

Date : 11/1/2012 5:12:19 PM
From : "Marshall Q.C., Hon. Thomas"
To : "'Marshall, Seth (St. John's - Project Office)'"
Subject : FW: Information on Muskrat Falls
Attachment : KM - MF Key Facts October 30, 2012.doc;

From: Burke, Tess

Sent: Wednesday, October 31, 2012 11:19 AM

To: Burke, Joan; Johnson, Charlene; Jackman, Clyde; French, Terry; Marshall Q.C., Hon. Thomas; King, Darin; Sullivan, Susan; Hutchings, Keith; McGrath, Nick; Collins, Felix; O'Brien, Kevin; Kennedy, Jerome; Davis, Paul A; Wiseman, Ross; Dalley, Derrick; Hedderson, Tom; Brazil, David J.; Collins, Sandy; Cornect, Tony; Cross, Eli; Crummell, Dan; Dinn, John; Forsey, Clayton; Granter, Vaughn; Hunter, Ray; Kent, Steve; Lane, Paul; Little, Glen; Littlejohn, Glen; Parsons, Kevin; Peach, Calvin; Perry, Tracey; Pollard, Kevin; Russell, Keith; Verge, Wade; Afonso, Maria; Patten, Kim; Piercey, Susan; Maidment, Donna; Antle, Sheldon; Petten, Barry; Wells, Larry; Reid, Derick W.; Lindahl, Lisa; O'Keefe, Lori; Guest, Kevin J; McGrath, Marietta; Hynes, Anita D.; Shute, Tracy; Hayden, Veronica T.; Cholock, Chick; Hynes, Darrell; Vokey, Sharon; Bruce, Patrick; Dillon, Mary Anne; MacDonald, Carla; Hewitt, Valerie; Bonia, Laurie; Conroy, Marie; Mercer, Melanie; Christopher, Eric; Robertson, Debbie; Power, Andrea; Carey, Alax A; Paul, Renee; Batten, Dawn; Cadigan, Barbara; Higdon, Jessica; Collier, Carolyn; Jim, Patrick; Tobin, Shannon J.; Poirier, Robert; Chatman, Ang; Carter, Janine; Hill, Crystal; Brushett, Janice; Abbott, Tracey; O'Neill, Lorna; Parsons, Corey; Dawe, Nancy C; Dunne, Darlene; Baker, Bridget; Craniford, Marg; Kieley, Debbie; Harrington, Jack; Cave, Janice; Frost, Caroline; Chaulk, Deborah; Morrissey, Jody M.; McCrate, Doreen; Stead, Rob; Byrne, John G; Gamberg, Gerarda; Halleran, Charlotte; Walsh, Linda J; Kelly, Betty; Ring, Ann; Strong, Melvin; Warren, Erica; Whelan, Sylvia

Subject: Information on Muskrat Falls

Please find attached information related to Muskrat Falls. These are general high level messages – key facts on muskrat. Please note that financial numbers have changed as well as some numbers related to economic benefits, so please disregard old MF messages containing numbers.

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Muskrat Falls

October 30, 2012

The Project

Power available in 2017

824 MW generating plant (4.9 TWh/y)

LIL - 1100 km high voltage direct current transmission line from Muskrat Falls to Soldiers Pond, including a 35 km underwater cable across the Strait of Belle Isle (900 MW Capacity)

Maritime Link – 180 km from Cape Ray, NL to Cape Breton, NS (500MW Capacity)

Report Comments – MHI Analysis of Decision Gate 3 (DG3)

The MHI review, which assessed the feasibility and financial merits of the development, re-affirmed that Muskrat Falls provides the lowest-cost option for electricity generation in the province and recommended that Government proceed with the development of Muskrat Falls

MHI has noted that the Muskrat Falls option has much less exposure to the uncertainty and variance in oil prices and could also accommodate additional load.

MHI also concluded (beyond the scope of their review) that connection to the North American grid is not only expected to improve reliability of the provinces system but would also have the potential to increase provincial power revenues

Cost Estimates

Decision Gate 2 (DG2) Estimates were released in November 2010

At DG2 Estimates, project engineering was at about 5%

DG3 Cost Estimates are more defined:

Approx. 50% Engineering and detailed design has been done to date

Results of early site work are known

Actual bid values for major project components known like turbines, generators, etc.

Economic and Employment Benefits

1.9 billion in income to labour and business

320 million in average income benefits per year

290 million in taxes to the Government of NL

3100 direct jobs at peak employment

1500 direct jobs per year on average (during construction) across more than 70 different occupations

9100 person-years of direct employment, including 5800 in Labrador

\$500 million in income to Labradorians and Labrador businesses

Project will lead to infrastructure improvements in the Lake Melville area including upgrades to port, airport, roads and broadband

Benefits / Outputs from DG3 process – Generally

Project will:

- Meet the challenge of an energy deficit looming by the end of the decade in the province;
- Provide stable electricity rates for residents and businesses at the lowest possible cost for generations to come;
- Support industrial development and future mining operations in Labrador;
- Break Quebec's stranglehold on our development and allow us to be energy self-sufficient;
- Open a new route to export surplus power into and through Atlantic Canada;
- Eliminate our ties to oil-fired generation from Holyrood and make the provincial grid more than 98% renewable; and
- Situate us to negotiate from a position of power for the development of Gull Island and the sale of Upper Churchill power 30 years out.
- The project will be self-financed, generating enough revenue to cover its costs including debt repayment.
- The construction phase will generate over 3,100 jobs at peak, providing more than \$1.9 billion in total income for labour and business.

Holyrood Thermal Generating Station

The Holyrood plant is over 40 years old – nearing the end of its useful life

Generates 15-25% of the power on the Island

The Plant burns up to 18,000 barrels of oil per day during peak

Fuel cost at Holyrood \$135 million in 2011

During the last 10 years Holyrood emitted an average of 1.1 million tonnes of greenhouse gas emissions.

Holyrood option costs gone up 20-25% for capital, paralleling Muskrat Falls option.

Environmental Benefits

Muskrat Falls will produce clean, Renewable hydro-electric power

With Muskrat Falls, NL will be powered by 98 % clean renewable energy

Retiring Holyrood will result in approximately the reduction of 1 million tonnes of green house gas emissions per year

Electricity Rates

If we rely on oil to generate electricity, average bills are projected to increase just over 2% per year from 2016-2030; With Muskrat the increase is about 1% per year for the same period.

Without Muskrat Falls the average residential electricity bill would increase by 38% or increase by \$82/month from 2016-2030

The same period from 2016 -2030 with Muskrat Falls is 18% or \$38 per month.[Check this with electricity rates paper]

Wind

Wind isn't a viable option for the replacement of Holyrood

An independent review of the Island's electricity system concluded that 300MW of Wind is the maximum amount that can be economically and technically integrated in to Island grid

Muskrat Falls Development

Lifespan more than 100 years

Right away the island will need 40% of the power generated from Muskrat Falls (to replace Holyrood)

The province is project to need 80% of Muskrat's power by 2036 earlier if additional industrial growth occurs in the province

Isolated Island Option

The Isolated Island option cost is 62% fuel. From 2012 to 2067, we will spend \$50 billion in nominal terms on oil versus on \$2 billion for the interconnected Muskrat option.

The Oil cost in the Muskrat Falls option is 0.04% Of the oil cost of the isolated island option.

Energy Demand

Forecasts prepared by Newfoundland and Labrador Hydro show that without new sources of power, by 2015 demand will begin to exceed firm supply

Demand is driven by;

- A strong economy and new business development
- Growth in the number of residential customers
- Higher than average new home construction
- Growing electricity use in homes
- Increased use of electric heat (86% of all new homes use electric heat)
- Increased industrial demand, primarily driven by the nickel processing facility in Long Harbour

Electricity demand on the island is expected to increase by 1.4% per year between 2011 and 2030

Since 2002, residential demand is up 16% and commercial demand is up 10% on the island

Residential customers have has increased by 12.6% since 2002 and the average electricity use per household has increased by 3.4%.

Since 2002 28,800 homes were constructed

Consultations by NalcorEA related public consultations (groups, councils, individuals)

107 - Muskrat Falls general meetings, presentations, open houses, topic specific workshops, etc

70 - Transmission specific meetings, presentations, open houses, topic specific workshops, etc

44 - Generation specific meetings, presentations, open houses, topic specific workshops, etc

Aboriginal Consultations (Generation & Transmission)

Innu Nation - 192 total number of letters, emails, calls, meetings

Nunatsiavut - 95 total number of letters, emails calls, meetings

NunatuKavut - 558 total number of letters, emails calls, meetings

PUB summary:

Nalcor has submitted 180 exhibits of information to the Board. Nalcor has also received a total of 440 RFIs from the Board, MHI and the Consumer Advocate. In addition, Nalcor had over 20 face to face meetings between various subject matter experts and MHI to help expedite the process and provide any information or context they required. In total Nalcor has provided the Board with in the order of 15,000 pages of documentation.

Speeches & Presentations

Nalcor has done over 60 speeches on MF to various groups over the past 24 months around the province including Chambers, Rotaries, NOIA, NEIA, PEG NL, etc. Nalcor has held special presentations at its AGM in 2011 and 2012 where it opened the floor and web cast the meeting and presentation to the public and accepted questions.

Meetings, Emails and Information requests

Outside the EA process, Nalcor has met with both the NDP and Liberals on at least two occasions outside of announcement briefings and have had one separate meeting with Yvonne Jones about the Straits. We have consistently responded to any emails and requests for information from party staff. We have also responded to questions by phone and email from members of the public.

Media and Communication

Nalcor has been consistently open with media and the public via the media through letters to the editor, media interviews on TV, radio and print. They have met with reporters when asked and provided background and technical briefings as requested. Nalcor has also established portals through social media and the web with our web site, youtube videos, Facebook pages, Twitter accounts and blogs by its executive and subject matter experts to cover off questions and matters of interest.

House of Assembly

Opposition has asked for a debate in the HOA 23 times (18 – Liberal & 5 – NDP)

Debate Template

- The debate will be limited to four days, which is a regular House week.
- The Government House Leader will stand at the very start to move the adoption of certain agreed-upon rule changes and procedures; then two will speak for the opposition parties; then the House will vote on these changes and procedures, following which the resolution will be introduced.
- By these special rules, the House will sit 10:00 a.m. to noon, 2:00 p.m. to 5:00 p.m., and 7:00 p.m. to 10:00 p.m.
- There will be an hour each for the Premier, the Leader of the Opposition and the Leader of the Third Party, the Natural Resources minister and the Natural Resources critic, with an additional 20 minutes for the Premier to close the debate. All other members would have 20 minutes.
- There will be a daily 30-minute question period (2:00 p.m.-2:30 p.m.) solely on Muskrat Falls.
- There will be no amendments to the resolution.
- The debate will be the only order of business apart from question period.
- The resolution notice requirement will be waived.
- The debate will end no later than 10:00 p.m. on Thursday when the Speaker will put forward the question.