

Knight Piesold - Proposed Revised Scope of Work

As approved by the NFAT Panel on January 10, 2014.

Manitoba Hydro has indicated in their correspondence of December 4, 13, and 30th of Manitoba Hydro's intention to award the Keeyask General Civil Contract early in 2014. Manitoba Hydro intends to seek Manitoba Hydro Board approval of the contract in February of 2014. It is the opinion of the Public Utilities Board that the review of tendered costs for Keeyask is of significant importance for the understanding of the projected capital costs.

The overall objective of the revised scope of work for Knight Piesold would be to validate Manitoba Hydro's overall cost estimate and tendering practices for Keeyask and the accuracy of Manitoba Hydro's cost estimating approach.

The proposed scope of work for KP to complete this objective is provided below.

- Review MH's overall management strategy and scheduling for the tendering of contracts for the Keeyask Generating Station and the procurement of other major facility components such as spillways, dams, dykes, powerhouse, turbines, intake gates, generators, controls etc. Comment on the effectiveness of this management approach for minimizing capital costs, securing competitive bids, and managing construction and procurement cost escalation and construction risks.
- Review Manitoba Hydro's construction risk management strategy and comment on its effectiveness.
- Review contract documents prepared by Manitoba Hydro for the major Keeyask components and comment on how such documents have been designed to secure cost effective bids from suppliers and contractors and where Manitoba Hydro may be vulnerable for cost increases, schedule changes etc. Comment on the overall thoroughness of the contract documents and drawings.
- Review construction and equipment procurement bonding and any liquidated damage requirements and comment on the appropriateness of such bonding and cost implications to the project.
- Review Manitoba Hydro's Quality Assurance and Quality Control (QA/QC) requirements for Keeyask construction and comment on the effectiveness and costs.
- Review the overall civil contract(s) project management approach; comment on its effectiveness and what project management controls are in place to minimize cost escalations.

- Critically review Manitoba Hydro's pre-tender construction estimates and compare with actual tender prices. Define where significant differences are noted and rationalize the specific differences.
- Provide an opinion as to the expected in-service capital cost for Keeyask once all work has been completed.
- Provide a supplemental report to the Panel incorporating this work by February 4th, 2014.