

# Low snow packs plus low water means more electricity generated using thermal fuel sources

Hydro plays a key role in the Yukon's electricity mix. In 2018, we used water to generate almost 94 per cent of the electricity needed by Yukoners connected to the Yukon grid. Thermal fuel sources like liquefied natural gas (LNG) and diesel were used to generate the other 6 per cent of Yukoners' needs.




## Current Situation – less available water

Running a hydro operation means being at the mercy of available water. We have three hydroelectric generation facilities in Whitehorse, Aishihik and Mayo.

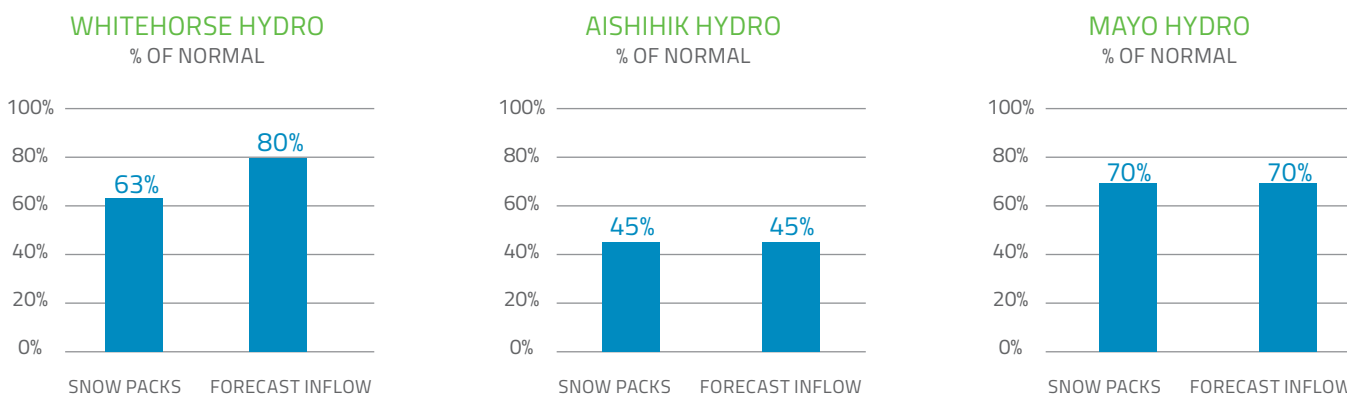
Over the past two winters, warm temperatures and dry conditions in much of the Yukon has resulted in lower than normal snow pack and water inflows at all three of our hydroelectric generation facilities.

## Reservoir inflows and why they are important

Generating hydroelectricity requires moving water. The higher the inflows into a hydro facility's reservoir, the more water is available to generate electricity. Three sources of water contribute to reservoir inflow levels:

-  > Snow pack;
-  > Rain; and
-  > Glacier melt (for Whitehorse only; not Aishihik or Mayo)

## March 2019 Snow Pack and 2019 Forecast Inflow Levels



**Inflows at Whitehorse Hydro include anticipated glacier melt.**

**Source:** Yukon Snow Survey Bulletin and Water Supply Forecast March 2019

## What it Means

### – more LNG will be needed

With less water available to generate electricity, we'll need to use more LNG this spring and fall to meet electricity demand. We anticipate needing to generate an additional 50 to 100 GWh of electricity using LNG in 2019, depending on the amount of rain we get this year. The more rain we get, the less LNG we'll need to use.

## The Challenge

### – Yukon's isolated grid

Operating an isolated power system means we can only rely on ourselves to generate the electricity Yukoners need 365 days a year. We do not have the option of buying and importing electricity from other provinces. This means that when local renewable sources of electricity are not available to meet demand, we must use reliable fuel sources like LNG and diesel to fill the gap.

## How You Can Help

### – conserve electricity

With every simple conservation choice we make, we reduce the need to use LNG and diesel to generate electricity and save more of Yukon's resources for the future. Make simple choices – turn off lights when you leave a room, take a five-minute shower instead of 10, use LEDs instead of incandescent lights. In addition to being good for the environment, these simple acts also save you money each month by lowering your power bill. Electricity conservation makes your life better — in real, everyday ways.

## The Future – a reliable, sustainable and affordable energy system

We are committed to securing a reliable mix of affordable and sustainable electricity sources today to enable Yukon's prosperity now and in the future.

Renewables play a dominant role in our energy mix with almost 94 per cent of electricity on the Yukon grid being generated using water in 2018. LNG and diesel also have an important place in our electricity mix. They help ensure reliable and cost-effective electricity is available when it's needed at peak times, during emergencies and when other sources of electricity aren't available.

As demand for electricity in the Yukon continues to grow, we continue to work on ways to maximize the generation sources we have, help Yukoners use less electricity, and build and integrate more renewable energy sources into the grid.

