



**~1,000 employees worldwide**

Headquarters in Germany, 28 office locations worldwide



**Internationally active in 16 countries**

Europe, North & South America, Africa,  
Canada (Ottawa, Calgary, Halifax, St. John's)



**Core business is development & construction**

Wind & solar projects and battery systems



**\$7 billion invested in Projects**

Approx. 5,000 megawatts developed and sold



**21,000 Megawatts under development**

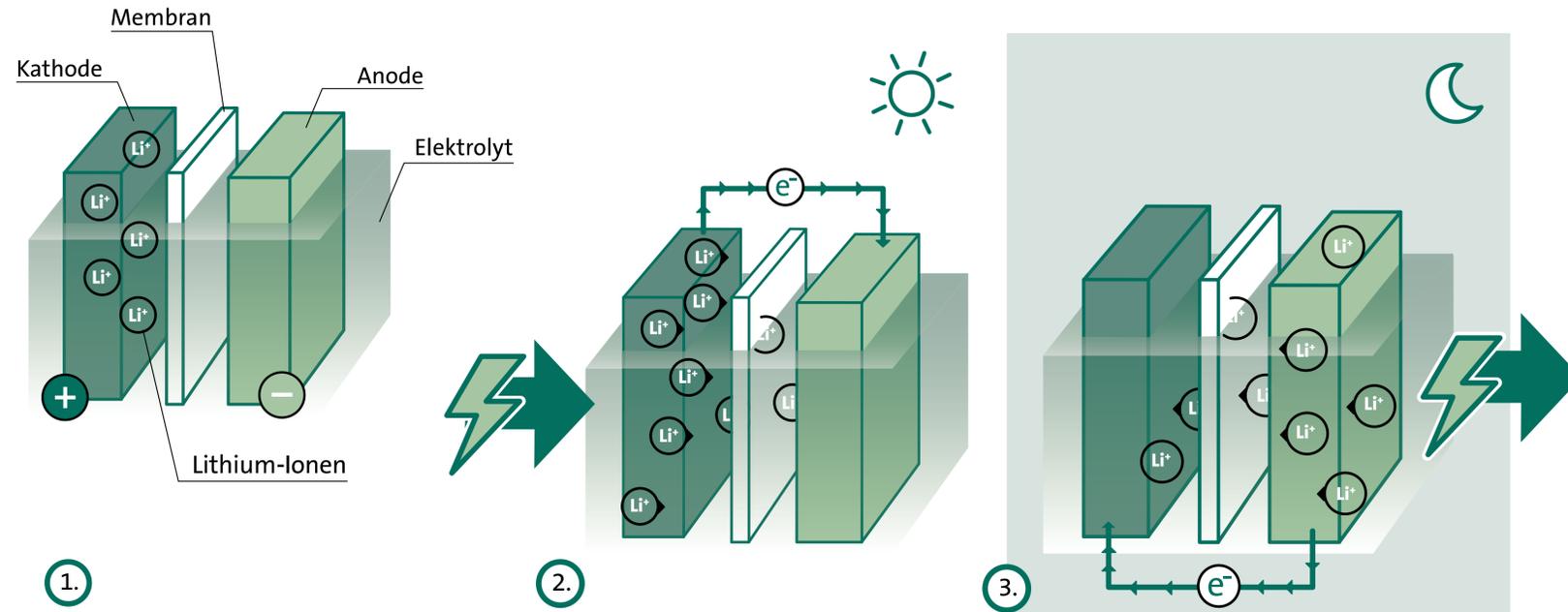
supported by \$200 million in equity & favourable financing



**Listed on the stock market since 2012**

Profitable since company's inception in 1996





The batteries are housed in containers about twelve meters long. It contains all the relevant components that a modern battery storage system needs to both optimize the availability of renewable energy and actively support the grid in critical situations.

The batteries work in a similar way to the rechargeable batteries in a laptop, except that they are much better at storing electricity.

- ① There are two electrodes inside. A distinction is made between the negative electrode (anode) and the positive electrode (cathode). They are surrounded by a conductive liquid, the electrolyte, and separated from each other by a membrane.

Lithium ions move between the cathode and anode and serve as reaction partners on both sides. When discharged, the lithium ions are located in the active material of the cathode.

- ② When an external voltage is applied, electrons move from the cathode to the anode via an external conductor. At the same time, the lithium ions are released from the cathode and enter the electrolyte.
- ③ From there, they migrate to the anode during the charging process and are integrated into the graphite grid.

This process continues until the battery is fully charged.

To discharge the battery, i.e. when the energy is required by a consumer, the process is reversed.

## Benefits for the Brock community

Positive impacts from the Project include:



Environmental benefit of **enabling more efficient use of local electricity infrastructure**, including solar generation in the Brock area, and supporting the long-term reliability of the Ontario electricity system.



The Project will provide **employment and contracts** for local goods and service providers, as well as property **tax revenue** for the Township of Brock



By strengthening local transmission system capacity, the project could also help to facilitate more economic growth in Brock region, and **improve local grid reliability**

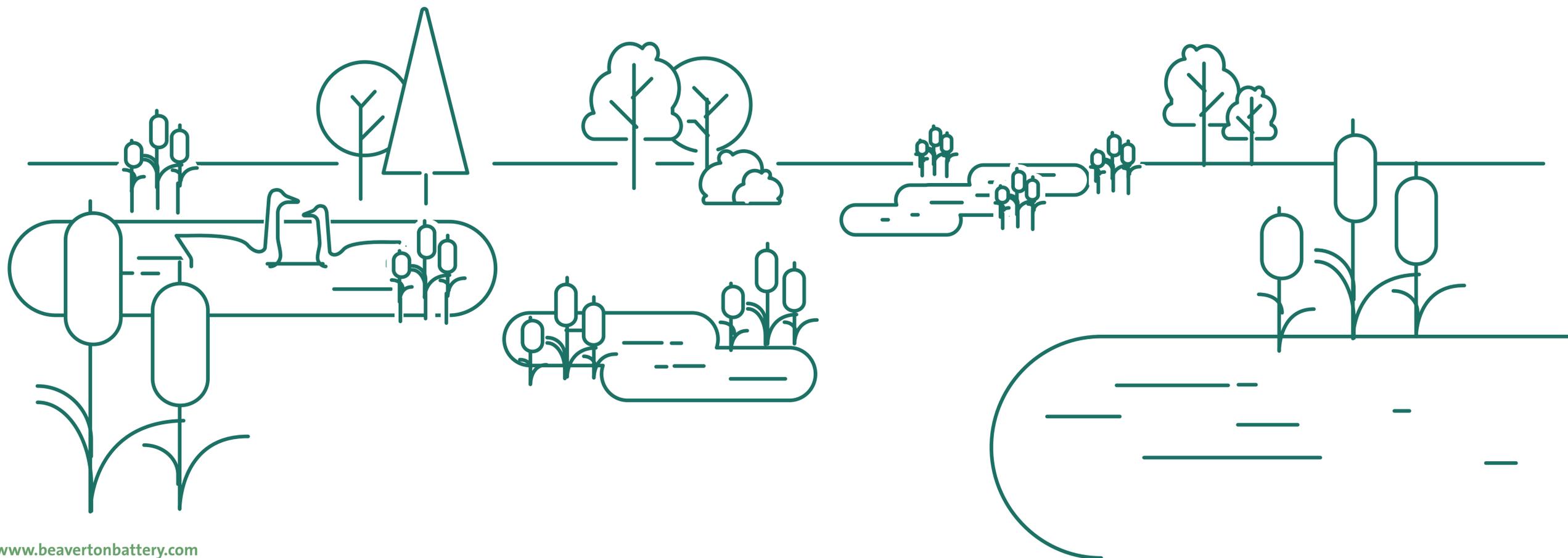


A **community benefit fund** will be established to support local initiatives.



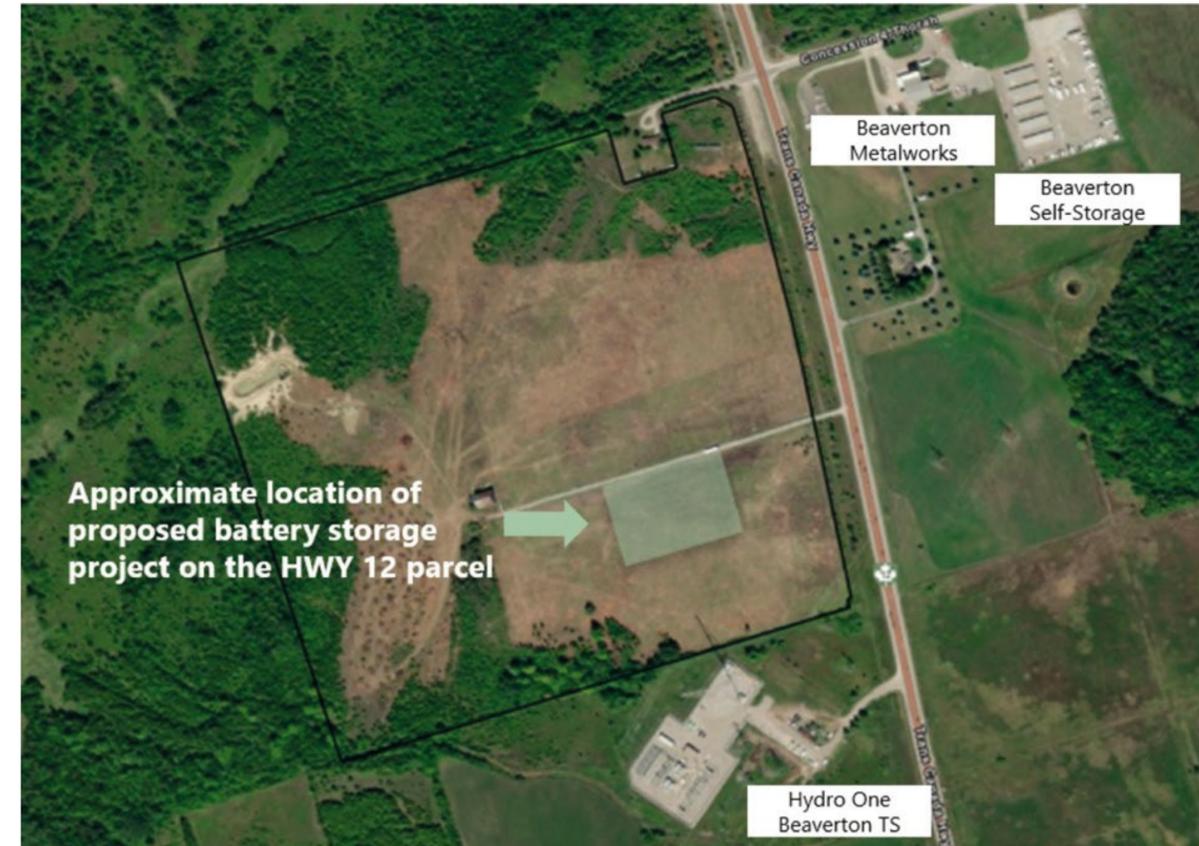
Kells, Northern Ireland  
50 MW / 25 MWh. Large stand-alone battery storage system for grid stabilisation  
Commissioning: 2022

- In order to move forward, the Project will require registration through the Air Emissions Environmental Activity and Sector Registry (AE EASR), an Environmental Compliance Approval (ECA) for stormwater runoff, and a Class Environmental Assessment (EA) for Minor Transmission Facilities, in accordance with the Ontario Environmental Assessment Act.
- ABO Wind commissioned Morrison-Hershfield to undertake an extensive program of monitoring and environmental assessment of the site throughout 2023. Based on this analysis, we are confident that the project would not adversely impact wildlife habitat. Wording TBC.
- Wetlands and forested areas of the 86-acre parcel will not be impacted by the development of the Project, which will be confined to the southeast corner of the parcel, adjacent to the Hydro One substation.
- Once operational, a BESS facility would be similar to the adjacent electrical substation in terms of its local impacts, with minimal noise and no air pollution.



- Property size - 86 acres
- Cultivated Land on Property - ~50 acres
- Project Operational Footprint - ~ 7 acres
- Land Classification - Class 2 (moderate crop limitations/moderate conservation practices required).

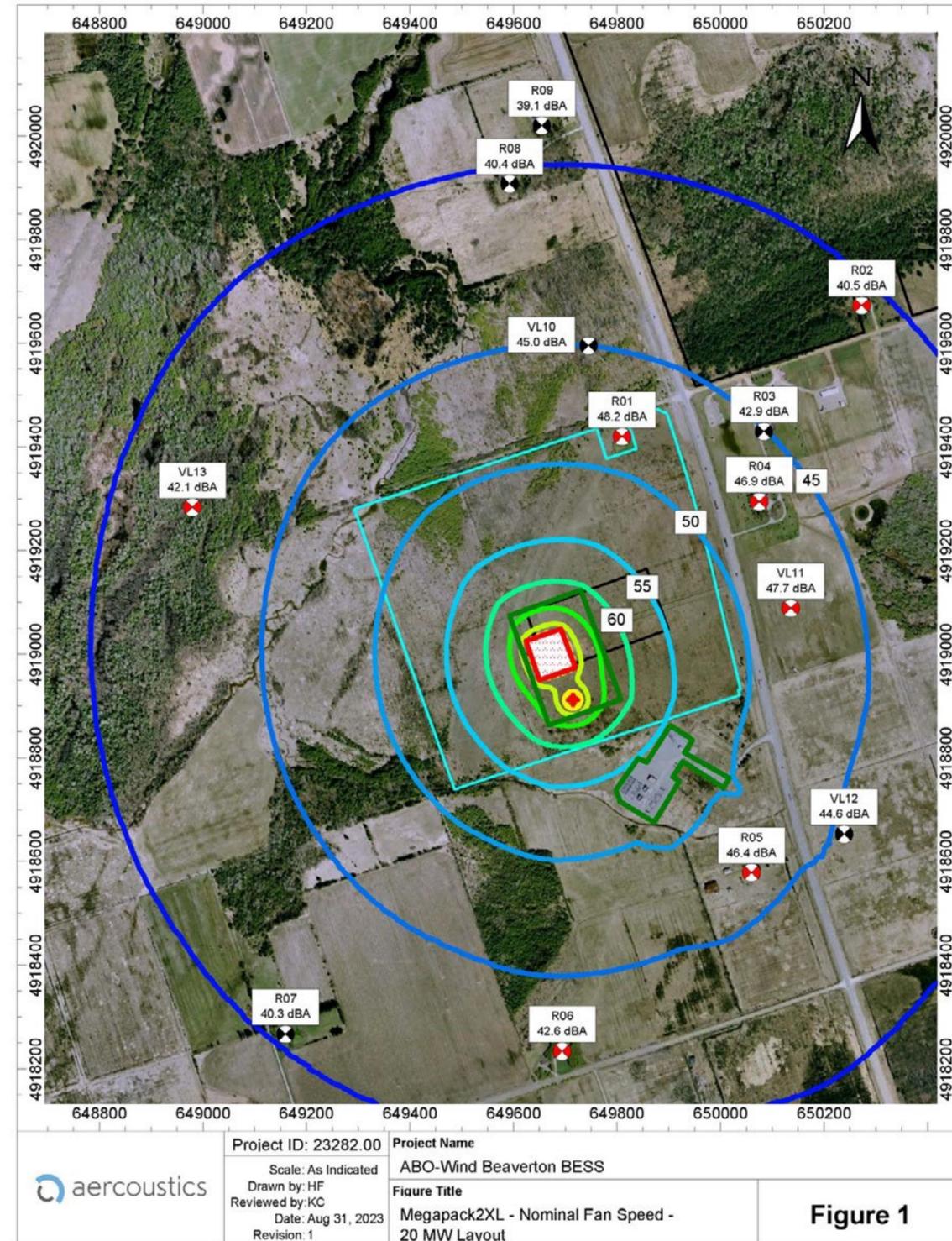
We are very mindful of the need to protect Ontario's prime farmland, and this project would enable the most efficient use of existing infrastructure: Batteries will help to avoid the over-building of new electricity generation, and by siting the facility directly adjacent to the existing Hydro One substation, we have sought to limit any landscape or other impacts associated with building new transmission lines.

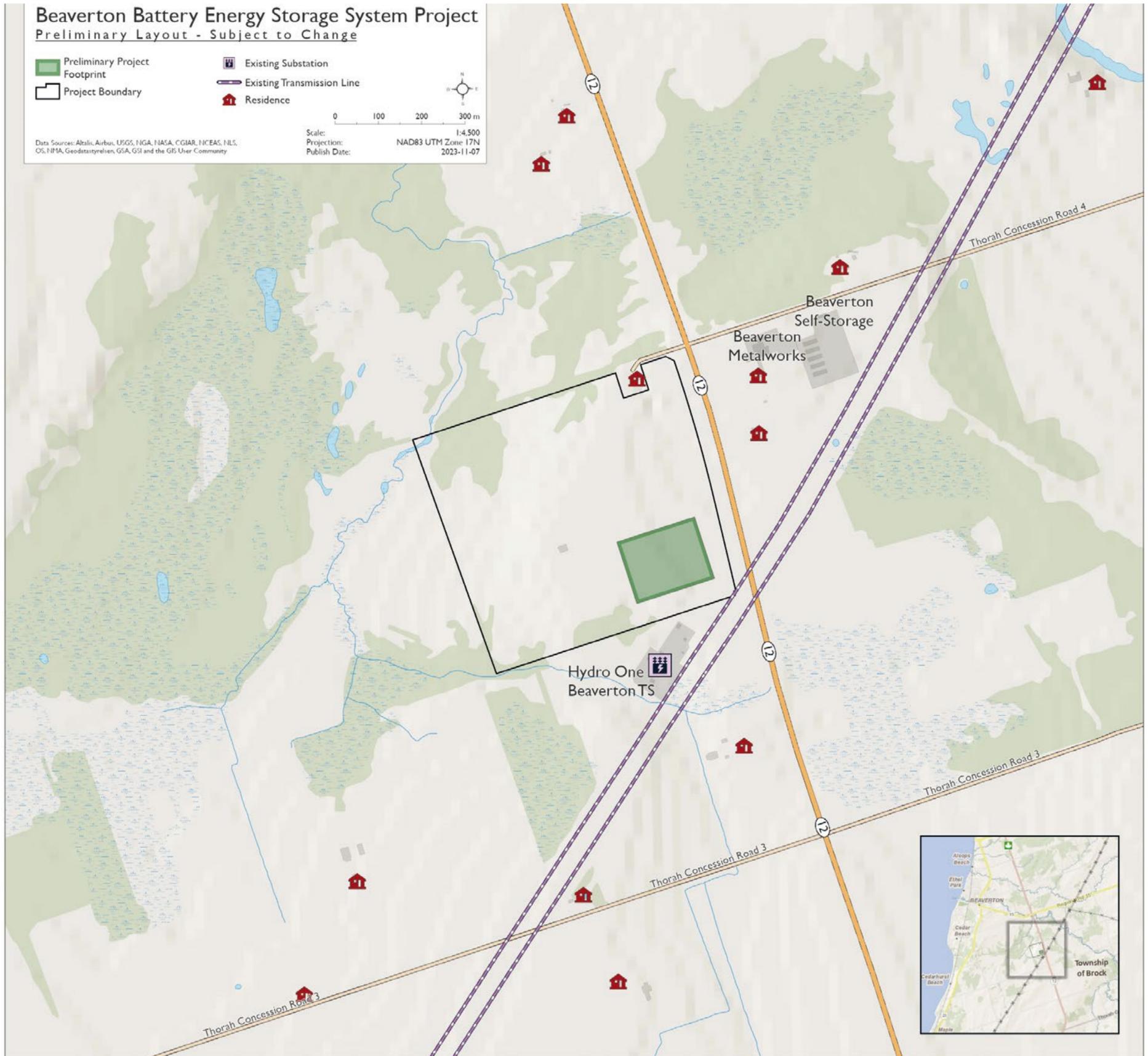


Some noise from the HVAC system and some of the electrical equipment for the BESS would be expected. In Ontario, noise emissions from any facilities including battery storage must meet extremely rigorous provincially-mandated limits. Preliminary acoustic modelling demonstrates that the Project will comply with provincial noise limits at nearby receptors:

- 45 decibels during the daytime (7am-7pm)
- 40 decibels during the nighttime (7pm-7am)

Noise emissions will be subject to a detailed acoustic assessment in accordance with Ontario Ministry of Environment requirements as part of the Project's environmental assessment process.





The Project would be located on **approximately 7 acres** of an 86-acre parcel, adjacent to the Hydro One Beaverton Transmission Station. The parcel is located north of Thorah Concession Rd. 3 and west of Highway 12.

The Project would connect to the existing 230-kV transmission line located on the site (**purple line on the map at left**)

# Beaverton Battery Energy Storage Project Overview

- ABO is proposing to develop an **80-Megawatt (MW)/320 Megawatt-hour (MWh) Battery Energy Storage System (BESS)** just south of Beaverton.

- The project would consist of an array of shipping containers, each containing energy storage cells, as well as inverters, transformers and other electrical components, and HVAC systems.

- The shipping containers would rest on foundations, with almost all the electrical wiring and communication cabling buried underground. The site area would be covered in crushed gravel and would be surrounded by a safety fence.



Construction site of the ABO Wind project Rechtenbach, Germany

## Anticipated development timeline

Activity	Timeline
Beaverton BESS project proposal submitted to IESO Long-term RFP process	December 2023
Project is awarded a 20-year contract	June 2024
Engineering, permitting, procurement, and continued community engagement	2024/2025
Construction is substantially complete; project is commissioned	2026/2027
Contract with IESO officially commences	May 2028



Battery storage Rechtenbach, Germany, delivery of the containers

## Why is this particular location being proposed for the project?

ABO anticipates significant value for Ontario's electricity system in having projects located in the Beaverton area, one of the fastest-growing regions in Canada. Our proposed site is immediately adjacent to Hydro One's Beaverton transmission station and a high-voltage transmission line, meaning our project would be able to fit in very well with existing grid infrastructure and the adjacent land use.

## What would be the fire risks associated with this project?

Fire incidence and propagation is, unfortunately, a risk with any electrical infrastructure. For utility-scale battery systems, these risks can be mitigated through facility design, battery unit spacing, and the use of state-of-the-art fire monitoring and suppression systems.

ABO will engage with local emergency response services to ensure that an Emergency Response Plan and training is developed in close collaboration with local authorities and service members.

## What will happen to the batteries at the end of their operational life? What about the site itself?

The project would be sited on only ~7 acres of Class 2 prime agricultural land (moderate crop limitations/moderate conservation practices required). We anticipate that approximately 50 acres of the remaining agricultural area would continue to be available for cultivation once the project is operating; The remainder of the 86-acre parcel is currently covered with trees and is not suitable for agriculture or a BESS facility.

By siting the facility directly adjacent to the existing Hydro One substation, we have sought to limit any landscape or other impacts associated with building new transmission lines.

## Would this project be located on prime agricultural land?

The project would be sited on only ~7 acres of Class 2 prime agricultural land (moderate crop limitations/moderate conservation practices required). We anticipate that approximately 50 acres of the remaining agricultural area would continue to be available for cultivation once the project is operating; The remainder of the 86-acre parcel is currently covered with trees and is not suitable for agriculture or a BESS facility.

By siting the facility directly adjacent to the existing Hydro One substation, we have sought to limit any landscape or other impacts associated with building new transmission lines.

## Would there be toxic chemical leaching or air pollution from the batteries?

No. The BESS would be designed, constructed and operated in accordance with the highest health and safety standards. The individual battery units would be completely sealed steel containers, each equipped with state-of-the-art monitoring equipment and safety systems that would immediately detect any abnormalities in voltage or temperature and automatically shut the unit down as a safety precaution.

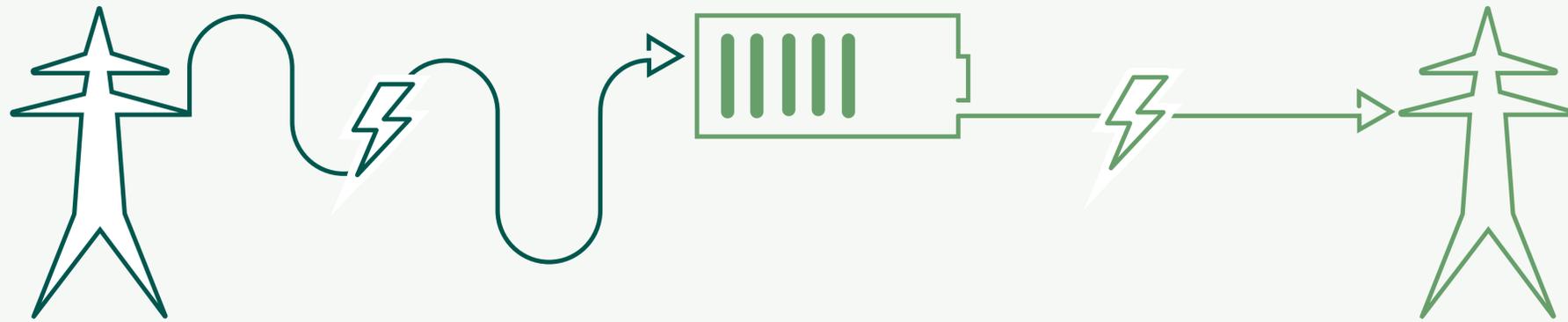
Battery storage does not produce air emissions or other pollution.

## Would there be noise emissions from the BESS?

Some noise from the HVAC system and some of the electrical equipment for the BESS would be expected. In Ontario, noise emissions from any facilities, including battery storage, must meet extremely rigorous provincially-mandated limits. Preliminary acoustic modelling demonstrates that the Project will comply with provincial noise limits at nearby receptors:

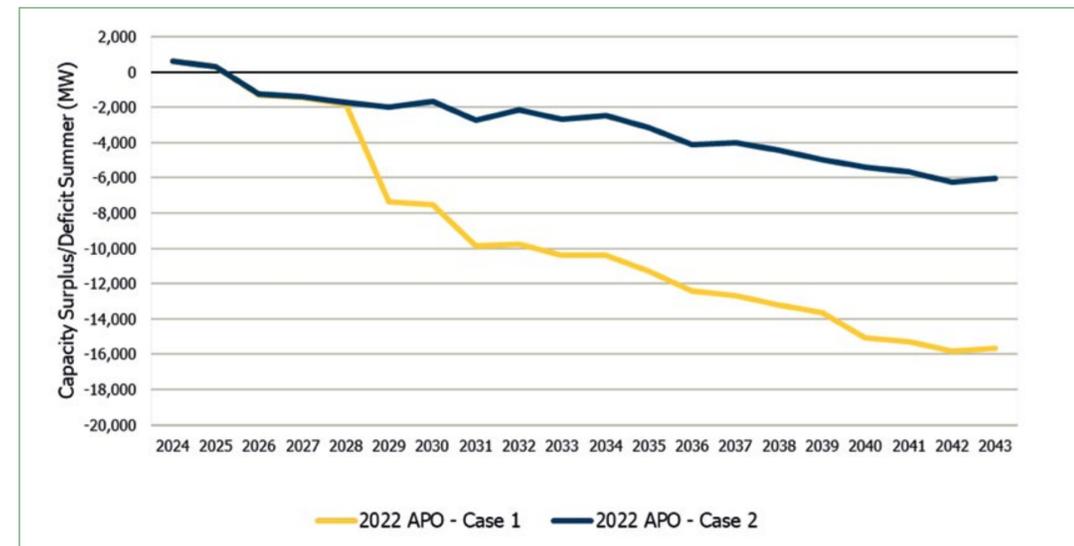
45 decibels during the daytime (7am-7pm),  
40 decibels during the nighttime (7pm-7am)

Noise emissions will be subject to a detailed acoustic assessment in accordance with Ontario Ministry of Environment requirements as part of the Project's environmental assessment process.



## Why is this battery storage project being proposed?

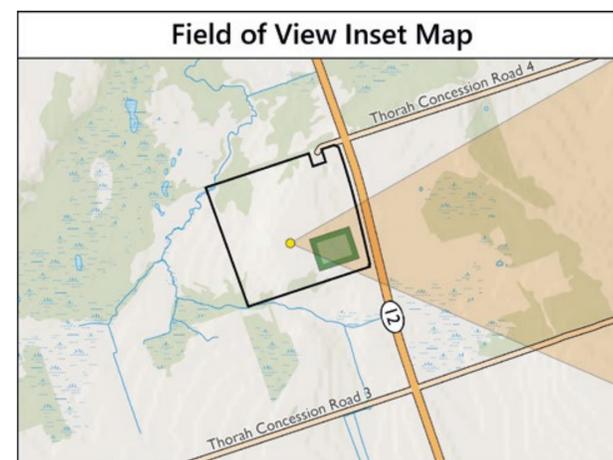
- After more than a decade of strong supply, Ontario is entering a period of emerging electricity system needs, driven by increasing demand, the retirement of the Pickering nuclear plant, the refurbishment of other nuclear generating units, as well as expiring contracts for existing facilities.
- Ontario's electricity system operator, the IESO, is currently undertaking a procurement process called the Long-Term Request for Proposals (LT-RFP) to procure new resources to meet the province's emerging reliability needs. In this round of the procurement, the IESO aims to procure up to 1,600 MW of battery storage from a variety of projects located across the province.
- To participate in this competitive RFP process, proposed energy storage projects:
  - Must be at least 1 MW
  - Must be capable of being continuously dispatched for at least four hours
  - Must be fully operational by May 2028



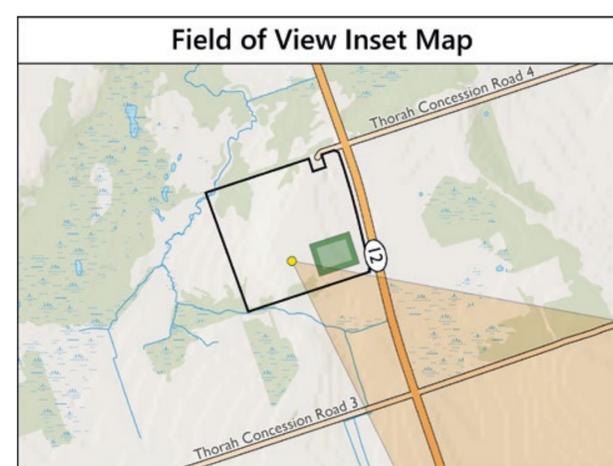
Above: As a result of rapidly growing electricity demand, the IESO projects a gap between available electricity capacity and the province's peak demand of at least 2,000 MW by 2028 (IESO Annual Planning Outlook, 2022)



View from the proposed site, looking east toward HWY 12



View from the proposed site, south toward the Hydro One Beaverton TS



View of the proposed site as it looks today, looking west from HWY 12

