

**Presentation of John D. McCormick,
B.A., M. B.A., LL. B.,
to the Manitoba Public Utilities Board
in the Manitoba Hydro 2010/11
2011/12 General Rate Application**

June 2011

Qualifications Attachment I

- B.A. , M. B.A. ,LL.B.
- Taught both Accounting and Tax as a Sessional Lecturer the University of Alberta
- Worked as a lawyer, investment banker and financial consultant.
- Director of Scotia McLeod and Levesque Beaubien.
- Have been qualified as a financial expert before Superior Courts and regulatory authorities including the AEUB, BCUC, MPUB and NEB.
- Have filed evidence as an Amicus Curiae for the AEUB, for consumers, and, in one instance for a utility.

Outline

- In this presentation, I intend to discuss certain aspects of issues on the record in this proceeding, including:
 - Some of my recommendations
 - Forecasting
 - Matters arising from the MH Rebuttal
 - Matters arising from the NBF Report
 - Risk
 - Process efficiency
 - Current interest rate environment



Recommendations

Recommendation #1

- “I am of the opinion that the MH methodology of forecasting long term debt solely based on its fixed rate forecast, and ignoring its own policy to maintain up to 30% of its debt on a floating rate basis, operates to the consumer’s detriment by inflating forecast interest costs in the current normal yield curve environment.”
 - Hydro’s forecasting, beginning with IFF-10, will now include a portion of new debt as floating, where in this hearing and before, all new debt was assumed to be higher cost Canadian dollar long term debt. Q/A 11, PUB/MH/Risk 6 (b)
 - This change partially adopts my recommendations as presented in Q/A 7 and based on the assumptions in PUB I-35(e) would bring about \$5 million in consumer savings in 2010/11 alone , but has not been included in this GRA. Q/A 7 at page 10

Recommendation #3

- “I am of the opinion that Manitoba Hydro has yet to fully embrace the interest rate forecasting methodologies recommended in the recent Centra decision, in particular the recommendation to test the predictions of the available forecasters as part of a process to develop a robust methodology with hopefully a less random or more accurate result.” Q/A 16-21

Recommendation #4

- “I am of the opinion that the Board should adopt an interest cost deferral mechanism, so as to ensure that the consumers need only pay the prudently incurred interest costs, **and to reduce the regulatory burden related to contested interest rate forecasts.**”
[Emphasis added]

Forecasting

Forecasting

- Forecasting financing expense is critical to customers.
 - In IFF-09, financing expense is the largest expense category, at 28% of total expense in forecast 2010 rising to over \$900 million and 33% of expenses in forecast 2020. Appendix 5.2, page 32/52
 - Forecasting financing expense accurately requires assumptions of interest rates, the breakdown between fixed and floating, currency of the issue, and the term to maturity of the underlying debt.
 - Good forecasting uses timely information, proximate to the decision date, and should not be biased.

Forecasting

- Much of the progress made in the Centra hearing arose as a result of Board staff picking up one of the threads of our IRs and asking PUB/Central 2-198.
- Hydro's forecasting, beginning with IFF-10, will apparently include a portion of new debt as floating rate, where in this hearing and before, all new debt was assumed to be higher cost fixed rate long term debt.
 - This change partially adopts my recommendations as presented in Q/A 7 and based on the assumptions in PUB I-35(e) would bring about \$5 million in annual consumer savings.

Forecasting

- Hydro's forecasting, beginning with IFF-10, is said to forecast interest costs on the assumption that 20% of new debt will be floating.
- Should the Board be disinclined to adopt an "interest cost deferral mechanism", I recommended that the Board adopt a revenue requirement based on a 25% or 27% floating rate debt component. Q/A 58, 60
 - 20% appears to be the midpoint of the 15-25% MH target range.
 - 27% is the higher end of the NBF range.
 - A forecast of a slightly greater portion of floating rate debt will moderate the financial impact of forecasting 30 year maturities while periodically undertaking shorter terms, say, 5 and 10 year financings.

Forecasting

- “Centra adopts a longer term view which incorporates high quality data sources and **sound forecasting methodologies**” CAC/MSOS/Centra 2-76, Centra 2009/10 GRA
 - I disagreed.
- “Each year Centra applies a consistent economic forecasting methodology that utilizes **high quality inputs** from numerous **independent forecasters**”,
 - I disagreed.

Forecasting

- “The **Corporation does not review the relative success of each forecast included in its forecast** of T-bill rates by comparing their historical forecasts with actual market results” *CAC/MSOS/Centra 2-76f*
 - I believe that this is an inferior methodology.
- “Centra monitors and **assesses interest rates on an ongoing basis**” *CAC/MSOS/Centra 2-72 e (8 and 9)*
 - If this is the case getting an interest rate forecast update should be no problem for Hydro.
 - Hydro should be well aware and able to quantify the degree of overestimation that has occurred.

Forecasting

- Hydro has yet to embrace my suggestion that “pruning” the list of available forecasters is valuable.
- *“Not only is it difficult to predict accurately, it is also very difficult to decide which prediction method is best” KM Report “there is “definitely a role for qualitative professional judgment.””*. *MH/KM-29, each quoted in Hydro Rebuttal at page 26/96*
- It is time to test the “professional judgement” used to select some forecasters and reject others, whose names we can see in the list used by Consensus Economics.
- As Hydro is disinclined to demonstrate the logic for its current pruning, I am resigned to recommending an “interest rate deferral mechanism”

Forecasting

- Forecasting financing expense is complicated by the need to forecast both interest rates, and term of the debt that may be issued.
- “In managing Manitoba Hydro’s debt portfolio, the Corporation works closely with the Province of Manitoba to structure the optimum balance of short and long-term debt denominated in both Canadian and US currencies”. Coalition/MH I-84, 2008/09 GRA, Appendix 6.2 Debt Management Strategy, page 4, CAC/MSOS/Centra 2-76 k
- This statement was the starting point in the process which lead to the NBF report, which we will discuss later.

Forecasting

- “The Corporation also takes advantage of opportunities to swap various debt instruments for lower cost alternatives where the benefits of such transactions are determined to outweigh any associated cost and risks, and utilizes fixed rate debt financing and interest rate derivatives to manage interest rates and the level of floating rate debt. Manitoba Hydro’s **long-term objective** is to maintain a floating rate debt portfolio that does not exceed 30% of total debt”. Coalition/MH I-84, 2008/09 GRA, Appendix 6.2 Debt Management Strategy, page 6, Coalition/MH I-85 a
- In addition to the 30% cap, there are target guidelines of between 15% and 25% for Floating Rate Debt.

MH Rebuttal Evidence

MH Rebuttal Evidence

- MH offers about 21 pages of rebuttal evidence related to my evidence.
- So as to move quickly through the more important material, I will not address all of the points they have put forward, but not addressing a point should not be taken as tacit agreement.

MH Rebuttal Evidence

- In its Rebuttal [page 23-24/96], MH addresses timely forecasts noting that “*interest rates were again reviewed in October 2009*”.
 - October 2009 was at least 19 months ago. Where is the update to reflect that the forecasts which were current in October have now been superseded?
- In footnote 18, supporting a discussion on updating forecasters, I am accused of being inconsistent, ignoring my own arguments.
 - For clarity, I believe inputs should be current, I also believe that one should select forecasters which contribute to a robust and accurate forecast.

MH Rebuttal Evidence

- In its Rebuttal [page 22/96], MH takes exception to my recommendation of an “interest cost deferral mechanism” saying “Mr. McCormick fails to acknowledge that Manitoba Hydro’s rates are set under a **rigorous** cost of service **methodology** ... , and he fails to recognize the fact that the retained earnings and net income of Manitoba Hydro are held for the benefit of ratepayers.”
 - The particular rate base “methodology” in use, is irrelevant to my concerns with the of use of poor forecasts based on superseded data and assumptions that conflict with both policy and practice.

MH Rebuttal Evidence

- In its Rebuttal [page 22/96], MH takes exception to my recommendation of an “interest cost deferral mechanism”.
 - Part of MH’s justification for diminishing the consequences of over collecting interest costs is in part “To the extent that there are higher contributions to retained earnings as a result of this difference, there will be lower future rate increase requirements.” [page 22/96 line 22]
 - I am not persuaded for several reasons;
 - Intergenerational equity,
 - Corporate incentive to overestimate interest costs and avoid under estimation,
 - MH disinclination to adopt more reasonable forecast methodology in the Centra case and in this case with respect to “pruning”.

NBF Report

NBF Report

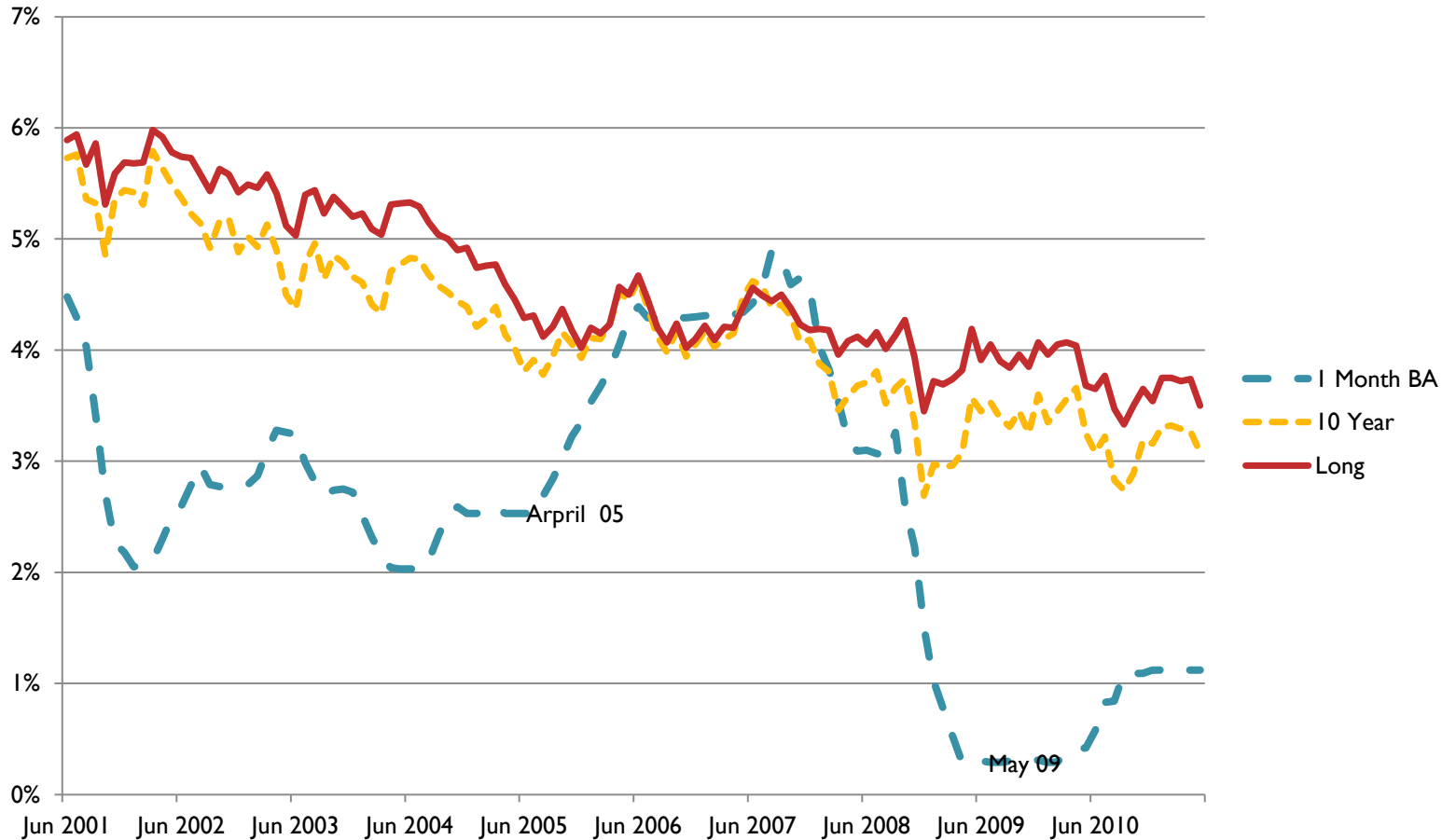
- RFP Requirements Q/A 35, CAC/MSOS/MH I-152 (a) page 8 & 9 of 15
 - Identify key factors for optimal weighting of fixed vs. floating
 - Provide a body of knowledge on portfolio optimization
 - Provide a comparative report detailing **policies** of peers
 - Define an optimal relative weighting of fixed vs. floating rate debt for scenarios, **flat/ steep /inverted** yield curves Q/A 51
 - Recommend an implementation plan and tools to assist on an ongoing basis
 - Identify financial statement impacts for a variety of economic scenarios,
- Regretfully, I was unable to confirm that each of these 6 services, for which NBF was paid, were completed. Q/A 36, 51

NBF Report

- I am of the opinion that the report by Manitoba's underwriter , NBF, is seriously flawed.
- Without regard to the many flaws in the report, this report determines an optimal range of 14% to 27% for floating rate debt using the author's preferred method.
- Essentially we are advised that the optimal range isn't 10% [25%-15%] in scope but thirty percent larger at 13% [27%-14%].
- NBF and MH think that is "sufficiently close". CAC/MSOS/MH I-163 (a). I disagree. Q/A 57 Each one of those percentage points can be worth several million dollars in costs saving each year.

NBF Report

Bank of Canada Benchmarks



NBR Report

Only one of 9 values for MH's Floating Rate percentage , and only 2 of 9 values for MH's total debt , as presented in table 14 were correct. Q/A 48 at page 61 of 76

Table 14		2000	2001	2002	2003	2004	2005	2006	2007	2008
Historical Debt Mix	Initial	15%	14%	14%	16%	17%	22%	19%	19%	19%
	Amended	18%	15%	18%	18%	22%	19%	17%	19%	20%
	Change	3%	1%	4%	2%	5%	-3%	-2%	0%	1%
Total Debt	Initial	7,134	6,442	7,661	7,268	7,390	7,204	7,169	7,227	7,599
	Amended	6,609	6,489	7,481	7,396	7,484	7,263	7,169	7,375	7,599
	Change	- 525	47	- 180	128	94	59	-	148	-

NBF Report

- This report is replete with errors. It was delivered in July 2009, and remained unchanged until CAC/MSOS examined it as part of the IR process.
 - How is it possible that no one noticed that only 27 of 72 values presented on table 14 were correct? CAC/MSOS MH I-164 (a)
 - How is it possible that no one noticed that only 2 of 9 values for MH's total debt presented in table 14 were correct? Q/A 48
 - How is it possible that no one noticed that only 1 of 9 values for MH's percentage of floating rate debt presented in table 17 were correct? CAC/MSOS MH I-118 (a), PUB MH I-174 (a) Q/A 48

NBF Report

- “An **in-depth analysis** of the fixed vs. floating rate debt **policies** of Manitoba Hydro’s peers” NBF report page 4/50, the third item on the list of six in the RFP.
 - The analysis focused on “**actual**” levels not **policies**. CAC/MSOS/MH I-174 (a). Q/A 37 & 47 The choice of “actuals” is somewhat odd since Hydro supplies some of the policy limits and target guidelines of its “peers” at page 18 of 65 in their 2008/09 Rebuttal Evidence.
 - NBF used internal data for Hydro “actuals” and for the “peers” used “balance sheet” data, ignoring information in the notes, quarterly statements and MD&A which belied its calculations, seeming to selectively use even number year reports ignoring restatements, and mulching data, so that “no reasonable comparison can be made” of data in Table I 7 Q/A 38, 39, 43, 44 & 46

NBF Report

- SaskPower 2008 Annual Report at page 56 states - “SaskPower is currently examining its structure to determine if ***an increased amount of floating rate debt*** would provide opportunities for lower average borrowing costs.” Q/A 41
- There was no mention of this policy review in the NBF report.
- During the first quarter of 2009, before the NBF finished its data collection, the Board of SaskPower approved a new floating rate policy.

NBF Report

Emera	2005	2006	2007	2007 in 2008	2008	2009
Short Term Debt	\$ 88.1	\$ 133.2	\$ 104.6	\$ 28.4	\$ 157.9	\$ 301.6
Current Portion LTD	152.9	3.4	121.0	121.0	131.4	108.1
Long Term Debt	1,631.8	1,657.4	1,600.2	1,676.4	2,159.2	2,319.9
Total	1,872.8	1,794.0	1,825.8	1,825.8	2,448.5	2,729.6
STD/Total	5%	7%	6%	2%	6%	11%
MD&A estimate		18%	14%	14%	19%	24%

NBF Report

- Why do I place so much importance on these obvious errors?
 - I am of the opinion that these visible errors are indicative of the quality of work and attention to detail which was brought to bear in this assignment, and which will likely extend into the calculations which we cannot see. Q/A 49
 - There are other visible errors, including SaskPower 2003 data page 47/76 line 20 Q/A 38 , and Emera 2007 data Q/A 44
 - As we were not provided with the detailed modeling to arrive at the range of 14-27% I have little confidence in the range, but am prepared to give NBF the benefit of the doubt in hopes of reducing the interest costs to be born by the ratepayers.

NBF Report

- “In managing Manitoba Hydro’s debt portfolio, the Corporation works closely with the Province of Manitoba to structure the optimum balance of short and long-term debt denominated in both Canadian and US currencies”. Coalition/MH I-84, 2008/09 GRA Appendix 6.2 Debt Management Strategy, page 4, and CAC/MSOS/Centra 2-76 k
 - Regrettably, after reading the NBF report, I remain unconvinced that we have attained and maintain the “optimum balance.

NBF Report

- Interveners did seek to understand the policy levels identified by MH.
 - Please provide any analysis that identifies, confirms or supports the “30%” factor as the maximum for a “floating rate” portion of Manitoba Hydro’s capital structure. Coalition/MH I-85 (a)
 - Please provide any analysis that identifies, confirms or supports the “15%” factor as the minimum or recommended level for a “floating rate” portion of Manitoba Hydro’s capital structure. Coalition/MH I-85 (f)
- Hydro advised that each of these levels were a “matter of judgment”. Coalition/MH I-85 (a)

NBF Report

- In its Rebuttal, at page 30/96, Hydro asserts, “The Coalition’s case was primarily based on the premise that Manitoba Hydro was underweighting its floating rate debt below levels prescribed by the theory of portfolio optimization.”
 - The issue was really that they had no proof of the optimality which they had asserted. Coalition/MH I-84,

NBF Report

- In its Rebuttal at page 31/96, Hydro notes the Modern Portfolio Theory approach would establish a range of “12-23%” for Floating Rate Debt.
- NBF believes the Modern Portfolio Theory approach is subject to “limitations” not inherent in the “asset liability framework” which would result in a range of 14-27% for Floating Rate Debt.
- Hydro asserts, at line 11, that CAC/MSOS “advocated” this method. I disagree.

NBF Report

- MH in rebuttal asks us to look beyond errors and perceive that the Order only required the determination of a range, saying, “Any suggestions by Mr. McCormick that NBF omitted to provide sufficient granularity ... are therefore misdirected.” Rebuttal page 33 of 96
I disagree.
- The “Contra preferentum” rule is relevant here.
- Hydro set the terms of the engagement, including “policies” and the academic support previously requested in IRs, and NBF declared its work to be “in-depth”, not the cursory “general insight” level described in the Rebuttal.

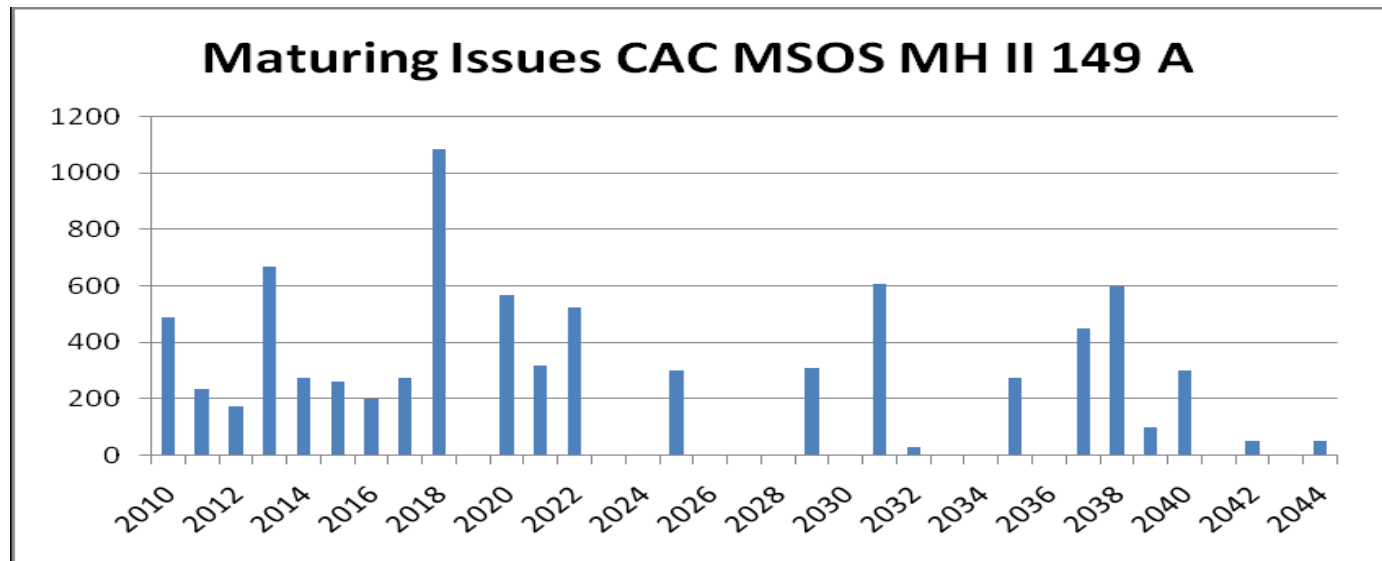
NBF Report

- “All other requests in the RFP’s ... were terms of reference beyond the Directive and were inserted by Manitoba Hydro in order to obtain additional value from the proposed engagement.” MH rebuttal page 30 of 96
- I am of the view that there is little value to be derived from tables with data developed under different methods prevent proper comparison.
- I am of the view that the other tasks were valuable only to the degree they have given us a window on the quality of work of the balance of the report.

Risk

Risk

- Debt maturity concentration or “Don’t put your eggs in one basket.” PUB/CAC MSOS (McCormick) I-I



- Insurance value of interest rate caps PUB/CAC MSOS (McCormick) I-2 (b)



Process Efficiency

Process Efficiency

- In each application, a wealth of information is filed, some of which is time sensitive. Time sensitive data needs to be updated.
- This application was filed based on IFF09-1 and the 2009 Economic Outlook. Tab 5 of the Application
- For forecast 2011/12 the long bond [GOC 10+] rate has fallen 55 basis points, from 4.95% to 4.40%, in the 2010 Economic Outlook. Forecast short term rates fell 130 basis points, from 3.80% to 2.50%. Q/A 6 at page 7

Current Interest Rates

Current Interest Rates

- The length of this proceeding means that the initial interest rate information is now quite stale.
- I believe updates would be helpful to the Board:
 - Last financial years T-bill, BA, and Canada bond averages
 - Current values for T-bill, BA, and Canada bond
 - Current forecast values by Canadian banks
 - Recent Manitoba financings
 - Current Bloomberg Manitoba specific yield curve data., and,
 - an update to one of the IRs in the Centra proceeding
- The following data is derived generally from publically available sources, while the Applicant has the capability to present additional data.

Current Interest Rates

- The Bank of Canada 3 month BA rate for May 27, 2011 was 1.20%. SeriesV39071
- For the 2010/11 financial year the 3 month BA rate averaged 1.02%. SeriesV39071
- 3 month T-bills averaged 0.75% for the 2010/11 financial year, and were 0.95% on May 27, 2011. SeriesV39065
- 10 year Canada bond averaged 3.20% for the 2010/11 financial year, and were 3.04% on May 27, 2011. SeriesV39055
- The Long Canada benchmark bond averaged 3.69% for the 2010/11 financial year, and was 3.48% on May 27, 2011. SeriesV39056

Current Interest Rates

- The 2009 Economic Outlook targeted 3.8%. Q/A 6
- The table below shows recent 3 month T-bill rate forecasts from Canadian Banks, averaging about 1.5% for 2011/12.

		2010	2011	2011	2011	2011	2012	2012	2012	2012
3 Month		4Q10	1Q11	2Q11	3Q11	4Q11	1Q12	2Q12	3Q12	4Q12
May-11	Scotia	1.05%	0.96%	1.10%	1.30%	1.70%	2.20%	2.30%	2.30%	2.30%
06-May-11	RBC	0.97%	1.10%	1.35%	1.70%	2.15%	2.40%	2.65%	2.90%	3.15%
May-11	TD	1.04%	0.96%	1.05%	1.30%	1.80%	2.30%	2.80%	3.05%	3.05%
20-May-11	CIBC		0.99%	1.00%	1.55%	1.90%	1.85%	1.85%	1.85%	1.90%
15-Apr-11	National			1.23%	1.68%	1.97%	2.28%			
	average			1.15%	1.51%	1.90%	2.21%	2.40%	2.53%	2.60%
	period									
	average			1.07%	1.33%	1.71%	2.06%	2.29%	2.46%	2.56%
20-May-11	BMO		0.95%	0.97%	1.05%	1.47%	1.47%	1.80%	2.30%	2.80%

Current Interest Rates

- The 2009 Economic Outlook targeted 4.95% for the “10Yr + rate”. Q/A 6 page 7 long bond
- The table below shows recent 10 year rate forecasts from Canadian Banks averaging about 3.6% for 2011/12.

		2010	2011	2011	2011	2011	2012	2012	2012	2012
	10 year	4Q10	1Q11	2Q11	3Q11	4Q11	1Q12	2Q12	3Q12	4Q12
May-11	Scotia	3.12%	3.35%	3.25%	3.40%	3.50%	3.70%	3.75%	3.80%	4.05%
06-May-11	RBC	3.16%	3.25%	3.30%	3.50%	3.80%	3.95%	4.05%	4.15%	4.15%
May-11	TD	3.12%	3.35%	3.35%	3.60%	4.00%	4.25%	4.40%	4.45%	4.45%
20-May-11	CIBC		3.27%	3.50%	3.55%	3.50%	3.60%	3.85%	3.95%	4.00%
15-Apr-11	National			3.50%	3.81%	3.97%	4.05%			
	average			3.38%	3.57%	3.75%	3.91%	4.01%	4.09%	4.16%
	Period average			3.35%	3.48%	3.66%	3.83%	3.96%	4.05%	4.13%
20-May-11	BMO		3.31%	3.25%	3.47%	3.69%	3.80%	3.90%	4.05%	4.20%

Current Interest Rates

- In 2011 Manitoba announced:
 - on January 13th, a \$350 million floating rate issue maturing in 2016. Quarterly CDOR [BA] plus 15 basis points. Recent yield was 1.50%
 - on April 19th, a \$750 million US pay 1.375% issue maturing in 2014. The issue price was 99.921. NBF joint lead manager-books
 - on May 10th, a 4.4% \$400 million issue maturing in 2042. Issue price was 99.738. Recently yield was 4.32%. NBF co-manager.
- The record is silent as to whether MH participated in these issues. MH participated in a January 2011 fixed issue, with a yield of 4.6%.
- These rates are indicative of significant excess interest costs being forecast in the revenue requirement.

Current Interest Rates

The table below compares some Canada and Manitoba interest rates

May 27 2011	Bloomberg Series F101 Canada	Bloomberg Series F302 Manitoba	Manitoba Canada Spread	Manitoba Term Spread to 30 Years
3 month	0.94%	1.09%	0.15%	3.29%
5 year	2.35%	2.74%	0.39%	1.64%
10 year	3.12%	3.86%	0.74%	0.52%
15 year	3.43%	4.21%	0.77%	0.17%
30 year	3.54%	4.38%	0.84%	0.00%

Current Interest Rates

The table below compares “A” utility and Manitoba interest rates

May 27 2011	Bloomberg Series F295 CAD Utility “A”	Bloomberg Series F302 Manitoba	Utility “A” to Manitoba Spread
3 month	1.27%	1.09%	0.19%
5 year	3.22%	2.74%	0.49%
10 year	4.28%	3.86%	0.42%
15 year	4.78%	4.21%	0.57%
30 year	4.98%	4.38%	0.61%



Summary & Conclusion

Summary

- I respectfully ask the Board to implement each of the recommendations in my written evidence.
- In addition, I would ask that the Board, in this and future hearings, require MH to provide an interest update, covering both forecast and actual rates to date.
- To improve the efficiency of future hearings, when the Board orders a technical independent report that was sought by a consumer intervener, I would ask the Board to require Hydro to involve that intervener, in the determination of the scope of the assignment and prior review of the report.

Conclusion

- Thank you for your attention and your favourable consideration of my various recommendations.