

Question & Answer Session

South Branch Battery Storage Project – Public Community Meeting

Location: Matilda Hall (4421 Brinston Rd, Dixons Corners, ON K0E 1C0)

Date and Time: November 16, 2023, 6:00 – 8:00 PM

Land/Siting

- 1) **Q: Is the property already purchased?**
 - A. No, the property has not been purchased by EDP Renewables Canada. There is an agreement between the company and the landowner to develop, construct, operate and decommission the project.

- 2) **Q: We are not getting power; the city of Ottawa is. What's the point of putting it here?**
 - A. The province of Ontario and the Independent Electricity System Operator's (IESO) request is for transmission-connected energy storage. These projects will provide additional functional security to the transmission system which allows the IESO to store excess electricity for distribution when needed. Electricity which is discharged into the transmission system will be dispatched to the local distribution companies for consumption by residential and industrial customers.

- 3) **Q: Outside of the capacity available on the existing transmission lines, what has brought you host this open house in front of the citizens of South Dundas?**
 - A. EDP Renewables Canada is already well-established within the municipality of South Dundas through the operation of our South Branch Wind Project which has been operating since 2014. Furthermore, the Independent Electricity System Operator (IESO) indicated through the Long Term I Deliverability Assessment that the transmission circuits situated in the municipality have the capacity for battery energy storage system (BESS) projects to be connected. The IESO has indicated based on the responses from the Deliverability Assessments that there are many circuits throughout the province that do not have capacity for projects to connect.

Permitting

- 4) **C: From what I understand, battery storage units are not permitted through the class Environmental Assessment (EA) process:**
 - A. In the case of most battery energy storage system (BESS) projects, a Class EA is triggered by the transmission line or transformer station of a project and not the battery storage units; however, the permitting approach that will be taken will include all aspect of the BESS project in order to have a complete environmental assessment. For instance, a noise impact assessment will be completed under this process and will not only consider the noise from the project transformation substation, but also noise sources coming from the battery containers (HVAC system and inverter). Moreover, an Environmental Activity and Sector Registry (EASR) is also requested for the whole battery storage facility.

Safety and Emergency Response

5) **Q: Have you done a critical hazard analysis specific to this site and region? The reality is that a fire triggered at this facility is difficult to contain. A hazard analysis is going to identify your pinch points and identify the hazards in our community. Have you taken measures to address those hazards?**

A. Battery energy storage system (BESS) in North America go through extensive testing and comply with several international standards to even be considered for commercial use. Therefore, BESS are designed in a way to greatly minimize the chance of any fire, and designed in such a way that if any fires occur, they are easily controlled. By design, lithium-ion BESS installations are very safe, and incidents occur in less than 1% of installations. Before being allowed to be installed in North America, the batteries are purposely heated, pierced, damaged, and intentionally set on fire. The goal of these tests is to understand how they fail, and to perform design modifications to ensure that they fail safely and in a predictable manner. These tests and modifications are done before the battery manufacturers obtain the approvals necessary to be able to sell their battery.

They produce carbon monoxide, carbon dioxide and water vapour when burned - similar to a fire in a painted building or a mechanic shop when automotive fluids and aerosols burn in a fire. There are lithium-iron phosphate batteries (LFP) – they do not contain cobalt or other heavy metals and conflict minerals. They do contain some graphite.

Community consultation is an important part of the development process, and this event is the first of many future consultations with the community. Engagement with the municipal staff, council and emergency services will be needed to successfully development the project.

6) **Q: You mentioned consulting with the fire department, but I think consultation is not sufficient, resourcing is an issue. Those resources in emergency response need to be fortified. You come to the community and put something in that's intrusive – the website is pretty and talks about engagement strategy. It doesn't talk about conversations with the local fire dept, or the risks involved. A bolt of lightning will change the dynamic of how we respond. How are you going to fortify your energy resources?**

A. Responded to by SunGrid: I work for SunGrid in EPC – we are a builder of batteries energy storage systems, based in Cambridge, Ontario and have installed systems in provinces and territories such as Nova Scotia, Ontario, British Columbia, and the Yukon. An Emergency Response Plan is in place that the operator will need to adhere to in the unlikely event of an emergency situation. In the case of fire, the operator will work with the fire department and direct the emergency services to limit the risk of fire spread to additional areas outside of the battery unit. The fire department will not be required to apply water to the burning unit as the unit will burn out itself. Any runoff from liquid materials in the impacted unit will be caught within the concrete catchment basin beneath the battery unit. The risk of fire propagation is also limited by designing the units

with effective spacing as to minimize the chance of spread.

7) Q: I read an article about a site in the US - why did they evacuate the entire town? Because they let it take care of itself. I've got a page of over 60 incidents on the failures of these tests/events. Samsung, LG, all the big players are involved. All of theirs are blowing up. What about the noise these things make? Do any of you live in this community? I am clear that it's a non-zero chance, and an emergency may happen soon, or it may happen later. 70% of people who live here get their daily drinking water from aquifer. Where is that water going to go from the adjacent units?

A. It is important to note that incidents of battery fires are a very small subset of all of the battery storage projects which have been deployed in North America, typically less than 1% of all installations. We unfortunately do not hear of all the installations that have been operating safely and successfully. The standards and environmental laws regulating battery energy storage system (BESS) installations are stricter in Canada than in the US. In the unlikely event of a fire, the unit being impacted will be allowed to burn in a controlled manner, and the surrounding units cooled so that it does not spread to neighbouring battery units. The affected unit should not have water sprayed on it directly. Any liquids discharged from the unit during the thermal event will be captured in the catchment basin below the unit for removal once the event has completed.

8) I've heard these units can burn up to four days or longer. I have a severe concern about this; these batteries need to be close to a metropolitan city for the additional resources a full-time fire department can provide.

A. Each manufacturer provides recommendations in the unlikely event of a fire which typically includes electrically isolating the impacted unit and allowing surrounding units to be cooled to prevent spread to other battery units, or any surrounding area. A failed battery energy storage system (BESS) may burn for 1-4 days and letting the impacted unit burn out is the recommended method of dealing with such an emergency. The Long-Term 1 Request for Proposals includes a number of projects which could be sited in, or near urban areas within Ontario. As noted earlier in the discussion, the units would produce carbon monoxide, carbon dioxide and water vapour if under a fire scenario.

9) Q: Will there be runoff into the water table? Will there be a protective dam around the whole site to prevent this?

A. The units are designed to contain any potential liquids that could leak from battery units, so they do not leak out of the facilities. This includes catchment basins under the units which are designed to catch any liquids which may be discharged during a thermal event. Projects are also required to complete a Stormwater Management Plan which aids in the development of the design to minimize stormwater runoff during the operation of the project.

Noise

10) C: How will you ensure that noise impacts during operations will not bother neighbours?

A. The project will adhere to strict provincial noise guidelines and sound level limits for occupied and vacant lot receptors. In Ontario, the noise perceived by residents will not

exceed 40 to 45 dBA depending on receptors location. A Noise Impact Assessment will be completed to ensure compliance. Mitigation options are available to reduce noise impacts such as noise barrier.

11) Q: Are the fans running 24/7?

- A. No. Each battery unit has a cooling system installed which runs during charging and discharging of electricity. The batteries will charge only during time periods where there is an excess amount of production on the transmission system and discharge when there is an electricity need. The fans may intermittently run in extreme cold or extreme heat to warm or cool the batteries if needed.

12) C: There was a BESS site canceled due to noise in Long Sault. Each container was created noise that was higher than 40 decibels.

- A. We are unaware of this project.

13) Q: What's the timeline to build one of these? What about noise during construction?

- A. The Independent Electricity System Operator (IESO) Long Term 1 Request for Proposals requires projects to be operational no later than April of 2028; therefore, the project will be installed and commissioned before that date if awarded with a contract. During construction, the project is required to comply with local noise by-laws or regulations and standard working hours. Moreover, construction mitigation measures would be implemented to reduce impacts as much as possible (e.g., reduce speed limit on site, regular equipment maintenance, etc.).

Decommissioning

14) Q: What is going to happen to them when their life is over? What is going to happen to them 20-30 years from now?

- A. There is growing industry for battery recycling in North America. Companies are incentivized to recycle the batteries and are seeing a 95% recovery rate. All batteries from the site will be recycled at the decommissioning phase. There are multiple recycling facilities that would be bidding to recycle the batteries at their end of life. Some of the facilities are:
- i. Li-Cycle (Canada) with plants in Kingston (ON), Rochester (NY, USA), Tuscaloosa (AL, USA), Gilbert (AZ, USA), Germany (Magdeburg)
 - ii. Redwood Materials (USA), Camp Hall, Berkeley County (CA, USA)
 - iii. Lithion (Canada), St. Bruno-de-Montarville, Montreal operational by year end 2023
 - iv. Retrieval Technologies (recently acquired Battery Solutions and Heritage Battery Recycling) with facilities in Trail (BC, Canada), Lancaster, Baltimore, Ohio, Brea, California (USA)

Visual

15) Q: It's a huge eyesore. Doesn't matter how you camouflage it. Are there lights on all night/security on site?

- A. Lights will be installed as required for the safety and operations of the facility, but in a manner which reduces visual impacts such as directional and sensor-activated lighting for the safety of inspection and maintenance personnel. Mitigation options will be explored if the project gets built to reduce impacts.

16) Q: What does the land look like when the batteries get taken off?

- A. A decommissioning plan will be established as part of the permitting process to ensure adequate decommissioning following the life of the project. The project lands would be restored to its previous use which typically includes the removal and re-distribution of topsoil to the areas which hosted the facility.

General

17) Q: Are there cooling units?

- A. Yes. Each battery unit has a cooling system installed which runs during charging and discharging of electricity.

18) Q: If EDP's entire company goes under, who is taking care of the project?

- A. EDP Renewables has financial commitments and contributions towards the decommissioning of the battery project. These funds and securities are intended to contribute to the decommissioning requirements of the project. The financial contributions that we make to our landowners is not an industry standard and is a part of EDP Renewables' commitment to participating landowners. It is typical for proponents to enter into landowner agreements where a decommissioning bond is posted which can be accessed in the highly unlikely event that EDP or another controlling owner fail to meet the decommissioning requirements of the agreement.

19) C: There are many proposed sites in our area. A number of companies doing the same thing that you are tonight, and we don't understand why so many projects are being proposed here.

- A. The intention of our open house was not to have you feel attacked. The Province of Ontario has identified a need for projects. EDP Renewables Canada was aware of the request for proposals and due to our experience in the province and this municipality, we decided to participate in the bid process. It is important to note that of the deliverability assessments that were submitted to the Independent Electricity System Operator (IESO), nearly half of the projects that passed are in the eastern region of the province.