Date: November 7, 2014 Cliff No: 87521

#### MINISTRY OF ENERGY AND MINES

### BRIEFING NOTE FOR INFORMATION

I PREPARED FOR: Honourable Bill Bennett, Minister of Energy and Mines

II ISSUE: Homathko River Hydroelectric Development

# III BACKGROUND:

The Homathko River Development is a proposed 895 megawatt (MW) (4,558 gigawatt hour per year (GWh/year)) of average annual energy) hydroelectric project consisting of four dams and three power plants in an undeveloped river basin in the Coastal Mountains.

The proposed facility development would include:

- a dam and 290 MW power plant on Mosley Creek;
- a dam and 420 MW power plant on Waddington Canyon on the Homathko River;
- · a storage dam on Tatlayoko Lake; and
- a dam and 185 MW power plant on the Homathko River at Nude Canyon.

The facilities would be situated within the boundaries of the Homathko River – Tatlayoko Protected Area Provincial Park. An overview and feasibility studies were completed in the early 1980s by BC Hydro and project activities were suspended in 1984 due to changes in load growth forecasts, and the Revelstoke project coming into operation.

## IV DISCUSSION:

The hydroelectric development of the Homathko River project would likely be challenging for a number of reasons including:

- Estimate of Costs: Cost estimates for the Homathko were developed in the 1980s and updated by the rate of inflation for the purposes of BC Hydro's 2008 Long Term Acquisition Plan. These estimates are pre-feasibilty and are within a +75/-25% range. The current project estimate (\$4.34B), excluding transmission costs which would be significant, has not been updated since 2008. s.13,s.17
- Legislative and Regulatory Considerations: The Homathko River project is prohibited under the Clean Energy Act from development by BC Hydro. The

regulatory approval process for a project of this size would require a federal and provincial environmental assessment(s) as well as Fisheries Act approvals.

- Environmental Considerations: The Homathko River is currently an unregulated river and environmental concerns would likely be a significant issue if the project were to be considered again. Furthermore, some of the project facilities would need to be located within the Homathko River - Tatlayoko Protected Area Provincial Park which would require a park boundary adjustment. Fisheries issues and wildlife habitat impacts would also likely be significant concerns.
- Project Build-out Timelines: 2008 estimates of best and worst case project construction timelines range from 13.5 to 20.5 years making the nearest in-service date between 2027 to 2034.

s.13.s.21

As compared to Site C (1,100 MW, 5,100 GWh, \$7.9B (\$2014)) which leverages multi-year, upstream storage, the Homathko River project (895 MW, 4,558 GWh, s.17,s.21 is not as attractive given its uncertain capital costs, minimal storage and environmental impacts to an unregulated river. Previous BC Hydro analysis has indicated that Site C is a preferred, less expensive option than Homathko River development.

#### $\mathbf{V}$ CONCLUSIONS:

- BC Hydro development on the Homathko River is prohibited under the Clean Energy Act.
- Site C is a preferred development option for a number of reasons including advanced design stage estimates and large multi-year upstream storage.
- Any proposed development on the Homathko River is likely to be controversial due to environmental and regulatory considerations.

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# Janes, Darci MEM:EX From: Margolis, Murray < Murray. Margolis@morganstanley.com> Monday, December 15, 2014 3:32 PM Sent: MacLaren, Les MEM:EX To: Cc: Chace, Julie MEM:EX; Wieringa, Paul MEM:EX; Trumpy, Chris MEM:EX; Sherk, Peter Subject: Low Cost Power Supply Proposal Attachments: BC Power Supply Proposal - Term Sheet.pdf Les, Please find attached a revised low cost power supply proposal as per our previous discussions with two alternatives: s.21 As we understand this is a critical time for the government to be deciding on the Site C project we believe that all relevant information needs to be disseminated to assist in this decision making. As such can you please pass this on to both the Energy and Finance Ministers. We are available to discuss this proposal and any requested modifications at your convenience. Thank you very much.

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