

1 **Undertaking 28 REVISED**

Exhibit No. _____

2 Potomac Economics to provide the Panel with further review of the information in Manitoba
3 Hydro Tab 5 graph showing all-in price of contracts compared to the MH-calculated Potomac
4 Economics all-in price.
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6 **RESPONSE:**

7 The following figure shows our calculation of All-In Prices for the various MH contracts based
8 on the terms of the contracts provided to us by MH in this proceeding. This figure is comparable
9 to Manitoba Hydro's "Tab-5" graph referenced in the undertaking.

10 Our Figure shows that the all-in prices for the contracts [REDACTED] than the Potomac
11 Economics All-In price series (shown in a dashed line). Based on our review, we have found:

12 (1) These contracts tend to be long-term forward, multi-year contracts, some extending
13 past 2030 and therefore, there will tend to be a premium for the hedge they provide
14 against future price increases and volatility.

15 (2) All of the contracts have environmental attributes which provide benefit to the buyer
16 that would otherwise not be reflected in the day-ahead prices.¹

17 Both of these factors will [REDACTED] contract prices than the all-in price calculated
18 from our forecast of the MISO market prices. The latter factor is particularly important. The
19 technologies that provide environmental attributes tend to be substantially more costly than the
20 natural-gas-fired capacity that is the basis of our capacity price forecast. Therefore, one would
21 expect to pay a significantly higher price to procure capacity with qualifying environmental
22 benefits. Importantly, only a small number of states impose such requirements on their regulated
23 utilities and the growth of wind resources has been dramatic in recent years. Hence, the future
24 demand for such attributes is uncertain.

25 It is important to note that MH includes provisions in their contracts for curtailing exports to
26 MISO to prevent end-use load shedding in Manitoba. In particular, the contracts include
27 interruption provisions that put MH exports to MISO on a lower priority than MH's own end-use
28 load, which means exports will be curtailed before end-use load is curtailed. [REDACTED]

¹ The only exception to this is SPC 25, which was provided to us in "term sheet" form and the term sheet did not indicate environmental attributes.

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The plotted values in our Figure are comparable to the All-In prices plotted in Manitoba Hydro Tab-5 Graph except that the price series for the MP 250 contract is [REDACTED] than the corresponding series in the MH Tab-5 graph. The main reason for this difference is that this contract depends on the [REDACTED]. In the MH exhibit, the plotted series was based on the [REDACTED] from [REDACTED] [REDACTED]. As we have explained in our report, these prices are [REDACTED] than our forecast [REDACTED] prices. Therefore, the series for MP 250 that we plotted will [REDACTED] because it is based on our forecasted [REDACTED] prices. Otherwise, our examination of the pricing terms of the other contracts generally resulted in plotted series that were comparable to those in MH "Tab-5 Graph".

² External Planning Resource is a MISO term for a capacity resource located outside MISO.

Figure

