

**Volume 5 – Board Counsel's Book of Documents****Manitoba Hydro 2012/13 and 2013/14 GRA****INDEX**

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66		PUB/MIPUG 1-18 and MH/MIPUG 1-8
67		PUB/MIPUG 1-7
68		CAC/MH I-47
69		IFRS, Clarification of Acceptable Methods of Depreciation and Amortisation: Proposed amendments to IAS 16 and IAS 38, Exposure Draft ED/2012/5, December 2012
70		MH Exhibit 69 and Exhibit 81
71		MH/MIPUG 1-3 and 1-4



1 **REFERENCE: Section 2.2.2 Pg. 2-6 Bonbright**

2  
3 **QUESTION:**

- 4  
5 a) Please list and quantify the specific items on which MIPUG suggests there is an  
6 "over focus on short run costs".  
7

8 **ANSWER:**

9  
10 **(a)**

11  
12 The section in question (2.2) sets out important ratemaking principles that guided the  
13 InterGroup assignment. One caution for ratemaking, as set out in the literature and  
14 established principles, warns against designing rates that are excessively focused on  
15 short-run costs and not sufficiently attentive to longer-term rate stability.  
16

17 In the case of Manitoba Hydro, the strength of the established regulatory regime is that  
18 there is a tendency away from specific annual "revenue requirement" items, with instead  
19 a perspective that it is important to look at where costs are going in the coming years.  
20 This results in a number of positive benefits for customers; for example that during some  
21 extreme event like a drought, rates do not have to be dramatically raised (nor  
22 dramatically lowered during a future high water event).  
23

24 In this proceeding, however, despite the above regulatory framework which is  
25 successfully designed to help promote stable rates and a long-term focus, Manitoba  
26 Hydro has proposed changes that do drive immediate impacts from short-term changes.  
27 This is mostly related to proposed changes to excessively expense overhead amounts  
28 that are better accounted for as part of the capital program, and to change depreciation  
29 to an ELG approach. The quantification of these changes is set out in the response to  
30 PUB/MIPUG-11(a).





1 **REFERENCE: Pages 4-2 & 4-7 Section 5.0**

2 **Level of Rates and Rate Options; Test Years Adjusted IFF**

3

4 **QUESTION:**

5

6 a) Please provide a table for each of the two test years including a column  
7 containing the IFF11-2 (income statement and retained earnings) as filed; a  
8 column which reflects detail of all adjustments that MIPUG suggests need not be  
9 made; a column that identifies adjustments that MIPUG suggests that can be  
10 deferred to other years; and a column with the resulting adjusted IFF.

11

12 b) Please comment on the rate implications of the adjusted IFF in (a) for the test  
13 years and for the subsequent "15 sustained years of massive capital investment".

14

15 c) Please provide Mr. Bowman's schedule of a "status quo utility" IFF for the test  
16 years and beyond, with all major assumptions detailed.

17

18 **ANSWER:**

19

20 **(a) and (b)**

21

22 Table 1 below shows the Electric Operations Projected Operating Statement for the  
23 years 2011/12 to 2015/16 adjusted for the proposed changes proposed by Mr. Bowman  
24 in the Pre-filed Testimony on pages 1-5 and 1-6.

25

26 Note that it is difficult for any party other than Hydro to model the intricacies of some  
27 aspects of the IFF; however, at a coarse level the attached table gives a good  
28 approximation of the effects of the recommendations.

29

30 Table 1 below does not yet complete any quantified adjustment for Mr. Bowman's  
31 recommendations on Hydro's continued need to focus on containing operating cost  
32 escalation and normal capital spending, nor for potential adjustments to asset lives as  
33 noted at page 4-14 to 4-15 of the pre-filed testimony.

**Table 1: Electric Operations Projected Operating Statement Adjusted for  
Initial Recommendations based on IFF 11-2 (\$ Millions)<sup>1</sup>**

REVENUES					
	2012	2013	2014	2015	2016
Manitoba Hydro Proposed General Consumer at approved rates	1,186	1,290	1,294	1,306	1,313
1% Rate Deferral Reinstated		(26)			
<b>MIPUG Proposed General Consumer at Approved Rates</b>	<b>1,186</b>	<b>1,264</b>	<b>1,294</b>	<b>1,306</b>	<b>1,313</b>
Manitoba Hydro Proposed Additional	-	45	106	156	208
Reduced by 3.5% from 2014 onward for not approved rate adjustment in 2013/14	-	-	(45)	(46)	(46)
<b>MIPUG Proposed Additional* Rates</b>	<b>-</b>	<b>45</b>	<b>61</b>	<b>110</b>	<b>162</b>
Extraprovincial	363	341	363	394	469
Other	7	16	16	16	17
	<b>1556</b>	<b>1666</b>	<b>1734</b>	<b>1826</b>	<b>1961</b>
EXPENSES					
Manitoba Hydro Proposed Operating and Administrative	398	447	532	542	548
Less Change in Capitalized Overhead		(56)	(58)	(59)	(60)
Less IFRS Changes - DSM	-	-	(32)	(29)	(29)
Less IFRS Changes - Admin and General	-	-	(36)	(37)	(37)
<b>MIPUG Proposed Operating and Administrative</b>	<b>398</b>	<b>391</b>	<b>406</b>	<b>417</b>	<b>422</b>
Manitoba Hydro Proposed Finance Expense	385	440	452	504	537
Add Interest Expense Adjustment for difference from MH proposed Revenues	-	1	3	6	8
<b>MIPUG Proposed Finance Expense</b>	<b>385</b>	<b>441</b>	<b>455</b>	<b>510</b>	<b>545</b>
Manitoba Hydro Proposed Depreciation and Amortization	353	401	354	358	375
Less Reduction in Amortization of Rate Regulated Assets	-	-	37	39	40
Less Administrative and General Overhead Capitalized (CGAAPS and IFRS)	-	-	1	3	4
Less Change to Equal Life Group Depreciation Method	-	-	(32)	(33)	(35)
Less Early Adoption of Net Salvage		(53)			
<b>MIPUG Proposed Depreciation and Amortization</b>	<b>353</b>	<b>348</b>	<b>360</b>	<b>367</b>	<b>384</b>
Water Rentals and Assessments	119	106	112	113	113
Fuel and Power Purchased	146	182	158	187	193
Capital and Other Taxes	82	87	92	99	107
Corporate Allocation	9	9	8	8	8
	<b>1,492</b>	<b>1,564</b>	<b>1,591</b>	<b>1,701</b>	<b>1,772</b>
Non-controlling Interest	0	(1)	(1)	(1)	(2)
Manitoba Hydro Proposed Net Income	64	19	70	60	124
Increase (Decrease) from Proposed Changes	0	82	72	65	63
<b>MIPUG Proposed Net Income</b>	<b>64</b>	<b>101</b>	<b>142</b>	<b>125</b>	<b>187</b>
<b>MIPUG Proposed Net Income with Potential Increased Water Flows</b>	<b>64</b>	<b>133</b>	<b>142</b>	<b>125</b>	<b>187</b>
*Additional General Consumer Revenue					
Percent Increase (as per Rate Outcome point 1 - finalize rates at current levels)	0.00%	3.57%	0.00%	3.50%	3.50%
Cumulative Percent Increase	0.00%	4.50%	4.50%	8.16%	11.94%
Manitoba Hydro Proposed Equity Ratio	25%	24%	18%	16%	15%
<b>MIPUG Proposed Adjusted Equity Ratio</b>	<b>26%</b>	<b>25%</b>	<b>24%</b>	<b>23%</b>	<b>23%</b>

<sup>1</sup> Reduction of 1% Rate Deferral as per PUB/MH I-1 and MIPUG/MH I-20(c) where the 2012/13 first quarter balance is multiplied by four as an estimate for the total year and all subsequent years are set equal. Reduction to Additional rates calculated as a reduction from Manitoba Hydro proposed cumulative increase of 8.16% in MH11-2 to 4.5%. Interest Expense calculated as difference between MH and MIPUG net revenues multiplied by CAD dollar Long-term debt rate on page 7 of IFF11-2 where 2015/16 is set equal to the 2014/15 amount. Changes to OM&A and Depreciation and Amortization from PUB/MH I-42. Adjusted Equity calculated as Retained Earnings from IFF11-2 less difference between Manitoba Hydro and MIPUG proposed Net Income, less the deduction of Power Smart Write-Off in 2013/14 as per PUB/MH I-42, does not include AOCl, Does not include Long-Term debt from Keeyask and Conawapa calculated from CEF11 (page 2) Total Spending less all remaining spending to incur after the year in question. Proposed Net Income with Potential Increased Water flow adds \$32 million to 2012/13 as explained in IFF11-2 pg. 3.

Table 2 below shows Mr. Bowman's proposed changes to Electric Retained Earnings and Table 3 uses the Adjusted Electric Retained Earnings to calculate the Debt Ratio for the forecast years 2011/12 to 2015/16.

**Table 2: Proposed Electric Retained Earnings for Forecast Years 2011/12 to 2015/16 (\$ Millions)<sup>2</sup>**

Fiscal Year Ended	Opening Electric Retained Earnings	IFRS Write Off to Site Remediation	IFRS Write Off to Acquisition (Centra & Manitoba Hydro)	IFRS Write Off for Employee Benefits	MIPUG Proposed Net Income	Adjusted Electric Retained Earnings
2012	2,391				64	2,455
2013	2,455				101	2,556
2014	2,556	(36)	(20)	(22)	142	2,620
2015	2,620				125	2,745
2016	2,745				187	2,931

The adjustments not included to Retained Earnings that Manitoba Hydro has proposed for 2013/14 as a result of IFRS conversion include:

- Write Off to Power Smart Programs of \$183 million;
- Write Off to Regulatory Costs of \$2 million;
- Write Off to Administrative Overhead of \$36 million; and
- Change to Equal Life Group Depreciation Write Off of \$31 million.

Mr. Bowman also proposes to adopt the removal of net salvage in 2012/13 as per page 1-6 of the Pre-Filed Testimony.

<sup>2</sup> 2011/12 Retained Earnings Amount from IFF11-2 page 33. Adjustments that MIPUG agrees with deducted from Retained Earnings as per PUB/MH I-42. MIPUG Proposed Net Income from Table 1 above.



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**Table 3: Adjusted Electric Operations Debt Ratio Calculation (\$ Millions)<sup>3</sup>**

	A	B	C	D	E	F	G = D - E - F	H	I	J	(G+H+I+J)/(A+B+C+G+H+I+J)
Fiscal Year Ended	Adjusted Retained Earnings	Contributions in Aid Construction	Non-Controlling Interest	Long-Term Debt	Keeyask Capital Spending To Date	Conawapa Capital Spending To Date	Adjusted Long-Term Debt	Sinking Fund Investment	Short-Term Debt	Short-Term Investments	Debt Ratio w/ Retained Earnings Deduction and no AOCI
2012	2,455	318	100	9,382	590	306	8,486	(372)	-	(50)	0.74
2013	2,556	332	-	10,295	754	411	9,130	(327)	41	-	0.75
2014	2,620	345	-	11,140	952	477	9,711	(137)	58	-	0.76
2015	2,745	352	-	12,498	1,353	545	10,600	(160)	8	-	0.77
2016	2,931	359	-	14,214	2,016	733	11,465	(325)	-	(98)	0.77

<sup>3</sup> Debt - Equity Calculation from MIPUG/MH I-11(c). Adjusted Retained Earnings from Table 2 above. Keeyask and Conawapa Capital Spending to Date Calculated from CEF11 (page 2) as Total Project Costs less costs not yet incurred.

1 The implications of the above adjusted scenario is that Hydro maintains a net income  
2 greater than forecast in the IFF11-2, while rate levels for customers are reduced. The  
3 cost levels better track the assets in service, and there is also recognition in the  
4 debt:equity calculation that Bipole III is expected to be in service for domestic ratepayer  
5 benefits in the next few years following this scenario (i.e., Bipole III spending is not  
6 removed from the debt:equity calculation above).

7  
8 This approach reasonably reflects continuity with Hydro's forecasts over the last decade  
9 as to capitalization approaches, and ensure current domestic ratepayers are not  
10 burdened by capital costs associated with plant not yet in service (i.e., Conawapa and  
11 Keeyask) at the same time that finances are challenged by the effects of Wuskwatim  
12 coming on-line.

13  
14 Given the higher overall equity levels, this approach also better positions Hydro for the  
15 capital investment over the coming 15 years, and provides the opportunity to have the  
16 costs that are properly associated with Conawapa and Keeyask be aggregated into the  
17 overall project costs, for future amortization/depreciation once those projects are in  
18 service and providing long-lived value to ratepayers.

19  
20 (c)

21  
22 Mr. Bowman does not have the information required to prepare an IFF for a "status quo"  
23 perspective on Manitoba Hydro. A reasonable approach to such a forecast would be to  
24 provide an IFF that reflects the simplest set of planning assumptions available to MH –  
25 likely a mixture of SCCT and CCCTs being constructed as required for capacity and  
26 energy shortfall purposes in the year in which shortfalls arise (other than capacity and  
27 energy being made available from base case DSM and committed resources) or  
28 alternatively the least cost new hydraulic generation planning sequence. This simple  
29 baseline IFF would then become the main basis for rate regulation prior to specific new  
30 capital-intensive resources being committed (e.g., receiving the necessary approvals  
31 such as an Order-in-Council or some other milestone decisions confirming a very high  
32 likelihood of the project proceeding).

33  
34 When the time comes for major new project assessment, such as for the NFAAT,  
35 Manitoba Hydro can provide data that is contrasted to this simple IFF, looking at an IFF  
36 scenario that includes the optional but recommended plans comprised of larger capital  
37 cost commitments and other attendant changes to the baseline IFF. This is generally

- 1 similar to what was done in the Wuskwatim NFAAT hearing, where a baseline IFF
- 2 consisting of Wuskwatim 2020 was compared to an "advancement" scenario with
- 3 Wuskwatim in-service for 2009.



**REFERENCE: Page I-6, Lines 16 to 28**  
**Pre-Filed Testimony of P. Bowman**

Mr. Bowman recommends that for rate setting purposes, Manitoba Hydro should "Maintain allocations of overhead and administrative and general costs to capital on the basis of full cost accounting, as permitted by CGAAP, consistent with approaches used by Hydro in the 2008-2010 period" and "To the extent required (i.e., in the event regulatory accounting cannot be accommodated in Hydro's audited financial statements), Hydro should provide the Board with 'regulatory' statements and calculations as an alternative to the IFF, for the purposes of assessing rate requirements."

**QUESTION:**

Please explain how Mr. Bowman's recommendations with respect to overhead capitalized and separate regulatory accounting are consistent with the following:

- a) The findings and recommendations contained on pages 112, 113 and 389 of Order 116/08, that the PUB was concerned about the aggressive deferral and capitalization of operating costs under a full-cost accounting approach and the recommendation that Manitoba Hydro consider the early adoption of less aggressive IFRS overhead capitalization practices; and
- b) The acceptance by the PUB for rate-setting purposes of the reductions to overhead capitalized made by Manitoba Hydro that have been implemented from the 2009/10 to 2011/12 period in Order 5/12, pertaining to the 2010/11 and 2011/12 test years.

**ANSWER:**

**(a) and (b)**

Mr. Bowman was not able to locate any reference to overheads on pages 112 or 113 of Order 116/08, and could not locate a page 389 in that Order (the final page is page 355).

1 Mr. Bowman also notes that Board Order 116/08 was issued at a time when IFRS  
2 changes were being hypothesized, but without solid information as to the standards and  
3 potential impacts. The Board expressed concerns in that Order that Hydro and  
4 ratepayers would be affected by a major change that could arise with IFRS, in that  
5 overheads would be reduced on an ongoing basis, but past project costs would continue  
6 to include a more fulsome overhead allocation that had been used in prior years, and as  
7 such future ratepayers may be in a way double-burdened by the change in approach<sup>1</sup>.

8  
9 The Board also expressed concern with Hydro's capitalization policies in that they  
10 provided a way to mask the degree of cost increases that were occurring in Hydro's  
11 spending<sup>2</sup>.

12  
13 In the end, the concern of the Board regarding Hydro's capitalization policies for major  
14 new construction, and their effects on intergenerational equity, was not justified. It is Mr.  
15 Bowman's view that the Board's conclusions on Hydro's capitalization policies did not  
16 properly consider the assets that were being developed, but only the dollars that were  
17 being spent, as noted in the following excerpt from Order 116/08 discussing Hydro's full  
18 cost accounting approach:

19  
20 "While there is an argument for the practice, the net result is that costs  
21 now being incurred are not reflected in rates until years, in fact decades,  
22 later, meaning the current generation of ratepayers leave the results for  
23 the generations that will follow to meet"<sup>3</sup>.

24  
25 The above excerpt summarizes the incorrect view that the "costs now being incurred"  
26 should somehow be paid for out of current rates, even through these costs are properly  
27 linked to future development. Mr. Bowman set out in Section 2.2 of the pre-filed  
28 testimony (particularly Section 2.2.4) the rationale as to why it is proper and principled  
29 utility ratemaking to match the financial impact of these costs with the economic benefits  
30 of the underlying assets they produce.

---

<sup>1</sup> The Board noted that "...there is an argument for MH's current approach..." but that "If the approach was to change" this would "result in current and future ratepayers being billed for costs reflective not only of current costs but also cost burdens avoided by past ratepayers as a result of the current process of deferral and capitalization.", page 94.

<sup>2</sup> "MH had total operating and administrative expenses before capitalization of \$543 million in 2003/04, which grew to over \$688 million in 2010 and is forecast to be \$703.8 million in 2010/11 and \$714.1 million in 2011/12, before capitalized activities and overhead. In 2003/04 MH capitalized approximately 28% of labour and benefits. The amount of labour and benefits capitalized has increased since then, where MH now capitalizes over 32% of its labour and benefits. The increase in amounts capitalized mutes the growth in O&A expense recorded on an annual basis." Board Order 116/08 page 93.

<sup>3</sup> Board Order 116/08, page 92-93.

1 The same assessment can be made on a retrospective basis with regard to the plants  
2 presently in service. For example, with reference to the output of earlier plants such as  
3 Long Spruce (1979) and Limestone (1990), these plants have production costs  
4 estimated earlier at 1.14 cents/kW.h (Long Spruce) and 2.21 cents/kW.h (Limestone)<sup>4</sup>.  
5 These plants are now roughly one-fifth to one-quarter of the way through their lifespan,  
6 and produce power at all-in prices that are very favourable for today's ratepayers (major  
7 plants that are even older typically have more favourable all-in costs, such as Kettle and  
8 Kelsey). The question becomes whether there is an excessive burden being imposed  
9 today due to previous generations having excessively capitalized project development  
10 costs or overheads. This would not appear to be the case. For today's ratepayers, a  
11 small percentage change in the output costs of Limestone, due to 1970s or 1980s  
12 ratepayers having been burdened with a greater or lesser percentage of the overhead  
13 costs of building the plant, would appear almost irrelevant to overall system power costs.  
14 There is no evidence of any intergenerational burden having been handed down to  
15 today's ratepayers from the methods that were applied by Hydro in accounting for these  
16 older plants. There is no reason to expect a similar relationship would not hold for  
17 Conawapa or Keeyask.  
18  
19 Please also see PUB/MIPUG-I-12.

---

<sup>4</sup> Per TREE/MH-I-5(h) from the 2002 Status Update filing.







1 **REFERENCE: Pg. 4-17**

2 **Net Salvage Removal from Depreciation**

3  
4 **QUESTION:**

5  
6 a) If the approach advanced by MH is not related to, or required by, IFRS, when  
7 does Mr. Bowman believe MH should implement the change, and indicate how  
8 an early adoption of such a policy change would impact the rates in the  
9 Application.

10  
11 b) Please indicate which of the prescribed approaches put forward by KPMG are  
12 allowed under IFRS.

13  
14 **ANSWER:**

15  
16 **(a)**

17  
18 Mr. Bowman considers that the change to remove net salvage from depreciation is a  
19 reasonable approach that should be implemented as soon as possible. Adoption of this  
20 measure would reduce depreciation costs by approximately \$55 million for each year  
21 implemented, as per MIPUG/MH-I-15(p). This is understood to include both the effects of  
22 eliminating annual accruals to the provision, and to amortize the accumulated  
23 amortization reserve variance, as this variance value is sensitive to the assumptions  
24 regarding net salvage.

25  
26 **(b)**

27  
28 It has been Mr. Bowman's experience that utilities referencing the application of IFRS to  
29 their operations indicate an approach roughly comparable to #(1) is the normal  
30 assumption for most of an asset's life, although as these costs are difficult to disentangle  
31 from the costs of building the replacement asset, in practice approach #(2) may in effect  
32 cover a substantial part of the costs which otherwise would have been included in a  
33 utility's "net salvage" or "future removal and site restoration" provision. Approaches #(3)  
34 through #(5) are typically cited as being unavailable for utilities for financial reporting  
35 under IFRS.

- 1 For ease of reference, the five approaches described by KPMG from pages 4-15 and 4-  
2 16 of Mr. Bowman's Pre-filed Testimony are:  
3  
4 1) Ignore salvage values in the calculation of the asset's depreciation rate.  
5 Recognize gross salvage revenue as income and retirement costs as an  
6 expense at the time the asset is retired.  
7  
8 2) Ignore salvage values in the calculation of the asset's depreciation rate  
9 and include the net salvage incurred on the retirement of the asset in the  
10 depreciable cost base of the asset that replaces the retired asset.  
11  
12 3) Ignore salvage values in the calculation of the asset's depreciation rate  
13 and amortize the net salvage incurred on the retirement of the asset over  
14 a period following the retirement.  
15  
16 4) Alternatively, incorporate the asset's predicted net salvage value in the  
17 calculation of its depreciation rate.  
18  
19 5) Establish a separate reserve (or allowance) for net salvage for each  
20 account that is expected to have negative net salvage. Calculate and  
21 display this reserve separately from accumulated depreciation.

1   **REFERENCE:    Pre-Filed Testimony of P. Bowman**

2  
3   **QUESTION:**

- 4  
5       a) Please provide a concise summary of the recommendations that Mr. Bowman is  
6       making to the PUB with regard to depreciation.

7  
8   **ANSWER:**

9  
10   **(a)**

11  
12   Mr. Bowman's recommendations to the PUB with respect to depreciation are as follows:

- 13  
14       1) Electricity rates should be set on the basis of depreciation rates, approaches and  
15       policies appropriate for determining fair and reasonable allocations to today's  
16       ratepayers. If Hydro's financial reporting uses depreciation rates that meet this  
17       test, then those depreciation rates should be used for electricity rate-setting. If  
18       not, then the Board should specify the depreciation rates to be used for electricity  
19       rate setting and ensure Hydro provides, in its GRA filing, a revenue requirement  
20       consistent with those PUB-directed depreciation rates.  
21  
22       2) Hydro's depreciation rates for electricity rate setting should not include net  
23       salvage, including for the test years.  
24  
25       3) Hydro's depreciation rates for electricity rate setting should be based on the ASL  
26       approach to calculating depreciation rates, not the ELG approach.  
27  
28       4) The Board should carefully consider the lives adopted for asset category 000A  
29       Dams Dikes and Weirs (Appendix 16, page 2 of 192), and asset category 000D  
30       Spillways (Appendix 16, page 10 of 192) to consider whether the proposed asset  
31       lives are sufficiently long given Hydro's own retirement data.  
32  
33       5) The Board should carefully consider the lives adopted for asset categories such  
34       as 4000J and 4000L (Metal Towers and Overhead Conductors) (Appendix 16,  
35       pages 121 of 192, and 124 of 192) to consider whether the proposed asset lives  
36       are excessively long given Hydro's own retirement data.





1 **REFERENCE: Section 2.2.4 Pg. 2-9**

2  
3 **QUESTION:**

4  
5 a) Has MH has developed Wuskwatim with 'no near-term adverse impacts'?

6  
7 **ANSWER:**

8  
9 **(a)**

10  
11 No. Wuskwatim is having an adverse impact on Hydro's financial performance over the  
12 first decade of the IFF, as set out within this response. However, this does not  
13 necessarily mean constructing Wuskwatim was a poor decision, as (1) many of the  
14 benefits of the plant (e.g., protection from unexpected load growth) cannot be easily  
15 quantified, and (2) the long-term benefits of advancing the plant are not apparent in this  
16 simple comparison (i.e., what would it have cost to build Wuskwatim for 2019, when  
17 needed for domestic service?).

18  
19 Further, so long as Hydro is not excessively focused on aggressively maintaining or  
20 raising near-term debt ratios, or in front-end loading recognition of Wuskwatim costs, it is  
21 likely that the rate system can mostly absorb this adverse financial effect without a  
22 notable increase to rates in the near-term. However, it is unlikely this project can be  
23 entirely absorbed with no impact on rates over the period to 2019/20.

24  
25 In completing this assessment, a number of variables need to be considered.

26  
27 **Need and Timing**

28  
29 The first matter that must be addressed is the need for Wuskwatim. This is because the  
30 appropriate baseline for comparison of the Wuskwatim effects on a given year is  
31 different if it is being required for domestic service than if solely serving exports. In  
32 particular, if the plant is solely serving exports, then the relevant comparator on a  
33 "with/without basis" is the situation absent the plant. If however the plant is serving  
34 domestic ratepayers then it is not possible to do a simple "with/without" comparator as  
35 there is no way to simply do "without".

1 At the time of the Wuskwatim Need for and Alternatives To (NFAAT) proceeding before  
2 the Clean Environment Commission, Manitoba Hydro indicated that the next power  
3 resource required for domestic load would be needed in 2019<sup>1</sup>. Under the then current  
4 planning assumptions, that plant would have been Wuskwatim. Instead the project was  
5 "advanced" from a 2019 in-service date to an earlier in-service date based on a number  
6 of premises, such as that: (a) this would provide more flexibility to Hydro if loads grew  
7 faster than expected, (b) this would permit Wuskwatim to be placed into service at a  
8 lower cost (due to inflation) and to be partially paid down by export sales in advance of  
9 being needed for domestic service, and (c) this would permit Manitoba Hydro, the  
10 Manitoba Government and the First Nation partners to secure earlier benefits (such as  
11 jobs, water rentals) than by waiting until 2019.

12  
13 In the previous GRA, Hydro confirmed in Exhibit MH-35 that the date when Wuskwatim  
14 would be required for domestic service, based on the 2010/11 load forecast, remained  
15 2019<sup>2</sup>.

16  
17 In this GRA, Manitoba Hydro has taken a very different approach to determining the data  
18 for when Wuskwatim is needed. For example, in PUB/MH I-25(b) the Board asked  
19 Manitoba Hydro to remove the impacts of Wuskwatim from the IFF11-2 for the years  
20 2012/13 to 2015/16, to which Manitoba Hydro responded that it was not practical to  
21 remove Wuskwatim as it is now required to meet firm load commitments. In MIPUG/MH  
22 I-4(a) Manitoba Hydro was asked to confirm if, based on the 2011/12 Power Resource  
23 Plan, Wuskwatim supply is not needed to meet domestic supply until 2019/20. Manitoba  
24 Hydro rejected this notion, despite the fact that it was based on the exact same  
25 mathematics as used in Hydro's exhibit MH-35 from the previous GRA. Instead Hydro  
26 indicated that the need for Wuskwatim generation has changed as load forecasts have  
27 been updated and 250 MW of wind power has been purchased under Power Purchase  
28 Agreements. When asked specifically in MIPUG/MH II-3(c) about the simple  
29 mathematics of subtracting the Wuskwatim (1250 GWh) from the total system surplus of  
30 1666 GWh in 2018/19 yielding a positive result (and therefore no "need" for Wuskwatim  
31 until after that year), Hydro instead focused on the fact that without "Wuskwatim and  
32 wind" there is a system deficit starting in 2011/12. It is not apparent why Hydro has  
33 adopted this new approach, in contrast to exhibit MH-35 from the previous GRA, to  
34 effectively package Wuskwatim and wind as a single resource. It would appear that the

---

<sup>1</sup> <http://www.cccmanitoba.ca/resource/reports/Commissioned-Reports-2004-2005-Wuskwatim-Generation-Transmission-Projects-Full-Report.pdf> page 19.

<sup>2</sup> Undertaking #22 (Exhibit MH-35) of the 2010 GRA.



Wuskwatim and wind commitments are independent decisions and can each be assessed on their own merits<sup>3</sup>.

In short, in the current GRA, it appears despite Hydro's claims to the contrary, it is reasonable to assume that Wuskwatim is not required for domestic service in the test years, but remains a required resource starting approximately 2019/20. This means that the reasonable comparison for Wuskwatim's effect on ratepayers for the test years is the situation with Wuskwatim (as set out in the IFF11-2) versus the situation without Wuskwatim.

### Impacts on Test Years

Focusing on the 2013/14 year, the best estimates available as to the costs and revenues of the Wuskwatim project are set out below. It is difficult to confirm that this fully captures the incremental impact of the Wuskwatim Generation and Transmission, as some values solely reference "Wuskwatim" without clarity as to whether transmission is included or only generation<sup>4</sup>. Further, some small impacts of the project, such as the effects of financing the First Nation partner equity, or payments from the WPLP to Manitoba Hydro as the General Partner, are difficult to track.

- **Capital cost:** The total Project cost for Wuskwatim Generating Station is \$1.375 billion, and the total cost for the Transmission Station is \$0.297 billion<sup>5</sup>. The Wuskwatim Generating Station was to come fully in-service by October, 2012<sup>6</sup>, such that it was to be in full service for the entire 2013/14 year.
- **OM&A:** Total 2013/14 at \$9.635 million per Appendix 5.6, page 7.

<sup>3</sup> Further, at the CEC hearings on Wuskwatim, Manitoba Hydro was already "...currently planning to develop 250 MW of wind generation during the next ten years, providing further testing establishes that it is viable." per page 58 of the CEC report on Wuskwatim <http://www.cecmanitoba.ca/resource/reports/Commissioned-Reports-2004-2005-Wuskwatim-Generation-Transmission-Projects-Full-Report.pdf>. Further: "MH indicated that it has been demonstrated that even if a wind project significantly larger than the Projects were to be adopted first, it would have a very small effect on the economics of the Projects." At page 59-60.

<sup>4</sup> For example, MIPUG/MH-I-16(a) asks for the depreciation expense for Wuskwatim generation and transmission. The value provided (\$24.8 million) for 2013/14 is the same value reported in PUB/MH-I-134(a) for the WPLP forecasts, which would be understood to own only generation.

<sup>5</sup> Appendix 6.1: Capital Expenditure Forecast (CEF11); p. 14.

<sup>6</sup> PUB/MH I-39(c).

- 1       • **Finance Expense:** Cited at \$71 million per the WPLP statements in PUB/MH-I-  
2       134. However, this value understates the true impact of the Wuskwatim  
3       borrowings, as the WPLP partnership is structured to assume 25% of the capital  
4       is provided through "equity". In practice, Manitoba Hydro has generated no  
5       incremental equity from the Wuskwatim investment to date (i.e., retained  
6       earnings would have been approximately equal up to 2013/14 with or without  
7       Wuskwatim) and the project has provided effectively no new cash flow sources.  
8       In short, absent Wuskwatim, Hydro would have almost the exact same amount of  
9       retained earnings in 2013/14 as it does in the IFF11-2 scenario, but have  
10      significant less long-term debt. As an approximation of the finance cost of  
11      Wuskwatim, it is necessary to adjust the \$71 million to reflect the full balance of  
12      the project (i.e., 100%, not 75% of debt financing), for a total finance cost of  
13      approximately \$95 million.  
14
  - 15      • **Depreciation:** For 2013/14, the forecast depreciation and amortization expense  
16      is cited as 24.8 million<sup>7</sup>.  
17
  - 18      • **Water Rentals:** The WPLP statements at PUB/MH-I-134 indicate \$5 million per  
19      year. This may ignore small effects on generation changes on the remainder of  
20      Hydro's system, but those are expected to be small.  
21
  - 22      • **Capital Taxes:** As per CAC/MH-I-15(a), the combined Capital Tax and Water  
23      Rentals are cited as \$11 million. As noted above, Water Rentals are projected at  
24      \$5 million, leaving \$6 million as the approximate Capital Tax impact.  
25
  - 26      • **Total 2013/14 Cost:** From the above – approximately \$141 million. This ignores  
27      smaller effects such as impacts on Sinking Fund balances and charges, etc.  
28
- 29      Revenue for Wuskwatim is difficult to isolate from overall Hydro operations in the test  
30      years. A good proxy however is the revenue attributed to the WPLP, which is based on  
31      average prices received by Hydro on long-term export sales (for on-peak Wuskwatim  
32      energy) and opportunity sales (for off-peak Wuskwatim energy). In the case of 2013/14,  
33      this value is \$57 million.

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<sup>7</sup> MIPUG/MH I-16(a).

Manitoba Hydro  
2012/14 General Rate Application  
**PUB/MIPUG-I-7**

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- 1 In sum, the one-year impacts on Manitoba Hydro's financial position in 2013/14 from the
- 2 Wuskwatim project is approximately negative \$83 million. Using the same approach as
- 3 set out above, the forecasts for the next 10 years is shown in Table 1.

Manitoba Hydro  
2012/14 General Rate Application  
**PUB/MIPUG-I-7**

**Table 1: Estimated Wuskwatim Operating Statement (\$ Millions)<sup>8</sup>**

	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22
<b>REVENUES</b>										
Revenue Attributed to WPLP	57	57	69	90	99	108	117	124	125	133
	57	57	69	90	99	108	117	124	125	133
<b>EXPENSES</b>										
Operating and Administrative	8	10	10	10	10	10	10	10	11	11
Finance Expense	83	95	97	100	99	97	96	93	91	88
Depreciation and Amortization	23	25	25	25	25	25	25	25	25	25
Water Rentals and Assessment	5	5	5	5	5	5	5	5	5	5
Capital Tax	5	6	6	6	6	6	6	6	6	6
	124	140	143	146	144	143	142	139	137	135
<b>Net Income</b>	(67)	(83)	(74)	(56)	(45)	(35)	(25)	(15)	(12)	(2)

<sup>8</sup> Revenues and Water Rentals from PUB/MH I-134. OM&A for 2012/13 and 2013/14 from Appendix 5.6, page 7 with remaining years from PUB/MH I-134. Finance Expense calculated based on amounts in PUB/MH I-134 representing 75% of total expense. Depreciation and Amortization Expense from MIPUG/MH I-16(a) and PUB/MH I-134. Capital Tax for 2012/13 and 2013/14 from CAC/MH I-15(a) less Water Rentals with remaining years set equal to 2013/14.

Manitoba Hydro  
2012/14 General Rate Application  
**PUB/MIPUG-I-7**

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- 1 In terms of the impacts on ratepayers in the near-term and the longer-term (as per  
2 PUB/MIPUG-16), as shown in Table 1 above, it is reasonable to expect that Wuskwatim  
3 will not contribute positively to domestic ratepayers until approximately 2021, roughly the  
4 same time frame that it is started to be required for domestic service. During this time  
5 frame the adverse impact on retained earnings could be as high as \$400 million as per  
6 the net losses in Table 1. Also note that Table 1 does not take into account cumulative  
7 debt impacts from any cash shortfalls in the years noted.  
8
- 9 Shortly after the years shown in Table 1, it can be expected that Wuskwatim would begin  
10 making a positive contribution to net income. Retained earnings will remain lower than  
11 they would have been absent Wuskwatim for a longer-term period of time, until the \$400  
12 million in net losses from the early years has been fully offset.





**CAC/MH I-47****Subject: Depreciation****Reference: Tab 4, Page 5 Lines 6 & 7****Preamble: Manitoba Hydro states "... partially offset by the change to the Equal Life Group methodology for calculating depreciation rates (as required with the transition to IFRS)."**

- a) Provide specific cites in IFRS pronouncements that require the use of Equal Life Group methodology and provide a copy of the cited references, together with copies of the pages containing those cites.**

**ANSWER:**

IAS 16 does not require that the Equal Life Group (ELG) method be used for determining depreciation rates as both the Average Service Life (ASL) and ELG method are acceptable methods for determining depreciation rates under IFRS.

The specific references from the IFRS pronouncements that MH considered regarding the change to the ELG methodology are as follows:

IFRS section IAS 16 Property, Plant & Equipment paragraphs:

- 50** The depreciable amount of an asset shall be allocated on a systematic basis over its useful life.
- 57** The useful life of an asset is defined in terms of the asset's expected utility to the entity. ,..., The estimation of the useful life of the asset is a matter of judgement based on the experience of the entity with similar assets.
- 60** The depreciation method used shall reflect the pattern in which the asset's future economic benefits are expected to be consumed by the entity.
- 68** The gain or loss arising from the de-recognition of an item of property, plant and equipment shall be included in profit and loss when the item is derecognized (unless IAS 17 requires otherwise on a sale and leaseback). Gains shall not be classified as revenue."

*(Please note that MH is not in a position to provide copies of the pages containing the particular reference due to copyright laws.)*



Under the ASL method, the depreciation rate is based on the average life of all assets within the overall component class. The calculation of the ELG depreciation rate is more robust and is based on the expected retirement pattern for similar asset groups within the overall asset component class. Rather than determining a depreciation rate using an overall average life of the entire asset component class, the ELG method breaks the larger class into sub-components groups with similar lives and factors the different service lives of the sub-components into the overall depreciation rate for the larger component class. As such, the ELG method provides a better matching of depreciation expense with the expected consumption of the asset, which complies with the requirements of IAS 16.

The IAS 16 requirement to recognize gains and losses on asset retirements immediately in net income is significantly different than the existing GAAP accounting practice that permits the recognition of annual gains and losses in accumulated depreciation. Differences in how depreciation rates are calculated under the ASL and ELG methods will influence the extent of annual asset retirement gains and losses that will be required to be recognized in net income under IFRS and will thus, influence the method to be chosen by an entity.

Since most assets are removed from service either before or after the average service life of the overall component class, it is expected that the extent of material gains and losses to be recognized in net income under IFRS would be higher when using the ASL method. The ELG calculated rate is expected to more accurately reflect the service life of the individual assets within the larger component class and thus, assets are more likely to be fully depreciated when they are removed from service under the ELG method; reducing any gain or loss.

The ELG method will minimize the amount of gains and losses recognized on retirement of assets, and will reduce net income volatility. As a result, the ELG method is the preferred approach for rate-regulated utilities as it is expected to promote rate stability for customers.



December 2012

Exposure Draft ED/2012/5

# Clarification of Acceptable Methods of Depreciation and Amortisation

Proposed amendments to IAS 16 and IAS 38

Comments to be received by 2 April 2013

**Clarification of Acceptable Methods of  
Depreciation and Amortisation  
(Proposed amendments to IAS 16  
and IAS 38)**

*Comments to be received by 2 April 2013*

Exposure Draft ED/2012/5 *Clarification of Acceptable Methods of Depreciation and Amortisation* (Proposed amendments to IAS 16 and IAS 38) is published by the International Accounting Standards Board (IASB) for comment only. The proposals may be modified in the light of the comments received before being issued in final form as amendments to IFRSs. Comments on the Exposure Draft and the Basis for Conclusions should be submitted in writing so as to be received by **2 April 2013**. Respondents are asked to send their comments electronically to the IASB website ([www.ifrs.org](http://www.ifrs.org)), using the 'Comment on a proposal' page.

All responses will be put on the public record unless the respondent requests confidentiality. However, such requests will not normally be granted unless supported by good reason, such as commercial confidence.

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## CLARIFICATION OF ACCEPTABLE METHODS OF DEPRECIATION AND AMORTISATION

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## Introduction and invitation to comment

### Introduction

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The International Accounting Standards Board (IASB) has published this Exposure Draft of the proposed amendments to IAS 16 *Property, Plant and Equipment* and IAS 38 *Intangible Assets*.

Paragraphs 60 of IAS 16 and 97 of IAS 38 establish 'consumption of economic benefits' as the principle for recognising depreciation or amortisation, whereby the depreciation or amortisation method used shall reflect the pattern in which the asset's future economic benefits are expected to be consumed by the entity.

Paragraphs 62 of IAS 16 and 98 of IAS 38 state that a variety of depreciation and/or amortisation methods can be used in applying that principle to allocate the depreciable/amortisable amount of an asset on a systematic basis over its useful life. An entity selects the method that most closely reflects the expected pattern of consumption of the expected future economic benefits embodied in the asset.

This amendment proposes to clarify that when applying the guidance in paragraph 62 of IAS 16 and paragraph 98 of IAS 38, a revenue-based method should not be used to calculate the charge for depreciation and/or amortisation, because that method reflects a pattern of economic benefits being generated from the asset, rather than the expected pattern of consumption of the future economic benefits embodied in the asset. The proposed amendment also provides some further guidance in the application of the diminishing balance method.

The IASB has also decided to make consistent the phrase 'units of production method' and has therefore amended those instances of phrases 'unit of production method'.

### Invitation to comment

---

The IASB invites comments on the proposals in this Exposure Draft, particularly on the questions set out below. Comments are most helpful if they:

- (a) comment on the questions as stated;
- (b) indicate the specific paragraph or group of paragraphs to which they relate;
- (c) contain a clear rationale; and
- (d) include any alternative that the IASB should consider, if applicable.

The IASB is not requesting comments on matters in IAS 16 or in IAS 38 that are not addressed in this Exposure Draft.

Comments should be submitted in writing so as to be received no later than **2 April 2013**.

## CLARIFICATION OF ACCEPTABLE METHODS OF DEPRECIATION AND AMORTISATION

**Questions for respondents****Question 1**

The IASB proposes to amend IAS 16 *Property, Plant and Equipment* and IAS 38 *Intangible Assets* to prohibit a depreciation or amortisation method that uses revenue generated from an activity that includes the use of an asset. This is because it reflects a pattern of future economic benefits being generated from the asset, rather than reflecting the expected pattern of consumption of the future economic benefits embodied in the asset. Do you agree? Why or why not?

**Question 2**

Do you have any other comments on the proposals?



**[Draft] Amendments to IAS 16 *Property, Plant and Equipment***

Paragraphs 62A–62B and 81G are added. Paragraph 62 is not proposed for amendment but is included here for ease of reference. New text is underlined.

**Depreciation method**

62 A variety of depreciation methods can be used to allocate the depreciable amount of an asset on a systematic basis over its useful life. These methods include the straight-line method, the diminishing balance method and the units of production method. The straight-line method results in a constant charge over the useful life if the asset's residual value does not change. The diminishing balance method results in a decreasing charge over the useful life. The units of production method results in a charge based on the expected use or output. The entity selects the method that most closely reflects the expected pattern of consumption of the future economic benefits embodied in the asset. That method is applied consistently from period to period unless there is a change in the expected pattern of consumption of those future economic benefits.

62A A method that uses revenue generated from an activity that includes the use of an asset is not an appropriate depreciation method for that asset, because it reflects a pattern of the future economic benefits being generated from the asset, rather than a pattern of consumption of the future economic benefits embodied in the asset. Paragraph 60 establishes consumption of the benefits that were inherent in the asset when it was acquired as the principle for depreciation.

62B When applying the diminishing balance method, information about technical or commercial obsolescence of the product or service output is relevant for estimating both the pattern of consumption of future economic benefits and the useful life of the asset. An expected future reduction in unit selling price of the product or service output of the asset could be an indication of the diminution of the future economic benefits of the asset as a result of technical or commercial obsolescence.

**Effective date and transition**

81G Clarification of Acceptable Methods of Depreciation and Amortisation (Amendments to IAS 16 and IAS 38), issued in [date], added paragraphs 62A and 62B. An entity shall apply those paragraphs for annual periods beginning on or after [date] retrospectively in accordance with IAS 8 *Accounting Policies, Changes in Accounting Estimates and Errors*. Earlier application is permitted.

**[Draft] Amendments to IAS 38 *Intangible Assets***

In paragraph 98, the phrase 'unit of production method' has been amended to 'units of production method'. Paragraphs 98A–98B and 130G are added. New text is underlined.

**Amortisation period and amortisation method**

- 98 A variety of depreciation methods can be used to allocate the depreciable amount of an asset on a systematic basis over its useful life. These methods include the straight-line method, the diminishing balance method and the units of production method. The method used is selected on the basis of the expected pattern of consumption of the expected future economic benefits embodied in the asset and is applied consistently from period to period, unless there is a change in the expected pattern of consumption of those future economic benefits.
- 98A A method that uses revenue generated from an activity that includes the use of an intangible asset is not an appropriate amortisation method for that intangible asset, because it reflects a pattern of economic benefits being generated from the intangible asset, rather than a pattern of consumption of the future economic benefits embodied in the intangible asset. Paragraph 97 establishes consumption of the benefits that were inherent in the asset when it was acquired as the principle for amortisation.
- 98B When applying the diminishing balance method, information about technical or commercial obsolescence of the product or service output is relevant for estimating the pattern of consumption of future economic benefits of the asset and the useful life of the asset. A future expected reduction in unit selling price of the product or service output of the asset could be an indication of the diminution of the future economic benefits of the intangible asset as a result of technical or commercial obsolescence.

**Effective date and transition**

- 130G Clarification of Acceptable Methods of Depreciation and Amortisation (Amendments to IAS 16 and IAS 38), issued in [date], amended paragraph 98 and added paragraphs 98A–98B. An entity shall apply those paragraphs for annual periods beginning on or after [date] retrospectively in accordance with IAS 8 *Accounting Policies, Changes in Accounting Estimates and Errors*. Earlier application is permitted.

EXPOSURE DRAFT--DECEMBER 2012

**[Draft] Amendments to the Basis for Conclusions on IAS 38**  
***Intangible Assets***

In paragraph BC72A, the phrase 'unit of production method' has been amended to 'units of production method'. New text is underlined.

- BC72A The last sentence of paragraph 98 previously stated, 'There is rarely, if ever, persuasive evidence to support an amortisation method for intangible assets with finite useful lives that results in a lower amount of accumulated amortisation than under the straight-line method.' In practice, this wording was perceived as preventing an entity from using the units of production method to amortise assets if it resulted in a lower amount of accumulated amortisation than the straight-line method. However, using the straight-line method could be inconsistent with the general requirement of paragraph 38 that the amortisation method should reflect the expected pattern of consumption of the expected future economic benefits embodied in an intangible asset. Consequently, the Board decided to delete the last sentence of paragraph 98.

**[Draft] Amendments to the Basis for Conclusions on IFRIC 12  
Service Concession Arrangements**

In paragraph BC64, the phrase 'unit of production method' has been amended to 'units of production method'. New text is underlined.

- BC64 The IFRIC considered whether it would be appropriate for intangible assets under paragraph 26 to be amortised using an 'interest' method of amortisation, ie one that takes account of the time value of money in addition to the consumption of the intangible asset, treating the asset more like a monetary than a non-monetary asset. However, the IFRIC concluded that there was nothing unique about these intangible assets that would justify use of a method of depreciation different from that used for other intangible assets. The IFRIC noted that paragraph 98 of IAS 38 provides for a number of amortisation methods for intangible assets with finite useful lives. These methods include the straight-line method, the diminishing balance method and the units of production method. The method used is selected on the basis of the expected pattern of consumption of the expected future economic benefits embodied in the asset and is applied consistently from period to period, unless there is a change in the expected pattern of consumption of those future economic benefits.

EXPOSURE DRAFT—DECEMBER 2012

**Approval by the Board of *Clarification of Acceptable Methods of Depreciation and Amortisation* (Proposed amendments to IAS 16 and IAS 38) published in December 2012**

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The Exposure Draft *Clarification of Acceptable Methods of Depreciation and Amortisation* was approved for publication by the fifteen members of the International Accounting Standards Board.

Hans Hoogervorst	Chairman
Ian Mackintosh	Vice-Chairman
Stephen Cooper	
Philippe Danjou	
Martin Edelmann	
Jan Engström	
Patrick Finnegan	
Amaro Luiz de Oliveira Gomes	
Prabhakar Kalavacherla	
Patricia McConnell	
Takatsugu Ochi	
Paul Pacter	
Darrel Scott	
Chungwoo Suh	
Wei-Guo Zhang	

## Basis for Conclusions

*This Basis for Conclusions accompanies, but is not part of, the proposed amendments.*

### Depreciation and amortisation method

- BC1 The IASB discussed whether it would be appropriate for plant and equipment to be depreciated and for intangible assets to be amortised using a revenue-based depreciation or amortisation method. A revenue-based depreciation or amortisation method is one that is derived from an interaction between units (ie quantity) and price, and that takes into account the expected future changes in price as the depreciation basis to allocate the amount of an asset that is to be depreciated or amortised. Paragraph 60 of IAS 16 and paragraph 97 of IAS 38 states that the depreciation or amortisation method used shall reflect the pattern in which the asset's future economic benefits are expected to be consumed by the entity.
- BC2 The IASB proposes that a revenue-based depreciation or amortisation method should not be applied because it reflects a pattern of economic benefits being generated from operating the business (of which the asset is part) rather than the economic benefits being consumed through the use of the asset. The future economic benefits embodied in an asset are consumed by an entity principally through its use as described in paragraph 56 of IAS 16. The use of an asset can be assessed by reference to the asset's expected capacity or physical output as described in paragraph 56(a) of IAS 16. Other factors are mentioned in paragraph 56(b)–(d) of IAS 16 to assist in the determination of a pattern of consumption of an asset.
- BC3 During its deliberations, the IASB considered the question of whether there could be limited circumstances in which revenue could be used to reflect the pattern in which the future economic benefits of the asset are expected to be consumed. The IASB noted that the limited circumstance when revenue could be used is when the use of a revenue-based method gives the same result as the use of a units of production method.
- BC4 For example, some types of intellectual property assets (for example, acquired rights to broadcast a film) will initially incur a significant decline in value followed by a diminishing rate of decline (for example, when a film is initially shown and with each subsequent showing the value of the rights typically decrease quickly at first and then at a slower rate). The IASB noted that the use of a time-based straight-line amortisation method may not be appropriate in those cases because these rights have an inherent and fast initial pattern of decline in value.
- BC5 The IASB observed that in those cases a measure such as the number of viewers attracted could be used as a reasonable basis for the pattern in which the benefits for those rights are expected to be consumed. In rare cases such as this, advertising revenue could serve as an equivalent for viewer numbers to the extent that advertising revenue has a linear relationship with viewer numbers.
- BC6 The IASB also proposes to clarify that expected future reductions in the unit selling price of the product or service output of the asset could be an indicator of

## EXPOSURE DRAFT—DECEMBER 2012

the diminution of the future economic benefits of the asset as a result of technical or commercial obsolescence (which is described as a factor for determining the useful life of an asset in paragraph 56(c) of IAS 16 and in paragraph 90(c) of IAS 38), and thereby relevant when applying the diminishing balance method.

- BC7 The IASB decided to make consistent the phrase 'units of production method' and has therefore amended those instances of phrases 'unit of production method'.







**MANITOBA HYDRO**

**2012/13 & 2013/14 ELECTRIC GENERAL RATE APPLICATION**

**UNDERTAKING PROVIDED BY: V.WARDEN**

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**Manitoba Hydro Undertaking # 38**

Provide the details of the depreciation calculations for Wuskwatim, without salvage, applying the ASL without salvage and ELG without salvage rates used in response to MIPUG Pre-Ask #5, including the known expenditures to date and a best estimate of the expenditures still to be incurred.

**Response:**

With respect to the 2013 and 2014 test years, for the purposes of calculating the depreciation expense for Wuskwatim, Manitoba Hydro has used ASL with net salvage depreciation rates consistent with all depreciable groups for those years.

Commencing in fiscal 2015, the following table provides the annual depreciation expense for the Wuskwatim Generating Station calculated using the ASL Without Net Salvage and the ELG Without Net Salvage depreciation rates provided in the response to MIPUG Pre-Ask #5.

The depreciation figures shown were calculated using actual capital expenditures to November 30, 2012 plus projected costs to complete the remaining work associated with the generating station.

As indicated in pages 1989 – 1991 of the transcript, Mr. Kennedy confirmed that the ASL without net salvage results shown in the following table would not satisfy the requirements of IFRS, and as such, would not be implemented.

**MANITOBA HYDRO  
 WUSKWATIM GENERATING STATION  
 DEPRECIATION EXPENSE**

Based on Actual Spending to November 30, 2012 plus Projected Cost to Complete

<b>Depreciable Work</b>	<b>ASL Without Net Salvage</b>			<b>ELG Without Net Salvage</b>		
	<b>Rate (%)</b>	<b>2015</b>	<b>2016 &amp; Future</b>	<b>Rate (%)</b>	<b>2015</b>	<b>2016 &amp; Future</b>
<b>Generating Station</b>						
Dams, Dykes & Weirs	0.80	\$ 1,246	\$ 1,246	0.87	\$ 1,355	\$ 1,355
Powerhouse	0.80	4,811	4,811	0.87	5,231	5,231
Spillway	1.33	1,265	1,265	2.06	1,959	1,959
Water Control Systems	2.00	2,118	2,118	2.07	2,192	2,192
Roads & Site Improvements	2.00	1,727	1,792	2.36	2,041	2,128
Turbines & Generators	1.54	2,477	2,477	1.65	2,654	2,654
Governors & Excitation System	2.00	105	105	2.13	112	112
A/C Electrical Power Systems	2.00	1,180	1,180	2.36	1,392	1,392
Instrumentation, Control & D/C Systems	4.35	479	479	5.50	1,954	1,954
Auxiliary Station Processes	2.50	1,555	1,620	3.33	2,071	2,158
Support Buildings	1.54	689	970	1.82	813	1,146
Support Building Renovations	5.00	3	12	5.00	3	12
Other Components *		327	303		321	275
<b>Total Generating Station</b>		<b>\$ 17,982</b>	<b>\$ 18,378</b>		<b>\$ 22,098</b>	<b>\$ 22,568</b>
<b>Less: Non-Controlling Interest</b>		<b>(5,759)</b>	<b>(5,890)</b>		<b>(7,077)</b>	<b>(7,232)</b>
<b>Manitoba Hydro Portion</b>		<b>\$ 12,223</b>	<b>\$ 12,488</b>		<b>\$ 15,021</b>	<b>\$ 15,336</b>

\* Includes other WPLP Partnership assets associated with the Generating Station, such as motor vehicles, furniture & equipment.

MH Exhibit #81  
Undertaking # 76  
Transcript Page # 3438  
Page 1 of 1

**MANITOBA HYDRO**

**2012/13 & 2013/14 ELECTRIC GENERAL RATE APPLICATION**

**UNDERTAKING PROVIDED BY: D. RAINKIE**

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**Manitoba Hydro Undertaking #76**

Manitoba Hydro to provide the ASL with net salvage calculations for Wuskwatim.

**Response:**

Commencing in fiscal 2015, the following table provides the annual depreciation expense for the Wuskwatim Generating Station calculated using the ASL with Net Salvage depreciation rates provided by Gannett Fleming and filed in Appendix 5.7, in Schedule 1 to the letter dated January 13, 2012.

The depreciation figures shown were calculated using actual capital expenditures to November 30, 2012 plus projected costs to complete the remaining work associated with the generating station.

**MANITOBA HYDRO  
 WUSKWATIM GENERATING STATION  
 DEPRECIATION EXPENSE**

(\$ 000's)

Based on Actual Spending to November 30, 2012 plus Projected Cost to Complete

<b>Depreciable Work</b>	<b>ASL With Net Salvage</b>		
	<b>Rate (%)</b>	<b>2015</b>	<b>2016 &amp; Future</b>
<b>Generating Station</b>			
Dams, Dykes & Weirs	0.88	\$ 1,371	\$ 1,371
Powerhouse	0.88	5,292	5,292
Spillway	1.47	1,398	1,398
Water Control Systems	2.20	2,329	2,329
Roads & Site Improvements	2.20	1,900	1,971
Turbines & Generators	1.69	2,718	2,718
Governors & Excitation System	2.20	116	116
A/C Electrical Power Systems	2.20	1,298	1,298
Instrumentation, Control & D/C Systems	4.78	1,699	1,699
Auxiliary Station Processes	2.75	1,710	1,781
Support Buildings	1.69	755	1,064
Support Building Renovations	5.50	3	13
Other		320	293
<b>Total Generating Station</b>		<b>\$ 20,909</b>	<b>\$ 21,343</b>
<b>Less: Non-Controlling Interest</b>		<b>(6,696)</b>	<b>(6,839)</b>
<b>Manitoba Hydro Portion</b>		<b>\$ 14,213</b>	<b>\$ 14,504</b>

71

1 **REFERENCE: Page 4-1, lines 11 to 23**  
2 **Pre-Filed Testimony of P. Bowman**  
3

4 **QUESTION:**  
5

- 6 a) Please explain the basis of Mr. Bowman's conclusion that a \$60 million reduction  
7 to Manitoba Hydro's projected net income is an offsetting factor to the impact of a  
8 \$250 million projected reduction in export revenues in 2013/14 between IFF09  
9 and IFF11-2.  
10

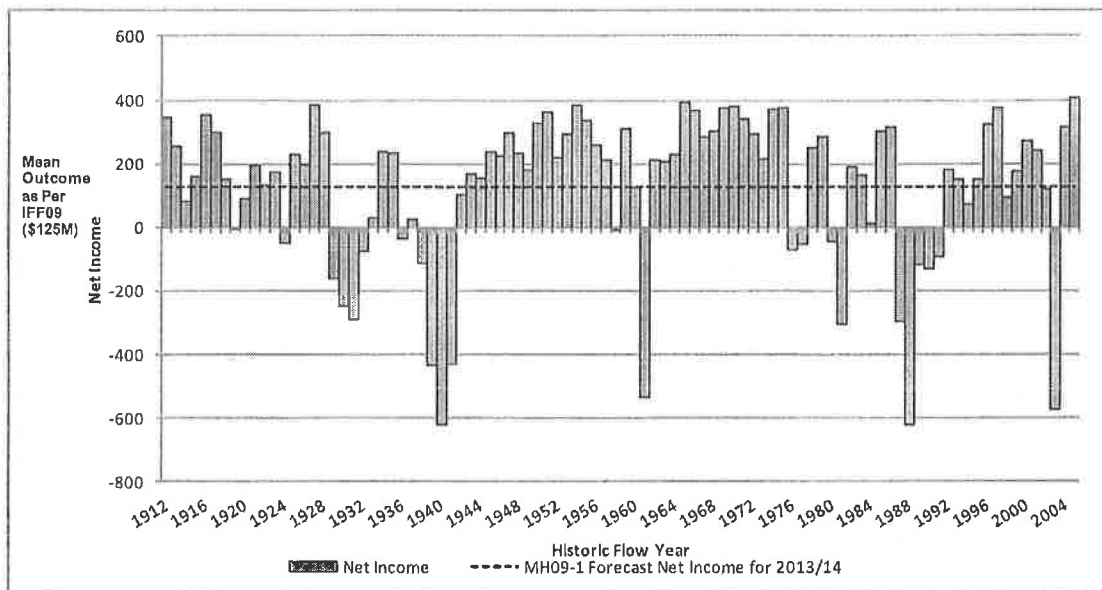
11 **ANSWER:**  
12

13 **(a)**  
14

15 Manitoba Hydro's exposure to natural gas prices and related export market prices is  
16 partially internally offsetting or "naturally hedged". This is because as natural gas prices  
17 and export market prices drop, Hydro experiences three related effects: 1) lower  
18 revenues from some export sales (largely opportunity sales); 2) lower costs for  
19 purchased power and fuel across all scenarios averaged into the IFF (droughts and  
20 floods); and 3) less severe financial losses during droughts. While items #2 and #3 are  
21 related, there are in fact distinct financial and risk profiles associated with each effect.  
22

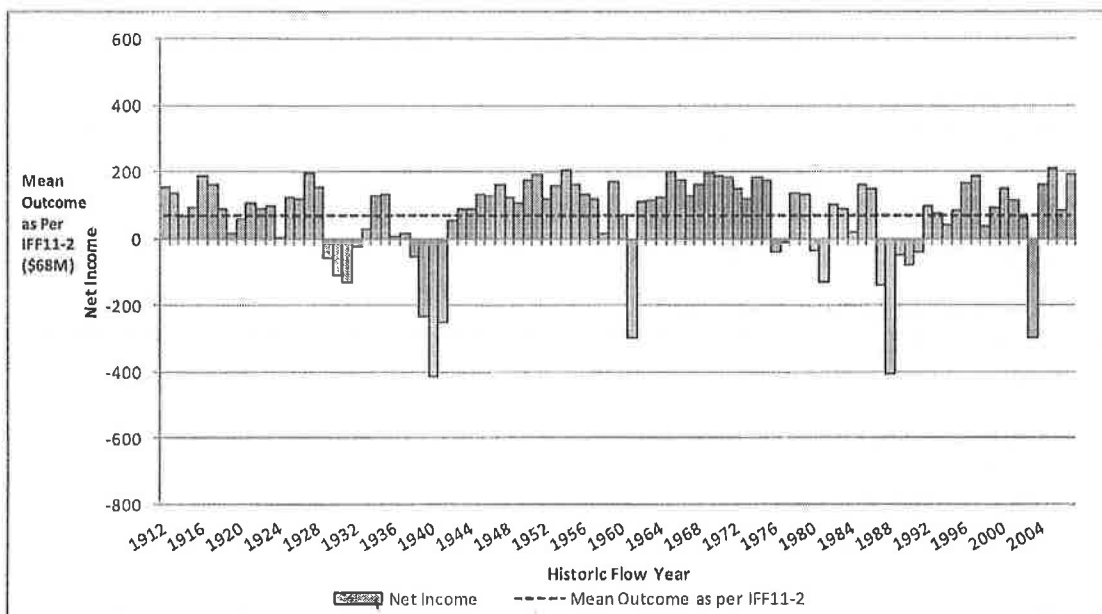
23 A good illustration of the concept is shown in three figures, set out below. Figure 1 is  
24 from data contained in the previous GRA (IR response PUB/MH-I-81(a)) indexed to the  
25 2013/14 IFF year from the IFF09-1 (the basis of the previous GRA), and Figure 2 is a  
26 repeat of Figure 2-3 from Mr. Bowman's pre-filed testimony with the axes made  
27 consistent with Figure 1 directly above it. As such, both figures represent 2013/14  
28 forecasts, but with differing vintages of export/drought price risk factored in (one from the  
29 previous GRA, one from this GRA). As shown in Figures 1 and 2, the risk exposure  
30 (illustrated by the height of the various bars) has been materially reduced in this GRA,  
31 and despite a lower forecast net income (the mean of all of the bars - totaling \$125  
32 million in IFF09-1 and \$68 million in IFF11-2) the risk profile is in fact improved (less  
33 years that lead to absolute losses, and smaller absolute losses when they occur).

1 **Figure 1: 2013/14 Net Income Distribution from IFF09-1 and the 2010-12 GRA**



2  
3  
4

**Figure 2: 2013/14 Net Income Distribution from IFF11-2 and the 2012/14 GRA**

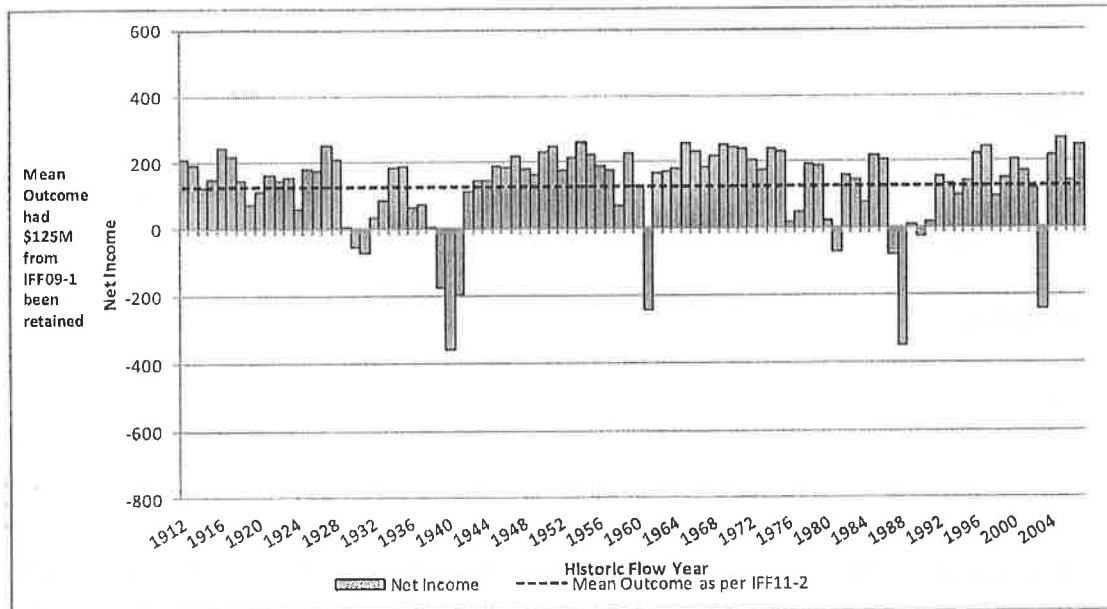


5



In contrast, had the previous target net income of \$125 million for 2013/14 been retained, the situation for 2013/14 would be as set out in Figure 3 below:

**Figure 3: 2013/14 Net Income Distribution for the Current GRA, had the \$125 Million Target Net Income from IFF09-1 been Retained**



The distribution of risk and net revenue in Figure 3 is materially shifted as compared to Figures 1 and 2. In particular, Figure 3 shows that had the \$125 million target net income been retained, there would be no further relevance to even discussing 5 year droughts, as the longest period of net losses in the historic record would be only 3 years (a repeat of 1939 to 1941 flows) and would total less than \$750 million in net losses, which would be fully made up within the 5 subsequent years without any new rate increases. The massive 2003/04 drought net losses would have been made up in basically 1 year even with no rate increases. In the entire 96 year flow record, there would be a total of only 11 instances of annual net losses for the Corporation. Using the ratemaking principles set out in Section 2.2 of Mr. Bowman's evidence, there would be no regulatory rationale for targeting such an excessively high net income or reserve build-up persistently across almost all water flow conditions.

1 **REFERENCE:** Page 4-8, line 1-2

2 **Pre-Filed Testimony of P. Bowman**

3  
4 "This approach [the ELG Procedure] is more aggressive in that for the  
5 same asset more of the costs are depreciated in the early years of the  
6 asset's life."

7  
8 **QUESTION:**

9  
10 a) Does Mr. Bowman view that the ELG procedure is a straight line method of  
11 depreciation? Please explain.

12  
13 **ANSWER:**

14  
15 **(a)**

16  
17 Yes, ELG is technically considered one of the "straight-line" methods of depreciation.

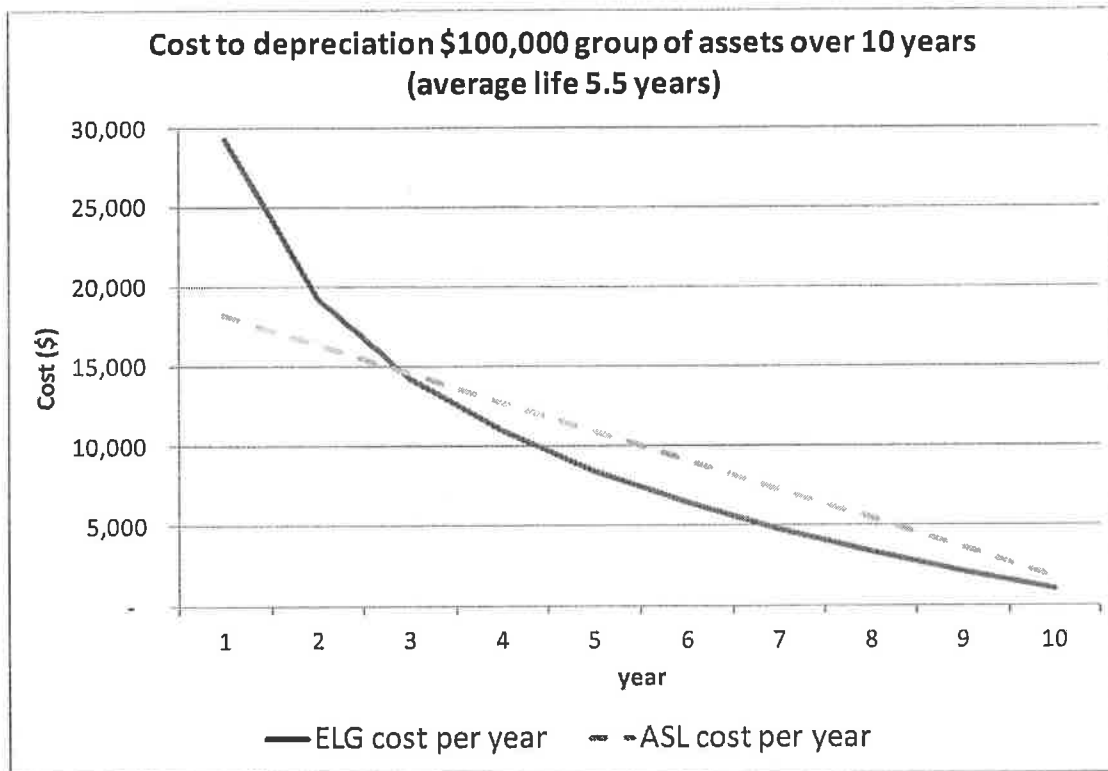
18  
19 The mathematics, however, are such that it does not result in the typical intuitive  
20 straight-line profile of the more easily understood Average Service Life (ASL) approach.

21  
22 For example, the mathematics for a \$100,000 investment in a group of like assets with  
23 an average life of 5.5 years and a simple step-function survivor curve (i.e., \$10,000 of  
24 gross plant retired each year) would normally be understood to yield an annual  
25 depreciation of  $\$100,000 / 5.5 \text{ years} =$  a rate of 18.181 percent, or \$18,181 in  
26 depreciation expense in the first year. The depreciation in each subsequent year would  
27 be the remaining gross book value of the class, times 18.181%. Under an ELG  
28 approach, the actual first year depreciation on this group of assets is \$29,290 (a 29.29%  
29 rate), which then decreases each year through the 10<sup>th</sup> year when the rate applied is  
30 10.00%<sup>1</sup>.

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<sup>1</sup> National Association of Regulatory Utility Commissioners, *Public Utility Depreciation Practices*, August 1996, Chapter XII: Equal Life Group Depreciation Rates.

- 1 The net cost to ratepayers is shown in the following graph:  
2



- 3  
4  
5 As a result, it has been Mr. Bowman's experience that when discussing rate impacts of  
6 depreciation methods, a general reference to "straight-line" approaches is understood to  
7 be synonymous with the intuitive mathematics (such as a 20 year average life yielding a  
8  $1/20^{\text{th}}$ , or 5% rate) consistent with the Average Service Life approach.

