

- Trail Road BESS will establish a **community benefit fund of \$150,000 annually**, aimed at supporting local organizations that contribute to the well-being of the community.
- As part of our culture, we support local programs, initiatives and organizations, including the Ottawa Food Bank, the CHEO Foundation, Dress for Success Ottawa, Ottawa Riverkeeper and more.
- We would seek community feedback on how to establish and administer the fund to ensure there is local input on what organizations and projects are being chosen and supported.



# Environmental Considerations

We're committed to working with the community and authorities to ensure safe and thoughtful planning of the Trail Road BESS Project.

## Primary Considerations



Noise



Wildlife



Fire



Wetlands



Trees

If Evolgen is chosen by the IESO, we will need to **obtain all required approvals** and **permits from the City of Ottawa** and **provincial authorities**.



# Safety & Fire Mitigation

Our safety culture is exemplified by more than two decades of experience and our track record of zero employee or contractor fatalities.

## Core elements of our fire safety approach



### Prevent

- Technology and Supplier Selection (Tier 1)
- Design with Safety in mind
- Safety Certification and codes
- Testing for Performance and Safety
- Emergency Response Plan



### Monitor

- Battery Management System (BMS) to monitor temperature, voltage, and more
- 24/7 staffed monitoring facility, located in our Gatineau office
- Maintenance program to ensure adequate BESS health



### Respond

- Fire response training and coordination
- Water is the preferred suppressant for firefighting
- Work with local first responders to ensure safe and effective response in case of an emergency

# Battery System Make-up

Individual Cell



Cells within the Module



Module



Cabinet Set Up



# Prevent

Safety is applied at all design levels of battery systems – cells, modules, racks, enclosure, and Battery Management System. Rigorous testing and certification is required for all products.

## Equipment Design

- LFP Chemistry
- Cell Design
- Propagation Prevention
- Rack level electrical protection
- Fire Suppression System
- Ventilation System
- Appropriate clearances to prevent propagation

## Testing & Certification

- Battery Cells, Modules & Racks and Battery Management System
  - UL1973 & UL1642
  - Safety features and design
- Testing completed at cell, module and unit level
  - UL9540A tests behavior in thermal runaway event
- Battery System
  - UL9540 Container & System level safety
  - NFPA 855 Container Design and Site Design Safety

# Monitor

Facility will be monitored 24/7 by Evolugen's remote control center. Multiple levels of monitoring, including at the cell, rack, container and site level.

## System Monitoring

- Battery Management System
- Cell & Module Level Monitoring
  - Temperature sensors and protection
  - Overcharge/Over-discharge (voltage) sensors and protection
  - Overcurrent sensors and protection
- Container disconnect in event of alarm
- Container smoke, heat & temperature detection
- Any alarms will be sent to Evolugen, Battery Supplier and First Responders



# Respond

Evolugen will develop a comprehensive Emergency Response Plan and will work with the community and first responders to develop the plan and approach.

## Automatic Response

- System Alarms
  - Sent to Monitoring Facility & Fire Department
- System is shutdown automatically
- Ventilation is activated to vent any gases built up



## First Responders

- Advanced Training for First Responders
- Assess Situation & Coordinate Response
- Fire Suppression
- Water is the preferred suppressant due to cooling capabilities



## Contain

- Prevent spread to other containers
- Clearances
- Spray with water as needed
- Continue to monitor & respond as needed

# Project Timeline and Next Steps







**To ask questions, please use  
the microphone at the front**



**Thank you  
for attending**

