

**Manitoba Hydro**  
**2023/24 & 2024/25 General Rate Application**

**Manitoba Public Utilities Board (PUB) Information Request**  
**Round 1 to the Representatives of the General Service Small and**  
**General Service Medium Customer Classes (GSS-GSM)**

**PUB/GSS-GSM I-1**

**Reference:** Emrydia Evidence p. 17 Depreciation

**Preamble:**

**Question:**

- (a) Please confirm whether Mr. Madsen recommends the use of the ALG procedure whole life depreciation rates determined by Concentric in its 2019 ASL Study and that the current level of componentization of the accounts in that study is IFRS compliant.
- (b) Please provide comparisons with other electric utilities that support the assertion that MH's level of componentization is sufficient.

**Response:**

The following responses were prepared by Dustin Madsen.

- (a) Confirmed. I consider the current level of componentization under the ALG procedure whole life technique rates determined in Concentric's 2019 ASL Study to be IFRS compliant. However, for further clarity, this assessment is based on a lack of evidence from Manitoba Hydro on the need for further componentization. Specifically, Manitoba Hydro has presented no evidence that additional componentization of the accounts based on the 2019 ASL study would have a significant impact on the calculated depreciation expense.<sup>1</sup> As stated in my evidence, I do not consider the increased level of componentization as proposed in the Alliance Consulting study to be "significant" and thus it is not necessary under IFRS.

Notwithstanding the above, if Manitoba Hydro were to present clear evidence of a need to further componentize its assets, then I would consider that evidence in the context of the requirements of IFRS. For example, assume that an account has a material investment balance of \$2 billion with an average service life of 50 years. Further, assume that two asset types with distinct lives are charged to that account and each comprise 50% of the investment in the account. If the first asset type had an expected useful life of 25 years and the second asset had an expected useful life of 100 years, then it is likely that additional componentization would be

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<sup>1</sup> Patrick Bowman on behalf of MIPUG has presented some evidence of additional componentization which I consider warranting further consideration.

warranted. However, if the first asset type had an expected useful life of 45 years and the second asset type an expected useful life of 55 years, then the average would remain 50 years. In this case, the need for further componentization would be unlikely, at least as it relates to IFRS compliance. Other drivers of retirement may influence a need to componentize the assets, and the benefits may outweigh the costs of separately tracking two accounts as opposed to one.

- (b) In response to GSS-GSM/MH I-1k, Concentric provided examples of some peers and the level componentization of those peers. I accept that information and would have no better information to provide to the PUB regarding the componentization of peers.

However, it is important to observe that the componentization requirements may be unique for each entity, due to specific circumstances with the assets that are constructed, and the information without context may be of less value. For example, BC Hydro's "329 accounts" as noted by Concentric span all of generation, transmission, distribution, and general plant. While this appears to be significant, from a review of Appendix T to BC Hydro 2023-2025 General Rate Application, which is the Concentric 2021 Depreciation Study,<sup>2</sup> this is driven by a variety of reasons. For example, part of this componentization level is driven by generation facilities with distinct lives and characteristics in BC, tracking of individual transformer sizes, and tracking various vehicles of different sizes and characteristics. There would also be geographic differences between BC Hydro and Manitoba Hydro that could drive differences in asset types.

I note that even with the additional accounts for similar types of assets, several retain the same average life and curve. Therefore, this may be more of a practical means by which BC Hydro prefers to track costs, rather than a need to comply with accounting requirements for componentization. The need for additional componentization is specific to the needs of each entity, and the specific assets being invested in.

I note that the level of componentization under the 2019 Concentric Depreciation Study is 371 accounts as opposed to the 781 proposed in the "IFRS-compliant ASL" study.<sup>3</sup> This level of componentization, which is the level I consider to also be IFRS-compliant applying the ALG procedure to the same accounts, is already greater than any other of the peers noted by Concentric.

My evidence and recommendations related to componentization are based on the principled nature of IFRS and my review of the existing level of componentization. Specifically, IFRS does not expect an entity to componentize assets to an unreasonably low level as such efforts would require material and unnecessary costs to track without materially altering or improving the depreciation estimate. The principle of "componentization" under IFRS is intended to ensure that an entity does not aggregate all or most of its assets with very different lives all in a single or very few accounts. Componentization is intended to provide for a reasonable, not perfect, estimate of depreciation expense under IFRS.

In conclusion, further componentizing the 371 existing accounts into further accounts is unlikely to result in a "significant" change to depreciation expense absent evidence of that fact from Manitoba Hydro.

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<sup>2</sup> [https://docs.bcuc.com/Documents/Proceedings/2021/DOC\\_64006\\_B-2-1-BCH-F23-F25-RRR-Appendix-public.pdf](https://docs.bcuc.com/Documents/Proceedings/2021/DOC_64006_B-2-1-BCH-F23-F25-RRR-Appendix-public.pdf), commencing at PDF page 1091

<sup>3</sup> Appendix 4.3, PDF page 22, Figure 10.

## PUB/GSS-GSM I-2

**Reference:** Emrydia Evidence p. 38 Depreciation

**Preamble:**

**Question:**

Please discuss the merits of offsetting the deferral account against the book accumulated reserve and the impact on revenue requirement.

**Response:**

The following responses were prepared by Dustin Madsen.

I am supportive of offsetting the gains and losses deferral account against the book accumulated reserve for rate setting purposes. This is the approach commonly applied in other jurisdictions where deferral accounts arise due to different IFRS and regulatory accounting requirements. To the extent all deferral account balances are tracked on an asset account basis and amortized over their remaining expected life, there would be no impact on revenue requirement of offsetting the deferral account against the book accumulated reserve. This is because such an approach will yield the same result as is achieved by either the ELG or ALG procedure and the whole life technique which amortizes any unrecovered or over recovered investment over the remaining life. This result holds true even if Manitoba Hydro continues to separately track and report a deferral account balance under IFRS.

I do not support offsetting the depreciation expense methodology deferral account against the book accumulated reserve for rate setting purposes. The difference is due to timing of depreciation expense and is not akin to the differences recorded to the book accumulated reserve. Given the deferral is a timing difference and will be resolved in the future, offsetting the deferral against the book accumulated reserve would result in an unnecessary change to the balance of the book accumulated reserve. Specifically, it would change the amount of the book accumulated depreciation calculated based on the ALG (ASL) procedure, with an accounting determined ELG procedure depreciation expense that is not relevant to the determination of rates. Ultimately, as I discuss in response to PUB/GSS-GSM I-3, Manitoba Hydro will collect the depreciation expense from customers that it is expensing for accounting purposes but not yet recovering.

### PUB/GSS-GSM I-3

**Reference:** Emrydia Evidence pp. 40-41 Depreciation

**Preamble:** At pages 40-41 of his evidence, Mr. Madsen states:

In summary, I recommend that the PUB direct a recovery period for the deferral accounts consistent with the recovery of the costs over the remaining useful life of the assets. I note that if Manitoba Hydro aligns its financial reporting with IFRS, which I consider to be appropriate, then the ELG vs. ALG deferral will naturally unwind and only the gains and losses deferral account will be impacted.

**Question:**

- (a) If there is a continuation of the current practice of Manitoba Hydro using ELG whole-life procedure for financial reporting purposes and the ALG whole-life procedure for regulatory purposes, when does Mr. Madsen see the deferred balance drawing down to zero?
- (b) In Mr. Madsen's view, is there a need for the Board to establish a recovery period under IFRS - 14 for the deferred balance, or will that theoretical natural unwinding over time not require the Board to establish a recovery period? If a recovery period is required, does Mr. Madsen recommend that it be over the expected remaining life of the assets?
- (c) How would the requirement to discount the balance to the net present value to the assets future cash flows under the proposed standard impact this account?

**Response:**

The following responses were prepared by Dustin Madsen.

- (a) I am unable to provide a specific draw down date. The deferral balance will draw down to zero at the same time as the last asset operated by Manitoba Hydro is retired. Assuming Manitoba Hydro continues to add assets and grow its investment balance, then it is likely the balance will continue to grow indefinitely.
- (b) No specific recovery period is required to be set as the balance will automatically be recovered over the remaining life of all current and future assets. Whether the ALG or ELG procedure is used, the same amount of depreciation expense will be recovered over the life of the assets.

The difference exists simply because of a difference in accounting and regulatory treatment for depreciation expense. If a specific recovery period is set, i.e. "over the expected remaining life of the assets", then the amortized amount will need to be confirmed every year. For example, if the expected remaining life is 30 years in 2023/24, the amortization rate would be calculated over 30 years in 2023/24. However, the balance will continue to grow and assuming similar assets are added into rate base the remaining life in 2024/25 would also be approximately 30 years, and thus any new balance would continue to be amortized over the same remaining life.

- (c) While the standard remains in an exposure draft form, the intent as currently drafted is for the discount rate to equal the regulated discount rate. The balance in the deferral account exists due to a timing difference in the collection of depreciation expense. As a simple example, Manitoba Hydro is approved to collect \$10 from customers, but expenses \$12. The earlier than necessary expensing of the costs means that in the future Manitoba Hydro will receive \$12 and only expense \$10.

In this example, the \$2 difference remains in the investment account to be recovered in the future and will be financed with a combination of debt and equity. These financing costs, which Manitoba Hydro recovers through its revenue requirement, would equate to the effective regulated rate of return on the investment. If discounted by the same amount, whether the difference is in a deferral account as currently included by Manitoba Hydro or in the plant investment, the discounted and undiscounted balances would be equal to each other.

**PUB/GSS-GSM I-4**

**Reference:** Emrydia Evidence pp. 41-42 Depreciation

**Preamble:** At pages 41-42 of his evidence, Mr. Madsen states:

Manitoba Hydro requested the ability to settle deferral account balances that represent a debit position (i.e., amount to be collected from customers) of \$355 million at the beginning of 2022/23 and \$413 million at the end of 2022/23. I understand the difference in the deferral account has been calculated from the basis of the ELG procedure to the existing ALG procedure.

As I discuss above, the ALG versus ELG difference is driven by a difference in accounting policies. Therefore, it need not be calculated and is not reflected in the theoretical reserve. If Manitoba Hydro changes its depreciation estimate for financial reporting purposes the difference will no longer exist. Regardless though, even if the difference continues to exist that difference already has an approved recovery period. Specifically, over the life of the assets if Manitoba Hydro uses the ELG whole life depreciation procedure and for regulatory purposes, the ALG whole life depreciation procedure is approved, then ultimately the difference will draw down to zero when the final asset is retired. No other recovery period is required.

**Question:**

- (a) Please explain whether Mr. Madsen is referring to the book accumulated reserves under ELG and ASL in the above passage or the ELG vs. ALG deferral account?
- (b) Please discuss the merits of offsetting the deferral account against the book accumulated reserve.

**Response:**

The following responses were prepared by Dustin Madsen.

- (a) I am referring to the ELG vs. ALG deferral account. Please also refer to my responses to PUB/GSS-GSM I-2 and 3 for further context.
- (b) Please refer to my response to PUB/GSS-GSM I-2.

## PUB/GSS-GSM I-5

**Reference:** Emrydia Evidence p.61 Depreciation

**Preamble:** In its evidence on page 61, Emrydia states:

First, while a 60-R3 curve provides a better mathematical fit, both the 60-R3 and 65-R4 curves provide a good mathematical fit.

At p. 62 of its evidence, Emrydia states:

However, both a 65-R4 as previously approved, and a 65-R3 curve continue to provide a strong visual fit to the observed retirement data while also better fitting the data through age 22.5 which is the period of highest exposures.

Overall, it appears that a 65-R3 curve provides the best balance between the two bookends. Specifically, a 65-R3 curve better fits the retirement data through age 22.5 than a 60-R3, but also provides a better fit to the observed retirement data through age 35.5, which the 60-R4 curve does not provide. A 65-R3 curve also provides a better alignment with the currently approved Iowa curve of 65-R4, which is preferable given the limited retirement data.

**Question:**

Please confirm that whether, in Emrydia's view, the 60-R3, 65-R3, and 65-R4 Iowa curves all provide a good fit of the existing retirement data for account 3200M.

**Response:**

The following responses were prepared by Dustin Madsen.

Confirmed, all curves provide a good fit to different portions of the observed retirement data.

**PUB/GSS-GSM I-6**

**Reference:** Emrydia Evidence pp.68-69; Tab 2 pp. 13-14 of 39 Zero-Based Budgeting

**Preamble:** At pages 68-69 of its evidence, Emrydia states:

Zero-based budgeting efforts require more effort than is generally required in a normal budgeting exercise. The level of increased effort would depend upon how rudimentary or complex an entity’s budgeting processes are. In any event, simply starting from an “assumed zero-base” is not a zero-based budgeting exercise as it is truly intended.

Rather, a zero-based budgeting exercise requires a concerted effort to not only line up FTEs with activities, but to also understand whether there are more efficient means of executing those activities. [...]

At Tab 2 (pp. 13-14), MH states:

Through the long-term strategic planning process, it became clear that disruptive forces are reshaping the utility industry and changing customer behaviours and expectations. Manitoba Hydro has realigned its organizational structure to effectively respond to this future. Traditionally, Manitoba Hydro was organized around functional segments (e.g., Generation, Transmission, Distribution); it has now adopted a more integrated approach that aligns the organization around operations, managing assets, providing customer service, as well as supporting business units.

The new business model supports Strategy 2040 by delivering solutions and experience that are responsive to the evolving needs and expectations of Manitobans. Centres of Expertise play a central role in the new business model, and the matrixed organization facilitates collaboration across the business units. The business model realignment is ongoing and is being undertaken to ensure Manitoba Hydro has the right resources in the right places at the right time to enable the successful execution of Strategy 2040 and the Enterprise Plan.

**Question:**

- (a) In Emrydia’s experience, would the completion of a zero-based budgeting exercise be associated with an organizational restructuring such as the one recently completed by MH for Strategy 2040?
- (b) Please provide examples of other Canadian utilities that have completed zero-budgeting exercises (and when). Also explain the typical length of time involved in completing such exercises and when such work is most appropriately recommended in the face of the ever changing needs of utility customers and the North American energy supply markets.

**Response:**

The following responses were prepared by Dustin Madsen.

- (a) Not necessarily. A zero-based budgeting exercise seeks to confirm that the level of resources assigned to complete the required work is appropriate. A zero-based budgeting exercise would not necessarily drive a company to reorganize to complete the work in a different manner, and instead may simply drive decisions around ongoing and future staffing levels within the existing structure.
- (b) Zero-based budgeting is a concept that can be highly refined and applied rigorously as I outline in my evidence, or an entity may incorporate best practices from the zero-based budgeting approach in the development of its forecasts/budgets. In my experience, elements of a zero-based budgeting approach are used in many investor-owned utilities as it provides a degree of precision in the forecasts. Precision is important for all utilities, whether investor or government owned, but for investor-owned utilities there is an increased risk that cost overruns may be to the account of the shareholder. For this reason, in my experience most investor-owned utilities apply elements of zero-based budgeting methodologies to ensure that their forecasts are reliable, predictable and controllable. In addition, I am aware that the concept of zero-based budgeting is being considered to some extent in New Brunswick for the government-owned utility New Brunswick Power.

In Alberta, the Alberta Utilities Commission (AUC) has long required cost-of-service regulated utilities to forecast costs on an assumed “zero basis”. For example, in Decision 2013-358 issued September 24, 2013 for ATCO Electric, the AUC stated:

163. The Commission wishes to be clear that ATCO Electric should not follow an approach which primarily uses the observed costs and resources of the year immediately prior to the applied-for test period, or the updated forecast of the previous period, as the starting point for its subsequent increases in activities and costs. The Commission considers that, regardless of the organizational structure, ATCO Electric would be best to develop its forecasts from an assumed zero-base, which seeks to reassess the resources and costs required to fulfill its statutory duties on an annual basis, without assuming that costs are simply incremental to the actual or forecast costs of the preceding year.

This approach to forecasting is not “required”. Instead, it is stated as the AUC’s expectation for the standard required to demonstrate that costs are required. Where a utility does not demonstrate that this standard is met, the utility is subject to disallowance of costs. As an example, in Decision 22742-D01-2019 issued July 4, 2019, at paragraph 48, the Commission acknowledged that ATCO Electric stated it forecast its full-time equivalents using the “activity-based” approach, which the Commission previously accepted as being equivalent to forecasting based on an assumed zero-base. Notwithstanding this acknowledgment, the Commission at paragraphs 49 to 53 of the same decision observed concerns and concluded that ATCO Electric “has failed to justify its requested FTEs and associated dollar amounts in the test years.” The issue continues to evolve in recent ATCO Electric proceedings with the Commission directing AET to file a significant amount of additional detail to support its FTE forecast including complex reconciliations of FTE changes from year-to-year by FTE and by department.

In summary, the standard and expectation that budgets be set based on an assumed zero-base is an expectation as opposed to a requirement in Alberta. Where a utility fails to support the applied for costs based on the same level of expected evidence, the forecast costs are typically denied.

The timeline to implement a full zero-based budgeting approach will largely depend upon the level of budgeting sophistication an entity currently maintains. Where existing costs are already budgeted and controlled at a detailed level, the effort to further implement a detailed zero-based budgeting exercise will be less onerous and time consuming. Conversely, where an entity forecasts costs at a higher level and does not possess significant detail regarding the activity-based need for those forecast costs, then implementing a detailed zero-based budgeting exercise will be time intensive. In this latter case, it may be more prudent to implement elements and best practices from a zero-based budgeting approach as opposed to fully implementing a zero-based budgeting exercise.

As an example, for changes in FTE levels, the PUB may require detailed business cases to support new FTE requests that outline why the work cannot be completed with the existing FTE complement. For hired services costs, the PUB may require more detailed evidence breaking down costs by vendor or cost type to better understand why the costs are changing and how any large incremental increases not driven by inflation are being supported and understood.

Regarding the final element of the PUB's question, a zero-based budgeting approach, or applying elements of one, seeks to ensure that the forecast and actual costs are reasonable. The "ever changing needs of utility customers and the North American energy supply markets" do not preclude a utility from undertaking all reasonable and practical efforts to control costs and support any cost increases as being reasonable. Rather, I consider the evolving nature of the industry to be supportive of a need for Manitoba Hydro to ensure all its costs are well-controlled to avoid unnecessary costs and improve the financial integrity of Manitoba Hydro overall.

**PUB/GSS-GSM I-7**

**Reference:** Emrydia Evidence p.92 Information Technology Costs

**Preamble:** At p. 92 of his evidence, Mr. Madsen states:

I do support the approval of a deferral account for SAP S4/HANA costs to provide for the deferral of the amounts akin to the result that would occur if the costs were capitalized. The use of the deferral account can be such that no costs are permitted to be included until a comprehensive business case supporting a decision to proceed with SAP S4/HANA or some other alternative is presented by Manitoba Hydro.

**Question:**

Please clarify whether Mr. Madsen recommends that the costs incurred be included in a deferral account in advance of the business case. If not, please describe how Manitoba Hydro should account for actual expenditures until such time as a business case is provided and considered for rate-setting purposes.

**Response:**

The following responses were prepared by Dustin Madsen.

For clarity, my concern is the approval of any specific costs in advance. Such an approval may implicitly signal to Manitoba Hydro that pursuing SAP S4/HANA is acceptable absent evidence to support such a conclusion.

I am less concerned with the approval of a deferral account to address any actual costs incurred to the extent Manitoba Hydro can demonstrate with evidence that a transition to SAP S4/HANA is the best option having regard for all forecast costs and benefits. However, initial costs permitted to be included in such a deferral account should be limited to costs incurred by Manitoba Hydro to explore the various alternatives available to it and complete a detailed business case to support a transition if indeed one is necessary.

**PUB/GSS-GSM I-8**

**Reference:** Emrydia Evidence p.95 Rate Design Matters

**Preamble:** In its evidence on page 95, Emrydia states:

In its cost-of-service filing, Manitoba Hydro proposed the following regarding the GSS-GSM customers:

- Propose differentiated rate adjustments with lower rates for the GSS-GSM customers to continue moving the GSS-ND into the zone of reasonableness.
- Continued use of a declining block energy structure.
- Cease rate harmonization of the GSS and GSM classes.

I have reviewed Manitoba Hydro's proposed rate design, including changes to certain aspects related to the GSS/GSM customer classes and the variable rates for different classes to rebalance the revenue to cost ratios.

Based on that review, I consider that Manitoba Hydro's proposed rate design appears to be compliant with recent PUB directions and aligned with best practices for cost-of-service rate design including, for example, the Bonbright Principles some of which are cited by Manitoba Hydro. Accordingly, I propose no changes to the rate design proposed by Manitoba Hydro at this time. [footnotes removed]

On page 20 of Tab 8 of the Application, MH states:

1. The Basic Charge and the price differential between the first and second blocks are intended to recover customer related costs (eg. meter reading, meters and service drops, billing), as well as a portion of the demand costs associated with the first 50 kVA of demand. [...]
2. The price differential between the second block and the tail block are intended to recover demand related costs (eg. Generation, Transmission, Distribution) for the first 50 kVA of the customer's demand not already captured in the first block. [...]

**Question:**

Please confirm or otherwise explain whether MH's declining block energy rate structure for GSS and GSM customers, where a portion of the fixed customer and demand costs are recovered in the lowest energy rate blocks, is consistent with Emrydia's experience in other jurisdictions.

**Response:**

The following responses were prepared by Dustin Madsen.

Declining block rate structures are less common than they were historically. This is because they can encourage more consumption if designed inappropriately.

However, in this case, I agree with the balance Manitoba Hydro has sought to strike as stated on pages 19 and 20 of Tab 08 of its application. I also note Manitoba Hydro's responses at COALITION/MH I-146 and PUB/MH I-144. Specifically, I note the following response to parts c) and d) of COALITION/MH I-146:

c) As described in Tab 8, a declining block energy rate can be used in place of a demand charge; in these instances declining block energy rates should not be viewed as rate discounts for using more energy but rather as serving as an alternate means of recovering demand-related costs. This is the case for Manitoba Hydro's rates for GSS and GSM customers where a portion of demand costs (first 50 kVA) are recovered via energy charges which serves to phase in the demand charge as customers get larger. Manitoba Hydro believes the declining block rate provides an appropriate price signal to reflect the cost of providing service and does not believe it materially impacts the Corporation's ability to respond to the potential of either lower average usage or decarbonization.

d) As defined in Tab 8, the ratemaking objective of efficiency considers whether price signals correspond with underlying embedded and / or marginal costs. Manitoba Hydro believes that the declining block rate design achieves this objective as the first two blocks capture the residual customer and demand-related costs that are not embedded in the basic monthly charge leaving the tail block, which will apply to most of the customers' marginal usage, to be priced more closely to the variable cost of energy.

I agree with Manitoba Hydro that as long as the first two blocks capture residual customer and demand-related costs, there would be a proper price signal, and if the final block is "priced more closely to the variable cost of energy", then there should be no improper price signal that encourages more consumption.

Finally, I am aware of Manitoba Hydro's plans to engage with the GSM class in the future on the possibility of discontinuing the declining block rate in the future. Given the long-standing use of the declining block energy rate structure for Manitoba Hydro and the GSS and GSM customers, and the planned future discussions, I did not propose any adjustments at this time consistent with the reasons stated by Manitoba Hydro for the same.