MH/Coalition (MPA) - 1

Reference:

MPA Report Page 3, line 37 – page 4, line 3

Preamble to IR (If Any):

Question:

What are the “other financial metrics” that, in your opinion, the capital markets are focused on in considering Manitoba Hydro’s creditworthiness.

RESPONSE:

As stated earlier in the same paragraph, “a primary focus is on the expected sufficiency of cash flows to satisfy debt obligations”. Various cash flow to leverage and cash flow to interest metrics address this primary focus. Examples are provided on page 33 of the MPA Report.

MH/Coalition (MPA) - 2

Reference:

MPA Report Page 3, Lines 14-15

Preamble to IR (If Any):

MPA states, “Manitoba Hydro’s governing legislation does not specify a capital structure for the company. It is organized as a non-share capital corporation, to be operated at cost.”

Question:

a) Please clarify what MPA believes the correct assessment of what “cost” means for a system with substantial components installed at a significantly lower cost including adjustment for inflation.

b) Are “costs” limited to items on the income statement or do they include all cash payments required of Manitoba Hydro each year, for example, on account of mitigation and the Winnipeg Hydro purchase..

RESPONSE:

a) The legislation itself provides a description of “costs” to be included in rates. Excerpts from the relevant sections of the legislation were provided on pages 14 through 16 of the MPA Report.

The question posed appears to suggest that “cost” may possibly reflect some adjustments for the current inflation-adjusted value of long-lived assets which were added to the electricity system in the past (i.e., “for a system with substantial

components installed at significantly lower cost including adjustment for inflation"). The question of whether regulated utility assets should be valued for rate-making purposes at book value versus "market-to-market" or "replacement cost" is one that has been addressed by regulators at various times. This issue appears to be out of scope for MPA, and in case has been largely settled among North American regulators, where book value of assets is normally used for regulated utility purposes.

b) While the legislation does not specifically mention payments related to Winnipeg Hydro or to mitigation, nevertheless these are costs of the corporation, and must be included in calculations respecting rates. Moreover, in s. 39(1)(b) of the *Manitoba Hydro Act*, there is a specific reference to "obligations" related to "construction, purchase, acquisition, or operation, of the property and works of the corporation", which appears to capture these costs. In its financial statements, Manitoba Hydro captures these line items in its Consolidated Statement of Cash Flows under "Investing Activities", rather than capturing them as expenses related to operations. Nevertheless, they are obligations of the utility.

MH/Coalition (MPA) - 3

Reference:

MPA Report Page 3 lines 19-20; page 22, lines 8-9

Preamble to IR (If Any):

MPA states, "Manitoba Hydro is fairly unique as a government-owned, pure cost recovery electricity utility which is mandated to produce and sell electricity for export…"; and

"…developing those resources for export purposes rather than domestic consumption casts Manitoba Hydro in an entrepreneurial role…"

Question:

Please identify what legislative or other source MPA relies on to support the assertion Manitoba Hydro's export business is a stand-alone, entrepreneurial initiative rather than an enabling tool by which Manitoba Hydro minimizes rate costs for domestic customers.

RESPONSE:

MPA does *not* assert that anything is a "stand-alone, entrepreneurial initiative". Exports are specifically allowed for in the *Manitoba Hydro Act* as *one of* the purposes of the corporation. Moreover, Manitoba Hydro has historically pursued projects that have an export focus, and that are designed to generate export revenue. Selling power into open electricity markets on a "merchant basis" (i.e., without long-term contracts covering the entire volume of production for the whole life of a facility) is an inherently entrepreneurial activity. By definition then, Manitoba Hydro is engaged in entrepreneurial activities, regardless of the intentions of the company with respect to the use of the revenues generated through the export activity.

MH/Coalition (MPA) - 4

Reference:

MPA Report Page 3, lines 26-27

Preamble to IR (If Any):

At page 3, MPA states, “One of the principal reasons to carefully track and manage financial performance is to ensure continued access to the capital markets.”

Question:

Please discuss whether management of overall debt levels and consequent interest costs is also a reason to track and manage financial performance.

RESPONSE:

As a publicly regulated utility, Manitoba Hydro is obliged to deliver its services in a manner that is as efficient as possible, within the boundaries of prudence. Since efficient management depends on accurate information, among other requirements, tracking and managing financial performance is also an ingredient of all efficiency initiatives, including those related to debt levels and interest costs.

MH/Coalition (MPA) - 5

Reference:

MPA Report Page 3, line 31

Preamble to IR (If Any):

At page 3, MPA states, “The primary concern of lenders is the risk that a borrower will default on a loan.”

Question:

a) Please discuss to what extent bond investors are concerned with fluctuations in the value of Province of Manitoba bonds.

b) Please discuss what factors would give rise to fluctuations in the value of a bond..

RESPONSE:

a) Investors in all classes of financial securities, including bonds, are always concerned about the value of the securities in their portfolio at any given time, for any number of reasons, the specific collection and prioritization of which will be different for each investor. There is nothing unique about Province of Manitoba bonds in this respect.

b) “Value” can have any of several different meanings. A bond has a “face value” which does not change (the cash value of the bond when it is redeemed, according to its terms, plus the bond may have a periodic cash interest payment associated with it, which must be factored into its value). A bond may also have a “market value”, which is the cash received by a seller of the bond to a different investor at a specific time. A

bond may also have an implied “market to market” value, which is an estimate based on the recent sale of similar bonds, in a specific set of broader financial and economic conditions. Based on the question posed, it appears that “mark to market” is the value that is at issue.

“Mark to market” values for financial securities fluctuate for any number of reasons, including prevailing inflation and interest rates, the relative risk associated with different classes of securities (e.g., stocks vs. bonds vs. derivatives, etc.), and specific risks associated with the issuer of a security at any given time. Analysis of all of these reasons for the fluctuation in the value of securities is well outside the scope of MPA’s work in this regulatory process.

MH/Coalition (MPA) - 6

Reference:

MPA Report Page 3, lines 35-37, page 4, line 1

Preamble to IR (If Any):

At page 3, MPA states “It is apparent from reading various financial market reports that a primary focus is on the expected sufficiency of cash flows to satisfy debt obligations. While the capital structure of a prospective borrower like Manitoba Hydro is important, it appears to be a secondary issue for the capital markets.”

Question:

a) Please provide a detailed list, including author and date of the “various financial market reports” that were reviewed to arrive at the conclusion that capital structure is a secondary issue or that diminish or dismiss the total debt or capital structure of Manitoba Hydro in determining the contingent risk of Manitoba Hydro to the Province of Manitoba.

b) Please confirm that cash flow includes interest charges and therefore, is significantly influenced by capital structure.

RESPONSE:

a) The MPA Report includes specific reference to documents and reports reviewed in the course of its preparation. This question quotes specific lines in the Executive Summary of the Report, which in turn refer to other documentation. The main body of the Report provides the information being requested.

b) Confirmed, cash flow includes interest charges, which are in turn influenced by capital structure. However, if cash flow is the primary concern, then monitoring cash flow is the logical way to gather information about cash flow, rather than monitoring a partial influencer of cash flow.

MH/Coalition (MPA) - 7

Reference:

MPA Report Page 4, lines 21 - 23

Preamble to IR (If Any):

At page 4, MPA states "…more modest rate increases may be sufficient to satisfy the needs of the capital markets…"

Question:

a) What level of rate increase would be "sufficient to satisfy the needs of the capital markets"?

b) What evidence do you rely on to establish what the needs of the capital markets are?

c) Please provide copies of all materials relied upon to establish the needs of the capital markets?

RESPONSE:

a) Calculating new rates for Manitoba Hydro is the purpose of the rate hearing as a whole, and is out of scope for MPA. The question references a line in the Executive Summary of the Report. The body of the Report discusses the types of analysis that are conducted by Capital Markets participants, and the ways in which they might understand and consider the potential impacts of rate increases.

b) The question references a line in the Executive Summary of the Report. The main body of the Report provides the evidence relied on.

c) The question references a line in the Executive Summary of the Report. The main body of the Report provides the evidence relied on.

MH/Coalition (MPA) - 8

Reference:

MPA Report Page 4, lines 22-23

Preamble to IR (If Any):

At page 4, MPA states “In the event that financial distress arises from the actualization of a risk, then rates could be increased further.”

Question:

In a significantly leveraged entity with high hydrology and export price risk, how does waiting for financial distress to arise before increasing rates reconcile with regulatory principles of rate predictability?

RESPONSE:

Rate stability and predictability are factors that are important in the calculation and design of regulated utility rates. However, there are other factors that are important as well, including efficient use of capital, cost causality, and the need to maintain access to credit markets, among others. Appropriately balancing all of these regulatory principles is the process through which regulators arrive at “just and reasonable” rates. Predictability does not trump other concerns.

MH/Coalition (MPA) - 9

Reference:

MPA Report Page 4, line 32

Preamble to IR (If Any):

At page 4, MPA suggests it may be more advisable to focus on “different financial metrics”

Question:

Which financial metrics are in your opinion appropriate for rate setting for Manitoba Hydro?

RESPONSE:

Rate setting as a whole should rely on a wide variety of financial metrics, which provide varying degrees of useful information. However, the specific context of the line referenced in this question, which appears in the Executive Summary of the Report, concerns the sufficiency of cash flows to cover all costs, including debt service. The main body of the Report discusses this issue at length.

MH/Coalition (MPA) - 10

Reference:

MPA Report Page 8, lines 34-36, page 9, lines 1-3

Preamble to IR (If Any):

At page 8, MPA states, “Since the average cost of Manitoba Hydro debt is influenced by all of the debt issued in the past, and past debt issues were more expensive than debt incurred today, the average cost of debt for Manitoba Hydro is actually higher than the real cash cost of construction debt that would be required for projects currently in progress. This means that more debt interest is being capitalized than was actually “caused by” the construction projects underway, strictly speaking. This serves to reduce finance expense in the current year, which increases net income now…”

Question:

Please confirm that, in general, during the construction phase of the Bipole 3 project over the last 5 years that interest rates have, in fact, been declining thus creating an additive impact on net income.

RESPONSE:

According to Manitoba Hydro financial reports, interest was capitalized in 2015 at 5.35%, in 2016 at 5.03%, and in 2017 at 4.89%. Since interest is capitalized at the average rate of interest applying to the entire debt portfolio outstanding for the year, this information appears to confirm that the average cost of Manitoba Hydro’s debt portfolio has indeed been falling, as stated in the MPA Report.

MH/Coalition (MPA) - 11

Reference:

MPA Report Page 9, lines 19-21

Preamble to IR (If Any):

At page 9, MPA states "…if [the interest coverage] ratio were at a 1.8x level, creditors would be comfortable that the business is producing enough cash flow to service outstanding debts."

Question:

Please describe MPA's view of any impact on creditors "comfort" level with cash flow sufficiency, if sustaining capital investment requirements necessary to maintain the system and meet the Manitoba Hydro's mandate were near to or greater than 0.8x interest.

RESPONSE:

The "cash flow sufficiency" referred to in the referenced lines is the sufficiency of cash flows "to service outstanding debts", not to service outstanding debts plus pay for all "sustaining" capital investments. Capital markets analysts and investors may have views on whether operating cash flows should be sufficient to pay for "sustaining" capital expenditures in any given year, however, their primary concern is whether operating cash flows are sufficient to pay for debt servicing costs.

In a regulated utility, capital investment costs rise and fall over time, because capital costs are inherently "lumpy" (many items of capital equipment or entire facilities are very large and expensive, and are long-lived). As a result, the relationship between cash flows and capital expenditures will also fluctuate, since capital expenditures are highly variable. "Sustaining"

capital expenditures is a somewhat arbitrary category, which is defined differently by different companies and analysts. As a result, generalizing how different analysts may view that relationship is of limited value.

MH/Coalition (MPA) - 12

Reference:

MPA Report Page 9, Lines 29-30

Manitoba Hydro Application Tab 2, pages 20 -25

Preamble to IR (If Any):

At page 9, MPA states “In the application, Manitoba Hydro does not emphasize this cash flow metric as much as it does the Debt : Equity Ratio, and does not address other variants of cash flow metrics and their uses.”

Question:

With reference to Tab 2, pages 20 – 25, how does MPA conclude Manitoba Hydro does not address other variants of cash flow metrics given its focus on the historical, current and projected cash flow deficiency on its existing operations?

RESPONSE:

In Tab 2, pages 20-25 of the Application, Manitoba Hydro contrasts the cash flow impacts of a 0% per year rate increase over a six-year forecast period, with a 7.9% per year rate increase over the same period. Other than clarifying that a 7.9% rate increase produces cash flows that are much higher than a 0% rate increase, this exposition does not provide an argument why the 7.9% rate path should be chosen among all other possible rate paths.

In the application, in the risk analysis in Tab 4, Manitoba Hydro makes clear that the proposed 7.9% rate path has a 50% probability of allowing the corporation to achieve a 75:25 debt to

equity ratio by March 31, 2027. Since it is a stated goal of the corporation to reach that capital ratio by that date, it is reasonable to infer that the rate path was selected exactly for that reason. The specific impacts of the proposed rate increases on other metrics, such as those pertaining to cash flow compared to interest charges, appear to be incidental to the main purpose of the selection of the rate path.

MH/Coalition (MPA) - 13

Reference:

MPA Report Page 18, lines 4 – 8

Preamble to IR (If Any):

Question:

In the period after Keeyask is in-service, please comment on whether rates should be sufficient to generate positive cash flow to contribute to debt reduction after having met all the cash needs of the company, inclusive of all interest, Business Operations Cap/Ex and other liability payments, such as those associated with mitigation and the Winnipeg Hydro purchase.

RESPONSE:

MPA Report page 18, lines 4 – 8 is a description of the principle of cost causality. It is unclear how that reference relates to the question posed, however, an assumption of a relationship is made in the answer following.

In a typical regulated utility model, rates should include depreciation. Depreciation represents the allocation to ratepayers in any given year of their share of the cost of long-lived assets. Using a straight-line depreciation methodology is a way to distribute costs fairly over time among ratepayers, satisfying the principle of cost causality.

After Keeyask is declared in-service and used and useful, it will be depreciated over time. Therefore, a portion of its total cost will be included in rates every year, satisfying the principle of cost causality.

In the normal course, if all forecasts and estimates of rate components are accurate, revenues generated from rates should be sufficient to generate cash flows that are sufficient to cover all cash costs, including debt servicing, and then have cash left over equivalent to depreciation, which was included in rates even though it is a non-cash item. That amount of remaining cash could then be used to retire a debt amount associated with the assets in question (since, broadly speaking, the remaining outstanding debt of the corporation should be consistent with the remaining life of its assets).

MH/Coalition (MPA) - 14

Reference:

MPA Report Page 18, lines 21 - 24

Preamble to IR (If Any):

Question:

MPA identifies Access to Capital Markets as one of the broader regulatory considerations for the PUB in approving rates. Does MPA agree that a plan which reduces corporate debt and improves the financial stability of the corporation will be more attractive to capital investors than one which allows debt to increase or remain stagnant?.

RESPONSE:

Confirmed. Access to Capital Markets is one of the regulatory considerations that is important in arriving at just and reasonable rates. The Capital Markets always prefer to invest in debt securities which are “covered by” or associated with assets that are valued at levels much greater than the outstanding debt. However, satisfying capital markets is only one objective, which much be fairly balanced against many other objectives, so improving the attractiveness to capital markets participants may not be a paramount consideration in any given case.

MH/Coalition (MPA) - 15

Reference:

MPA Report Page 21, lines 14 - 21

Preamble to IR (If Any):

Question:

Would MPA propose including other recurring or perpetual payments, such as those associated with the Winnipeg Hydro purchase and mitigation, in the Revenue Requirement formula outlined in page 21?

RESPONSE:

Please refer to MH/Coalition (MPA) – 2, above.

MH/Coalition (MPA) - 16

Reference:

MPA Report Page 21, lines 32-34 and Page 22, lines 1-4; Page 22, Footnote 9

Preamble to IR (If Any):

At Pages 21-22, MPA states “it is important to note that the actual cost of capital must include some accounting for the necessity and existence of reserves. The reserves represent a financial burden on the ratepayers that contributed the funds through their rates, and hence the capital cost of the reserves should be calculated at a discount rate appropriate for the full body of Manitoba Hydro domestic customers.9 Unlike equity providers in a typical regulated utility who freely choose to contribute capital based on expected returns, Manitoba Hydro customers involuntarily make contributions to reserves through their rates. The effectively hidden nature of this capital cost should increase the burden on Manitoba Hydro to demonstrate that its reserves are both required and properly managed.”

NOTE: MH16 Update with Interim and 3.95% rate increases results in cumulative net income of $130 million in the period 2018-2027 and nearly $500 million in net losses 2023-2027 (PUB/MH I-34 Attachment 2). In addition, finance expense savings of $500 million associated with the shortening in weighted average term to maturity are included in this forecast (Tab 2, page 7).

Question:

a) Manitoba Hydro does not understand the information provided at pages 21-22 quoted above. Please explain.

b) How does MPA conclude that historic cash flows and income levels created or maintain sufficient financial reserves?

c) How does MPA conclude that a plan which includes 3.95% rate increases effectively contribute to financial reserves to manage unforeseen risks or rate stabilization?

RESPONSE:

a) Manitoba Hydro is a pure cost recovery, publicly-owned regulated utility. No investors contribute any capital to the corporation (in return for dividends or otherwise). All of the corporation's capital is accumulated by collecting revenues from ratepayers that are in excess of current costs of operation (this is why, for example, that the term "equity" is somewhat of a misnomer on Manitoba Hydro's Balance Sheet, and why the term used by the Bonneville Power Administration, "Accumulated Net Revenues", is perhaps a more accurate and transparent description).

Manitoba Hydro proposes to achieve a target 75:25 debt to equity ratio by March 31, 2027. One of the benefits of doing so, as claimed by Manitoba Hydro, is that reducing debt is a positive step because it will reduce costs associated with maintaining debt (i.e., interest costs). It is true, debt entails debt interest, and reducing debt reduces debt interest costs. However, implicit in this argument is that Manitoba Hydro's "equity" has no cost. Therefore, increasing the proportion of "equity" on Manitoba Hydro's Balance Sheet is a costless step, while reducing debt reduces costs, so on a net basis, pursuing this goal is beneficial.

The referenced passage in MPA's Report asserts that in fact there is a cost that should be associated with "equity", and therefore building "equity" on Manitoba Hydro's balance sheet is not cost free. Since Manitoba Hydro ratepayers have contributed all of Manitoba Hydro's "equity", the cost associated with that equity is the cost of capital faced by Manitoba Hydro's ratepayers. Those ratepayers are a collective, and each

has their own specific cost of capital, but it is safe to say that the cost of capital is greater than zero. Some estimate must be made of the cost of capital associated with Manitoba Hydro "equity", and that should be included in the analysis of whether Manitoba Hydro should increase "equity" in proportion to debt in its capital structure.

b) MPA does not assert that historic cash flows and income levels created "sufficient" financial reserves, merely that any reserves (or "equity") that are currently in place were the result of ratepayer contributions. The question of "sufficiency" of those reserves for future purposes is a key question in the rate hearing.

c) MPA does not make that conclusion. Elsewhere in the Report (see the discussion at pages 42 and 43, for example), MPA comments on the modeling provided by Manitoba Hydro relating to 3.95% rate increases, and notes that the interest coverage ratio remains above 1.0 x throughout. However, this is only one observation among many.

MH/Coalition (MPA) - 17

Reference:

MPA Report Page 24

Preamble to IR (If Any):

Question:

a) Please re-produce the Chart in page 24 to include Manitoba Hydro, along with the other utilities.

b) Please confirm that a detailed analysis of the specific circumstances of each individual peer utility as to their business model, operating cost structure, and market growth expectations would be required to make meaningful comparisons..

RESPONSE:

a) Please see the table on the following page, which is formatted identically to the Chart on page 24 of the MPA Report, and may be used for comparison purposes.

Name	Manitoba Hydro
Created By	Government of Manitoba
Organization Type	Wholly owned Crown Corporation
Regulated Market	Manitoba Generation and Transmission
Other Markets	Electricity exports to Ontario, Saskatchewan, MISO
Export Mandate	Yes
Dividends Paid To	No
Regulated By	Manitoba Public Utilities Board
2016 PPE (millions)	15,436
2016 Long-term Debt (millions)	12,680
Debt/PPE	82.1%
Company Credit Ratings	
Parent Credit Ratings (if applicable)	DBRS A high S&P A+ Moody's Aa2

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2

b) Not confirmed. The “meaningfulness” of comparisons depends on the context and information required to draw conclusions. Information was provided on multiple companies which was sufficient to highlight various similarities and differences between them, which is meaningful and useful in many different ways.

Moreover, MPA notes that Manitoba Hydro chose to introduce into evidence information on various utilities (see for example Appendix 4.1) without providing “a detailed analysis of the specific circumstances of each individual peer utility as to their business model, operating cost structure, and market growth expectations”.

MH/Coalition (MPA) - 18

Reference:

MPA Report Page 36, lines 14 - 35

Preamble to IR (If Any):

MPA's evidence identifies five broad categories of risk.

Question:

a) In MPA's opinion, does Manitoba Hydro face regulatory risk?

b) MPA indicates that "Manitoba Hydro does not face price risk in its domestic market, since rates are regulated on a full cost recovery basis." Does a risk that a regulator fails to approve rates which seek to recover the full cost of providing service constitute a risk to Manitoba Hydro?

c) Is the above risk consistent with the risk identified by DBRS (as quoted on page 31 of MPA's report) that "…DBRS could consider reclassifying a portion of the Utility's debt to be tax-supported should the financial health of the Utility deteriorate to the point where its expenses cannot be recovered through rates."?

RESPONSE:

a) Manitoba Hydro does not face regulatory risk in the same sense as investor-owned utilities across North America, who may have costs disallowed by regulators which then fall to the account of shareholders. Manitoba Hydro is a pure cost recovery, publicly-owned utility, and as a result all of its costs are to the account of ratepayers. In

the legislation, the PUB is required to ensure that the price of power reflects ***all*** costs of operating the system (*Manitoba Hydro Act*, s. 39(1)). However, the regulator does have flexibility in setting rates, and that variability can be perceived as "risk" in some sense, though very differently from the risks that apply to investor owned utilities.

If "regulatory risk" is considered more broadly to encompass "political risk", then yes, this is faced by Manitoba Hydro. Since both Manitoba Hydro and the PUB are governed by legislation, and the government of Manitoba could change its legislation at any time, then this is a risk faced by Manitoba Hydro. However, "political risk" is faced by all utilities, everywhere.

b) As noted in the previous paragraphs, the regulator in Manitoba is required by legislation to include in rates all of the costs of the electricity system in Manitoba. Manitoba Hydro and the PUB can disagree on how rates are structured, on the timing of cost recovery, on whether certain items (such as "reserves" at certain levels) are necessary "costs", but the PUB cannot deviate from its governing legislation.

c) DBRS appears to be commenting on what is described in the MPA Report as a "market risk", not a "regulatory risk". If rates are increased to the point where ratepayers would cut their electricity consumption rather than pay higher bills, then increasing rates no longer results in greater revenues. If greater revenues/cash are nevertheless required to fulfill corporate obligations, then other sources of cash/capital might be required, for example including an equity injection. DBRS is positing an extreme and highly unlikely future scenario, but it has no particularly bearing on "regulatory risk".

MH/Coalition (MPA) - 19

Reference:

MPA Report Page 42, Lines 29-30

Preamble to IR (If Any):

At page 42, MPA states, "*Interest Coverage Remains Above Critical Throughout on the 3.95% Rate Path:* At the P01 position of the 29 EBITDA to Interest plot on the 3.95% rate path, the ratio is never below 1"

Question:

Please describe how an EBITDA to Interest coverage of 1.0x is consistent with self-supporting status if the utility has any non-discretionary capital expenditures to make in a year to keep the system operating.

RESPONSE:

Strictly speaking, there is no necessary relationship between cash flows from operations in a regulated utility, and capital expenditures that are required in any given year. This is why capital coverage ratios typically fluctuate as dramatically as they do. As a capital intensive business, electricity utility face "lumpy" capital expenditures, which are sometimes larger than cash flows, and sometimes not.

"Self-supporting" status, as understood by the credit rating agencies, is a test to determine whether the utility continues to meet the definition of solvency, which typically addresses whether a corporation's business is generating revenue sufficient to cover all of its cash obligations. Obviously, over time a healthy business should generate sufficient cash flows to

pay for its capital expenditures (and necessary interest and returns on equity associated with that capital), but in any given year this is not required.

MH/Coalition (MPA) - 20

Reference:

MPA Report Page 48, lines 11 – 17, lines 25-27

Preamble to IR (If Any):

At page 4, on lines 22-23, MPA states, “In the event that financial distress arises from the actualization of a risk, then rates could be increased further.”

At page 48, MPA states, “Some Manitoba Hydro ratepayers will have a higher cost of capital, while for others it will be lower. Given that Manitoba Hydro’s ratepayers encompass almost all of the people in the province, it is arguable that a “social discount rate” should be used in this sort of calculation. There is an abundant academic literature around this subject, given its use in assessing long-term government programs (and conceptual problems like the cost of climate change). In Canada, recent government studies have landed on using a 3% real discount rate for many uses, consistent with recent decisions of the US government.36 In the case of Manitoba Hydro, this would be a ratepayer cost of capital of 5%, given the assumed 2% inflation rate.”

At page 48, MPA states, “On the other hand, if the 3.95% rate path were pursued, then rates might have to be increased in the face of a severe drought. In this case, the 3.95% rate path would morph into something new, with different financial outcomes, and costs to ratepayers.”

Question:

a) Please confirm that MH16 Update with Interim and 3.95% rate increases (PUB/MH I-34 Attachment 2) has a higher likelihood of requiring unexpected/unplanned rate action?

b) In MPA's opinion, is it appropriate to use the same social discount rate to compare the Present Value of customer bills between two scenarios with a different probability of outcome?.

RESPONSE:

a) Confirmed. Higher rates would result in greater reserves retained in Manitoba Hydro, therefore reducing the likelihood of financial distress. However, it is not apparent that this benefit has been balanced appropriately against the costs to ratepayers of paying higher rates today.

b) MPA suggested one version of a "social discount rate" as a proxy for the collective cost of capital of Manitoba Hydro ratepayers. Regardless of whether this is the discount rate that is chosen, some discount rate, other than zero, should be ascribed to ratepayers when considering the costs and benefits of alternative rate paths.

It is unclear what "probability of outcome" is referred to in the question? And why that has a bearing on the choice of discount rate applicable to ratepayers? Ratepayers face a cost of capital (which can be understood as an implied time value of money, or literally a cost of funds borrowed or otherwise financed), and this cost of capital is not affected by Manitoba Hydro's financial circumstances.

MPA speculates that the source of the question is the following: When investors are considering alternative investment opportunities, they realize that each investment opportunity has its own level of risk. Analyzing the potential returns from each alternative should take into account the risk of actually receiving the "expected" returns. There are two ways that risk can be taken into account: by modifying the "expected" cash flows over time (e.g., considering a high case and a low case, and realizing that either might occur), or by adjusting the discount rate applied to the "expected" flows (i.e., "riskier" investments will face a higher discount rate, and

therefore the present value of the flows will be lower, for comparison purposes).

On page 48 of the Report, MPA is discussing the possible responses to a drought occurring, and the potential impact of such an event on ratepayers, as expressed through Manitoba Hydro rates. MPA points out that additional analysis is required to better understand those possible impacts. In this case, MPA advocates that high and low scenarios be examined in order to take into account risk, rather than modifying the discount rates applicable to ratepayers. For the purposes of rate analysis, it would be better to assume a stable cost of capital for ratepayers, and consider various combinations of rate scenarios and financial stresses.

MH/Coalition (MPA) - 21

Reference:

MPA Report Page 55, lines 29 - 33

Preamble to IR (If Any):

Question:

MPA describes equity as “dead money”. Given that increasing equity means less debt for the Corporation, would you agree that ratepayers receive the benefit of reduced rates as a result of lower debt service costs?

RESPONSE:

In the normal use of the term “equity”, an investor would expect to earn a return on that investment at some rate. Rates of return on equity are, in the normal course, higher than rates of return on debt.

In the case of Manitoba Hydro, the term “equity” is used to described what might better be understood as “accumulated net revenues” that have been received from ratepayers over time. The money is “dead” in the sense that ratepayers receive no cash return on that contribution to Manitoba Hydro.

Manitoba Hydro argues that if its equity increases, then its cost of debt will be reduced over time. However, if ratepayers did not contribute that capital to Manitoba Hydro, they would have had the opportunity to earn cash returns on the money in countless other ways. In order

to support that debt reduction is a net benefit to ratepayers, Manitoba Hydro should propose and defend a specific cost of capital for its ratepayers, and then demonstrate that reducing debt is a better use of ratepayer money than their alternative uses.

MH/Coalition (MPA) - 22

Reference:

MPA Report Page 56, lines 6-8

Preamble to IR (If Any):

At lines 6-8, MPA states “This careful delineation does not appear to have been done; rather, all risks appear to have been accepted as included in the coverage by equity reserves, and no care taken to ensure that ratepayers over time are contributing an appropriate amount.”

Question:

What evidence does MPA rely on to support the allegation that “no care [has been] taken to ensure that ratepayers over time are contributing an appropriate amount”?

RESPONSE:

The passage referenced is from the Summary Observations section of the MPA Report. The two sentences prior to the referenced sentence state:
“Fairness as between ratepayers demands no less than an effort to apportion the costs of reserves over time and across customer classes. Estimating the necessary size of reserves should be founded upon an understanding of the risks faced by the corporation that should be borne by all ratepayers across time (as opposed to those risks that should be borne in real time, as they may or may not occur), and some form of careful calculation about the least size of reserves that will satisfy the need for the general financial health of the utility.”

The “careful calculations” referred to are threefold: a) which risks should be covered by reserves, and which should simply be allowed to affect rates as they are set over time? b) for

those risks that should be covered by reserves, what size of reserves are required at any given time? c) how should ratepayers over time contribute to those reserves so that their contributions could be considered fair over time?

The MPA Report is critical of the assertion in the Manitoba Hydro Application that a 75:25 debt to equity ratio (and hence reserves equivalent to 25% of capital) is actually required. The MPA Report is critical of the fact that all risks appear to be lumped together, and not carefully and separately addressed to determine which should be covered by reserves, and which should just be allowed to affect rates over time. The MPA Report is critical of the fact that the size of reserves appears to be excessive if the purpose of the reserves is to ensure that Manitoba Hydro continues to be regarded as a self-supporting entity (since at a 7.9% rate path interest coverage ratios appear to be multiple times higher than necessary in most potential future scenarios). And the MPA Report is critical of the fact that the 7.9% rate path leads to an outcome where ratepayers in the medium term will be required to make large contributions to reserves, but ratepayers in the future will in all likelihood not be so required, since the reserves will already be large at that point (and this highly unequal treatment of ratepayers violates the cost causality principle).

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Reference:

MPA Report Page 56, lines 28-30

Preamble to IR (If Any):

At lines 28 – 30, MPA states "A fixed target for a specific date, which does not take into account changing variables and contexts, and is not adjustable and related to real drivers of rate-making policy, does not appear credible."

Question:

a) Please confirm that between MH16 (included with the initial Application) and MH16 Update, Manitoba Hydro did not adjust its rate profile and that achievement of the 25% equity ratio fell beyond the 10-year horizon.

b) Please provide the references to Manitoba Hydro's evidence wherein Manitoba Hydro indicated that its intention was to implement rates to meet a fixed Debt/Equity target of 75/25 in 10 years, with no regard to actual future financial results?

c) Does MPA agree that regardless of the preferred target metric, it is necessary, as a financial planning matter, to have a date in the forecast at which point the target is achieved?.

RESPONSE:

a) MPA's understanding is that the Application proposed five years of 7.9% rate increases, followed by five years of 2% increases. This rate path was explained to have a 50%

probability of achieving a 75:25 debt to equity ratio by March 31, 2027.

After the PUB's interim rate decision of 3.36%, Manitoba Hydro returned with a proposed rate path of 7.9% rate increases for six years, plus an increase of 4.54% for one year, followed by 2% increases for two years.

In response to IR PUB/MH Round 2 – 41, Manitoba Hydro presented revised analysis of the probabilities of achieving various equity ratios at different dates. It is notable that the probably of achieving 25% equity by March 31, 2027 is approximately 50% if the revised 7.9% rate path for six years is followed. It is reasonable to infer from this that the intention of Manitoba Hydro is to achieve its preferred debt to equity target by March 31, 2027.

Regardless, it was noted in MPA's Report that the formal application to the PUB is for rate increases in 2017 and 2018 only, and that all of the rate paths discussed in the Application and in the regulatory process as a whole are necessarily speculative only.

b) Please see the response to a) above.

c) Target metrics do not necessarily require fixed dates, though that is one possibility. An alternative form of target metric for financial planning purposes could be, for example, a "forward period" rule, for example saying that "over the next X years, the metric should be Y". In such a case, steps would be taken which will be expected to achieve that metric with some degree of probability, and would be revisited periodically. The actual achievement of the metric on a historical basis would not be relevant, as the metric would always be considered on a forward basis. The Bonneville Power Administration in the United States uses this type of rule to set rates: it sets rates at a level such that it will have a 95% probability of maintaining sufficient liquidity resources

to meet all obligations over its two year rate horizon. Other types of metrics are also possible.

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Reference:

MPA Report Page 153

Preamble to IR (If Any):

Question:

a) For each section of the Report and each Finding in the Summary Observations, please identify the name and qualifications of each person who worked on each of the topics/findings by topic/finding, including a list of the previous projects or proceedings which the individuals participated in related to the topic and his/her role in the project or proceeding.

b) Please provide each contributors' experience working in the debt capital markets department of an investment dealer or the Treasury department of a significant issuer of debt, or at a credit rating agency..

RESPONSE:

a) The principal author of the Report was Pelino Colaiacovo. Information on Pelino was included in the Report Appendices. In addition, it is MPA's practice to discuss significant assignments internally to ensure that the output represents the views of the firm. No specific assignment of these views can be made to any particular part of the Report, as it is a general review process.

b) Information on selected MPA staff and relevant past assignments was included in the Appendices of the MPA Report. In addition, however, it may be relevant to note the background and accomplishments of David Santangeli, Managing Director, who also provided general comments, guidance and advice on the MPA Report.

David Santangeli

David Santangeli is a Managing Director and co-founder of MPA. In this role he is responsible for transaction origination and execution, financial advisory and capital raising services for clients across a wide spectrum of industry segments, including energy, utilities, infrastructure, government and quasi-government entities and a variety of other commercial sectors.

Utility and infrastructure clients have included Altagas Utilities, the Ontario Ministry of Energy, the Ontario Ministry of Finance, Milton Hydro, Enwin Utilities, and Oshawa Hydro. In addition, David has been a financial advisor to a number of quasi-government enterprises, particularly with respect to balance sheet management and capital structuring.

Prior to joining MPA in 2004, David spent over 15 years in the investment banking and financial industry. From 1996 to 2004, he was a senior investment banker at Scotia Capital Inc., most recently as Industry Head for the Power and Infrastructure sector. During this period, he worked on the proposed purchase of Hydro One, and numerous other utility assignments.

David joined Scotia Capital in 1996 in order to develop Scotia's Structured Finance capability. From 1996 to 2000, he was responsible for hiring, training and developing all professionals in the Scotia Structured Finance group, and was the primary driver behind the development of the business. Prior to Scotia, David held positions at Confederation Life and Newcourt Credit Group.

David holds a B.Sc. and an MBA from the University of Toronto.

David Santangeli's career included substantial periods where his focus was exclusively or largely on debt capital markets, in his time at Confederation Life and Newcourt Credit, as head of structured finance, and as head of a combined

group of investment bankers serving the power and utilities industry. Notable experiences and accomplishments related to this assignment include:

- Leading the team at Scotia Capital which advised the Government of Ontario on the initial capital structure for Ontario Power Generation and Hydro One, in order to ensure the acceptability of the same to the capital markets (note that Hydro One subsequently achieved an independent credit rating, while OPG continued to have government-supported debt)

- Leading the team at MPA (which included Pelino Colaiacovo) which assisted Toronto Community Housing Corporation to obtain a world-first independent credit rating for a social housing provider; the overall assignment included, over the course of three years, development of TCHC's capital plan, financial modelling, achieving the organization's initial credit rating from S&P, selecting dealers for the organization's initial offering of debt, drafting documents throughout the process and advising on terms and conditions at every stage, and raising $450 million of public debt

- Leading the team at MPA which assisted Orange Air Ambulance in achieving its initial credit rating

In addition, Pelino Colaiacovo's experience at the Government of Ontario is relevant because of his role in the creation of the Ontario Power Authority, and in particular the structuring of the organization to ensure that it achieved an independent credit rating one notch below that of the Province of Ontario.

In short, MPA's collective experience with respect to credit ratings and the debt capital markets in general is both broad and deep.

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Reference:

MPA Report Page 161

Preamble to IR (If Any):

Question:

a) Please provide a copy of your written retainer letter. Please also provide any instructions you received with respect to your retainer.

b) Please advise whether issues regarding your evidence were identified by yourself, MIPUG and/or Consumers Coalition representatives.

RESPONSE:

a) Please find attached the retainer letter in Attachment A.

The Consumers Coalition adds: We have provided the letter but deleted the financial terms which are not relevant to the question or to the Board's deliberations.

b) The scope of the retainer letter was jointly identified by MPA and the Consumers Coalition. The methodological approach and analysis in the Report was developed solely by MPA.