

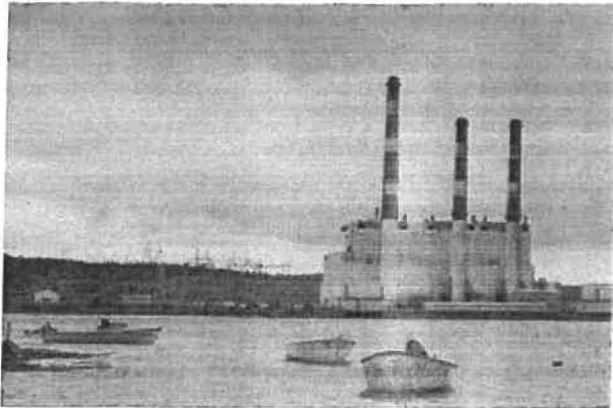
Shuttering Holyrood station

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None



In this photo taken from near the bridge truck in Seal Cove Wednesday, the Newfoundland and Labrador Hydro -- Nalcor Energy -- power generating energy plant in Holyrood can be seen across the harbour from Seal Cove. The plant is shut down for its annual summer maintenance. — Photo by Joe Giblin/The Telegram

It's not about the emissions — it's about the high cost of oil at the Holyrood thermal generation station.

Shutting down the oil-fired generating station in Holyrood is a central theme of the \$6.2-billion Muskrat Falls project as Nalcor Energy forecasts higher Bunker C heavy oil prices in the future.

At the same time, Nalcor expects power consumption to steadily increase as people switch to electric heat, newly built homes use electric heat and industrial customers, such as Vale's Long Harbour nickel processing plant, come onstream.

The provincial energy corporation says the combination will make Holyrood increasingly expensive to operate.

"For us, based on the alternatives and options that we have available to us, interconnecting with Labrador and developing Muskrat Falls is a lower-cost alternative than continuing to rely on Holyrood," said Gilbert Bennett, Nalcor's vice-president for the Lower Churchill project.

He was one of several Nalcor executives who spoke with The Telegram's editorial board Monday.

"We have seen and continue to see consistent increases in electricity demand on a per household basis," said Bennett.

High-priced oil

If the island portion of the province remains isolated from the Labrador hydro grid, Nalcor says the only source of extra power is the Holyrood plant.

And that means burning increasingly expensive fuel.

Nalcor forecasts Bunker C fuel costs will average \$384 million annually between 2017 and 2036 to generate electricity at the plant.

Simple math says that long-term projection works out to about \$7.3 billion.

The 500-megawatt plant has supplied between 15 per cent and 25 per cent of the island's electricity needs during the past four decades, according to Nalcor.

In the past decade, the plant has averaged about 18 per cent of the hydro supply. (See chart for details)

The plant burns about 18,000 barrels of oil per day during peak production. Nalcor says that could rise to 21,000 barrels per day once the Long Harbour nickel plant is up and running.

End of emissions

For people in the Holyrood area, Muskrat Falls will spell the end of plant emissions — particulate, sulphur dioxide, nitrogen oxide and carbon dioxide.

Nalcor says the plant emits more than one million tonnes of greenhouse gases (GHGs) annually.

"One of the energy plan commitments was to either retire Holyrood, if we have a Lower Churchill inter-connection, or to install electrostatic precipitators and scrubbers on that facility to eliminate those emissions," said Bennett.

The energy plan was released by the Williams government in 2007.

Nalcor says those scrubbers and electrostatic precipitators can reduce sulphur dioxide and particulate emissions by up to 95 per cent.

But the corporation says it could also increase nitrogen oxide and carbon dioxide emissions by about five per cent.

The company estimates the cost of installing the equipment at almost \$600 million, along with annual operating costs of \$12 million to \$15 million.

No GHG restrictions

A new source of hydro power could accomplish what concerns about emission have not: end hydro generation at Holyrood.

"Our analysis is ... that we can continue to run Holyrood in its existing state until 2033-2035, with no restrictions on GHGs," said Bennett.

"That's the best-case scenario."

While the federal government is slowly moving toward greenhouse gas legislation, Bennett said it'll target coal-fired facilities first.

Oil-fired facilities, such as Holyrood, will be next.

But by then, Bennett said "the facility will come down at the end of its useful life and be replaced... . That is not being driven by emissions."

Once Muskrat Falls comes online in 2017, the Holyrood plant will remain — but it will no longer have boilers or smokestacks.

The generators will remain since the plant will continue as the terminal station for the Holyrood area.

It will also serve as a voltage regulator — housing synchronous condensers used to help maintain voltage levels along power lines as needed.

Backup power

Why not maintain Holyrood as a potential backup source of power? The short answer: cost.

Besides, Nalcor says restarting the plant would take about as long as fixing an outage problem in the first place.

"To do a black start on Holyrood is three or four days," said Dawn Dalley, Nalcor's communications manager, on Wednesday.

"The chances of not being able to repair something that happened on a line after three or four days would be slim."

Nalcor says it has designed its hydro link connecting Labrador and Newfoundland with plenty of "robustness and redundancy."

Two power lines flow electricity to the Avalon Peninsula from Baie d'Espoir.

A third line is planned as part of upgrades to the Avalon transmission system and is expected to be available by the time power flows from Muskrat Falls.

The Labrador inter-connect will be the fourth line. It uses what's called a bipole design — allowing one side of the pole to continue moving power if the other pole fails.

As well, Dalley said power can be imported to the island via the Maritime link to Nova Scotia.

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Watch for more articles on the Lower Churchill development in the days ahead in The Telegram.