

**SUBJECT: Macro-Environmental**

**REFERENCE: MNP Report, page 47**

**PREAMBLE:** MNP appears to rely on the Clean Environment Commission review of Keeyask as the form for addressing all water supply/hydraulic generation issues related to the PDP.

**QUESTION:**

Did MNP examine the potential changes for Lake Winnipeg water levels that would result from Manitoba Hydro's K19/C25/750MW scenario as opposed to MH's K19/C25/250MW scenario? How would MH achieve greater hydraulic generation with the same K19/C25 generation facilities?

**RESPONSE:**

Consistent with IR responses PUB-MNP-29 and PUB-MNP-30, MNP has not identified evidence that would suggest Lake Winnipeg water levels or the operation of LWR would fall outside of the norm under any alternative development plan scenario. The LWR operating license is not expected to change, regardless of development plan and therefore the parameters of operation would be kept as follows:

- When the lake level is between 711-715 feet, outflows are set to meet the requirements of power production on the Nelson River;
- When lake level is above 715 feet, MH must operate at maximum discharge until 715 feet is reached; and
- When the lake level is below 711 feet, MH must operate outflow as ordered by the Minister responsible for the Water Power Act.

Greater hydraulic generation is achieved through enhanced flexibility in system optimization under the K19/C25/750MW scenarios. Two advantages are of note:

- The higher transfer capacity of the 750 MW line provides greater off-peak import capability (3291 GWh), allowing more storage during off-peak periods, with release occurring during optimized export sale periods in the June to September period.
- MH plans its operations to export surplus energy (in excess of reserve requirements) in the highest energy-value periods to the extent possible and within operating license constraints. MH's SPLASH modeling, provided to LCA in support of their technical reports on the NFAT filing, demonstrates that during wetter than average hydro resource years, the 750 MW interconnection allows MH to sell additional surplus generation which would otherwise be spilled to meet operating license requirements. Therefore, greater generation is possible under the same water resources management and water level conditions on the system, including Lake Winnipeg. Please see Figure 5-22, Technical Appendix 5B, Hydrologic Risk, La Capra Associates Inc.

Lake Winnipeg levels would continue to vary year to year and month to month. However, these levels would not vary outside of the operating license defined requirements or vary considerably from the historic record as a result of operating Keeyask or Conawapa.