1 MIPUG/MPA 1-001

- 2 **REFERENCE:**
- 3 page 57
- 4 **PREAMBLE:**

"In some model runs across resource plans, rates would be required to rise by anywhere from
25% to 50% or more for a sustained period in order to maintain Manitoba Hydro's financial
probity ... A more realistic scenario is that rates would increase at something more than double
the rate of inflation, but that the Government of Manitoba would also fund Manitoba Hydro's
business with a combination of additional debt and possibly temporary relief from fees and
taxes paid to government (water rental fees, capital taxes, and debt guarantee fees)"

11 **QUESTION:**

- 12 Please explain the circumstances that would lead to the Government of Manitoba "funding"
- 13 Manitoba Hydro's business with debt. How is this different than Hydro simply borrowing funds
- 14 with the provincial guarantee as is done today? Is it MPA's opinion that the Government of
- 15 Manitoba "funds" Manitoba Hydro today?

16 **RESPONSE:**

- 17 Manitoba Hydro is currently considered to be financially self-supporting by credit rating
- 18 agencies and other observers. As a result, while Manitoba Hydro's debt is raised and provided
- 19 by the province, that debt is not usually included in the category of "tax supported debt" of the
- 20 Province of Manitoba.
- 21 In the event that Manitoba Hydro suffers financial distress, for example because of a prolonged
- drought, it may no longer be perceived to be financially self-supporting. In such a scenario,
- 23 tough choices would need to be made regarding rate increases that would be imposed on
- 24 Manitoba ratepayers, versus additional debt provided by the Government of Manitoba which
- 25 might be perceived by observers as "tax-supported", which might have an impact on the overall
- 26 credit and capital markets position of the province.



- 1 MIPUG/MPA 1-002
- 2 **REFERENCE:**
- 3 pg 45
- 4 **PREAMBLE:**
- 5 MPA develops its own rate increase modeling as illustrated, for example, at Figure 8.
- 6 **QUESTION:**
- 7 Please provide a detailed description of the rate design criteria applied by MPA. Under what
- 8 circumstances are rate increases imposed, and how large? Under what circumstances are
- 9 decreases imposed, and how large? Are rates ever changed by less than the maximum in any
- 10 given year? What role does debt:equity and/or interest coverage (or other balance sheet tests)
- 11 play in this conceptual rate design calculation?
- 12 **RESPONSE:**
- 13 Please see MH/MPA 1-007.
- 14



1 MIPUG/MPA 1-003

2 **REFERENCE:**

3

4 **PREAMBLE:**

- 5 MPA indicates "Changing Manitoba demand does not actually affect the total cost to ratepayers
- 6 over 48 years very much, if all other variables are kept constant..."

7 **QUESTION:**

- 8 Please indicate if the statement means the total cost to ratepayers in terms of overall revenue
- 9 to be derived from domestic load, or the total cost in terms of average unit rates. If the former,
- 10 isn't recovering the same total overall cost from a lower load require higher average rates,
- 11 which would be a cost to ratepayers?

12 **RESPONSE:**

- 13 The reference is to the total amount of revenue that would be collectively obtained from
- 14 Manitoba ratepayers. If that revenue depends on a smaller pool of domestic demand, then
- 15 rates would be higher to compensate. Higher rates per unit of energy could be perceived as a
- 16 burden for individual ratepayers, particularly if those ratepayers are not responsible for the
- 17 decline in overall consumption.



- 1 MIPUG/MPA 1-004
- 2 **REFERENCE:**
- 3
- 4 **PREAMBLE**:
- 5
- 6 **QUESTION:**
- 7 Please indicate whether any draft of the MPA report was provided to Manitoba Hydro to "fact
- 8 check" and if so, please provide a copy of that draft report and the response of Manitoba
- 9 Hydro.

10 **RESPONSE:**

- 11 A draft report was provided to Manitoba Hydro in order to facilitate a review for
- 12 inappropriately included commercially sensitive information (CSI). Manitoba Hydro discovered
- 13 no CSI in our Report, and hence no changes to the Report were made.
- 14



- 1 MIPUG/MPA 1-005
- 2 **REFERENCE:**
- 3
- 4 **PREAMBLE**:
- 5
- 6 **QUESTION:**
- 7 Please indicate why the 0% "additional capital cost" in Figure 18 (\$44,230 million) is not equal
- 8 to the NPV for Plan 14 at reference conditions (\$44,949 million) in Figure 6. What variables are
- 9 changed?
- 10 **RESPONSE:**
- 11 The PV for Plan 14 at reference conditions in Figure 6 (\$44,949 million) is probability-weighted
- 12 from all 9 reference economics scenarios.
- 13 The 0% "additional capital cost" in Figure 18 (\$44,230 million) is simply the average output of
- 14 our model in the Ref/Ref/Ref scenario only.



- 1 **MIPUG/MPA 1-006**
- 2 **REFERENCE:**
- 3
- 4 **PREAMBLE:**
- 5 "...the longer term contracts are not mitigating market risk or exposure for Manitoba Hydro,
- 6 but merely apportioning the market risk accepted in pursuing the Preferred Development Plan"

7 **QUESTION:**

- 8 Please explain how contracts that yield fixed prices do not mitigate market risk? Please provide
- 9 all backup and justification for this conclusion.
- 10 **RESPONSE:**
- 11 Please see CAC/MPA 1-015(b)(ii).
- 12



- 1 MIPUG/MPA 1-007
- 2 **REFERENCE:**
- 3
- 4 **PREAMBLE**:
- 5
- 6 **QUESTION:**
- 7 Please identify the person or persons who had the primary responsibility of drafting each of the
- 8 components of the report.
- 9 **RESPONSE:**
- 10 Pelino Colaiacovo was primarily responsible for drafting the report. Benjamin Kinder was
- 11 primarily responsible for MPA's modeling.



- 1 MIPUG/MPA 1-008
- 2 **REFERENCE:**
- 3
- 4 **PREAMBLE**:
- 5
- 6 **QUESTION:**
- 7 Please provide the present value of the level of retained earnings (shareholder's equity) built up
- 8 in the plans shown in this table.
- 9 **RESPONSE:**
- 10 MPA will provide this information to you shortly, as it must be extracted from our modeling
- 11 runs.
- 12



- 1 MIPUG/MPA 1-009
- 2 **REFERENCE:**
- 3
- 4 **PREAMBLE**:
- 5 By agreement with the shareholder, the target level of "equity" in the corporation is 25% of
- 6 total capital...
- 7 **QUESTION:**
- 8 Please provide the date of the agreement and the terms and condition. Please provide a copy
- 9 of any agreement that MPA has received or reviewed. If MPA has not received or reviewed
- 10 such agreement, please provide the basis for MPA's conclusion that there is such an
- 11 agreement.
- 12 **RESPONSE:**
- 13 Please see CAC/MPA 1-002.
- 14



- 1 MIPUG/MPA 1-010
- 2 **REFERENCE:**
- 3
- 4 **PREAMBLE:**
- 5 MPA has selected a 6% and 10% discount rate, per page 41
- 6 **QUESTION:**
- 7 Please explain the basis for choosing the 6% and 10% discount rates. Are these real or nominal
- 8 rates? What inflation is assumed?
- 9 **RESPONSE:**
- 10 Please see CAC/MPA 1-007(b).
- 11



- 1 MIPUG/MPA 1-011
- 2 **REFERENCE:**
- 3
- 4 **PREAMBLE:**
- 5 Page 65 lines 33-38
- 6 **QUESTION:**
- 7 Please provide the view of MPA as to whether sunk costs in Keeyask and/or Conawapa must be
- 8 written off and over what period if the projects do not receive a decision to proceed in June
- 9 2014. What is there is an expectation that the projects will proceed for later in service (e.g.,
- 10 Keeyask 2022, Conawapa 2026, Conawapa 2031). How many years can Hydro maintain the
- 11 planning costs on the books before the projects are no longer able to be maintained and
- 12 planning costs must be written off?
- 13 **RESPONSE:**
- 14 MPA is not an accounting firm, and cannot provide advice with respect to the potential
- 15 treatment of amounts to be written off under GAAP or IFRS rules.
- From an economic perspective, if the Keeyask and Conawapa projects do not proceed, then sunk costs must be financially managed in some way, either through a one-time write down in assets, or through a five-year process as suggested by Manitoba Hydro. If the projects are merely delayed rather than canceled, then the specific cost items included in those sunk costs would have to be individually reviewed – likely annually by Manitoba Hydro's auditors – to determine if there continues to be value in them, or if the expenditures have become "stale"
- and no longer represent useful assets.



- 1 MIPUG/MPA 1-012
- 2 **REFERENCE:**
- 3
- 4 **PREAMBLE**:
- 5

6 **QUESTION:**

Based on its review of materials and its knowledge, is MPA able to comment on what should be
used as low cost of debt and low cost of equity assumptions? Is MPA able to comment on what

9 should be used as an appropriate risk premium over Long Canada Bonds for each of Hydro's

10 debt and Hydro's equity? If so, please provide MPA's view on these matters.

11 **RESPONSE:**

12 Please see PUB/MPA 1-029 for a discussion of interest rate issues.

With respect to the equity premium that might be appropriate for Manitoba Hydro, it is notable 13 that Canadian regulated "wires" utilities - which don't take export risks and which are not 14 subject to hydrology risk – were found by the Ontario Energy Board to be subject to a 5% equity 15 risk premium above long Canada bonds, as discussed in our Report in section 5.1.1. While 16 Manitoba Hydro is exposed to these risks, it does on the other hand enjoy the support of a 17 Provincial Government through a debt guarantee. As a result, assuming a minimum equity risk 18 19 premium of 5% may be reasonable. However, this would still be slightly higher than the implied equity risk premium included in Manitoba Hydro's WACC calculation (i.e., 3% above its cost of 20 debt, which would be approximately 4.5% higher than long Canada bonds). A slightly more 21 aggressive view would suggest that an even higher equity premium might be appropriate. 22



- 1 MIPUG/MPA 1-013
- 2 **REFERENCE:**
- 3
- 4 **PREAMBLE**:
- 5
- 6 **QUESTION:**
- 7 Are there other factors and approaches to choosing the appropriate discount rate than set out
- 8 in section 5.1.2? What are these other factors or approaches and how do they apply to the
- 9 NFAT?
- 10 **RESPONSE:**
- 11 Please see CAC/MPA 1-007(b).



1 MIPUG/MPA 1-014

2 **REFERENCE:**

3

4 **PREAMBLE**:

- 5 MPA indicates that "where there is existing literature with respect to the choice of appropriate
- 6 discount rates to represent ratepayers, we have not pursued the issue further"

7 **QUESTION:**

- 8 Please provide a list of all relevant "existing literature" and provide links or citations. To the
- 9 extent it can be shared, please provide a copy of the relevant literature that MPA would rely
- 10 upon.
- 11 **RESPONSE:**
- 12 A sample of the available literature will be provided shortly.
- 13
- 14



- 1 MIPUG/MPA 1-015
- 2 **REFERENCE:**
- 3
- 4 **PREAMBLE**:
- 5 MPA indicates that wind IPPs require a return on investment to the wind farm owner (page 68).
- 6 **QUESTION:**
- 7 Is the return on investment to wind farm owners assumed to be less than the 6% discount rate?
- 8 Higher than the 10% discount rate?
- 9 **RESPONSE:**
- 10 Investor returns on wind farm development across Canada have varied over the past 10 years,
- 11 depending on the specific provincial program or arrangement under which the wind farms were
- 12 built. For example, some provinces have held competitive "Request for Proposal" processes,
- 13 while others have developed "tariff" programs with fixed rates for wind output, and still others
- 14 have allowed wind farms to sell into competitive markets.
- 15 In general, most investors in wind farms have pursued after tax equity returns on their
- 16 investment in the range of 12% to 15%, when wind farms are fully contracted by a credit-
- 17 worthy offtake party for substantially the full life of the development (i.e., 20 to 25 years).
- 18 Given the level of debt that is assumed in the capital structure of a typical wind farm, this
- 19 translates to an after tax Weighted Average Cost of Capital in the range of 7% to 9% under
- 20 recent debt capital markets conditions.