Q: Re: Review of Newfoundland and Labrador Hydro Power Supply Adequacy and Reliability Prior to and Post Muskrat Falls ("the Liberty Report #2"), p. 52.

Citation 1:

> **IV. Reliability of Muskrat Falls**
> **A. Component Reliability and Availability**
>
> **…**
> **In addition to faults within the LIL, outages may result from problems at Muskrat Falls or in the IIS, operator errors, and long term outages of critical transmission lines and system infrastructure, such as synchronous condensers. Such outages will be outlined, but not quantified in this part.**

Citation 2:

> **Other causes of outages of the LIL or interruptions of power infeed to the IIS from Muskrat Falls, which have not been discussed in section two through seven above include:**
> **1) Tripping of some or all ac lines leading to the Muskrat Falls converter station**
> **2) Tripping of some or all ac lines leading to the Soldiers Pond converter station**
> **3) Delayed clearing of faults in close proximity to the Muskrat Falls or Soldiers Pond converter stations, *e.g.*, because of protection or breaker failure (stuck breaker)**
> **4) Major faults, *e.g.*, fire or extensive insulation damage to 2 or more high inertia synchronous condensers, requiring major repair at times of high loading on the LIL**
> **5) Operator errors**
> **6) Major fires in the converter stations.**

Preamble:

> **Sections 1 ("Definitions") and 2 ("Impacts of Outages") of section IV.A. include three categories of outages (Bipole Outages, Monopolar Outages and Temporary Interruption), but do not explicitly address scenarios involving long-term or permanent interruption of deliveries from Muskrat Falls.**

Please indicate whether or not Liberty has studied the implications with respect to the reliability of power infeed to the IIS over the LITL of a permanent long-term total forced outage caused by physical damage to the Muskrat Falls facility caused by instability of the North Spur soils.

If so, please indicate if the recommendations in the Liberty Report #2 would be adequate to maintain IIS reliability in the event of long-term loss of all power from the Muskrat Falls facility.

If not, please indicate if review of this eventuality was excluded by virtue of the mandate given to the Liberty Consulting Group.

A. The extreme contingency of "a long-term loss of all power from the Muskrat Falls facility", whether caused by North Spur issues or any other reason, was not considered by Liberty. It is not reasonable to assume that 824 MW of generation could be lost on a "permanent long-term" basis without serious reliability consequences to the IIS, whether Liberty's recommendations are followed or not. Liberty was not asked by the Board to review the design and construction risks related to the North Spur.