

Date : 10/30/2012 9:50:50 PM
From : DawnDalley@nalcenergy.com
To : "Maclean, Heather"
Subject : RE: FYI - Minister Kennedys speaking notes - MHI Wind
Attachment : SN - Minister Kennedy_nalcor.doc;
Would be better if I attached them. lol

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From: "Maclean, Heather" <heathermaclean@gov.nl.ca>
To: <DawnDalley@nalcenergy.com>
Date: 10/30/2012 09:49 PM
Subject: RE: FYI - Minister Kennedys speaking notes - MHI Wind

Suggestions not coming thru

From: DawnDalley@nalcenergy.com [<mailto:DawnDalley@nalcenergy.com>]
Sent: Tuesday, October 30, 2012 9:46 PM
To: Maclean, Heather
Subject: Re: FYI - Minister Kennedys speaking notes - MHI Wind

Minor suggestions from Ed. Do you need/want Ed to speak.

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From: "Maclean, Heather" <heathermaclean@gov.nl.ca>
To: <DawnDalley@nalcenergy.com>
Cc: "Power, Glenda" <glendapower@gov.nl.ca>, "Hammond, Lynn" <LynnHammond@gov.nl.ca>, "Mamell, Debbie" <DebbieMamell@gov.nl.ca>, "Carroll, Lynette" <lynetecarroll@gov.nl.ca>
Date: 10/30/2012 08:49 PM
Subject: FYI - Minister Kennedys speaking notes - MHI Wind

FYI – attached speaking notes for Minister Kennedy for release of MHI Wind Report tomorrow am...

Heather

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**Wind Energy
MHI Independent Review
October 30, 2012**

Good morning.

I am pleased to be here today ~~and joined by Ed Martin~~ to release Manitoba Hydro International's independent review of wind energy. Thank you to Ed Martin from Nalcor for joining me.

MHI's review answered two questions. The first is whether additional wind energy generation can be installed on the Island to provide a firm supply of electricity to customers on the Island over the long-term.

The second question is whether wind energy can be the sole replacement for the 824 megawatt generation station at Muskrat Falls and the Labrador Island Transmission Link as well as the Holyrood facility.

The two main studies MHI assessed to complete their independent review were Hatch's Wind Integration Study – Isolated Island, and Nalcor's report on Wind Integration – Voltage Regulation and Stability Analysis.

MHI concluded that both of these reports were technically sound, met their identified study goals, and were performed in accordance with best utility practices.

On the first question, it is the opinion of MHI that Nalcor has incorporated the maximum amount of wind generation in the Isolated Island option based on the results of these studies.

MHI recommends that wind options beyond a 10% penetration level not be pursued at this time. The report notes that the highest wind penetrations today are in the range of 20%, and then only with systems that are interconnected.

MHI concluded that wind generation would not support the demand for electricity during peak periods on the Island, and identifies that wind must be backed-up by reliable firm energy sources.

The report also presents information from published literature on wind penetration levels and issues in other renewable energy jurisdictions such as Europe, the United States, New Zealand, and Hawaii.

The survey of practices and experiences in these other jurisdictions suggest a limit of 10% wind penetration based on capacity in an Isolated scenario for the Island of Newfoundland.

In preparing to answer the second question, can wind replace Holyrood and meet future demand, MHI developed 2 wind scenarios to provide sufficient wind and backup to achieve this goal.

The first option involved 1,100MW of wind at a 40 per cent capacity factor and new combustion turbines for back up.

The second option also involved 1,100 MW of wind but included lithium batteries as energy storage for back up.

A Cumulative Present Worth analysis was performed on each of the large scale wind development scenarios identified in the report and were then compared against the existing CPW metrics prepared by Nalcor for Muskrat Falls (or the Interconnected option) and the refurbishment of Holyrood (or the Isolated Island option).

These wind solutions to replace Holyrood were identified as having a 75% penetration level and exceeds the demonstrated global utility experience in terms of wind penetration.

The report concludes that Muskrat Falls is \$3.49 billion less than the Wind and Thermal scenario, and \$9.06 billion less than the Wind and Battery Scenario. Both options are more costly than the Isolated Island option.

This report is another endorsement of Muskrat Falls. It provides further support that the project is the best option to deliver least-cost renewable power to Newfoundland and Labrador.

An investment in Muskrat Falls will provide a secure reliable supply of power and allow the province to capitalize on export opportunities.

Connection to the North American grid will further strengthen our ability to further develop our wind potential.

Muskrat Falls will provide a secure clean energy future for our province and our wind resources (which are among the best in North America) will help position us to become leaders in the development and use of wind power.

Nalcor's wind strategy will focus on advancing wind development opportunities in the province in conjunction with the Lower Churchill Project and existing hydroelectric projects.

It has been established unequivocally that we need the power and that Muskrat Falls is the least-cost option to deliver reliable power to our province.

As noted yesterday, I stated that we would release a report that clearly establishes that wind is not a viable option to be the main source of electricity generation for Newfoundland and Labrador.

Tomorrow we will release information concerning natural gas to prove that it is also not economically feasible.

Muskrat Falls is a reliable, responsible and least-cost energy solution for Newfoundland and Labrador.

There has never been a better time in the history of our province to pursue this project. It is the right time to move on Muskrat Falls and capitalize on the tremendous benefits this project will provide for the people of Newfoundland and Labrador.

Thank you.