Enbridge

Proposed Battery Energy Storage Systems in the Municipality of Kincardine, Ontario

October 2023

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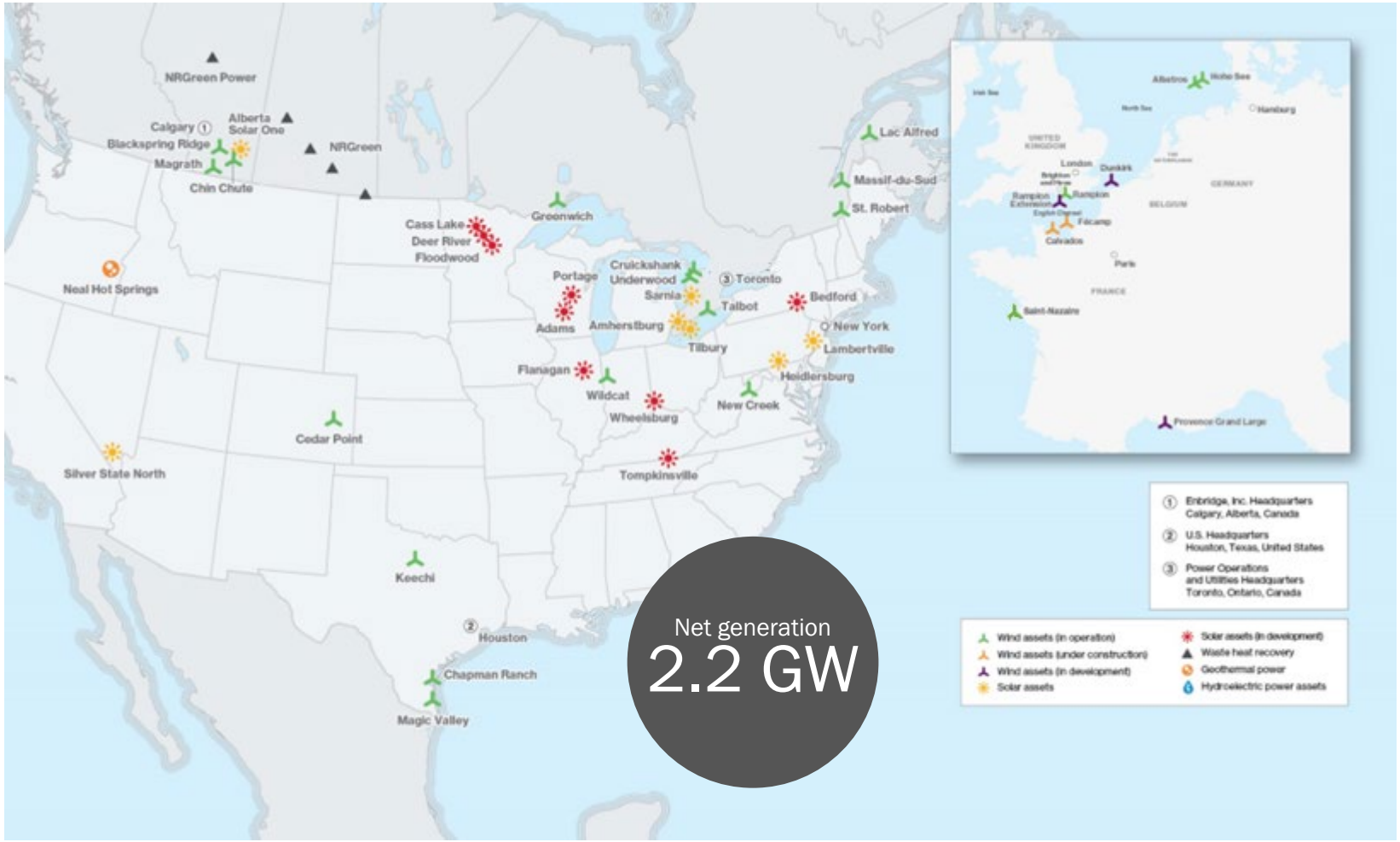
Agenda for today's meeting

- Enbridge's Renewable Power Activities
- Independent Electricity System Operator's goals and process
  - Energy needs in Ontario
  - Energy supply in Ontario
  - Capacity
  - Request for Proposals Process
- Enbridge's Proposed Battery Project in Kincardine, Ontario
- Next Steps in Consultation

Enbridge – Renewable Power

Renewable Power Footprint



Assets (operating & under-construction):

- **23** Wind farms - onshore & offshore
- **16** Solar energy operations
- **5** Waste heat recovery facilities
- **1** Geothermal facility

Over $8 billion invested in renewable power generation since 2002

Operating our assets

- Optimizing operations of our assets is a key priority.
- We self-operate many of our assets and collaborate with partners on others.
- We have strong operational experience and are working to deepen our capabilities every year.
- Focus areas include:
  - 24/7 monitoring to detect trends and alerts and keep assets online and operating
  - Standardizing safety and operational frameworks to ensure a consistent safety culture and send everyone home safe
  - Working with partners to maximize performance and efficient operations

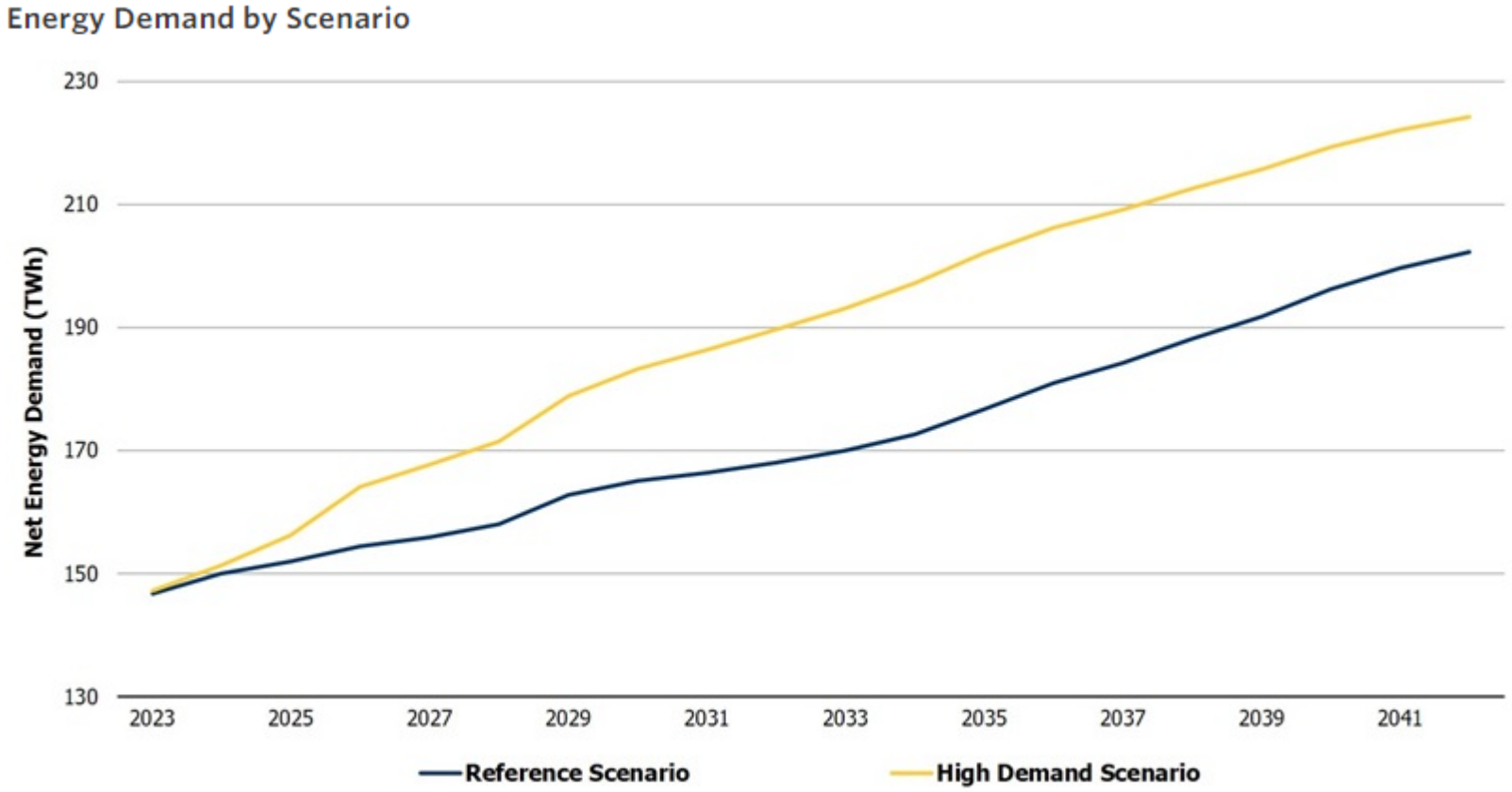
Ontario – Electricity Objectives

Ontario electricity demand

- Independent Electricity System Operator (IESO) is responsible for operating Ontario's electricity grid
- IESO must identify likely changes in demand and supply to create a forecast that it updates annually.
- IESO must then use those forecasts to ensure that Ontario ratepayers have an affordable, reliable supply of electricity to meet their needs.
- In recent years, a third priority has emerged, which is to ensure the electricity supply is sustainable, which also means a low-carbon, clean supply.
- To help keep rates affordable, IESO procures a portion of its electricity supply through competitive processes.

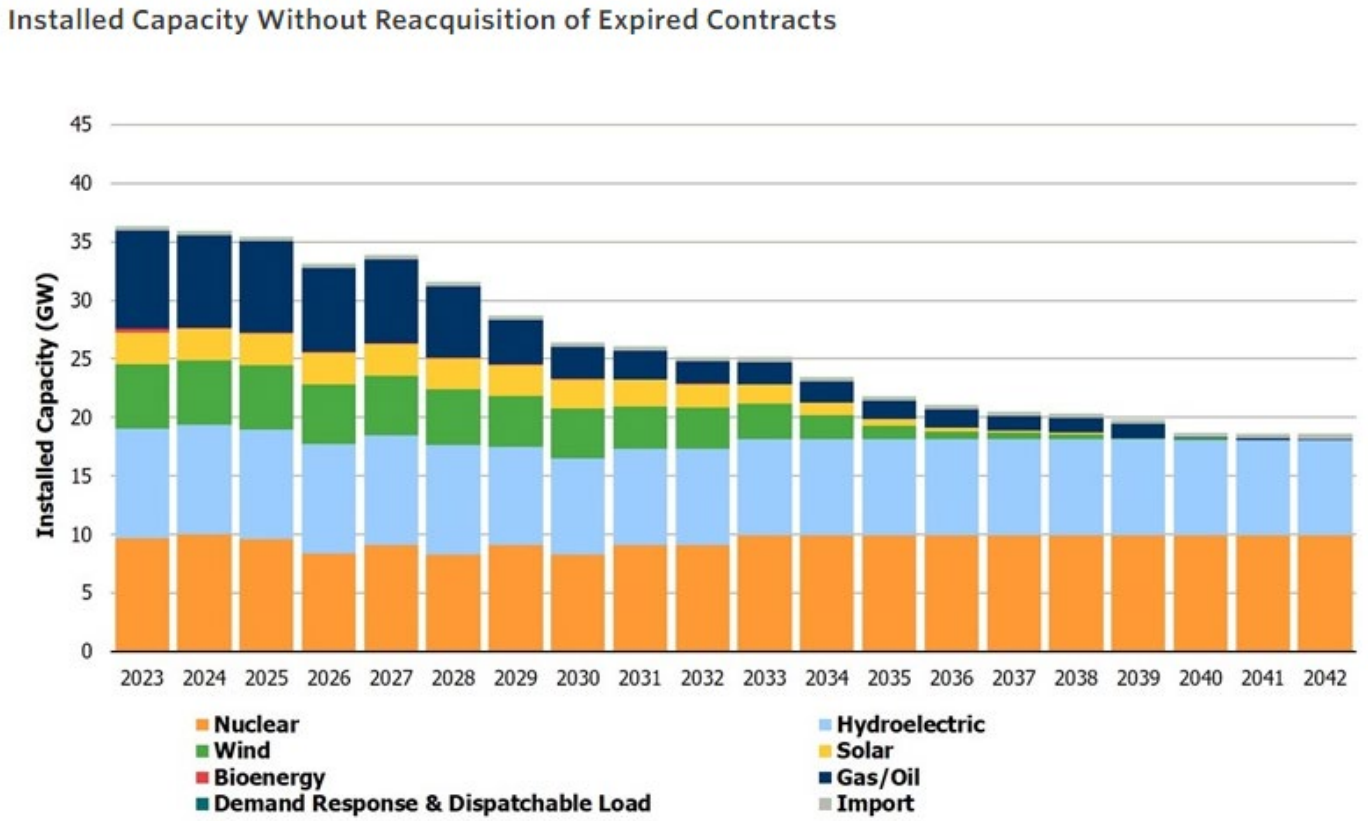
IESO - Demand

- Demand is increasing in Ontario due to population growth, electrification of certain sectors and vehicles, and economic growth, including in the mining, industrial, and agricultural sectors.
- Depending on the speed of electrification and electric vehicle adoption, this demand could climb very rapidly.



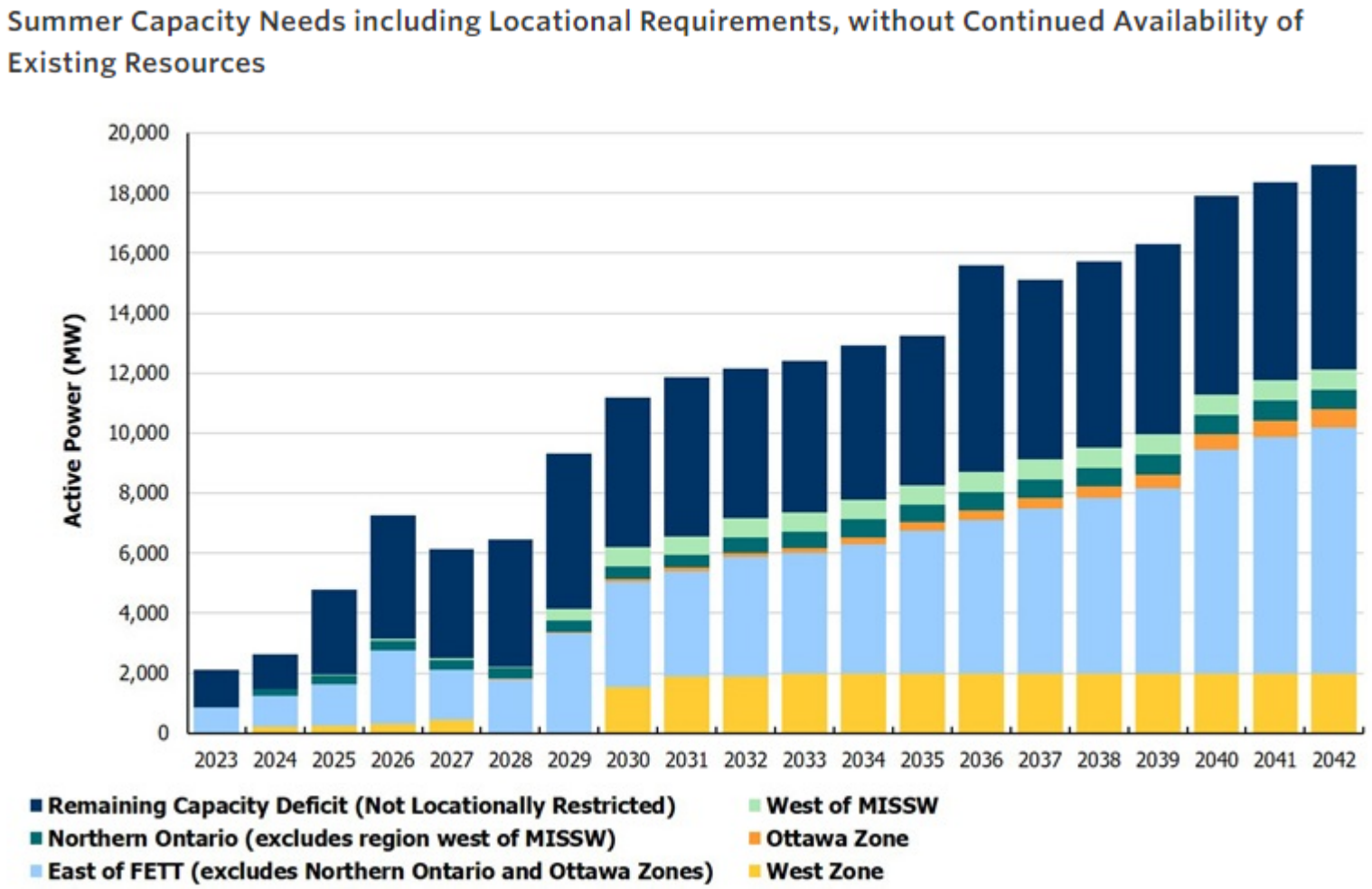
IESO - Supply

- Supply is anticipated to naturally reduce in the coming years, due to the retirement of the Pickering Nuclear Generation Facility, other nuclear refurbishment outages, and expiring contracts, particularly in oil and gas fired generation.
- Some of this could be preserved by re-contracting with wind and solar but clean energy regulations could mean that the retiring gas will not be replaced.



IESO – Capacity needs

- In the short-term, the retiring nuclear and gas capacity will lead to a capacity shortfall on a regular basis, particularly in the summer months as early as next year, but really picking up in 2025 and 2026.



Battery Energy Storage Systems

- BESS is on the rise around the world as nations work to replace coal and oil-fired generation with lower-carbon electricity resources, including wind and solar power.
- BESS helps balance the electricity grid by charging when demand is low and feeding electricity into the grid when demand is high and/or generation from other resources is low.
- The United States had over 9.5 GW of BESS installed as of Q1 2023, according to American Clean Power, and that number is expected to continue growing.* The existing capacity helps balance the renewable energy projects in California and Texas that provide significant portions of their energy supplies and helped them avoid capacity shortfalls this past summer.
- Global installed BESS is expected to reach more than 80 GW in annual new developments by 2030, a lot of which is in China and India.
- Canada is lagging behind other countries on BESS, in part because of our excellent nuclear and hydro resources. There are a handful of projects in Ontario, Saskatchewan and Prince Edward Island, but the federal government and all provincial governments are working to enable power storage development to help the transition to net-zero.

Link to American Clean Power Facts on Storage: https://cleanpower.org/facts/clean-energy-storage/

IESO Procurement

- IESO recently procured nearly 1.2 GW of new capacity and plans to purchase a further 2.5 GW in 2024 for projects that must enter operation in May 2028, but will be incentivized to enter operation in May 2027:
  - 1,600 MW will come from Battery Energy Storage Systems (BESS)
  - 905 MW GW will be from non-storage technologies
- The projects awarded contract under these two RFPs will be focused on capacity, which means that projects do not have to produce new electricity.

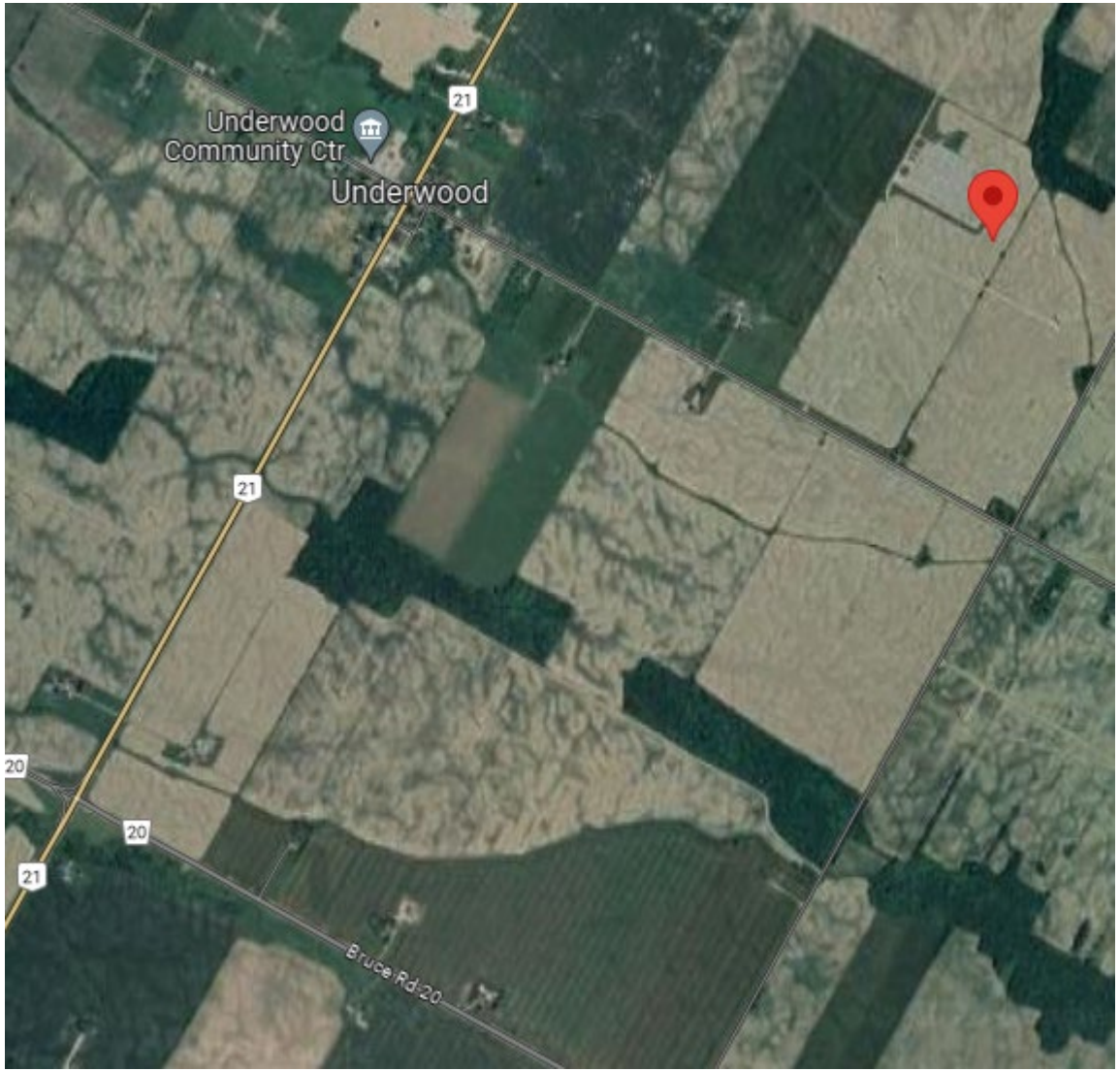
As a result, Enbridge is exploring a Battery Energy Storage System (BESS) project in Kincardine.

- Battery Energy Storage Systems (BESS):
  - Connect to the grid to charge like any electricity purchaser
  - Charge the battery when electricity demand is low, e.g., overnight when people don't have their lights on or have their air conditioning turned down, largely from excess wind and nuclear power.
  - Feed electricity back into the grid when electricity demand is very high and/or when generation is low as dispatched by IESO.

Enbridge – BESS proposed for Kincardine

Land requirements

- Nameplate capacity would not be more than 150 MW
- Equipment being finalized
- If the project is 150 MW, would require approximately 15 acres
- Enbridge-owned land at the Underwood Wind project (PIN 332820048)



Battery Energy Storage

View: from Southeast of the project, looking Northwest

Battery Energy Storage

View: from Concession Road 6, Southwest of the project, looking Northeast

What to expect

- In the event that this BESS project is selected under IESO's RFP in Summer 2024,
  - We will undertake environmental studies, land use studies, and interconnection studies to ensure the project can be built safely for employees, the community, and the environment.
  - Construction would likely begin in 2025 and would include laying foundations for the batteries to rest on at the site, and then trucking in the batteries.
  - Unlike some other projects you may be more familiar with, BESS projects are fairly straightforward to build as the batteries are built offsite and are moved in, like small shipping containers.
  - There would be increased traffic on the road and some related noise and dust, but relatively little compared to other major construction work.
  - This work would offer jobs opportunities to local vendors for the studies required, site preparation, fencing, substation construction, foundation work and other civil work at the site.
- We cannot yet discuss dollar amounts, due to the competitive bid process, but we anticipate the project would also result in significant new tax revenue for Kincardine.

Community Engagement

Next Steps

- We have held our first public meeting for potentially impacted community members to learn more about the project and ask questions. We published a project website that we will keep up to date where people can review meeting materials and minutes at any time. We are also available to answer questions at any time.
- IESO will select winning projects in Summer 2024. In the event we are successful, we will hold a follow-up meeting on the project, including final size and technology details, and additional opportunity for comments and questions.
- We will undertake consultations directly with Indigenous communities and will continue those in line with the above.
- We will be completing the fulsome Provincial Class EA environmental review process for this project.

Request

- Under IESO's process, projects are more likely to be successful if they have received Municipal Support. This does not in any way exempt the projects from Municipal or Provincial permitting and study requirements.
- We request that Council pass a resolution of support that includes the following language

  The Council of the Municipality of Kincardine supports the development, construction and operation of Enbridge's battery energy storage project (LT1RFQ-012-3) of up to 150 MW, located on PIN 332820048.*

- We will then ask the municipality to sign a letter of municipal support referencing the resolution, so that we may submit that letter along with our bid package to IESO in early-December.

*Property Legal Description: LT 9 CON 7 BRUCE EXCEPT PT 5, 3R1791; S/T R31063; S/T EASEMENT IN GROS S OVER PT 1 3R8516 AS IN BR10098; KINCARDINE

Questions?

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