

NLIS 2
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Independent Review Shows Wind at Least \$3.5B More than Muskrat Falls

An independent study by Manitoba Hydro International (MHI) has concluded that large-scale wind development as a replacement for the Holyrood Thermal Generating Station is not a least cost option, and that an investment in Muskrat Falls provides a firm power supply, while providing opportunity to benefit from export opportunities once interconnection is established. The report was released this morning by the Honourable Jerome Kennedy, Minister of Natural Resources.

“This study on wind provides an opinion on using large-scale wind on the Island, and concludes that it would not support the demand for electricity during peak periods on the Island,” said Minister Kennedy. “MHI identifies that wind must be backed up by firm energy sources and provides further support that Muskrat Falls is the best option to deliver reliable least-cost renewable power to Newfoundland and Labrador.”

The study by MHI *Review of the Wind Study for the Isolated Island of Newfoundland* considered the questions:

- Can sufficient wind be developed in an Isolated Island scenario to replace the Holyrood Thermal Generating Station to meet future demand?
- Is this a feasible and economic alternative to Muskrat Falls?

A cumulative present worth analysis was completed by MHI which concluded that a wind and thermal scenario would be \$3.49 billion more than Muskrat Falls, and a wind and battery scenario would be \$9.06 billion more than Muskrat Falls. It is also more expensive than the Isolated Island Option (Holyrood). These scenarios were independently developed and assessed by MHI.

In MHI's opinion, Nalcor has incorporated the maximum amount of wind generation in the Isolated Island (Holyrood) option. MHI noted that the highest wind penetrations today are in the range of 20 per cent and then only with systems that are interconnected with a larger electricity grid. A wind solution to replace Holyrood was identified as having a 75 per cent penetration level which exceeds the demonstrated global utility experience in terms of wind penetration. Wind energy penetration refers to the fraction of energy produced by wind compared with the total available generation capacity.

MHI found Nalcor's work to be technically sound and performed in accordance with good utility practices. They also found that wind generation cannot be assumed to have available capacity during peak demand on the Island. MHI found that large-scale wind development,

as a replacement for the Holyrood Thermal Generating Station, is not a least cost option and “does not represent good utility practice” at this time.

“Nalcor has always understood that large-scale wind was not a viable option for the Island,” said Mr. Martin. “MHI provided theorized options for the replacement of Holyrood with a large-scale wind development backed up by significant thermal in one option and batteries in another. The scenarios and modes of wind operation theorized in this study has not been demonstrated in any part of the world for an Isolated Island grid.

“Nalcor's analysis at Decision Gate 2 determined that wind was not a technical or economic replacement for Muskrat Falls and the MHI study supports this conclusion. That being said, since Decision Gate 2, we have continued to do further wind study and were able to utilize more wind in the Isolated Island option, but it is still not a replacement for Muskrat Falls, and the Interconnected Muskrat Falls option is still the least cost option for the province.”

To view the full MHI report on the study of wind power as an energy option for the Island of Newfoundland, please visit: www.powerinourhands.ca

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