BATTERY STORAGE PART OF OUR
Future-Focused Portfolio

battery storage system

QUICK INFO SHEET

yukon energy

Yukon Energy is building a grid-scale battery storage system in the Whitehorse area. As one of the projects identified in our 10-Year Renewable Electricity Plan, the new battery is another way we are delivering sustainable, reliable and affordable electricity to Yukoners. It will help us maximize the amount of renewable resources we use to meet peak demands for electricity, burn less diesel fuel and improve the reliability of our grid.

why energy storage?

On Yukon's isolated power grid, one of the largest challenges we face is meeting peak demands for electricity. This often happens during winter months when water levels are low and customers' need for electricity is high. That's why we have liquefied natural gas (LNG) and diesel engine generators. We turn to them when there's not enough water to generate the power Yukoners need. With the new battery on our grid, we can store extra electricity when there's a lower demand for it and then use it when the demand goes up.

benefits of energy storage

It's sustainable
Uses more renewable electricity and less diesel to meet peak demands for power.

Cuts carbon emissions
Expected to reduce 20,000 tonnes of emissions between 2023 and 2043.

Saves money
Running diesel engines less means fuel and engine maintenance savings.

Improves grid reliability
It will be especially useful during sudden outages or decreases in demand.

Restores power outages faster
It can be turned on at the flip of a switch during a power outage.

how much will this project cost?

The battery will cost between $27 and $30 million to build.

$16.5 MILLION will be covered by the Government of Canada's Green Infrastructure Stream.

$10.5–13.5 MILLION will be covered by Yukon Energy.

We will submit an application to the Yukon Utilities Board to include our share of this investment in rates after we install the battery and it's operational.

what kind of battery will we use?

The most common battery chemistry for grid-scale battery energy storage systems is lithium ion. That's because it is flexible and can be charged many times in its lifetime.

what will the battery look like?

Our battery energy storage system is expected to be about the same width and half the length of a CFL-sized football field, and the height of two people. It will be made up of container units that are quick and easy to install and made for our northern climate.

what will the site look like?

The battery site will be fenced and will have monitors, cameras, and alarms to provide security.

are these batteries safe?

A lithium ion battery is generally considered safe technology. It uses no acid, which eliminates spill and contamination hazards. The risk of fire is very low.

As with any energy storage system, the risks increase if the system is not properly operated or maintained. To manage fire and safety risks, we will:

- select a vendor with **a reliable battery system**
- use **qualified technicians** to do the installation and carry out routine maintenance
- install a monitoring and **fire suppression system** that is **specifically designed for batteries**
- **prepare a fire response plan** for the local fire department and emergency response staff

what sites are we considering for the battery?

We'd like to install the battery close to our existing facilities to reduce construction costs and to make it easier and more effective to operate.

We're looking at three sites that appear to fit that bill. One is on Ta'an Kwäch'än Council Settlement Land and the other two are on Kwanlin Dün First Nation Settlement Land.

SITE A

On Kwanlin Dün First Nation land beside our Takhini substation at Km 8.5 North Klondike Highway

SITE B

On Ta'an Kwäch'än Council land across from our Whitehorse LNG facility on Robert Service Way

SITE C

On Kwanlin Dün First Nation land at the north east corner of the Alaska Highway and Robert Service Way

how will we select the site?

When choosing the battery's final location, we'll consider the following.

- distance from existing generation facilities and transmission lines
- space and technical requirements needed to operate and maintain the battery safely and efficiently
- environmental and socio-economic factors
- partnership opportunities
- input from Ta'an Kwäch'än Council, Kwanlin Dün First Nation, their development corporations and the public
- the site's readiness for utility development

how to get involved

There are several ways you can get more information and provide your feedback on this project.

IN-PERSON COMMUNITY MEETINGS

Tuesday, September 15
Hootalinqua Fire Hall
6:30–8:30 pm

Wednesday, September 16
Yukon Transportation Museum
6:30–8:30 pm

Thursday, September 17
Best Western Gold Rush Inn
6:30–8:30 pm

Submit a question or comment to yecbatteryfeedback@stantec.com.

Complete the online comment form available on our website, yukonenergy.ca/battery.

VIRTUAL COMMUNITY MEETINGS

Tuesday, September 8
7–9 pm

Thursday, September 10
5:30–7:30 pm

Email **yecbatteryfeedback@stantec.com** or visit **yukonenergy.ca/battery** to get the virtual meeting link and log-in details.

COVID-19 protocol

All meetings will include a short presentation and an opportunity for participants to ask questions. If COVID-19 circumstances should deem in-person meetings unsafe, we will replace them with virtual meetings. Please check our website for updated information.

HELP KEEP US
COVID-SAFE

how will we use stakeholder and public input?

We want to hear your comments about this project and the potential sites. Comments received will be summarized in a What We Heard Report that will be made public. The report will be used by our project team and Board of Directors to the determine the final site for the battery and to refine how the site will be designed.

next steps

We will accept comments until September 20, 2020.

Once we have finished the engagement, we will:

- select a final site;
- finish the site design;
- choose and order the battery; and
- get all necessary approvals and permits.

We expect the battery to be operational in 2022.

CONTACT INFORMATION
email: yecbatteryfeedback@stantec.com or communications@yec.yk.ca
website: yukonenergy.ca/battery

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