

**From:**

**Subject:**

**Date:**

Beaverton Battery Energy Storage Systems - a resident with questions.

November 13, 2023 1:44:40 PM

---

My name is Kristen Mellegers and I'm a Beaverton resident. I understand that there are two proposals for Battery Energy Storage Systems and I have a few questions and comments to bring forward.

I am aware that the province is seeking 1500 megawatts of energy storage and that the IESO has identified numerous potential locations related to their readiness to connect to the existing infrastructure. I am also aware that this appears to be expedited for two reasons 1. the decommission of the Pickering Nuclear Power Plant and how it will affect the grid, and 2. Ontario's plan to be carbon neutral in 2050.

None of these issues are being disputed.

My first question is - What is the cost to the community?

This is a bit of a loaded question, but will this project impact our property taxes? increase our insurance rates? will any construction of the facility impact local wells? will the facility require us to improve local fire departments in terms of equipment and training - and how does that affect tax rate? will there need to be improvements to infrastructure related to water mains in the event of a disaster? will there be any significant increase in disruption related to fire suppression equipment (say 100 or so HVAC units running consistently)? after the 20 year contract, who pays for the decommission of the BESS? how will the facility be monitored and maintained, locally? - and in the event of an emergency, what types of early interventions can the community count on?

My second question is - Are lithium-ion batteries our only option?

I am aware that Ontario has not had a BESS fire as of yet, but the very real risk exists. New York State experienced [3 BESS facility fires](#) in 2023 alone, and other facilities [worldwide](#) injuring or killing multiple first responders ([also here](#)).

Even though Ontario has an excellent track record, we can not ignore the risk.

Additionally, lithium ion batteries are being touted for their reduced carbon impact - however studies only show their reduced impact related to electric vehicles, and the otherwise impact using internal combustion engines and their tailpipe emissions.

To ignore the environmental impact of global open-pit lithium mines resulting in deforestation, contaminated groundwater, and the release of anywhere from 2 to 40 metric tonnes of carbon\* is tantamount to greenwashing.

An analysis published September 13 in McMaster University's research focused on health and wellbeing shows [How zinc-ion batteries may solve our renewable energy storage problem](#) which highlights:

For Canada to reach the decarbonization targets set in the Canadian Net-Zero Emissions

Accountability Act, including a grid powered by 90 per cent renewable electricity, the deployment of zinc-ion batteries will be crucial.

Studies have shown that for renewables to become the source of 90 to 95 per cent of all electricity, the cost of energy storage must be below US\$150/kWh.

Modern lithium-ion systems are still sitting around US\$350/kWh

Zinc-ion batteries, on the other hand, could solve the cost and abundance issues. Using inexpensive, abundant materials such as zinc and manganese not only makes them cheaper to produce, but lowers risk from supply chain disruptions or material shortages that affect lithium-ion materials such as lithium and cobalt.

The annual production of zinc globally is over 100 times that of lithium. Not to mention that demand for lithium and cobalt is anticipated to outweigh the supply within the next decade.

The article goes on to state the safety of Zinc-ion batteries removing the risk of fire and explosion.

I would like to state that I am not opposed to a Battery Energy Storage System, but the speed at which these projects are introduced, given the little time residents are able to respond, is troublesome.

We look to our local leaders and are counting on the local government to hear our concerns and advocate for us.

-Kristen Mellegers

\*Crawford, I. (2022, March 1). How Much CO2 Is Emitted by Manufacturing Batteries? Department of Mechanical Engineering. Retrieved November 13, 2023, from <<https://meche.mit.edu/news-media/how-much-co2-emitted-manufacturing-batteries>>

\*Romare M., Dahllöf, L. (2017, May). The Life Cycle Energy Consumption and Greenhouse Gas Emissions From Lithium-Ion Batteries. Swedish Energy Agency. Retrieved November 13, 2023, from <<https://www.energimyndigheten.se/globalassets/forskning--innovation/transporter/c243-the-life-cycle-energy-consumption-and-co2-emissions-from-lithium-ion-batteries-.pdf>>

**From:**  
**To:** [Clerks](#)  
**Subject:** Re: Beaverton Battery Energy Storage Systems - a resident with questions.  
**Date:** November 26, 2023 10:59:49 AM

---

I would like to state that some of my questions were answered at the info- session and as a result I am now entirely opposed to these projects. I see that there is very little value to the community and all of the risk and cost. Please include this attachment to my original email.

Thank you.

-Kristen Mellegers

On Fri, Nov 17, 2023, 11:51 AM Clerks <[Clerks@brock.ca](mailto:Clerks@brock.ca)> wrote: