Ontario Energy Board (Board Staff) INTERROGATORY #2.6 List 1

Interrogatory

Issue Number: 2.2
Issue: Has an appropriate evaluation methodology been applied to all the alternatives considered?

Ref B/Tab 3/Sch 1/pp. 5 and 6/p.5 (lines 25-58) and p. 6(lines 1-8)

Preamble:

The Applicant states that Alternative 4 would provide less transfer capacity than the preferred option. Alternative 4 is a 500 kV double circuit transmission line from Bruce to Longwood TS and a 500 kV double circuit transmission line from Longwood TS to Middleport TS all along existing ROW corridors.

Questions:

(i) How much transfer capability does the applicant, the IESO and the OPA believe can be provided utilizing this alternative?

(ii) What are the limitations to increasing the transmission delivery with this alternative to the desired 8,100 MW level?

(iii) How can these limitations be mitigated or removed and what is the estimated cost of the mitigation/removal?

(iv) Assuming that the both interim measures (the Generation Rejection and the Series Compensation) are implemented, what would be the total transfer capability of the modified Alternative 4?

Response

(i) The IESO has determined that a system with a new double circuit 500 kV line from Bruce to Longwood and from Longwood to Middleport would have a capability of 7,021 MW.

(ii) The proposed alternative is limited by voltage stability limits.

(iii) The capability of this alternative is significantly lower than the proposed project and would cost approximately twice as much (as it is the same type of line, but is

approximately twice as long). No study was conducted to determine exactly how to remove the limitations to this alternative. However, it is believed that adding series compensation to each circuit from Bruce to Longwood and from Longwood to Middleport would provide the required capability. While this option has not been studied, total costs would be expected to be in the range of $225 million.

(iv) Generation rejection is not an appropriate measure to meet long-term increases in transmission capability and for that reason would not be implemented. Please see the response to Board Staff Interrogatory 3.2. While series compensation could increase transfer capability, the precise increase is not known as this option was not studied given the significant costs of this alternative. Please refer to (iii) above.