Date : 6/24/2012 12:30:41 PM
From : GBennett@nalcorenergy.com
To : "Bown, Charles W."
Subject : Re: FW: wind scope
Attachment : ATT1045959.jpg;

Charles,

I think it would be important to hold until you results of the Hatch work. This scope would then become a comment on the reasonableness of that work rather than what appears to be a duplication but without the benefit of Hatch's hydraulic (Vista) modelling.

G

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From: "Bown, Charles W." <cbown@gov.nl.ca>
To: <GilbertBennett@nalcorenergy.com>
Date: 06/24/2012 12:21 PM
Subject: FW: wind scope

We've been discussing them undertaking a qualitative exercise re wind. Our initial thoughts are attached with the exception to #3 which has been inserted. Im not prepared to go that far.
Charles

From: Paul Wilson [mailto:plwilson@mhi.ca]
Sent: Friday, June 22, 2012 12:19 PM
To: Parsons, Walter
Cc: Snook, Corey; Bown, Charles W.
Subject: RE: wind scope

Hello Walter, it was a pleasure to meet with you and Corey yesterday. I have accepted all of Charles changes and have further revised the document (attached) to clarify a number of points and adjust tasks to match the study goals we discussed. The document was sent to the rest of the team and I will now work on effort and schedule, hopefully by the end of next week.

Regards,
Paul Wilson

From: Parsons, Walter [mailto:WalterParsons@gov.nl.ca]
Sent: June-22-12 6:17 AM
To: Paul Wilson
Cc: Snook, Corey; Bown, Charles W.; pwang@hydro.mb.ca
Subject: RE: wind scope

Paul,

Thanks again for coming in to meet with us yesterday. We are looking forward to getting a proposed high-level schedule and new version of the scope of work. Please feel free to give me a call on 709-729-6760 if you have any questions or concerns.

Talk soon,

Walter

From: Paul Wilson [mailto:plwilson@mhi.ca]
Sent: Thursday, June 21, 2012 11:57 AM
To: Parsons, Walter
Subject: Re: wind scope

Hi Walter, I am at Nalcor right now. Can we meet later this afternoon? Also, tomorrow is an option. You can call me at +12045101271.

Paul.
Regards,
Paul Wilson
Message sent by Blackberry

From: Parsons, Walter [mailto:WalterParsons@gov.nl.ca]
Sent: Thursday, June 21, 2012 06:50 AM
To: Paul Wilson
Subject: FW: wind scope

Paul,

Charles has made some suggested edits to the proposed scope for the wind capacity assessment (see attached). I understand you may be in the city today? Are you available for a short meeting to discuss this and next steps?

Talk soon,

Walter

From: Bown, Charles W.
Sent: Tuesday, June 19, 2012 8:35 AM
To: Parsons, Walter
Subject: wind scope

Walter;
I've revised the scope and copied that section below. The doc is also attached with tracked changes.
Charles

A number of non-government organizations and private citizens have questioned the need to build the Muskrat Falls Generating Station and the associated HVdc transmission system as the next option for the Isolated Island of Newfoundland. These groups have promoted a wind power solution as replacement for 824 MW Muskrat Falls Generating Station and ultimately the 500 MW Holyrood Thermal Generating Station as a viable alternative.

The basic question is "Can sufficient wind generation be installed on the Island to provide a firm supply of electricity to Island customers?" The Island of Newfoundland is a large Island with varying wind resources available across the Island. At this time, the probability of the entire island becalming is unknown. The transmission system is also limited in power transfers west-east to the Avalon Peninsula and would likely require upgrades and cost to customers is an important consideration.

The purpose of the MHI study is to provide a learned opinion on the reasonableness of this question considering the application of new technology, the situation in similar jurisdictions (for example Hawaii and Ireland) and the application of statistical methods for firm assessment (i.e. capacity credit). For a good discussion of the issues surrounding capacity credits, visit this reference.[1]

The assessment should determine:
a) If the wind power solution can work for the isolated island power system to replace planned new sources of electricity composed of traditional base load and peaking thermal plants.
b) What is the capacity credit[2] of wind power on the Island of Newfoundland? Can there be sufficient wind power investment to provide a reliable firm supply for island customers with overbuild.

Study Goals:
1. Perform a desktop exercise to review existing literature, working group papers, technical resources, and industry know-how to describe the common nomenclature in the industry, identify existing wind farm applications in isolated networks, identify the key issues in their application, document known issues with these applications.

2. When the key facts noted above are considered together with the situation on the Island of Newfoundland, describe the applicability of the key issues and whether there is any merit in proponent claims that wind power can be a sole solution for Newfoundland.

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[1] http://windfarmrealities.org/?p=200

[2] The capacity credit for intermittent generation, the additional conventional capacity required to maintain a given level of reliability and thus the overall system margin are all related to each other. The smaller the capacity credit, the more capacity needed to maintain reliability, hence the larger the system margin. The amount by which the system margin must rise in order to maintain reliability has been described in some studies as "standby capacity", "back-up capacity" or the "system reserves". But there is no need to provide dedicated "back-up" capacity to support individual generators. Source: http://www.wind-works.org/articles/GridIntegrationofWindEnergy.html

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