NEEDS FOR AND ALTERNATIVES TO (NFAT)

Manitoba Hydro Undertaking #55

Manitoba Hydro to provide both the economic and financial analysis of the high capital cost scenario, that would be the reference economics revenue and high capital cost related to those plans that are currently being updated (ref-ref-high) and provide narrative on the impact of such changes on the economics and finances of the plans. Manitoba Hydro to include Level 2 DSM with and without the anticipated pipeline load.

Response:

Provided below is the response with respect to the economic analysis. The financial analysis will be provided under separate cover.

The stress test for Keeyask and Conawapa high capital costs uses 2013 reference assumptions with the exception of capital costs for the Keeyask and Conawapa generating stations which are at the high values for the 2014 updated capital costs for the 2 generating stations. The analysis has been undertaken on the basis of DSM Level 2 and is relative to the All Gas plan using 2013 reference assumptions at DSM Level 2.

The stress test evaluates the risk associated with capital costs increases that would be uniquely associated with the Keeyask and Conawapa generation stations and considers no concurrent offsetting increases in the capital costs of natural gas generation or in energy prices.

Keeyask

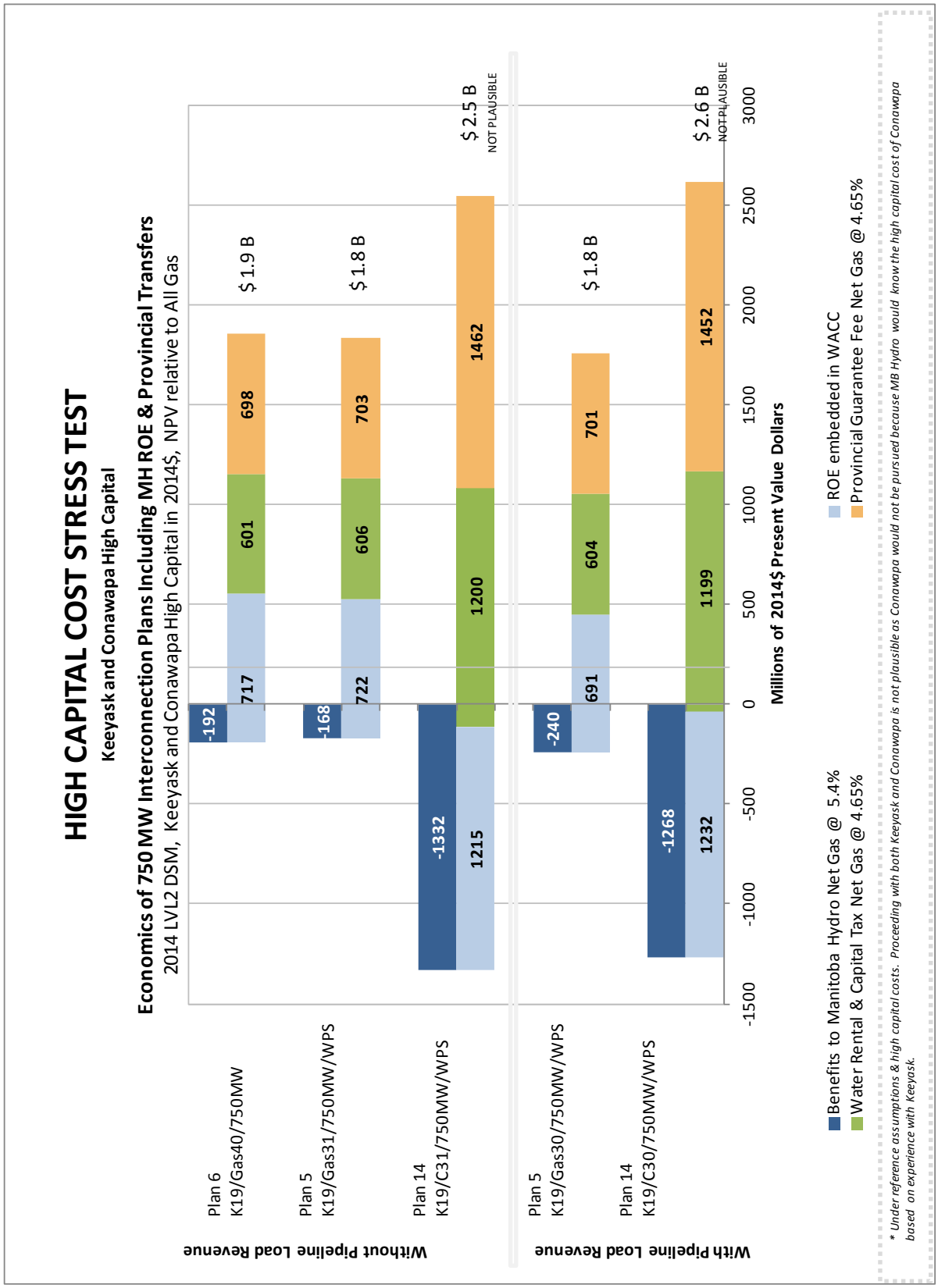
The reference capital cost estimate for the Keeyask G.S. includes contingency and reserves of $735 million (nominal dollars). The $735 million represents 13% of the remaining costs to be spent on Keeyask. The high capital cost estimate for Keeyask is approximately $800 million higher than the reference estimate which means that under the high capital cost scenario costs are estimated to be approximately $1500 million or 30% above Manitoba Hydro's revised point estimate for the Keeyask G.S.

As shown in the chart below, under this high capital cost stress test, the analysis for Plans 5 and 6 results in a cost relative to the All Gas Plan of $-168 million and $-192 million respectively at the 5.4% real WACC on a net present value basis. Including Manitoba Hydro's embedded return on equity would provide an NPV amount of over $500 million, relative to the All Gas Plan that would be available to Manitoba Hydro. In addition, incremental transfers to the Province are approximately $1300 million in NPV for Plans 5 and 6.

Conawapa

As shown in the chart below, under this high capital cost stress test, the analysis for Plan 14 results in a cost relative to the All Gas Plan of $-1332 million without the pipeline and $-1268 with the pipeline at the 5.4% real WACC on a net present value basis. Including Manitoba Hydro's embedded return on equity would provide an amount of over $1200 million that would result in an overall net cost to Manitoba Hydro on a relative NPV basis of $-117 million without the pipeline and $-36 million with the pipeline. In addition, incremental transfers to the Province are approximately $2600 million for Plan 14.

Increases in Conawapa cost estimates of the magnitude estimated in the high capital cost scenario would be known prior to the January 2018 point of commitment of Conawapa. Subject to regulatory approval, Manitoba Hydro plans to commence the first major concrete pours for Keeyask in or about May 2016. This experience will inform Manitoba Hydro's cost estimates for Conawapa and as such Manitoba Hydro would not proceed to commit to Conawapa in the face of high capital costs unless there were offsetting factors such as sufficiently higher export revenues. The scenario presented does not take into account such offsetting factors and as such the case presented is not a feasible possibility.


HIGH CAPITAL COST STRESS TEST
Keeyask and Conawapa High Capital
Economics of 750 MW Interconnection Plans Including MH ROE & Provincial Transfers
2014 LVL2 DSM, Keeyask and Conawapa High Capital in 2014$, NPV relative to All Gas
Without Pipeline Load Revenue
With Pipeline Load Revenue
Plan 6 K19/Gas40/750MW
Plan 5 K19/Gas31/750MW/WPS
Plan 14 K19/C31/750MW/WPS
Plan 5 K19/Gas30/750MW/WPS
Plan 14 K19/C30/750MW/WPS
-192
717
601
698
$ 1.9 B
-168
722
606
703
$ 1.8 B
-1332
1215
1200
1462
$ 2.5 B
NOT PLAUSIBLE
-240
691
604
701
$ 1.8 B
-1268
1232
1199
1452
$ 2.6 B
NOT PLAUSIBLE
-1500
-1000
-500
0
500
1000
1500
2000
2500
3000
Millions of 2014$ Present Value Dollars
Benefits to Manitoba Hydro Net Gas @ 5.4%
Water Rental & Capital Tax Net Gas @ 4.65%
ROE embedded in WACC
Provincial Guarantee Fee Net Gas @ 4.65%
* Under reference assumptions & high capital costs. Proceeding with both Keeyask and Conawapa is not plausible as Conawapa would not be pursued because MB Hydro would know the high capital cost of Conawapa based on experience with Keeyask.