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The Public Utilities Board of Manitoba
400 – 330 Portage Avenue
Winnipeg, MB R3C 0C4

Attention: Rachel McMillin, Associate Secretary

Re: Manitoba Hydro Final Written Argument on Business Operations Capital

The following comments are provided on behalf of the Consumers Coalition to provide details complementing the Coalition's oral closing argument on matters relating to Business Operations Capital ("BOC"). The Coalition files this letter as part of its closing submissions in the Manitoba Hydro 2023/24 and 2024/25 General Rate Application.

1.1 Asset Sustainment Spending

- Inflation: Manitoba Hydro is positioning itself to increase spending by over \$200M in the future due to inflation. This evidence was introduced during cross-examination of Midgard Consulting Inc. Midgard acknowledged that the source of the data was Statistics Canada but did not acknowledge or address whether it was a reasonable predictor of future inflation.¹

¹ Manitoba Hydro Final Argument, Section 10.1, p. 91, l. 1-5.



1.2 Asset Sustainment Spending – Asset Performance Measures

- Declining System Performance: Minimal declines in system performance, as demonstrated in the evidence presented by Midgard, have not been sufficiently addressed by Manitoba Hydro.²
 - Manitoba Hydro has not demonstrated that its increased spending on BOC is strategically focused on the areas that would yield the greatest improvements in performance.
- T-SAIDI & T-SAIFI: Note that Fiscal 2022 is an outlier year and not indicative of a long-term trend.³
- SAIDI & SAIFI: The trends discussed in Manitoba Hydro’s written closing argument are influenced by the selection of endpoints and the interpretation of data. The evidence presented by Midgard illustrates that customer perception changes when the results of major event days are excluded. This is because Manitoba Hydro lacks substantial control over the impacts of major event days, and it has not provided sufficient evidence to demonstrate that its proposed spending increases are specifically aimed at addressing the exposure and impacts of such major event days.
 - Overall increasing trends are primarily influenced by 66 kV line performance, which is not the focal point of Manitoba Hydro's proposed major investments. It should not be assumed that the increased costs will be directly correlated with improved performance.
- Extensive use of 66kV Transmission Lines: Manitoba Hydro should anticipate poorer performance from these lines compared to higher voltage lines due to reduced Right-Of-Way (ROW) widths and different clearing practices. This is because these lines pose less risk to the overall system.⁴
 - The solutions to address the declining reliability of the 66kV lines include implementing ROW clearing practices that are more aggressive or strategic, rather than replacing them entirely.
 - Enhancing the ability to sectionalize the lines can be achieved through measures such as remotely operated switching and automatic reclosers.
- Intervention Rates: While it is acknowledged that intervention rates are expected to rise in the future (with the specific date unknown and Manitoba Hydro lacking accurate asset information quality), it does not necessarily imply the need for increases within the

² Manitoba Hydro Final Argument, Section 10.2, p. 91, l. 10-14.

³ Manitoba Hydro Final Argument, Section 10.2.1, p. 93, Figure 15.

⁴ Manitoba Hydro Final Argument, Section 10.2.1, p. 95, l. 7-11.



current planning period. The year 2032 falls well beyond the planning period and does not justify raising rates during the current planning phase.⁵

- It appears that Manitoba Hydro is potentially incorporating rate adjustments to allow for future flexibility, effectively padding today's rates to provide room for maneuverability in the future.
- Asset Intervention Rates: The majority of the Asset Types in Figure 19 of Manitoba Hydro's written argument do not exhibit a direct correlation with customer reliability, as they are installed in redundant configurations. This further emphasizes Manitoba Hydro's tendency to prioritize individual assets over the system as a whole, which appears to be deeply ingrained and challenging to overcome without a significant management reset.⁶
- Declining Planned Maintenance Performance: Manitoba Hydro may have failed to maintain sufficient field staffing resources to accomplish the required work, rather than providing justification for significant increases in capital spending.⁷
 - Alternatively, viewed from a different perspective, if the unfinished work is deemed essential, this chart could indicate a level of negligence.
 - Another possible interpretation is that Manitoba Hydro has appropriately identified a substantial portion of the planned work as low priority/low risk, and thus considered it acceptable to disregard without significant impacts on customer service.

1.3 Deferring Investments Into the Future

- Deferring Investments: Manitoba Hydro has not presented sufficient evidence to support the claim that the assets with the most significant impact on customer reliability are being neglected or lacking adequate investment for maintenance. This is evident from Manitoba Hydro's consistent superior performance compared to its Canadian peers.
 - Grand Rapids Unit 4 Overhaul: Manitoba Hydro consistently conflates investments centered on specific assets with investments aimed at enhancing overall system performance. There is no indication that Manitoba Hydro genuinely acknowledges the need to prioritize system performance, despite making repeated claims that its spending increases primarily target improvements in system and customer performance.⁸

⁵ Manitoba Hydro Final Argument, Section 10.2.2, Figure 19, p. 96-98.

⁶ Manitoba Hydro Final Argument, Section 10.2.2, Figure 19, p. 96-98.

⁷ Manitoba Hydro Final Argument, Section 10.2.3, p. 99, Figure 20.

⁸ Manitoba Hydro Final Argument, Section 10.3, p. 100, l. 29 to p. 101, l. 8.



- Pointe du Bois Renewable Energy Project (PREP): Manitoba Hydro has offered minimal evidence regarding its ability to optimize the operational utilization of the current Pointe du Bois generating unit portfolio to mitigate risk and maximize production. The potentially available grant funding coincidentally compels the advancement of the investment, years ahead of the actual necessity.⁹
- Bipole I & II Refurbishments: Midgard did not propose neglecting the maintenance of components that could potentially compromise safety or other interconnected components upon failure. Midgard explicitly stated that such components should be addressed proactively before failure occurs.¹⁰
 - Midgard did suggest that not all planned HVDC investments hold the same level of urgency or possess equal impacts on system performance. Investments should be prioritized based on a system-focused approach.
 - Midgard noted, utilizing Manitoba Hydro's own evidence, that bipole outages have thus far not significantly affected either Manitoba Hydro costs or service.

1.4 Advancing Asset Management Maturity

- Commitment to Advancing Asset Management Maturity: Manitoba Hydro has undoubtedly invested significant efforts in attempting to showcase a strong commitment to advancing its Asset Management Maturity. However, this position is contradicted by the relatively slow progress it has made in actually advancing its Asset Management maturity.¹¹

1.5 Asset Investment and Portfolio Planning

- Portfolio Optimization: Manitoba Hydro acknowledges its inability to achieve cross-departmental capital planning optimization due to varying levels of maturity in its AM processes across different departments.¹²
 - Manitoba Hydro recognizes that its asset data and processes are inadequate for numerous asset classes that have a direct impact on customer reliability.¹³

⁹ Manitoba Hydro Final Argument, Section 10.3, p. 101, l. 10-20.

¹⁰ Manitoba Hydro Final Argument, Section 10.3, p. 101, l. 22 to p. 102, l. 1.

¹¹ Manitoba Hydro Final Argument, Section 10.4, p. 102-104.

¹² Manitoba Hydro Final Argument, Section 10.5, p. 105, l. 4-9.

¹³ The question of how such a fragmented situation could be expected to generate an optimized investment portfolio is left unanswered by Manitoba Hydro, apart from asserting that it is a rigorous process and requesting trust without providing further clarification.



- **Robust Asset Investment and Portfolio Planning:** Numerous asset categories where Manitoba Hydro acknowledges that asset information and processes are unfit for their intended purpose. There is a lack of coordination between the Asset Management processes across different business lines, particularly the distribution business line responsible for serving the largest customer base.¹⁴
 - Manitoba Hydro may be allocating inadequate investments to its 66 kV sub-transmission system while overinvesting in higher voltage transmission infrastructure. Consequently, this neglect of radial sub-transmission facilities, which directly affect customer reliability, results in higher customer interruptions.
 - These decisions appear to prioritize costly investments in redundant high voltage transmission assets that do not correlate as directly with customer reliability.
- **Capital Expenditure Plan:** Manitoba Hydro fails to provide clarification on how it intends to achieve cross-departmental optimization and budget allocations when faced with inconsistent processes and unreliable asset data.¹⁵
 - Manitoba Hydro acknowledges the inadequacy of inputs required for Copperleaf to optimize an investment portfolio. Consequently, Copperleaf's ability to perform portfolio optimization is compromised.

1.6 Short-term Planning & Decision Making

- **Condition not Risk Is Used Near Term:** In the short term, Manitoba Hydro overlooks the significance of an asset's role and, consequently, the risk it poses. This includes considering the combination of its condition, probability of failure, and consequence of failure. Instead, Manitoba Hydro adheres to its traditional decision-making approach, which solely relies on asset condition.¹⁶ This approach is echoed in the Manitoba Hydro's Slide Deck (Slide 38)¹⁷ wherein Manitoba Hydro touts the focus on assets (only) rather than the longer-term approach of (purportedly) looking at system impacts.

1.7 Whole Life Cost Models

- **Whole Life Cost Model:** In filed evidence the model is portrayed as a future aspiration rather than a present reality. It appears that Manitoba Hydro is now asserting its current

¹⁴ Manitoba Hydro Final Argument, Section 10.5, p. 105-107.

¹⁵ Manitoba Hydro Final Argument, Section 10.5, p. 105, l. 23 to p. 106, l. 15.

¹⁶ Manitoba Hydro Final Argument, Section 10.6, p. 107-108.

¹⁷ 2023-24 and 2024-25 GRA - Oral Final Submission.pdf.



state and using it as the foundation for its application, which contradicts other evidence that has been submitted.¹⁸

- Manitoba Hydro concedes that it lacks sufficient asset data for numerous asset classes that have a direct influence on customer reliability. Consequently, the inputs required to construct Asset Lifecycle models for these asset classes are inherently unfit for their intended purpose.
- Manitoba Hydro does not address how it compensates for its deficient asset data when utilizing this or any other emerging Asset Management processes.

1.8 Addressing Midgard’s Evidence

- “Manitoba Hydro should let assets fail and customers could proactively prepare for outages due to the asset failures with fossil fuel backup generation.”¹⁹ This is an example, not a recommended strategy Manitoba Hydro must determine its own recommended strategies based on its unique circumstances. The transcript reference cited by Manitoba Hydro is an example of a strategy used in the Yukon based on its needs.

1.8.1 Manitoba Hydro’s Market Interactions and Performance to Reliability Standards

- Generation Investments and Mandatory Reliability Standards: If the argument revolves around Mandatory Reliability Standards as the justification for Generation Investments, let that be the focal point of the argument. It is important to note that Manitoba Hydro has shifted tactics in order to rationalize their investments.²⁰
- Generation Investments, DC Bi-Pole Investments and Revenue Impact: If the justification revolves around financial considerations, it is important to provide a clear financial justification.
 - The financial justification essentially represents the Minimum System conversation presented in a different form.
 - Dual bipole failure is an event of highly improbable occurrence. Moreover, each bipole possesses the capability to continue functioning at reduced capacity even after the failure of a single pole. Therefore, a complete outage of both bipoles would necessitate failures in four nearly independent systems.²¹

¹⁸ Manitoba Hydro Final Argument, Section 10.7, p. 108-109.

¹⁹ Manitoba Hydro Final Argument, Section 11, p. 112, l. 18-20.

²⁰ Manitoba Hydro Final Argument, Section 11.3, p. 116, l. 15-31.

²¹ Manitoba Hydro Final Argument, Section 11.3, p. 119, l. 18 to p. 120, l. 9.



- Manitoba Hydro supplied the performance data upon which Midgard based its conclusions. Midgard did not originate the notion that bipole failures generally do not result in significant system disruptions; Manitoba Hydro itself presented this evidence. Midgard merely observed and provided commentary on Manitoba Hydro's own findings.²²
- Midgard did not propose that Manitoba Hydro should completely abandon 2200 MW of hydro generation. Midgard emphasized the need for a more appropriate pacing of bipole investments to align with the actual level of risk. Manitoba Hydro's approach seems to treat all risks, particularly those related to bipoles, high voltage transmission, and generation assets, as non-negotiable issues that demand immediate resolution.²³ (this appears to be another example of a short-term asset focus without consideration of system risk).
 - It would be more effective to establish a prioritized and ranked set of projects based on a thorough evaluation of risks, allowing for a measured and strategic approach to addressing them.

1.8.2 HVDC Bipole Analysis

- Alberta System Discussion: This observation was not previously presented in the evidence. Nobody is suggesting that Manitoba Hydro create the risk of experiencing catastrophic failure in its DC system.²⁴
 - Midgard has extensive knowledge of various power systems, including BC, Alberta, Saskatchewan, and Ontario, as well as in-depth investigations of the Manitoba system for two separate GRAs. Manitoba Hydro's characterization that Midgard would not understand their system due to our familiarity with the Alberta System is incorrect.
 - Manitoba Hydro mischaracterization the Alberta system having a redundant AC network supporting the DC Bipoles. The Alberta System would lack sufficient capacity under various operating conditions if the DC Bipoles were not in place. Midgard can point to instances as early as 2006 when the North-South backbone 240 kV lines couldn't be taken out of service for more than short outages due to operational constraints.
 - Referring to Midgard's CVs can counter the claim that we lack broad enough experience to comprehend the "complex" Manitoba Hydro system.

²² Manitoba Hydro Final Argument, Section 11.3, p. 119, l. 18 to p. 120, l. 9.

²³ *Ibid.*

²⁴ Manitoba Hydro Final Argument, Section 11.5, p. 120-121.



1.8.3 Capacity

- Capacity: A capacity factor of 25% indicates that, on average, 25% of MH's generation capacity remains unused at any given time.²⁵
 - This does not mean that 25% of the units are idle simultaneously, as many units may be operating at less than 100% of their nameplate capacity. During numerous hours throughout the year, particularly during off-peak periods in spring and fall, it is likely that a significant portion of the capacity is indeed idle. Hence, the statement asserting that "most of the year a lot of that capacity is sitting idle" is valid.

1.9 Minimum System

- Minimum System: The arguments predominantly revolve around accounting challenges rather than actual system planning barriers.²⁶
 - The matter of the "Export Class" concerning Cost of Service Study ("COSS") was not addressed by Midgard in the evidence presented. Midgard focused on planning aspects, distinct from the specific consideration of COSS. It is important to recognize that planning and COSS are not equivalent in this context.
 - Midgard provided a simplified method of allocating minimum system in evidence.²⁷

The Consumers Coalition thanks the Board for its consideration of these comments.



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²⁵ Manitoba Hydro Final Argument, Section 11.7, p. 122, l. 11-27.

²⁶ Manitoba Hydro Final Argument, Section 12, p. 124-127.

²⁷ Manitoba Hydro Final Argument, Section 12, p. 125, l. 8-10.

