INFORMATION REQUEST RESPONSE

To: Manitoba Public Utilities Board Date: February 20, 2014

KP File: VA103-449/1-A.55

Needs For Alternatives To – **GAC/KP I-001 a**

SUBJECT: Wind Costs

REFERENCE: http://www.pub.gov.mb.ca/nfat/knight_pi3sold_report_jan_27_2014.pdf, Page 50

PREAMBLE:

"The NFAT assessment could consider a wind energy base cost of $1,800/kW for a total base cost of $117 million (excluding transmission) for the 65 MW wind energy projects"

QUESTION:

Please confirm that the base cost of $1,800/kW is intended to exclude both interconnection costs and transmission line costs.

RESPONSE:

The cost of $1,800/kW excludes transmission line costs and any major transmission system upgrades.

/bxf

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Needs For Alternatives To – **GAC/KP I-001 b**

SUBJECT: Wind Costs

REFERENCE: http://www.pub.gov.mb.ca/nfat/knight_pi3sold_report_jan_27_2014.pdf, Page 49

PREAMBLE:

"It is apparent that project costs may differ by locality, with the "Interior" region of the US (adjacent to Manitoba) reporting average project costs of approximately $1760/kW and the lowest overall spread in costs (US DoE, 2013). ... On this basis, the expected "base case" capital costs rounded to the nearest $100/kW would be approximately $1,800/kW"

QUESTION:

Was KP aware that the DoE's average project cost of $1,760/kW included "substation and/or interconnection expenses" (DoE, p. 34)? If so, how does KP reconcile its estimate of $1,800/kW (excluding transmission) with the DoE's average project cost of $1,760 (including transmission substation/interconnection)?

RESPONSE:

We are aware that the DoE report suggests that substation and/or interconnection expenses are included, but it does not appear that transmission costs and major transmission system upgrades have been included in this cost. The DoE report further states that "*emphasis should be placed on overall trends in the data rather than on individual project-level estimates*". It is for this reason that KP used the recent cost trend applied to the more detailed MH cost estimate as the first basis for their opinion, and used the DoE report's cost of $1,760/kW for the interior region only as a means to corroborate the cost estimate of $1,800/kW.

/mgp1