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VIA EMAIL & ORIGINAL TO FOLLOW BY MAIL

Public Utilities Board of Manitoba
400 - 330 Portage Avenue
Winnipeg MB R3C OC4

Attention: Kurt Simonsen, Associate Secretary

Dear Sirs/Mesdames:

Re: Review on Appropriate Level of Financial Reserves for Manitoba Hydro as Directed in PUB Order 59/18

Please see attached, comments on behalf of the Manitoba Industrial Power Users Group (MIPUG) with respect to the Public Utilities Board's (PUB) request in Order 90/18 for comments regarding scope for review of an appropriate level of financial reserves for Manitoba Hydro, as directed in Order 59/18.

For comments on a potential process for the forthcoming review, MIPUG proposes the following for the Board's consideration:

- Terms of Reference for the review, which are to be drafted by the PUB, should clearly set out the purpose and outcomes sought from this process.
- In MIPUG's view, the review should focus on the specific direction provided by the Board to hold a technical conference (Order 59/18, page 66) to consider approaches setting a minimum retained earnings test for guidance in setting consumer rates, tied to rule-based regulation. In MIPUG's view, the focus of this process should likely not be on achieving a final Board Order setting out the rules to be used in any "rule-based regulation", but rather a focus on the technical matters underlying such an approach. As such, the focus should be on exploring technical matters, not necessarily on adjudicating conclusions in a quasi-judicial format. The end result of the process need not be a final Board Order. Final decisions on rules and rates can be addressed as part of the next General Rate Application (GRA).
- It is unlikely that recommendations agreed upon by all parties will be determined by this process, but at a minimum this process should accelerate the discovery process for positions to be considered in the next GRA.

- MIPUG understands some of the data used in Manitoba Hydro's models is considered commercially sensitive. As a result, an independent review of scenarios and of modelling for considering minimum retained earnings, financial targets, levels of financial reserves and tools to forecast sensitivities and risk will likely be required. It would be beneficial to all parties for the PUB to hire an Independent Expert Consultant (IEC), similar to the role of Daymark Energy Advisors in the 2015/16 Cost of Service Methodology Review. This role should include assisting all parties in accessing the working information for various quantitative exercises. This could help expedite process in the following ways:
    - Structuring a Terms of Reference for an IEC to help avoid the need for repetition by other participants;
    - The IEC role should include meeting with participants to understand the positions and priorities of each party, and assist the parties in accessing information (or, where Commercially Sensitive, in having confidence that the information has been reviewed by an independent party); and
    - Participants could request model runs from the IEC, where inputs may otherwise be deemed confidential, to help with discovery and testing of financial reserves (again similar to the Cost of Service Methodology Review). This should not impede participants from conducting their own tests/analysis, but will reduce duplication and mitigate any confidentiality concerns that may exist.
- As this process has technical elements, a discovery process for participants would help to supplement understanding and develop positions. Likely, one round of Information Requests would be sufficient for a starting basis of understanding.
- In addition, interactive workshops attended by all participants would help facilitate discussion and understanding. Likely workshops should be run or coordinated by the potential IEC, with the specific role for Manitoba Hydro being dependent on the scope of each workshop. Undertakings resulting from workshops where responses are technical and not immediately available should be allowable.
    - Workshops could be broken into categories, such as the following two topic areas:
        1) Review of Hydro's current financial targets and financial reserve considerations, including 5-year drought and other scenarios, and
        2) Review and refinement of other tools and analysis for assessing financial reserves and rule-based approaches including use of the "Uncertainty Analysis" tool that has been initiated by Hydro.

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- At the end of the process, written submissions should be allowed from participants for recommendations for the PUB to consider and to provide a record ahead of the next GRA.
- Based on their own involvement and the review of written submissions, the IEC should generate a final summary report on the process, reflecting pros and cons of various alternatives.
- As a result of this process, PUB directives or Minimum Filing Requirements would guide Manitoba Hydro with rate setting ahead of the next GRA.
- Participants in this process should include intervenors who took substantive positions on the appropriate levels of financial reserves and Hydro financial targets in the last GRA and advisory/expert support as required.

MIPUG looks forward to participating in this upcoming process. Thank you for the opportunity to comment on these matters.

Yours truly,

THOMPSON DORFMAN SWEATMAN LLP

Per: Antoine F. Hacault

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Manitoba Industrial Power Users Group Comments Regarding Scope for Upcoming Collaborative Review of the "Appropriate Level of Financial Reserves, for example a Minimum Retained Earnings Test".

This submission provides MIPUG's perspectives on the appropriate scope for the anticipated collaborative review of the appropriate level of financial reserves for Manitoba Hydro, including for example a minimum retained earnings test.

Comments Regarding the Purpose of this Process

The collaborative process arises out of PUB Order 59/18 which found that Hydro's proposed rate increase for 2018/19 was not required. The Board instead concluded that there was "merit to gaining better understanding of the financial reserves required for Manitoba Hydro under various circumstances", noting the following:

> This would include consideration of risk tolerances, what risks should be protected by reserves, and the circumstances which would guide the need for more aggressive rate increases to continue full cost recovery for Manitoba Hydro[1].

The Board further described the purpose in Order 90/18, noting:

> As such, Directive 9 provides for a Board-hosted technical conference that will be a forum for stakeholders to discuss and explore the use of rule-based regulation that considers the level of financial reserves required by Manitoba Hydro under various circumstances and meeting other financial metrics in the face of potential risks to the Utility. The technical conference is to bring clarity on these matters, which were discussed in the evidence at the GRA but not fully canvassed as to whether and how rule-based regulation could be employed by the Board going forward[2].

In MIPUG's view, it is important to frame the review in light of the principles under which Manitoba Hydro was created and operates, including:

1) Hydro does not have share capital.
2) Hydro is a cost recovery utility (as opposed to a utility which is entitled to a return on shareholders' equity, for example).
3) Financial reserves are required to address risks.
4) Hydro's "reserves" or "equity" or "retained earnings" are, in effect, amounts built up out of rates over time, from charging customer rates that exceed costs (where costs already include the depreciation of all assets in service at a given time).

[1] Order 59/18 page 66
[2] Order 90/18, page 35.

5) By contributing reserves, ratepayers benefit from the presence of the reserves primarily through reduced future rate volatility, as well as to some degree of avoided interest costs.

6) There is significant customer interest in avoiding rate instability or unpredictability. This is consistent with good regulatory ratemaking practice. The presence of ratepayer reserves, at a sufficient level, helps achieve this objective. At a certain level of financial reserves however, customer rate stability does not further benefit.

7) Hydro's access to capital (e.g., debt) is not affected in any material way by the level of reserves.

8) Hydro has a captive customer base, provides a necessary service (electricity), and has rates that are generally viewed as favourable (sometimes quoted as being "low"). As a result, the ultimate purpose of reserves is not to ensure creditors will be repaid or to avoid defaulting on the Provincial guarantee – there is little to no risk of that occurring while Hydro retains the power to increase electricity rates. The ultimate purpose of Hydro's reserves, as ratepayer contributions, is for domestic rate stability.

9) Hydro's financial risks encompass both positive (better than forecast) and negative (worse than forecast) potential future conditions.

10) The scale and magnitude of Hydro's risks vary over time. For example, if Hydro plans to borrow many billions of dollars in the near term, the "risks" from interest rate changes can be high (where "risk" encompasses variation in future costs). At times when most of Hydro's debt is locked-in to long-term fixed rates, the risk tied to unexpected interest rate changes goes down.

11) As part of Hydro's need to communicate with many stakeholders, including its shareholder, domestic customers, export customers, capital markets, etc. there is a need to be able to provide clear and quantifiable information about Hydro's financial status over both short and long terms.

MIPUG has participated for decades in the processes used to set Manitoba Hydro's rates. During this time, there has been significant development in the tools used to assess and manage Hydro's financial forecasts.

Since the late 1990s, the focus for rate setting has been on three main financial targets:

1) The desire to achieve a given **Debt-to-Equity** ratio by a certain target date.

2) The desire to achieve a net income at or above with a specified **Interest Coverage** level (margin over interest expense).

3) The desire to generate cash for **Capital Coverage** at a level that funds normal (i.e., non-growth oriented) internal capital programs with cash rather than debt. This target has also been expressed as testing Hydro's financial operations for self-sufficiency (i.e. a cash flow test).

The term “desire” is deliberately chosen with regard to the rate setting context. This is because in a rate setting context, none of the above financial targets are absolute. Many rate application processes have reviewed forecasts, such as during droughts or when major capital projects come into service, which fail to fulfill the desired levels in one or more years. Hydro’s operational context is an important consideration and not meeting financial targets is not a reason to shock ratepayers - there is still room for moderation, longer-term outlooks and temporarily yielding on the financial targets.[3]

In Manitoba Hydro’s case, the desired financial target levels provide some guidance, but nothing that is absolute in terms of guiding rate increases. For example, the debt-to-equity ratio target is very long term (can be one to two decades hence) which tells very little about whether a given rate-setting year is sufficiently on course or requires substantial rate changes. Similarly, the interest coverage and capital coverage targets can be informative of whether a single year is meeting the desired levels, but in the face of large enough reserves, it is commonly agreed that these targets need not be met each year (in fact this is the very purpose of reserves).

What is missing from Hydro’s formal financial targets is a tool or tools that exhibit the following characteristics:

1) Considers specific concurrent risks in terms of forecasts of major cost and load variables; and,
2) Is stochastic, in that it considers not only the potential worst case, but the likelihood of an adverse outcome across a full range of possible outcomes (positive and negative).

The purpose of these tools would be to inform whether the current level of reserves (or a targeted level of reserves attained through stable rate changes) can withstand the stresses of unlikely but foreseeable future scenarios (such as prolonged drought, export price volatility, etc.). This is consistent with the idea of a “minimum retained earnings” level.

In Hydro’s 2017/18 and 2018/19 GRA the uncertainty analysis was introduced (Appendix 4.2) which begins to permit such analysis.[4]

This topic was explored in the transcript with Mr. Bowman under examination by Board Counsel:

> MS. DAYNA STEINFELD: ... Mr. Bowman, just to clarify a point that you've made on this slide, you've supported the idea of having refined ratesetting mechanisms as raised by Mr. Colaiacovo, but you say that "specific proposals are not yet developed and need work."

[3] This stands in contrast to many regulated environments where the setting of a financial target such as a specified Return on Equity leads to a strictly calculated revenue requirement that effectively must be met in the year in question – in these cases, there is almost no room for moderation in the overall corporate Revenue Requirement.

[4] For further information on this, please see Background Paper C from the pre-filed testimony of Patrick Bowman in the 2017/18 and 2018/19 GRA.

So is your recommendation to this Board that it move in this direction perhaps by ordering a next steps such as a technical conference; is that what you're suggesting?

MR. PATRICK BOWMAN: That would be one practical way. I set out a bit more detail in the -- background paper 'C' and an IR on this matter of what some of these things might look like. But yes, I think that's one way.

MS. DAYNA STEINFELD: And if we just move forward to slide 23. In terms of taking next steps in this regard, does the uncertainty analysis that's set out here is this something that might help form the basis for the Board to set those kinds of refined ratesetting mechanisms?

MR. PATRICK BOWMAN: The analysis behind that slide is the tool that is, I will say, well thought out and rather elegant. Taking it to the next step would involve -- this isn't the slide I would use, this is just a -- how bad does it get at some point. There's a different sort of set of cone type of analysis.

But the step in evolution is being able to say, how do I -- rather than if I do something stubbornly at 1 percent rate increase, how bad does it get? What you should do is say, If I look at the condition to each year and have a rule for how I might change my rate increases and not rate shock people, how bad does it get? In other words, not what does it look if I do 3.95. It'd be -- my suggestion is the next step you test, as you say, what if it -- what does it look like if I start at 3 but if things are going downhill, I'm prepared to do 5 and if they're going uphill, I'm prepared to 2. And then have a model that adapts that way and see how tight you pull in that range.

And if you -- when you -- once you pull in that range, your P5 or something of that nature is still keeping your retained earnings way above of Mr. Osler's measure of minimum retained earnings, and I think you have some comfort that you have a regime that, you know, you can start with that rate increase 3 percent. You've communicated to people that if things go bad I'm going to go to 5. No one's sitting there thinking you're going to go to 12. And you've shown how that will avoid the bottom, and you're not going to drive this Utility into ruin. I think that's the type of

> communication that this tool can do if it's developed to its level. It's not quite there yet.[5]

Comments Regarding Scope of this Process

On the basis of the above comments, the scope for a review of Hydro's financial reserves and consideration of risk should be two-fold:

1) **Financial Targets:** Consider whether there are updates needed to Hydro's three main financial targets. For example, there was discussion in the recent GRA that the Capital Coverage target should include cash flows for payments to Winnipeg Hydro, which it presently does not. This issue should be understood and resolved. Also, clarify the purpose of each financial target and what signals each provides for rate setting purposes.
2) **Uncertainty and Minimum Retained Earnings:** Review all necessary methods and analyses for the use of Hydro's Uncertainty Analysis tool (or other alternatives) to inform the establishment of a rule-based Minimum Retained Earnings level as part of each GRA rate setting process. The intent is this should provide the Board with a tool that is more risk-focused and more helpful in assessing the near-term than the aspirational or long-term financial targets noted above. Among the factors for further review and consideration:
    a. What key inputs should be considered as "scenarios" or "risks" (e.g., drought, interest rates, load, export prices, etc.)
    b. What triggers should be considered for applying a rate response (e.g., consider scenarios that apply a higher rate response if a forecast year shows negative net income; or shows net income below Income Coverage target level; or approaches based on Capital Coverage calculations; or excessive progress on Debt-to-Equity targets; etc.)
    c. What rate response should be considered for testing as compared to an assumed rate increase baseline (e.g., +/- 2%, +/- 3%, +2%/-1%, etc.).

A further item of interest relates to clear communication on potential future rate increase tolerances and PUB expectations. As noted in the transcript above, if modelling at a GRA could show that a given rate increase projection (e.g. 3% increase each year as cited in the above transcript), combined with a rate response in the range of, say, +/- 2% under favourable or very adverse conditions, could ensure Hydro remains in a reasonable reserve position, both customers and financial markets would have the opportunity to (a) see that the Board has considered whether 3% is a reasonable and sustainable rate increase, (b) have some understanding of the rate shock risk that they face (e.g., 5% maximum in a given year under stated conditions), and (c) have clear knowledge that the Board has considered what is necessary to ensure Hydro can avoid financial distress in the case of adverse moves on key risk factors.

[5] 2017/18 & 2018/19 GRA, Hearing Transcript from January 25, 2018, pages 6428 - 6430

At this stage, MIPUG suggests thoughtful consideration is needed regarding the concept of "which risks should be protected by reserves". This concept is based on the idea that risks such as drought are self-correcting and revert to the mean, and thus suit (and require) reserves, while other risks such as interest rate changes do not suit reserves. In MIPUG's view, Hydro's reserves are not just a self-balancing drought/flood account, but also serve a rate transition role for other risks. It is true that a permanent sustained move toward higher interest rates should be tied to rate increases; it is still desirable that reserves could permit any such rate adjustments to occur in an orderly and measured fashion over-time, consistent with stable rates.

Additional Issues for Consideration in Scoping Upcoming Review Process

The 2017/18 and 2018/19 GRA process thoroughly reviewed many topics that are relevant considerations when reviewing financial reserves and appropriate risk tolerances. These include:

1. Regulatory & Legislative Principles: For example: the role of a Crown Corporation regarding building "equity", used and useful, intergenerational equity, power at cost, a definition for 'self-supporting' and other principled considerations for use in determining financial reserve levels and financial targets and risk assessment tools in rate setting.
    a. For example, definitions of 'self-supporting' were discussed in the last GRA by Mr. Bowman (transcript pages 6074 – 6076) and Mr. Colaiacovo (transcript pages 4982 – 4983).
2. The purpose of reserves and timing considerations within the context of Hydro business operations, appropriate risk tolerances and planning horizons.
    a. For example, Mr. Bowman discussed the purpose of reserves and how reserve levels can guide rate setting in the last GRA (transcript pages 4940 – 4942).
    b. Mr. Colaiacovo identified the importance of clarity in terms of establishing the impact on reserves and the trade-off between targets, timing and conditions (transcript page 4905).
        i. PUB Order 59/18, pg. 65: "The Board agrees with the evidence of Morrison Park Advisors, that this raises a question: if a primary purpose of having Retained Earnings is to withstand a drought, why does Manitoba Hydro need rates at a level that would allow it to build Retained Earnings during a drought?"
    c. Hydrological risk (i.e. drought) and understanding how Hydro's hydrology modelling captures risk (based off of 100+ historical water flow conditions, uses the mean flow of this to calculate expected revenue).

i. Example provided by Mr. Colaiacovo in the GRA on Bonneville Power Authority and use of rules to manage hydrological risks (transcript pages 4908 – 4911).

d. Understanding interest rate impacts already built into Manitoba Hydro's financial forecasts as a baseline and what, if any, additional interest rate risk appropriately justifies increases to financial reserves. Consideration is needed regarding the present situation (with ongoing major borrowings for Keeyask) versus a status quo operation debt cycle post-Keeyask.

e. Cash flow sufficiency (i.e. "self supporting" operations) as a metric for setting reserve levels. For example, Mr. Colaiacovo discussed how credit rating agencies consider cash flow (transcript pages 5016 – 5018, 5023 - 5024).

f. Other considerations for uncertainty analysis and risk assessment including, but not limited to, inflationary/economic inputs, export/fuel prices, domestic load growth (elasticities) and DSM forecasts, unforeseen circumstances (e.g. carbon tax), etc.

Additionally, tools/reports used in the last GRA (or previous) that may be of relevance in the upcoming review includes but is not limited to:

a. Hydro's previously used Minimum Retained Earnings Test (MRET) as a short-term rate setting tool (to balance the longer-term debt-to-equity ratio target). As described by Mr. Osler in the last GRA (transcript pages 6122 – 6123; 6420 – 6421; PUB-MIPUG-14) as a drought target coupled with self insurance as a requirement for the minimum level of reserves in a given year; in the 1990s set as two years of drought protection and a self-insurance provision. For current times Mr. Osler recommended expanding to a five or seven year drought (i.e. the single highest financial risk factor).

b. KPMG Financial Target Review Report (Appendix 4.1 and Supplementary Appendix 4.5) which reviewed Manitoba Hydro's financial targets and considerations on perspectives from capital markets and credit rating agencies and scenario/probabilistic analysis and testing.

c. Uncertainty Analysis: In the last GRA, Hydro filed Appendix 4.2, a response to the KPMG Financial Target Review including Section 2.0 Manitoba Hydro's Uncertainty Analysis. This uncertainty analysis was additional quantitative analysis combining key risk factors (flow variability/drought, export prices and interest rates) and generating 15,200 financial projections with equal probabilistic weightings. Subsequent IRs varied probabilistic weightings between key risk factors as additional analysis.

d. MIPUG Evidence (Exhibit MIPUG-15) included Background Paper C: Uncertainty Analysis which highlighted the benefits and originalities of

Hydro's uncertainty analysis in Appendix 4.2 and risk scenarios and outlined some of the improvements that would help guide rate setting.

e. Morrison Park Advisors Evidence (Exhibit CC-17 and Errata in CC-17-1) and direct testimony presentation (CC-45) provided review of Manitoba Hydro financial targets, risks, and considerations of each from a capital market and credit rating agency perspective.

f. Hydro's scenario analysis from the Needs For and Alternatives To (NFAT) Review, which took a very long term focus but considered 27 scenarios for each development plan and compared the net present value including high, reference and low capital costs, interest rates, and export prices.

g. Credit Rating Agency financial target metrics as a guide to what credit rating agencies review. For example, the types of financial information reviewed in Credit Rating Agency reports provided in Appendix 4.4 or Moody's Methodology/scorecard as referenced starting transcript pages 5062 (but not on the GRA record).

h. Thresholds - In the last GRA, there was cross-examination between Mr. Colaiacovo and Mr. Peters that looked at the impact of drought on retained earnings (transcript pages 5159 – 5169, reviewing cumulative impacts provided in PUB/MH II-40), and while rate increases were held constant, depending on the scenario retained earnings either continued to slowly grow (7.9% rate increases) or decrease by almost $2 billion (3.95% rate increases). A minimum retained earnings test could help provide a threshold or signal for when the PUB should consider making rate adjustments in response to significant financial events.

    i. Mr. Colaiacovo discussed thresholds and risk in cross-examination (transcript pages 4967 – 4969).