Board Counsel's Book of Documents – VOLUME 3
Manitoba Hydro 2017/18 and 2018/19 GRA

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Tab #	Description	Reference
Credit Rating Considerations		
28.	*Historical Credit Rating Information*	***Tab 4, excerpts; PUB MFR 14***
29.	*Credit Agency Reports*	***2017/18 & 2018/19 GRA, Appendix 4.4; S&P Ratings Report July 14, 2016***
30.	*MH Presentations to Credit Rating Agencies*	***PUB/MH I-60 (b) – Attachment; PUB/MH II-23 (a-b)***
31.	*Borrowing Costs- Credit Spreads*	***PUB/MH I-41 (a-b); PUB/MH I-61***
32.	*Debt Administration*	***PUB/MH II-13 (a-e);***

Debt Management		
33.	*Debt Management Strategy*	***2017/18 & 2018/19 GRA, Appendix 3.5; MIPUG/MH I-20 (a-h)***
34.	*ST. & LT. Debt Continuity/ Free Cash Flow*	***PUB MFR 56; PUB/MH I-23 (a-b)***
35.	*Debt Levels & Maturities*	***MIPUG/MH I-19 (a-b); PUB/MH I-29 (a-b); MIPUG/MH I-9 (b-c)***
36.	*Debt Management Strategy Based on IFF15 Rates Levels*	***PUB/MH II-17 (a-b)***
37.	*Long Term Debt Portfolio Mix/ WAIR*	***PUB/MH I-27 (a-b); PUB/MH I-28 (a-c); PUB/MH I-24; PUB/MH I-32 (b) COALITION/MH I-97 (a-c)***
38.	*Terms of New and Amended Debt Issues*	***PUB/MH I-32 (a) Attachment***
39.	*Interest Rate Forecast*	***PUB MFR 52 (Updated); COALITION/MH I-63 (a-b);***

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Tab #	Description	Reference
Finance Expense		
40.	*Details Finance Expense - (IFF16U Interim)*	***COALITION/MH I-96 (a-d);***
41.	*Finance Expense – 2014/15 vs. 2016/17*	***MIPUG/MH I-9 (a)***
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44.	*Interest Allocated to Construction of Major Projects*	***MIPUG/MH I-14 (a); PUB/MH II-26 (a-b)***
45.	*Impact of Keeyask G.S. on Cash Flow*	***COALITION/MH I-71 (a-c)***
46.	*Debt Maturity Schedule*	***PUB MFR 58;***
47.	*Debt Maturity and Finance Expense Alternative Scenarios*	***PUB/MH II-28***

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4.6 CREDIT RATING AGENCY PERSPECTIVES

The vast majority of Manitoba Hydro's investment in new plant and assets is funded by way of debt issuance advanced and guaranteed by the Province of Manitoba. While Manitoba Hydro also uses internally generated cash flows to fund some level of investment, due to the capital intensity of the Corporation's business, debt financing is both significant and essential.

Manitoba Hydro's long and short term credit ratings are a flow-through of the Province of Manitoba's credit ratings (as highlighted in green in **Figure 4.21** below):

Figure 4.21 Province of Manitoba Credit Ratings

<table>
<tr><th colspan="2">S&P</th><th colspan="2">Moody's</th><th colspan="2">DBRS</th></tr>
<tr><th>Long Term</th><th>Short Term</th><th>Long Term</th><th>Short Term</th><th>Long Term</th><th>Short Term</th></tr>
<tr><td>AAA</td><td rowspan="4">A-1+</td><td>Aaa</td><td rowspan="6">P-1</td><td>AAA</td><td rowspan="2">R-1 high</td></tr>
<tr><td>AA+</td><td>Aa1</td><td>AA high</td></tr>
<tr><td>AA</td><td>Aa2</td><td>AA</td><td rowspan="2">R-1 middle</td></tr>
<tr><td>AA-</td><td>Aa3</td><td>AA low</td></tr>
<tr><td>A+</td><td rowspan="2">A-1</td><td>A1</td><td>A high</td><td rowspan="3">R-1 low</td></tr>
<tr><td>A</td><td>A2</td><td>A</td></tr>
<tr><td>A-</td><td>A-1/A-2</td><td>A3</td><td>P-1/P-2</td><td>A low</td></tr>
<tr><td>BBB+</td><td>A-2</td><td>Baa1</td><td>P-2</td><td>BBB high</td><td>R-2 high</td></tr>
<tr><td>BBB</td><td>A-2/A-3</td><td>Baa2</td><td>P-2/P-3</td><td>BBB</td><td>R-2 middle</td></tr>
<tr><td>BBB-</td><td>A-3</td><td>Baa3</td><td>P-3</td><td>BBB low</td><td>R-2 low/R-3</td></tr>
</table>

Since the 2015/16 Electric GRA, the Province of Manitoba's credit rating has been downgraded by both Moody's and S&P. The credit rating has come under increasing pressure as the province's debt burden grows. **Figure 4.22** shows the comparative long term credit ratings for each of the Canadian provinces.

Figure 4.22 Provincial Long Term Credit Ratings Comparison

Province	Standard & Poors	DBRS	Moody's Investors Service
British Columbia	AAA	AA (high)	Aaa
Alberta	AA #	AA (high)	Aa1 #
Saskatchewan	AA+ #	AA	Aaa
Manitoba	AA- #	A (high)	Aa2
Ontario	A+	AA (low)	Aa2
Québec	A+ *	A (high)	Aa2
New Brunswick	A+	A (high)	Aa2
Nova Scotia	A+	A (high)	Aa2
Prince Edward Island	A	A (low)	Aa2
Newfoundland & Labrador	A#	A (low)	Aa3 #

* positive / # negative outlook

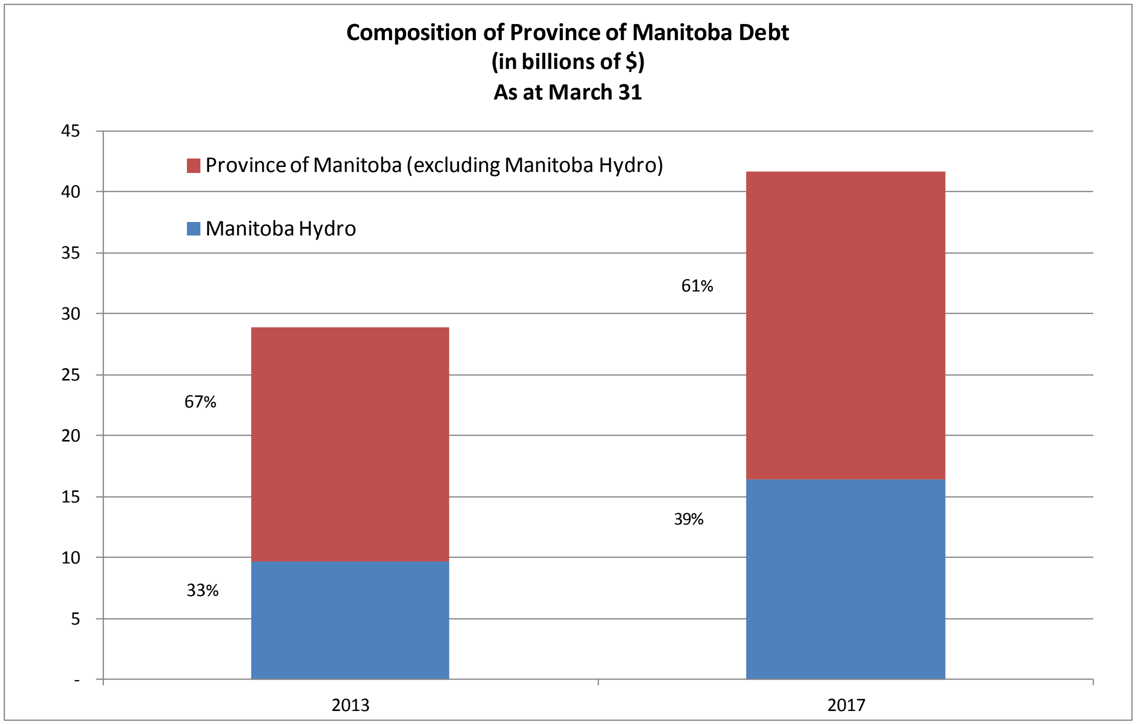
Figure 4.23 shows the downgrades of the western provinces that have occurred since the last Electric GRA.

Figure 4.23 Downgrades of Western Provinces

Province	Standard & Poors	DBRS	Moody's Investors Service
British Columbia	0	0	0
Alberta	2	1	1
Saskatchewan	1	0	0
Manitoba	1	0	1

The province's credit rating should be of concern to Manitoba Hydro's customers as it impacts the cost of borrowing that the Corporation must recover in its rates. As demonstrated in **Figure 4.24**, debt advances to Manitoba Hydro form a significant and growing portion of the total provincial debt and the Corporation's financial performance is therefore a contributing factor toward the financial strength and assessment of the Province's credit rating.

Figure 4.24 Composition of Province of Manitoba Debt



The credit rating agencies assign credit ratings based on their independent evaluations. Each rating agency considers Manitoba Hydro's financial risk profile including financial performance, ratios and forecasts as well as the business risk profile in assessing whether or not Manitoba Hydro is self-supporting. Providing that the rating agency views Manitoba Hydro's long term debt advances from the Province of Manitoba to be self-supporting, the credit rating agencies have stated that they will not include Manitoba Hydro's debt levels (the blue portion in the bar chart) in the net tax-supported provincial debt. This exclusion of Manitoba Hydro's debt is significant when assessing the Province of Manitoba's ratio of net tax-supported provincial debt as a percent of provincial GDP; a critical ratio for the provincial financial risk profile. Should Manitoba Hydro lose its self-supporting status and the contingent liability represented by Manitoba Hydro's debt to the Province of Manitoba materialize, the implication to the Province of Manitoba and its taxpayers is a higher risk of further downgrades.

On July 10, 2015 **Moody's downgraded** the Province of Manitoba's long term debt credit rating, and revised the outlook on the Province of Manitoba's long term debt rating from negative to stable. As indicated in the Moody's report on the Province of Manitoba:

> *"the downgrade reflects the deterioration of Manitoba's financial metrics leading to an increased debt burden and our expectation that the province will face significant challenges in achieving fiscal balance by 2018-19"*.

The credit rating and outlook from Moody's has remained unchanged since July 10, 2015. Moody's report on Manitoba Hydro from November 16, 2016 stated that:

> *"Moody's continues to expect Manitoba Hydro to operate as a self-sufficient corporation to service its debt and afford payments to the Province such as water rentals and assessments".*

However in Moody's report on the Province of Manitoba dated August 3, 2016, with respect to Manitoba Hydro, Moody's states:

> *"The anticipated increase in debt continues to pressure the province's rating since it raises the contingent liability of the province. Manitoba Hydro has flexibility to increase utility rates to ensure that its own revenues will continue to support its operations and debt payments. Political willingness to approve rate increases when Manitoba Hydro's credit metrics will reach their low point will be critical to recover expected capital expenditures and restore credit metrics."*

On July 14, 2016 **S&P downgraded** the Province of Manitoba's long term debt credit rating and placed the outlook as negative. The negative outlook reflects the view that there is at least a one-in-three chance that S&P could lower the province's ratings by one notch in the subsequent 12 to 24 month period should the Province of Manitoba fail to meet its fiscal targets. As indicated in this S&P report on the Province of Manitoba:

> *"the downgrade reflects our assessment of the significant rise in Manitoba's debt burden. This stems from the province's ongoing fiscal shortfalls and significant*

debt on-lent to the MHEB which we no longer consider to be self-supporting mainly due to its high and rising leverage."

S&P has clarified its rating methodology such that it now defines "self-supporting" as maintaining stand-alone investment grade credit metrics. Since Manitoba Hydro does not meet this standard, Manitoba Hydro's debt is now **included** in the tax supported debt of the Province. S&P considers Manitoba Hydro to have a "highly leveraged" financial risk profile.

The S&P report on the Province of Manitoba from July 29, 2016 stated that:

"The province has run fiscal deficits since fiscal 2010 and MHEB is currently undertaking a large capital program to renew and expand its generating assets. The result has been a steady increase in the province's tax-supported debt burden to a level that we view as very high and that is significantly higher than that of its domestic and international peers. In addition, although we had previously expected that Manitoba's debt burden would continue to grow, the pace of borrowing in fiscal years 2016 and 2017 was greater than we had previously expected."

The credit rating and outlook from DBRS has remained unchanged since Manitoba Hydro's last GRA in 2015.

The November 25, 2016 DBRS rating report on Manitoba Hydro stated that:

"DBRS considers Manitoba Hydro to be self-supporting, as it is able to fund its own operations and service debt obligations. However, DBRS could consider reclassifying a portion of the Utility's debt to be tax-supported should the financial health of the Utility deteriorate to the point where its expenses cannot be recovered through rates. If this were to occur, it could potentially put downward pressure on the Province's credit rating."

"DBRS had noted that rate increases of 3.95% were expected to be insufficient for Manitoba Hydro to recover costs related to major projects for the medium term."

Attached as Appendix 4.4 are the following credit reports that have recently been issued by DBRS for Manitoba Hydro and the Province of Manitoba:

- DBRS Manitoba Hydro November 25, 2016
- DBRS Province of Manitoba September 12, 2016
- DBRS Manitoba Hydro November 26, 2015
- DBRS Province of Manitoba August 17, 2015

The following credit reports and ratings actions from Moody's and S&P for Manitoba Hydro and the Province of Manitoba have been filed in confidence with the PUB. These reports are proprietary and Manitoba Hydro has not received permission to file these on the public record.

- Moody's Manitoba Hydro November 16, 2016
- Moody's Province of Manitoba August 3, 2016
- S & P Province of Manitoba July 29, 2016
- S & P Province of Manitoba December 21, 2015
- Moody's Manitoba Hydro November 6, 2015
- Moody's Province of Manitoba July 16, 2015

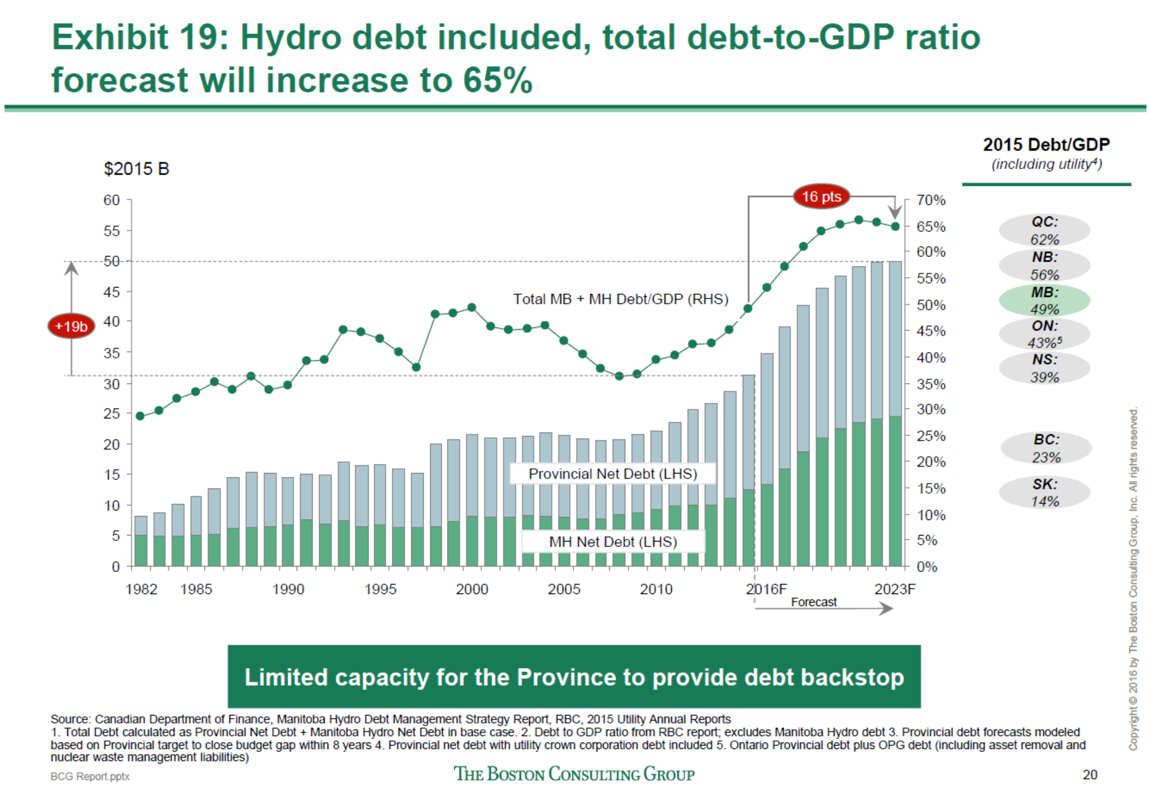
In addition, the following ratings actions (downgrades) have recently been issued by Moody's and S&P with respect to long term credit ratings, and have been filed in confidence with the PUB:

- S & P Province of Manitoba July 14, 2016
- Moody's Province of Manitoba July 10, 2015

Credit rating agencies, in their review of provincial sovereign debt, take into consideration the ratio of debt to GDP as one indicator of the financial health of the bond issuer. Credit rating agencies are willing to exclude Manitoba Hydro's debt from the calculation of total provincial debt so long as Manitoba Hydro is deemed to be self-supporting in its ability to adequately support the cost of its borrowing. In the event that Manitoba Hydro's financial situation deteriorates to a level whereby the credit rating agency no longer views it as self-supporting, the level of total provincial debt must then include that attributed to Manitoba Hydro.

Figure 4.25 below illustrates that the level of borrowing required for Manitoba Hydro's capital expansion will dramatically increase the total level of debt taken on by the Province. If Manitoba Hydro is no longer considered to be self-supporting (as S&P has now concluded), Manitoba Hydro's debt would need to be included in the tax supported debt of the Province for purposes of ratio calculation for assessing the financial strength of the Province. In combination with the Province's estimated borrowings over the course of the next few years, BCG projected that the debt-to-GDP ratio would increase to 65% by the fiscal year 2023.

Figure 4.25 Manitoba Debt to GDP Ratio



As shown in the Figure above, the circumstances facing the Province of Manitoba and Manitoba Hydro at this time are far different from those experienced in the past, in terms of the level of debt compared to GDP.

Therefore, it is critical that credit rating agencies view Manitoba Hydro's debt as self-supporting and that weakened financial ratios as a result of major capital investments and reinvestments do not negatively impact the credit rating of the Province. An implication of the recent and potential future downgrades is an increased cost of borrowing.

The proposed rate increases are necessary to demonstrate to the credit rating agencies that Manitoba Hydro is on a path to maintain its self-supporting financial status.

PUB MFR 14

Financial Information

A table, which details the debt to equity ratio, capital coverage ratio and interest coverage ratio, net assets, net income, total debt and retained earnings, DBRS bond ratings, total Provincial Debt and total MH debt to total Manitoba debt in each year since 1992.

Please see the table on the following page.

Information relating to the Province of Manitoba was provided by the Province.

Financial History	Debt/Equity Ratio	Capital Coverage Ratio	Interest Coverage Ratio	EBITDA Interest Coverage Ratio	Total MH Assets	MH Net Income	Total MH Debt	Sinking Fund	Total MH Net Debt	MH Retained Earnings	DBRS Bond Rating *	Total Province of MB Debt	Sinking Fund	Total Province of MB Net Debt	Total MH Net Debt to Total MB Net Debt
2016	83:17	1.37	1.06	1.55	19,780	49	14,527	0	14,527	2,828	A (high)	39,874	1,227	38,647	37.6%
2015	82:18	1.20	1.19	1.73	17,567	136	12,680	114	12,566	2,779	A (high)	35,742	1,389	34,353	36.6%
2014	76:24	1.35	1.28	1.95	15,639	174	10,868	111	10,757	2,716	A (high)	32,629	1,544	31,085	34.6%
2013	75:25	1.25	1.15	1.81	14,542	92	9,985	352	9,633	2,542	A (high)	30,563	1,672	28,891	33.3%
2012	74:26	1.13	1.10	1.74	13,791	61	9,382	372	9,010	2,450	A (high)	28,698	1,859	26,839	33.6%
2011	73:27	1.25	1.27	1.96	12,882	150	8,647	282	8,365	2,389	A (high)	25,617	1,896	23,721	35.3%
2010	73:27	1.34	1.32	2.06	12,437	164	8,538	383	8,155	2,239	A (high)	24,431	2,097	22,334	36.5%
2009	77:23	1.77	1.49	2.16	11,547	266	8,187	666	7,521	2,076	A (high)	22,727	2,335	20,392	36.9%
2008	73:27	1.62	1.69	2.43	11,766	346	7,571	718	6,853	1,822	A (high)	22,056	2,757	19,299	35.5%
2007	80:20	1.10	1.23	1.83	10,922	122	7,227	630	6,597	1,407	A (high)	20,476	2,516	17,960	36.7%
2006	81:19	2.28	1.77		10,482	415	7,169	555	6,614	1,285	A (high)	19,828	2,153	17,675	37.4%
2005	85:15	1.20	1.25		9,952	136	7,204	562	6,642	870	A (high)	19,410	2,729	16,681	39.8%
2004	87:13	(0.32)	0.17		9,903	(436)	7,390	715	6,675	734	A (high)	18,206	3,070	15,136	44.1%
2003	80:20	1.10	1.14		10,234	71	7,268	948	6,320	1,170	A (high)	17,810	3,939	13,871	45.6%
2002	77:23	1.67	1.42		10,405	214	7,661	1,515	6,146	1,302	A	20,682	6,551	14,131	43.5%
2001	80:20	1.18	1.62		9,966	270	7,464	1,350	6,114	1,088	A	20,459	6,247	14,212	43.0%
2000	83:17	1.28	1.35		8,692	152	6,770	1,282	5,488	818	A	19,878	6,411	13,467	40.8%
1999	84:16	1.22	1.23		7,866	100	5,883	1,111	4,772	666	A	18,278	5,822	12,456	38.3%
1998	86:14	1.13	1.25		7,617	111	5,548	989	4,559	566	A	17,378	5,053	12,325	37.0%
1997	88:12	1.12	1.23		7,133	101	5,175	682	4,493	455	A	16,886	4,530	12,356	36.4%
1996	91:09	1.00	1.16		6,737	70	5,284	599	4,685	354	A	16,763	3,833	12,930	36.2%
1995	92:08	1.00	1.13		6,449	56	5,034	527	4,507	284	A	16,481	3,442	13,039	34.6%
1994	93:07	n/a	1.16		6,543	70	5,406	458	4,948	228	A	15,670	3,091	12,579	39.3%
1993	95:05	n/a	0.95		6,025	(24)	4,971	438	4,533	159	A	14,127	2,892	11,235	40.3%
1992	94:06	n/a	1.04		6,505	18	5,441	469	4,972	183	A	12,776	2,669	10,107	49.2%

* The DBRS long term credit rating for the period from 1992-2016 is the same for both the Manitoba Hydro-Electric Board and the Province of Manitoba.

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Rating Report

The Manitoba Hydro-Electric Board

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DBRS

Insight beyond the rating.

Ratings

Debt	Rating	Trend
Long-Term Obligations	A (high)	Stable
Short-Term Obligations	R-1 (middle)	Stable

Note: These Obligations are based on the status of the Manitoba Hydro-Electric Board as a Crown agent of the Province of Manitoba and the unconditional guarantee provided by the Province on Manitoba Hydro's third-party debt, and thus reflect the Province's debt ratings.

Rating Update

DBRS Limited (DBRS) has updated its report on the Manitoba Hydro-Electric Board (Manitoba Hydro or the Utility). The ratings assigned to the Utility's Long-Term Obligations and Short-Term Obligations are a flow-through of the ratings of the Province of Manitoba (the Province; rated A (high) and R-1 (middle) with Stable trends by DBRS). Pursuant to *The Manitoba Hydro Act*, the Province unconditionally guarantees almost all of Manitoba Hydro's outstanding third-party debt (please see the *DBRS Criteria: Guarantees and Other Forms of Support* methodology for further details). The Province also provides most of the Utility's financing through provincial advances (approximately 99% of total debt as at March 31, 2016). DBRS considers Manitoba Hydro to be self-supporting, as it is able to fund its own operations and service debt obligations.

In early 2016, Manitoba Hydro engaged the Boston Consulting Group to conduct a review of its financial, operating and capital plans, with particular focus on the Bipole III Transmission Reliability Project (Bipole III), the Keeyask Infrastructure and Generating Station Project (the Keeyask Project) and the Manitoba-Minnesota Transmission Project (MMTP). The results, issued in September 2016 (the BCG Report), concluded that although the decision to proceed with the Keeyask Project was imprudent as some major risks were not fully considered, the best path forward was to continue construction on all three projects. The BCG Report noted, however, that total cost overruns of $1 billion could occur along with possible delays to the in-service dates of 12 months for Bipole III and 21 months for the Keeyask Project. The BCG Report also noted the rising leverage at the Utility as a result of the substantial capex; debt-to-capital at Manitoba Hydro had risen to 83% at F2016 and had been expected to peak at 88%, significantly above the target capital structure of 75% debt. A new board appointed at Manitoba Hydro in 2016 intends to limit the deterioration in the Utility's balance sheet. As a result, the Utility has begun reviewing initiatives to help alleviate pressure on its key financial ratios, such as improving operational efficiencies, requesting annual rate increases higher than the previously planned 3.95%, as well as a potential equity injection from the Province. DBRS sees these initiatives, if actualized, as positive to Manitoba Hydro's financial profile, as they will provide some financial flexibility for the Utility, especially in the event of adverse drought conditions or further cost overruns on the projects.

Continued on P. 2

Financial Information

The Manitoba Hydro-Electric Board

(CAD millions where applicable)	For the year ended March 31 [1] 2016	2015	2014	2013	2012
Total debt in capital structure [2]	83.0%	81.3%	79.4%	78.5%	77.9%
Cash flow/Total debt	5.4%	5.3%	6.4%	6.1%	6.3%
EBIT gross interest coverage (times)	0.91	1.07	0.96	0.89	0.80
Net income before non-recurring items	55	145	178	92	61
Cash flow from operations	791	665	691	589	567

1 2015 to 2016 based on IFRS; 2012 to 2014 based on Canadian GAAP. 2 Adjusted for other comprehensive income.

Issuer Description

The Manitoba Hydro-Electric Board, a wholly owned Crown corporation of the Province of Manitoba, is a vertically integrated electric utility that provides generation, transmission and distribution of electricity to approximately 567,634 customers throughout Manitoba, and natural gas service to approximately 276,858 customers via its subsidiary, Centra Gas Manitoba Inc. The Utility also exports electricity to more than 25 electric utilities through its participation in four wholesale markets in Canada and in the Midwestern United States.

Available in accessible formats upon request

Rating Update (CONTINUED)

DBRS continues to view Manitoba Hydro as self-supporting, as its earnings and cash flows continue to be sufficient to cover its operating expenses and to service its outstanding debt. However, DBRS could consider reclassifying a portion of the Utility's debt to be tax-supported should the financial health of the Utility deteriorate to the point where its expenses cannot be recovered through rates. If this were to occur, it could potentially put downward pressure on the Province's credit rating. Similarly, a large equity injection by the Province that materially increases tax-supported debt could also put downward pressure on the Province's credit profile. At this time, however, DBRS expects the Province's ratings to remain stable.

Rating Considerations

Strengths

1. Debt is a direct obligation of the Province
Manitoba Hydro is an agent of the Crown, and its debt securities, except for $65 million of Manitoba Hydro-Electric Board Bonds (less than 1% of total debt at March 31, 2016), are held or guaranteed by the Province; therefore, the ratings assigned to Manitoba Hydro's obligations are a flow-through of the ratings assigned to the Province.

2. Low-cost hydro-based generation
Low-cost hydroelectric-based generating capacity results in one of the lowest variable cost structures in North America, which has enabled Manitoba Hydro to provide electricity to its domestic customers at one of the lowest rates on the continent. This gives the Utility the flexibility to increase rates in the future, especially in light of the substantially heightened capex requirements.

3. Access to export markets
Manitoba Hydro's interconnections (approximately 43% of installed capacity), with firm export transfer capability of 2,100 megawatts (MW) to the United States, 175 MW to Saskatchewan and 200 MW to Ontario, along with additional non-firm transfer capability, provide the Utility with access to favourable export markets. The interconnections also provide a secure supply of electricity for domestic customers during times of poor hydrology.

Challenges

1. High leverage
Leverage at Manitoba Hydro has been increasing over the past years as a result of the significant capital projects currently being undertaken. As such, the debt-to-capital ratio reached 83% at F2016, above the target capital structure of 75% debt. The Utility had forecast leverage to peak at 88% when the Keeyask Project is brought in service, but with the possibility of cost overruns and delays detailed in the BCG Report for Bipole III and the Keeyask Project, leverage could potentially further increase if mitigants are not enacted. The Utility is currently reviewing potential initiatives, such as requesting higher rate increases or an equity injection from the Province, which could help alleviate pressure on its key financial ratios.

2. High level of planned capex
The Utility is currently undergoing a period of substantial capex, with major projects that include Bipole III (total capex of approximately $4.65 billion) and the Keeyask Project (total capex of approximately $6.5 billion). As a result, capex for the Utility had been forecast to average approximately $2.4 billion per year before falling to $900 million beginning in F2022. However, the BCG Report notes that total capex for Bipole III could increase to $5 billion, while the Keeyask Project could reach $7.8 billion. As such, average capex for the medium term may continue to climb and further pressure the already high debt levels.

3. Hydrology risk
Given that approximately 92% of Manitoba Hydro's installed generating capacity is hydroelectricity-based, earnings and cash flows are highly sensitive to hydrological conditions. The Utility is also exposed to significant price and volume risk because of its export commitments under the fixed price-to-volume contract, which may require the Utility to procure power supply from import markets if hydrological conditions are unfavourable.

Major Projects (Under Construction and Planned)

Project	Estimated Cost ($ millions)	Planned Construction Start Date	In-Service Target Date
Bipole III Transmission Reliability Project	4,650	2013	2019
Keeyask Infrastructure and Generating Station Projects	6,500	2014	2021
Manitoba-Minnesota Transmission Project	450	2017	mid-2020

- **Bipole III**: This project involves the construction of a 500-kilovolt (kV) high-voltage direct current transmission line, along with new converter stations. Construction began during winter 2013/2014, and the transmission line is expected to be in service for 2018. The BCG Report noted that the cost for the project may increase to approximately $5 billion with the in-service date delayed until mid-2019.
- **Keeyask Project**: This project includes the development of a 695 MW generation station on the Nelson River. Construction began in July 2014; the first generator is expected to be in service for 2019 and the remaining units are expected to be in service by 2021. The BCG Report noted that the cost for the project may increase to approximately $7.8 billion with the in-service date delayed until mid-2021.
- **MMTP**: This proposed project involves the construction of a 500 kV alternating current transmission line from Winnipeg to the Manitoba-Minnesota border, where it will interconnect with the Great Northern Transmission Line (GNTL) to be built by Minnesota Power. The Province authorized Manitoba Hydro to proceed with the project in July 2014, and the Utility filed an Environmental Impact Statement in September 2015, which began the formal regulatory review process. Minnesota Power has received all major regulatory approvals for the GNTL including a Presidential Permit, and expects to start construction early in 2017.

Earnings and Outlook

(CAD millions where applicable)	2016	2015	2014	2013	2012
	For the year ended March 31 [1]				
Total electricity revenues	1,791	1,812	1,861	1,733	1,573
Net gas revenues	172	161	163	147	132
Total revenues	**1,963**	**1,973**	**2,024**	**1,880**	**1,705**
EBITDA	983	990	1,068	991	865
EBIT	595	621	626	568	484
Gross interest expense	654	581	654	636	603
Earning before taxes	45	134	156	79	61
Net income before non-recurring items	55	145	178	92	61
Reported net income	49	136	174	92	61
Return on equity [2]	1.9%	5.0%	6.6%	3.5%	2.4%

1 2015 to 2016 based on IFRS; 2012 to 2014 based on Canadian GAAP. 2 Adjusted for other comprehensive income.

F2016 Summary

- Earnings declined in F2016 as milder winter temperature for the period reduced revenues from both the domestic electric and natural gas segments, while depreciation and interest expense rose from the continued high capex.
  - This was slightly offset by a 3.95% rate increase effective August 1, 2015.

F2017 Outlook

- Manitoba Hydro has forecast earnings in F2017 to remain low, with expected net income of approximately $25 million. While rates increased by 3.36% effective August 1, 2016, this will likely be more than offset by rising depreciation and interest costs.
  - The Utility had requested a rate increase of 3.95% effective April 1, 2016. The delay in implementation and lower approved increase will also have a negative impact on earnings.
- DBRS expects the Utility's profitability to remain challenged over the medium term as the Utility continues to invest significant amounts for Bipole III and the Keeyask Project. However, the new board at Manitoba Hydro appointed earlier in 2016 intends to improve leverage at the Utility back to the target debt-to-capital ratio of 75%.
  - While Manitoba Hydro had planned to file for more moderate annual rate increases of 3.95% until F2029, the Utility is currently considering requesting higher rate increases for the next few years to help improve the leverage ratio. DBRS had noted that rate increases of 3.95% were expected to be insufficient for Manitoba Hydro to recover costs related to major projects for the medium term.
  - Other initiatives include the plan to reduce the workforce (approximately 6,000 employees), largely through attrition and managing vacancies, to help contain operating costs at the Utility.

Financial Profile

(CAD millions where applicable)	2016	2015	2014	2013	2012
	For the year ended March 31 [1]				
Cash receipts from customers	2,298	2,359	2,176	2,015	1,998
Cash paid to suppliers and employees	(950)	(1,203)	(1,053)	(981)	(1,048)
Interest paid	(580)	(517)	(502)	(489)	(418)
Interest received	23	26	70	44	35
Cash flow from operations	**791**	**665**	**691**	**589**	**567**
Dividends paid	0	0	0	0	0
Capital expenditures	(2,280)	(1,730)	(1,394)	(1,037)	(1,124)
Free cash flow	**(1,489)**	**(1,065)**	**(703)**	**(448)**	**(557)**
Acquisitions & investments	(89)	(105)	(103)	(98)	(90)
Net sinking fund withdrawals/(payments)	114	(3)	206	22	(75)
Net debt change	1,803	1,556	707	565	673
Other	123	(31)	3	(59)	29
Change in cash	**462**	**352**	**110**	**(18)**	**(20)**
Total debt (net sinking fund investments)	14,527	12,566	10,757	9,633	9,010
Cash and equivalents	953	487	142	32	50
Total debt in capital structure [2]	83.0%	81.3%	79.4%	78.5%	77.9%
Cash flow/Total debt	5.4%	5.3%	6.4%	6.1%	6.3%
EBIT gross interest coverage (times)	0.91	1.07	0.96	0.89	0.80
Dividend payout ratio	0.0%	0.0%	0.0%	0.0%	0.0%

1 2015 to 2016 based on IFRS; 2012 to 2014 based on Canadian GAAP. 2 Adjusted for other comprehensive income.

F2016 Summary

- Manitoba Hydro's key financial ratios weakened in F2016 largely because of the increase in debt to fund the large capex requirements.
- Cash flow from operations increased in F2016 from higher payable balances related to the capex projects and to the lower cost of gas and purchase gas costs caused by warmer weather.
- Gross capex of $2.4 billion included $872 million for Bipole III and $742 million for the Keeyask Project.
- The significant free cash flow deficit for the fiscal period was funded through advances from the Province.

F2017 Outlook

- Manitoba Hydro's key financial ratios are expected to remain weak for the medium term as it continues its large capex program. While the debt-to-capital ratio had been forecast to peak at 88% in F2022, the Utility is currently reviewing potential initiatives to help improve its financial health.
  - Manitoba Hydro is seeking to identify internal efficiencies to improve operating results.
  - The Utility may request higher annual rate increases than the planned 3.95% in order to improve its earnings and cash flows.
  - A potential equity injection from the Province would also help alleviate pressure on Manitoba Hydro's leverage.
- Manitoba Hydro has forecast capex of approximately $3.5 billion for F2017, including around $1.5 billion for Bipole III and $1.1 billion for the Keeyask Project.
  - The Utility had forecast capex to peak in F2017 and F2018 ($3.1 billion) when Bipole III comes in service. It had also forecast capex to moderate to around $900 million a year following the in-service date of the Keeyask Project in F2021.
  - However, the BCG Report estimates that an additional approximately $1 billion may be needed for the two projects to be completed. As well, the BCG Report also expects delays to the in-service date of the two projects.
- The high level of capex is expected to result in continued negative free cash flows, which will likely be funded through advances from the Province. Without a corresponding increase in equity, either through higher earnings or an equity injection from the Province, the increasing debt load could further weaken Manitoba Hydro's key financial ratios.
  - The Utility does have some financial flexibility, as it has no mandatory dividend payment requirements.

Long-Term Debt Maturities and Bank Lines

Debt Profile (CAD millions)	%	2016	2015	2014
		For the year ended March 31		
Advances from the Province	98.8%	14,437	12,485	10,683
Manitoba Hydro Bonds	0.2%	26	76	169
Manitoba Hydro-Electric Board Bonds*	1.0%	145	157	158
	100.0%	**14,608**	**12,718**	**11,010**
Other adjustments		(81)	(38)	(142)
Total		**14,527**	**12,680**	**10,868**

* Includes $65 million of unguaranteed bonds at March 31, 2016.

Debt Maturities

Year	2017	2018	2019	2020	2021	Thereafter	Total
(CAD millions)	326	331	996	345	1,299	11,311	**14,608**
%	2%	2%	7%	2%	9%	78%	**100%**

Summary

- The Province supports Manitoba Hydro by advancing funds or guaranteeing the Utility's long-term debt issuances. Long-term debt at March 31, 2016, consisted of the following:
  - $14,437 million in advances from the Province (all of which have annual sinking fund requirements).
  - $26 million of Manitoba Hydro Bonds.
  - $145 million of Manitoba Hydro-Electric Board Bonds.
- Only $65 million of Manitoba Hydro-Electric Board Bonds, which were issued for mitigation projects, do not carry the provincial guarantee.
- Manitoba Hydro maintains a relatively smooth maturity profile with potential volatility from foreign currency debt, mostly mitigated through natural and cash flow hedges and a moderate level of floating-rate debt (10% of total debt at March 31, 2016), which adds stability to debt servicing costs and minimizes interest rate risk.
- The Utility has bank credit facilities that provide for overdrafts and notes payable of up to $500 million denominated in Canadian and/or U.S. dollars. At March 31, 2016, there were no amounts outstanding. Manitoba Hydro issues short-term promissory notes in its own name for its short-term cash requirements and does not receive short-term funding from the Province. These short-term notes are guaranteed by the Province.

Regulation

Manitoba Hydro is governed by *The Manitoba Hydro Act*, and its electricity and natural gas rates are regulated by the Public Utilities Board (PUB).

Electricity

- Each year, Manitoba Hydro reviews its financial targets with particular focus on its debt-to-equity target capital structure of 75% to 25%. If the Utility deems a rate adjustment necessary to continue progress toward attaining its financial targets, it submits a rate application to the PUB.
- The PUB reviews the rate adjustment application with the objective of allowing Manitoba Hydro to recover its cost of service and achieve its long-term debt-to-equity target. The PUB does not have the mandate to pre-approve capex. The capex planning responsibility resides with Manitoba Hydro and the government of Manitoba.
- Manitoba Hydro submitted its 2015/16 & 2016/17 General Rate Application (GRA) in January 2015, requesting 3.95% rate increases effective April 1, 2015, and April 1, 2016.
  - The PUB advised the Utility that it would not set rates for 2016/17 as part of this application.
  - On July 24, 2015, the PUB finalized the previously approved interim rate increase of 2.75% effective May 1, 2014, and approved a 3.95% increase in rates effective August 1, 2015. In its decision, the PUB indicated that it would consider various options regarding a process to review rates effective for April 1, 2016.
  - For the 2015 rate increase, the PUB directed 1.80% of the revenues associated with the rate increase to be applied to general revenues, and for the remaining 2.15% to be placed in a deferral account to mitigate rate increases when Bipole III comes in service. This was similar to the PUB's direction for rate increases approved in 2013/14 and 2014/15, where a portion of the revenues was also allocated to the Bipole III deferral account.
- On November 18, 2015, the Utility submitted its Supplemental Filing for Interim Rates effective April 1, 2016, requesting a 3.95% general rate increase.
  - In April 2016, the PUB approved an interim rate increase of 3.36% effective August 1, 2016.
  - Manitoba Hydro expects to file its 2016/17 and 2017/18 GRA in early 2017.
- While Manitoba Hydro is the sole retail electricity supplier in Manitoba, under *The Manitoba Hydro Amendment Act* (the Act), other utilities may access the transmission system to reach customers in neighbouring provinces and states.
- The Act also explicitly allows Manitoba Hydro to build new generating capacity for export sales, to offer new energy-related services, to enter into strategic alliances and joint ventures, and to create subsidiaries.
- There are presently no plans to move to full retail competition in the Province.
- Manitoba retail customers currently enjoy rates that are among the lowest in North America as a result of Manitoba Hydro's predominantly hydroelectric generation and efficient resource management.

Natural Gas Distribution

- Manitoba Hydro distributes natural gas through its wholly owned subsidiary, Centra Gas Manitoba Inc. (Centra Gas). In accordance with the rate-setting methodology for natural gas, commodity rates are changed every quarter based on 12-month forward natural gas market prices.
  - The commodity cost of gas is a pass-through with no markup to customers.
  - Non-commodity costs, such as transportation and storage are also passed on.
- The PUB allows Centra Gas to target an annual profit of approximately $3 million, which is fairly modest compared with Manitoba Hydro's consolidated earnings.
- Centra Gas filed its 2015/16 Cost of Gas Application in June 2015, requesting, effective November 1, 2015, the approval of supplemental gas, transportation and distribution rates, including rate riders to dispose of balances in its non-Primary Gas deferral accounts.
  - In October 2015, the PUB approved, on an interim basis, new rates for supplemental gas, transportation and distribution, as well as rate riders to dispose of the balance in the non-Primary Gas deferral accounts.

Watershed Storage Capacity

Manitoba Hydro draws water from five distinct watersheds: Nelson River, Winnipeg River, Saskatchewan River, Churchill River (including the Laurie River) and Burntwood River. This provides the Utility with some geographic diversification, especially during times of low hydrology. The main generation source is the Nelson River, which accounted for approximately 78% of power generated in F2016.

Source of Electrical Energy Generated and Imported

For the year ended March 31, 2016

Nelson River	**78.32%**
Billion kWh generated	**28.1**
Limestone	25.26%
Kettle	24.04%
Long Spruce	20.08%
Kelsey	6.62%
Jenpeg	2.32%
Winnipeg River	**10.45%**
Billion kWh generated	**3.8**
Seven Sisters	3.21%
Great Falls	2.31%
Pine Falls	1.75%
Pointe du Bois	0.80%
Slave Falls	1.15%
McArthur	1.23%
Thermal	**0.16%**
Billion kWh generated	**0.1**
Brandon	0.14%
Selkirk	0.02%

Saskatchewan River	**4.25%**
Billion kWh generated	**1.5**
Grand Rapids	4.25%
Laurie River	**0.10%**
Billion kWh generated	**0.0**
Laurie River #1	0.05%
Laurie River #2	0.05%
Burntwood River	**4.10%**
Billion kWh generated	**1.5**
Wuskwatim	4.10%
Purchases (excl. wind)	**0.24%**
Billion kWh imported	**0.1**
Wind	**2.38%**
Billion kWh	**0.9**

Source: Manitoba Hydro

Favourable characteristics inherent in Manitoba Hydro's watersheds include the following:

- Cold temperatures reduce overall evaporation rates, as many of the reservoirs are frozen over for up to five months of the year.
- A significant portion of the watersheds consists of rock, which has lower seepage rates and higher runoff than predominantly soil-covered watersheds.
- Lake Winnipeg, Cedar Lake and Southern Indian Lake serve as large storage reservoirs. The Utility's water storage capacity is a competitive advantage in trading electricity (buying surplus U.S. power at low off-peak prices and selling its electricity during peak demand periods at higher prices).

In addition to its own generating stations in Manitoba, Manitoba Hydro purchases all electricity from two wind farms in southern Manitoba (St. Joseph and St. Leon). The installed capacity of these facilities is 258.5 MW. The Wuskwatim Generating Station is owned by the Wuskwatim Power Limited Partnership, in which Manitoba Hydro is the majority owner. Manitoba Hydro purchases all the electricity generated from the Wuskwatim Generating Station.

Generating Capacity

Manitoba Hydro's Generating Stations and Capabilities

For the year ended March 31, 2016

Power Station	Location	# of Units	Net Capacity (MW)
Hydroelectric			
Great Falls	Winnipeg River	6	129
Seven Sisters	Winnipeg River	6	165
Pine Falls	Winnipeg River	6	84
McArthur Falls	Winnipeg River	8	56
Pointe du Bois	Winnipeg River	16	75
Slave Falls	Winnipeg River	8	68
Grand Rapids	Saskatchewan River	4	479
Kelsey	Nelson River	7	286
Kettle	Nelson River	12	1,220
Jenpeg	Nelson River	6	115
Long Spruce	Nelson River	10	980
Limestone	Nelson River	10	1,350
Laurie River (2)	Laurie River	3	10
Wuskwatim	Burntwood River	3	211
Total Hydroelectric Generation		**105**	**5,228**
Thermal			
Brandon (coal: 93 MW, gas: 234 MW)		3	327
Selkirk (gas)		2	125
Total Thermal Generation		**5**	**452**
Isolated Diesel Capabilities			
Brochet			3
Lac Brochet			2
Shamattawa			3
Tadoule Lake			2
Total Isolated Diesel Generation			**10**
Total Generation Capacity			**5,690**

Source: Manitoba Hydro

The Manitoba Hydro-Electric Board [1]

Balance Sheet (CAD millions)	2016	2015	2014		2016	2015	2014
	March 31				March 31		
Assets				**Liabilities & Equity**			
Cash & equivalents	953	487	142	S.T. borrowings	0	0	0
Accounts receivable	372	427	520	Accounts payable	723	529	561
Inventories	117	99	81	Current portion L.T.D.	326	377	408
Prepaid expenses & other	43	54	0	Other current liab.	192	190	100
Total Current Assets	**1,485**	**1,067**	**743**	**Total Current Liab.**	**1,241**	**1,096**	**1,069**
Net fixed assets	17,208	15,222	13,627	Long-term debt (net sinking fund investments)	14,201	12,189	10,349
Goodwill & intangibles	301	290	281	Sinking fund investments	0	114	111
Investments & others	786	988	988	Other L.T. liab.	2,146	1,989	1,225
				Shareholders' equity	2,192	2,179	2,885
Total Assets	**19,780**	**17,567**	**15,639**	**Total Liab. & SE**	**19,780**	**17,567**	**15,639**

1 2015 to 2016 based on IFRS; 2014 based on Canadian GAAP.

Balance Sheet & Liquidity & Capital Ratios	2016	2015	2014	2013	2012
	For the year ended March 31 [1]				
Current ratio	1.20	0.97	0.70	0.48	0.65
Total debt in capital structure	86.9%	85.2%	78.9%	76.6%	75.8%
Total debt in capital structure [2]	83.0%	81.3%	79.4%	78.5%	77.9%
Cash flow/Total debt	5.4%	5.3%	6.4%	6.1%	6.3%
(Cash flow-dividends)/Capex	0.35	0.38	0.50	0.57	0.50
Dividend payout ratio	0.0%	0.0%	0.0%	0.0%	0.0%
Coverage Ratios (times)					
EBIT gross interest coverage	0.91	1.07	0.96	0.89	0.80
EBITDA gross interest coverage	1.50	1.70	1.63	1.56	1.43
Fixed-charge coverage	0.91	1.07	0.96	0.89	0.80
Profitability Ratios					
Purchased power/Electricty revenues	6.5%	7.1%	8.6%	7.7%	9.3%
Operating margin	30.3%	31.5%	30.9%	30.2%	28.4%
Net margin	2.8%	7.3%	8.8%	4.9%	3.6%
Return on equity [2]	1.9%	5.0%	6.6%	3.5%	2.4%

1 2015 to 2016 based on IFRS; 2012 to 2014 based on Canadian GAAP. 2 Adjusted for other comprehensive income.

Rating History

	Current	2015	2014	2013	2012	2011
Long-Term Obligations	A (high)	A (high)	A (high)	A (high)	A (high)	A (high)
Short-Term Obligations	R-1 (middle)	R-1 (middle)	R-1 (middle)	R-1 (middle)	R-1 (middle)	R-1 (middle)

Note: These Obligations are based on the status of the Manitoba Hydro-Electric Board as a Crown agent of the Province of Manitoba and the unconditional guarantee provided by the Province on Manitoba Hydro's third-party debt, and thus reflect the Province's debt ratings.

Previous Action

- Confirmed, September 12, 2016.

Related Research

- *DBRS Confirms Province of Manitoba at A (high) and R-1 (middle)*, September 12, 2016.
- *Manitoba, Province of: Rating Report*, September 12, 2016.

Short-Term Promissory Notes Programme

- $500 million.

Previous Report

- Manitoba Hydro-Electric Board, The: Rating Report, November 26, 2015.

Notes:
All figures are in Canadian dollars unless otherwise noted.

For the definition of Issuer Rating, please refer to Rating Definitions under Rating Policy on **www.dbrs.com**.

Generally, Issuer Ratings apply to all senior unsecured obligations of an applicable issuer, except when an issuer has a significant or unique level of secured debt.

Rating Report

Province of Manitoba

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DBRS

Insight beyond the rating.

Ratings

Debt	Rating	Rating Action	Trend
Issuer Rating	A (high)	Confirmed	Stable
Long-Term Debt*	A (high)	Confirmed	Stable
Short-Term Debt*	R-1 (middle)	Confirmed	Stable

* Includes guaranteed long-term and short-term debt obligations issued by the Manitoba-Hydro Electric Board.

Rating Update

DBRS Limited (DBRS) has confirmed the Issuer Rating and the Long-Term Debt and Short-Term Debt ratings of the Province of Manitoba (Manitoba or the Province) at A (high), A (high) and R-1 (middle), respectively. All trends are Stable. The Province's credit profile continues to be supported by a stable, resilient and growing economy and a debt burden that remains commensurate with the ratings. Notwithstanding this stability, the Province's operating results have failed to improve in recent years, and without a concerted effort to reduce operating deficits and slow debt accumulation, the flexibility within the existing ratings may be eroded.

Preliminary results for 2015–16 indicate that the deficit widened significantly to $1.0 billion from a budgeted deficit of $422 million. On a DBRS-adjusted basis, which recognizes capital expenditures as incurred as opposed to as amortized, this equates to a deficit of $2.0 billion, or 2.8% of gross domestic product (GDP). As a result, DBRS-adjusted debt is estimated to have risen to $27.6 billion, or 42.0% of GDP, as of March 31, 2016.

The economic outlook for 2016 remains largely similar to previous years. The Province expects reasonably strong growth in both 2016 and 2017, though forecasts have weakened slightly since the time of the budget. The private sector consensus tracked by DBRS suggests growth of 2.2% and 2.1% in 2016 and 2017, respectively. Continued gains in manufacturing and export-oriented industries are expected to offset weakness in residential and non-residential investment.

Despite consistent economic growth in recent years, the Province has posted increasingly large operating deficits. The newly elected PC Government tabled a budget within six weeks of election night. As such, the budget focuses on the current year and the expenditure plan is consistent with that of prior years. The budget projects a deficit of $911 million, or $1.75 billion on a DBRS-adjusted basis (2.6% of GDP). Initial indications from the new government suggest a reluctance to raise taxes or make sharp and immediate spending reductions. The focus appears to be on continuing to invest in strategic infrastructure and slowing expenditure growth without significantly affecting front-line services. With this, the government has indicated that it is unlikely to balance the budget until its second term in office (i.e., it could take up to eight years). DBRS estimates the debt burden will rise to $30.1 billion, or 44.1% of GDP, by the end of 2016–17 and expects it could climb further in subsequent years, though the trajectory is uncertain in the absence of a more detailed multi-year fiscal plan.

A negative rating action is not expected in the near term, but could occur if operating results deteriorate significantly and the outlook for debt burden increases sharply. A positive rating action, while unlikely, would require a material improvement in operating results and a substantial reduction in the debt burden.

Financial Information

	For the year ended March 31				
(all financial figures DBRS adjusted)	2016-17B	2015-16F	2014-15	2013-14	2012-13
Debt/GDP 1	44.1%	42.0%	38.8%	37.3%	36.0%
Surplus (deficit)/GDP	(2.6%)	(2.8%)	(2.1%)	(2.1%)	(2.2%)
Federal transfers/total revenue	27.0%	26.0%	25.9%	27.2%	29.2%
Interest costs/total revenue	5.5%	5.4%	5.4%	5.4%	5.6%
Real GDP growth rate 2	2.4%	2.2%	2.3%	2.4%	3.0%

1 Tax-supported debt + unfunded pension liabilities. 2 GDP on a calendar year basis as forecast in the provincial budget.
B = Budget. F = Forecast.

Issuer Description

Manitoba is located in Central Canada and ranks fifth among Canadian provinces by population and sixth in terms of GDP. The Province is home to significant renewable energy resources, with almost all electricity generated from water.

Rating Considerations

Strengths

1. Diversified and resilient economy

Manitoba has one of the most resilient and diversified economies in the country. The Province has a mix of industries, including agriculture, mining, manufacturing, financial services and transportation, with no undue reliance on a particular industry. The Province has a relatively stable labour force characterized by low unemployment, and relatively strong population and labour force growth. The Province's interprovincial and international exports are relatively diversified in both composition and destination. With this broad diversification, the Province's economy tends to post stable growth and exhibit lower volatility than the economies of most other provinces.

2. Prudent debt management

Manitoba's debt burden has risen sharply in recent years, reaching 42% of GDP at March 31, 2016. Notwithstanding the increases, the debt burden remains commensurate with the ratings, and the Province's approach to debt management is prudent. The Province maintains a relatively smooth debt maturity profile, no unhedged foreign currency exposure and only a moderate level of floating-rate exposure. The Province also has good market access with well-established domestic and international borrowing programs.

3. Abundant low-cost hydroelectricity

Manitoba benefits from an abundance of low-cost hydroelectricity. The Province has among the lowest rates in North America, which gives Manitoba a distinct advantage when competing for new business investment in some industries.

Challenges

1. Substantial deficit

The Province has a large deficit and few substantial revenue options available to it. As such, the Province will likely face significant challenges over the medium term to return to balance without affecting front-line services.

2. Reliance on federal transfers

Federal transfers, including equalization, account for about one-quarter of provincial revenue. Outside of Atlantic Canada, Manitoba is the most reliant province on federal transfers, which exposes it to some risk of federal policy changes, though DBRS notes that material changes to the major transfer programs tend to be gradual and well communicated. Moreover, DBRS also notes that Manitoba's share of the equalization program has fallen in recent years, which reflects an improvement in the Province's fiscal capacity relative to the other provinces.

3. Below-average income and GDP per capita

Manitoba boasts a well-diversified economy and a healthy labour market, though the Province continues to have lower average incomes, which limits the ability of the Province to significantly increase own-source revenue. DBRS notes that the Province's economy has grown moderately in recent years, and this includes relatively strong growth in per-capital GDP.

2016–17 Budget

Exhibit #1: Surplus (deficit)/GDP

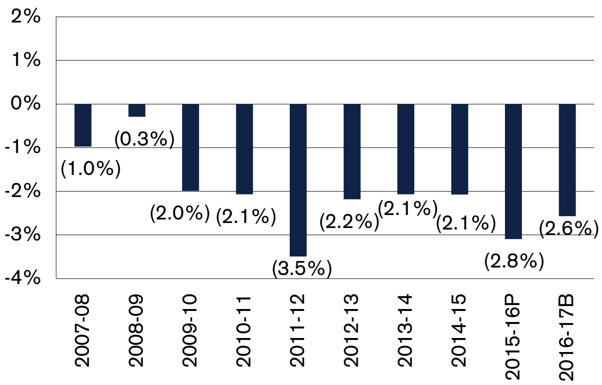
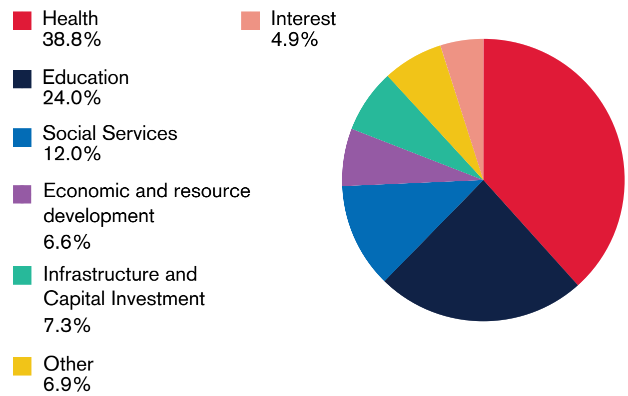


Exhibit #2: 2016-17 DBRS-Adjusted Expenditures



The newly elected Progressive Conservative government, led by Brian Pallister, introduced its first budget six weeks after being elected. The budget does not provide a multi-year outlook, but it does provide some insight into the government's longer-term fiscal and social policy objectives. Among its policy objectives, the budget speaks to restoring fiscal balance and discipline, limiting spending growth in core government, reviewing existing programs and continuing to invest in strategic infrastructure. A more substantive budget with a multi-year fiscal plan is expected in spring 2017.

The Province has projected a deficit of $911 million for 2016–17, which includes $150 million in unspecified revenue increases or expenditure savings. While it is a modest improvement over the prior year's preliminary result, it is one of the largest budget deficits for the Province and represents a significant challenge for the new government. On a DBRS-adjusted basis, the budget deficit equates to a $1.75 billion shortfall, or 2.6% of GDP.

Total DBRS-adjusted revenue is forecast to rise by 3.1% with moderate growth in tax revenue (+2.7%) and strong growth in federal transfers (+7.3%), which will offset some modest weakness in other own source revenue (-0.9%). Most of the revenue growth is attributable to underlying economic strength, though the government did begin to implement campaign promises with the partial indexation of the personal income tax system and the introduction of income testing for the Seniors' School Tax Rebate. Timing differences will provide a modest increase to revenue in 2016–17, but once fully implemented, the full-year net impact will be marginal.

Total DBRS-adjusted expenditures are budgeted to rise 1.1%, which includes a provision for $150 million in in-year savings. The budget includes fairly significant increases for health (+4.0%), education (+2.5%), social services (+4.6%) and justice (+3.1%). Much of the spending growth is being driven by both volume and cost pressures, though the Province has offset growth in these high pressure areas with significant reductions elsewhere in government, including economic development, general government and capital. As the spending plan has not significantly changed from previous years, it is likely that more substantive changes could be expected in the next budget, though the messaging from the elected government suggests a reluctance to significantly alter front-line services. The government has implemented an expenditure management process that could limit in-year spending increases and put a greater emphasis on doing more with less. While the potential savings may be limited, the new process does substantiate some of the shift in tone under the new government.

Capital investment remains significant but lower than in the prior year. The government will continue to invest in strategic infrastructure investments (e.g., roads, infrastructure, health care, education, etc.) and has committed to no less than $1 billion annually.

Outlook

The first budget was prepared quickly after the election and thus the spending plan was largely unchanged from previous years. DBRS expects the spring 2017 budget to provide greater clarity on the government's fiscal policy direction. The new government has emphasized its intention to restore the Province's finances but has indicated that it will be up to eight years before the budget is balanced. This reflects, in part, the limited revenue options available to the Province and the government's reluctance to adversely modify front-line services. As such, the strategy appears to be a slow grind back to balance, with the government seeking opportunities to slow expenditure growth, rationalize government services whenever possible.

To support this effort, the Province has initiated an enhanced expenditure management process and fiscal performance reviews. The expenditure management process requires greater oversight and approvals, and if sustained, could achieve modest savings through attrition and the avoidance of unnecessary

2016–17 Budget (CONTINUED)

expenses. The potentially more significant exercise appears to be the fiscal performance reviews, which are being conducted by a consultancy with the stated aim of improving the efficiency, efficacy and economy of government services. The challenge, however, is the constrained timeline required to complete thorough reviews, assess the findings, and implement the changes ahead of the next budget. While changes to tax systems or grants/transfers can be made relatively quickly, substantive changes to program areas generally require considerable lead time.

It is early in the new government's mandate, and while initial indications suggest the government is prepared to begin the process of fiscal consolidation, the challenge is considerable and the timeline is long. Without considerable upfront efforts to reduce near-term deficits, the Province's credit profile is likely to deteriorate further as a result of additional debt accumulation. While the Province's credit profile does have flexibility to accommodate ongoing deficits and the resulting growth in the debt burden in the near term, that flexibility is not unlimited. Without clear and credible action to demonstrate the government's resolve and to shift the outlook for debt growth, the credit rating could come under pressure over the medium term.

2015–16 Preliminary Results

Preliminary results for 2015–16 indicate that the budget deficit deteriorated significantly to $1.0 billion from the planned $422 million deficit. On a DBRS-adjusted basis, this equates to a $2.0 billion shortfall, or 2.8% of GDP. Total revenue rose marginally over the prior year but missed budget expectations primarily because of weaker-than-expected growth in tax revenue. Federal transfers rose slightly year over year; increases in Canada Health and Social transfers offset declines in equalization. Manitoba's equalization entitlement has been falling in recent years with the Province's improving fiscal capacity. On a per capita basis, Manitoba's entitlement has fallen to $1,344 from $1,591 over the last five years.

The deterioration in the operating result was largely driven by the significant increase in in-year spending. Budget projections suggested relatively little growth in DBRS-adjusted expenditures, but expenditures are projected to have been $700 million higher than planned, which contributed to relatively high year-over-year expenditure growth (+4.6%). The variance to budget was driven by health care and capital investment. Health-care spending was $162 million higher than planned as a result of price and volume pressures, while gross capital investment was about $144 million higher than planned. Other areas of government generally experienced more modest pressures or provided in-year savings.

Debt Profile

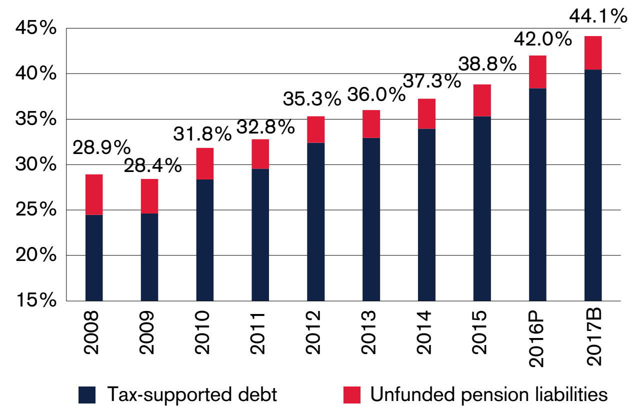
The Province's debt burden has continued to rise moderately with ongoing operating deficits and significant capital investment. DBRS estimates the Province's DBRS-adjusted debt burden, defined as tax-supported debt plus unfunded pension liabilities, to have risen by $2.8 billion in 2015–16 and reached 42.0% of GDP. This is about $1.5 billion, or 2.2% of GDP, higher than was anticipated at the time of DBRS's last review. The increase in the debt burden reflects both growth in outstanding debt and a negative revision to GDP.

The Province maintains a prudent debt structure with no unhedged foreign currency exposure and only moderate floating-rate exposure (18%) at March 31, 2016. The debt maturity profile remains relatively smooth with no substantial refinancing needs in any given year. Moreover, the Province has good market access with establish domestic and international borrowing programs.

The Province's unfunded pension liabilities are considerable and have continued to rise in recent years. At March 31, 2016, the unfunded pension liabilities totalled $2.3 billion, or 3.6% of GDP. The civil service superannuation plan and the teachers' pension plan account for the majority of the unfunded pension obligations. Contribution rates have increased in recent years, and indexing has been made conditional, though the unfunded liabilities have continued to rise in the absence of more substantial changes to plan design or funding.

The Province issues debt in its own name on behalf of the Manitoba Hydro, the provincial utility, and guarantees much of the utility's existing legacy debt. Notwithstanding the taxpayer-backed guarantee, both Manitoba Hydro and the Government of Manitoba expect the cost of this debt to be recovered through electricity rates. Manitoba Hydro is currently undertaking a significant capital program to increase capacity and reliability of its generation and transmission base. This is leading to a significant increase in debt, and because rate increases are being phased in gradually, leverage and coverage ratios are deteriorating. While the utility's financials are expected to deteriorate further over the medium term, leverage and coverage ratios will improve thereafter, and indications suggest that the rate increases will enable the utility to sustainably service its debt without direct subsidies from the Province. Moreover, the utility maintains considerable flexibility given its exceptionally low rates.

Exhibit #3: DBRS-Adjusted Debt-to-GDP



DBRS continues to classify Manitoba Hydro's debt as self-supported and excludes it from DBRS' estimate of tax-supported debt. DBRS would consider reclassifying a portion of Manitoba Hydro's debt as tax-supported if the outlook were such that the utility appears unable to service its debt with cash flow from operations for a sustained period of time.

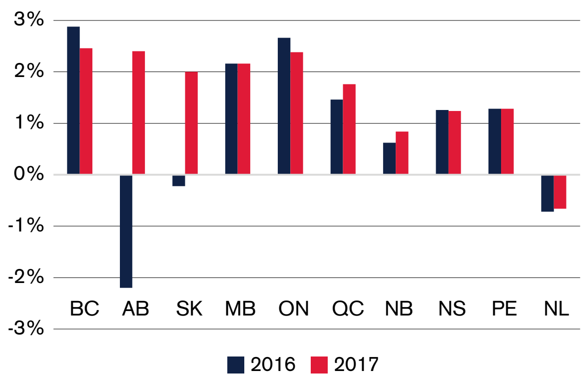
Outlook

In 2016–17, DBRS-adjusted debt is expected to rise by $2.5 billion to $30.1 billion on account of the budgetary deficit, capital requirements and rising unfunded pension liabilities. With the increase, the debt burden will rise to 44.1% of GDP, its highest level since the mid-1990s. The new government has stated its intention to stabilize the debt burden. In the absence of a more detailed fiscal plan and the long timeline for returning to balance, DBRS expects the debt burden to continue to rise over the medium term, though the trajectory and peak remain uncertain at this time.

The Province's gross borrowing requirement for 2016–17 is estimated to be $6.5 billion, of which the Province has already completed $2.4 billion. The Province typically targets 30% of its issuance outside of Canada, but has been borrowing more heavily in international markets this year.

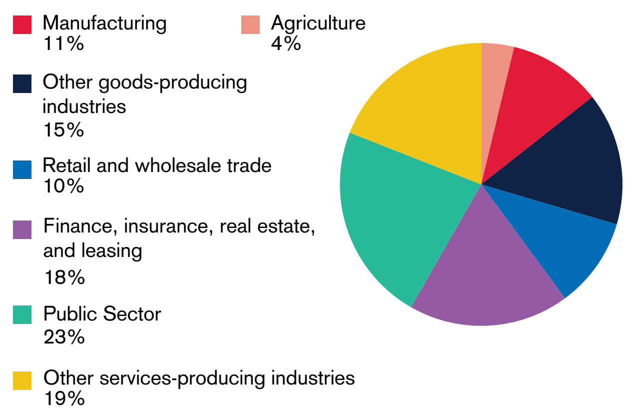
Economy

Exhibit #4: Real GDP Growth Outlook



Source: Major Canadian banks' economic forecasts at the time of this report.

Exhibit #5: 2015 Real GDP Breakdown



Source: Statistics Canada, CANSIM 379-0028.

Preliminary estimates from Statistics Canada indicate that Manitoba's economy grew by 2.3% in 2015, with fairly strong growth across both the goods and services producing sectors. The results were somewhat mixed among industries: Strong growth in construction, agriculture, transportation and warehousing, and financial services offset weakness in mining, oil and gas, and the public sector. Manitoba's economy is relatively stable given its broad diversification.

Overall manufacturing and exports showed mixed results, with agricultural exports (food and equipment) showing some weakness given the strength of the prior-year crop and weaker exports to some markets. Notwithstanding this softness, exports in the transportation, electronics, metals and energy industries did post reasonable growth, in part supported by an improving U.S. economy and a weaker Canadian dollar.

The labour market continued to perform well with a modest increase in unemployment, reflecting stronger growth in the labour market. Both the labour market (+1.8%) and employment (+1.5%) grew moderately, with employment gains largely driven by the private sector. Overall growth in the labour market continues to reflect strong underlying population trends. Manitoba continues to benefit from strong population growth driven by natural increase and international migration. Moreover, weakness in commodity-producing provinces has reduced interprovincial outflows. Altogether, Manitoba expects reasonably strong population growth to continue over the medium term.

Relatively strong household formation has supported strong gains in the housing market in recent years. This led to overbuilding in the years leading up to 2015, which weighed on residential construction in 2015. Despite the excess housing stock, housing market fundamentals have held up well, as the excess inventory is being absorbed. Non-residential investment more than offset weakness in the housing market, as a number of major projects were underway in 2015 (e.g., Canadian Museum for Human Rights, Stadium, Hydroelectric projects, and infrastructure).

Outlook

At the time the budget was presented, the Province projected real economic growth of 2.2% in 2016 and 2.4% in 2017. This is consistent with growth in recent years and the private sector expectations at the time of the budget. The economic outlook has since weakened marginally, though the Province and private sector forecasters continue to expect growth of at least 2.0% in this year and next. Overall, the economic outlook is stable with continued gains in export-oriented industries supporting moderate growth. The Province will continue to see moderately strong population growth, as international migration remains strong and interprovincial outmigration remains subdued, which will support further growth in the labour market. The economic forecast has relatively little upside potential given the completion of a number of major construction projects recently, though there is some downside risk to the outlook with the modestly slower growth outlook for the U.S. economy and a potentially weaker harvest as a result of the wetter-than-normal growing season. Notwithstanding the downside risks, the economic outlook for the Province continues to exhibit significant stability and resilience.

Economy (CONTINUED)

Economic Statistics

	For the year ended December 31						
	2017 P	2016 P	2015	2014	2013	2012	2011
Nominal GDP ($ millions)	71,313	68,308	65,807	64,077	61,897	59,781	56,197
Nominal GDP growth	4.4%	3.8%	2.7%	3.5%	3.5%	6.4%	5.4%
Real GDP growth	2.4%	2.2%	1.6%	2.3%	2.4%	3.0%	2.5%
Population (thousands)	1,323	1,309	1,293	1,280	1,265	1,250	1,234
Population growth	1.1%	1.2%	1.0%	1.2%	1.2%	1.4%	1.0%
Employment (thousands)	646	639	636	627	626	622	612
Unemployment rate	5.5%	5.8%	5.6%	5.4%	5.4%	5.3%	5.5%
Housing starts (units)	5,700	5,350	5,501	6,220	7,465	7,242	6,083
Retail sales ($ millions)	19,823	19,377	18,297	18,034	17,297	16,652	16,443
Inflation rate (CPI)	2.2%	1.8%	1.2%	1.9%	2.2%	1.6%	3.0%
Primary household income per capita ($)	34,141	33,675	33,509	32,210	31,687	30,822	29,605

Sources: Statistics Canada (actuals); Manitoba Finance and DBRS estimates; CMHC (housing projections). P= Projected.

Budget Summary

	Projected		Budget			
($ millions)	2016-17	2015-16	2015-16	2014-15	2013-14	2012-13
Revenue	15,190	14,729	14,912	14,691	14,152	13,540
Program expenditure	16,110	15,794	15,270	15,227	14,672	14,080
Program surplus (deficit)	**(920)**	**(1,065)**	**(358)**	**(536)**	**(520)**	**(540)**
Interest expense	834	790	790	794	759	765
DBRS-Adjusted Surplus (Deficit)	**(1,754)**	**(1,855)**	**(1,149)**	**(1,330)**	**(1,279)**	**(1,305)**
DBRS adjustments:						
Capital expenditures less amortization 1	843	844	727	877	757	745
Surplus (deficit), as reported	**(911)**	**(1,011)**	**(422)**	**(453)**	**(522)**	**(560)**
Tax-supported debt + unfunded pension liabilities	30,143	27,635	26,169	24,872	23,057	21,515
Gross borrowing requirements (all entities)	6,500	6,309	4,725	5,357	4,528	3,493
Gross capital expenditure	1,517	1,702	1,331	1,534	1,333	1,273

1 DBRS adjusts reported figures to recognize capital expenditures as incurred rather than as amortized, to improve interprovincial comparability.

Selected Financial Indicators (DBRS-Adjusted)

	2016-17	2015-16	2015-16	2014-15	2013-14	2012-13
Debt/GDP 1	44.1%	42.0%	39.8%	38.8%	37.3%	36.0%
Surplus (deficit)/GDP	(2.6%)	(2.8%)	(1.7%)	(2.1%)	(2.1%)	(2.2%)
Surplus (deficit)/total revenue	(11.6%)	(12.6%)	(7.7%)	(9.1%)	(9.0%)	(9.6%)
Interest costs/total revenue	5.5%	5.4%	5.3%	5.4%	5.4%	5.6%
Total tax revenues/total revenue	52.7%	52.9%	53.5%	51.6%	50.7%	49.2%
Federal transfers/total revenue	27.0%	26.0%	26.0%	25.9%	27.2%	29.2%
Program expenditures/total revenue	106.1%	107.2%	102.4%	103.6%	103.7%	104.0%
Health expenditures/total expenditures	38.3%	37.3%	37.9%	37.3%	37.0%	36.7%
Program expenditure growth	0.8%	3.7%	0.3%	3.8%	4.2%	(5.1%)
Total expenditure growth	1.1%	3.5%	0.2%	3.8%	3.9%	(4.8%)
Total revenue growth	3.1%	0.3%	1.5%	3.8%	4.5%	(0.6%)

1 DBRS-adjusted debt: tax-supported debt + unfunded pension liabilities.

Political Background Information

Party in Power:	Progressive Conservative Party	**Legislature Seats:**	40 of 57
Premier:	Brian Pallister	**Election required by:**	October 2020

DBRS-Adjusted Statement of Operations

($ millions)	Projected 2016-17	2015-16	Budget 2015-16	2014-15	2013-14	2012-13
Revenue						
Personal income tax	3,339	3,261	3,262	3,117	2,978	2,846
Retail sales tax	2,328	2,261	2,292	2,205	2,028	1,767
Corporate taxes	1,123	1,093	1,220	1,105	1,024	965
Fuel taxes	331	327	346	335	329	332
Tobacco taxes	256	256	252	256	272	252
Education property tax	533	500	493	461	434	380
Other taxes	93	95	108	101	105	124
Total tax revenue	**8,003**	**7,794**	**7,973**	**7,578**	**7,169**	**6,667**
Manitoba Liquor and Lotteries Corporation	586	583	582	597	554	558
Manitoba Hydro	42	49	125	114	174	92
Natural resource levies	152	169	172	169	176	168
Fees, permits, licences & other	2,299	2,306	2,178	2,425	2,237	2,102
Total Own-Source Revenue	**11,082**	**10,901**	**11,031**	**10,883**	**10,310**	**9,587**
Equalization payments	1,736	1,738	1,738	1,750	1,799	1,872
Canada health & social transfer	1,786	1,697	1,698	1,621	1,524	1,487
Other federal transfers	586	393	445	438	519	594
Total Federal Transfers	**4,108**	**3,828**	**3,881**	**3,809**	**3,842**	**3,953**
DBRS-Adjusted Revenue	**15,190**	**14,729**	**14,912**	**14,691**	**14,152**	**13,540**
Expenditures						
Health	6,497	6,250	6,088	5,979.9	5,706	5,454
Education and training	4,061	3,962	3,983	3,638.5	3,562	3,339
Social services	2,036	1,946	1,891	1,119.6	1,074	1,035
Justice	603	585	581	532.7	534	500
Infrastructure and transportation	389	269	373	544.3	501	540
Economic and resource development	1,115	1,168	1,109	1,997	1,914	1,883
Other general government	716	770	668	538	624	584
Capital expenditures less amortization 1	843	844	727	877.0	757	745
Targeted in-year savings	(150)	-	(150)	-	-	-
DBRS-Adjusted Program Expenditures	**16,110**	**15,794**	**15,270**	**15,227**	**14,672**	**14,080**
Net interest expense 2	834	790	790	794	759	765
DBRS-Adjusted Expenditures	**16,944**	**16,584**	**16,060**	**16,021**	**15,431**	**14,845**
DBRS-Adjusted Surplus (Deficit)	**(1,754)**	**(1,855)**	**(1,149)**	**(1,330)**	**(1,279)**	**(1,305)**
DBRS adjustments:						
Capital expenditures less amortization 1	843	844	727	877	757	745
Surplus (deficit), as reported	**(911)**	**(1,011)**	**(422)**	**(453)**	**(522)**	**(560)**

1 DBRS adjusts reported figures to recognize capital expenditures as incurred rather than as amortized, to improve interprovincial comparability.
2 Interest expense is net of sinking funds.

Province of Manitoba

Statement of Financial Position

($ millions)	2017B	2016P	2015
Assets			
Cash and cash equivalents	5,693	7,863	6,728
Amounts receivable	4,259	4,405	6,466
Loans & advances 1	32,172	32,712	30,703
Equity in gov't enterprises	3,829	3,692	3,415
Net tangible capital assets	18,023	17,217	15,796
Other assets	49	188	151
Total Assets	**64,025**	**66,077**	**63,259**

	2017B	2016P	2015
Liabilities			
A/P and accrued charges	4,200	4,204	4,204
Debt 1	45,547	39,874	35,742
Unfunded pension liability	2,513	2,354	2,245
Total Liabilities	**52,260**	**46,432**	**42,191**
Accumulated Deficit	**(9,685)**	**(8,812)**	**(7,923)**

Net Public Sector Debt

($ millions)	As at March 31							
	2017B	2016P	2015	2014	2013	2012	2011	2010
Net general purpose debt 2	19,714	18,499	16,784	15,730	14,851	13,956	11,907	10,949
Crown corporation & gov't agencies	3,710	3,309	2,827	2,511	2,246	1,926	1,641	1,478
Schools and universities	610	620	610	590	538	495	461	432
Health facilities	2,473	1,730	1,338	1,262	1,149	1,094	1,015	949
Municipalities 3	1,123	1,123	1,068	926	903	735	723	602
Net Tax-Supported Debt	**27,630**	**25,281**	**22,627**	**21,019**	**19,687**	**18,206**	**15,747**	**14,410**
Self-supporting debt:								
Manitoba Hydro 2	17,848	14,544	12,540	10,838	9,609	8,999	8,362	7,730
Total net public sector debt	**45,478**	**39,825**	**35,167**	**31,857**	**29,296**	**27,205**	**24,109**	**22,140**
Unfunded Pension Liabilities 4	2,513	2,354	2,245	2,038	1,828	1,634	1,731	1,768
DBRS-Adjusted Debt 5	**30,143**	**27,635**	**24,872**	**23,057**	**21,515**	**19,840**	**17,478**	**16,178**
Per Capita (CAD)								
Tax-supp. debt + unf. pension liabilities	23,029	21,366	19,427	18,222	17,206	16,082	14,316	13,386
Total public sector debt	34,745	30,791	27,469	25,176	23,429	22,051	19,747	18,319
As a % of GDP								
Tax-supp. debt + unf. pension liabilities	44.1%	42.0%	38.8%	37.3%	36.0%	35.3%	32.8%	31.8%
Total public sector debt	66.6%	60.5%	54.9%	51.5%	49.0%	48.4%	45.2%	43.6%
Debt Breakdown by Currency 6								
CAD pay	n/a	100%	100%	100%	100%	100%	100%	100%
Non-CAD pay	n/a	0%	0%	0%	0%	0%	0%	0%
Fixed/Floating Rate Debt Breakdown 6								
Fixed rate	n/a	82%	78%	79%	77%	80%	76%	82%
Floating rate	n/a	18%	22%	21%	23%	20%	24%	18%

1 Includes the assets and liabilities related to debt of Manitoba Hydro and Manitoba Lotteries Corporation. 2 Excludes pre-financing. 3 Not guaranteed by the Province.
4 Excludes pension liabilities for self-supporting Crown corporations. 5 DBRS-adjusted debt is defined as tax-supported debt plus unfunded pension liabilities (excluding those of self-support Crown corporations. 6 Net of hedges (if any). Floating-rate debt is defined as debt that matures or is reprised within 12 months.

Unfunded Pension Liabilities (Tax-Supported)

($ millions)	Valuation Date	Mar. 31, 2016
Civil service 1	Dec. 2015	2,813
Teachers 2	Jan. 2012	3,589
Other plans (incl. MLAs, judges, other)	Various	1,912
Total liabilities		**8,314**
Pension assets		5,960
Total Unfunded Pension Liabilities		**2,354**

1 Civil service pension plan includes amounts for indexation and unamortized pension adjustment. 2 Teachers' pension plan includes amount for indexation.

Gross Debt Maturity Schedule

($ millions)	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 to 2025-26	2026-27 +	Total
Public Sector Debt ($ millions)	4,307	2,497	2,727	2,405	3,527	8,165	15,988	39,615
Public Sector Debt (%)	10.9%	6.3%	6.9%	6.1%	8.9%	20.6%	40.4%	100.0%

Rating History

	Current	2014	2013	2012	2011	2010
Issuer Rating	A (high)	A (high)	A (high)	A (high)	NR	NR
Long-Term Debt	A (high)	A (high)	A (high)	A (high)	A (high)	A (high)
Short-Term Debt	R-1 (middle)	R-1 (middle)	R-1 (middle)	R-1 (middle)	R-1 (middle)	R-1 (middle)

Previous Action

- Confirmed, August 17, 2015.

Related Research

- *Rating Canadian Provincial Governments,* May 25, 2016.
- *DBRS Criteria: Guarantees and Other Forms of Support,* February 9, 2016.
- *Manitoba Hydro-Electric Board: Rating Report,* August 17, 2015.

Treasury Bill Limit

- $1.95 billion.

Previous Report

- Province of Manitoba: Rating Report, August 17, 2015.

Notes:
All figures are in Canadian dollars unless otherwise noted.

For the definition of Issuer Rating, please refer to Rating Definitions under Rating Policy on **www.dbrs.com**.

Generally, Issuer Ratings apply to all senior unsecured obligations of an applicable issuer, except when an issuer has a significant or unique level of secured debt.

Rating Report

The Manitoba Hydro-Electric Board

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Insight beyond the rating.

Ratings

Debt	Rating	Trend
Long-Term Obligations	A (high)	Stable
Short-Term Obligations	R-1 (middle)	Stable

Note: These Obligations are based on the status of the Manitoba Hydro-Electric Board as a Crown agent of the Province of Manitoba and the unconditional guarantee provided by the Province on Manitoba Hydro's third-party debt, and thus reflect the Province's debt ratings.

Rating Update

DBRS Limited (DBRS) has updated its report on the Manitoba Hydro-Electric Board (Manitoba Hydro or the Utility). The ratings assigned to the Utility's Long-Term Obligations and Short-Term Obligations are a flow-through of the ratings of the Province of Manitoba (the Province; rated A (high) and R-1 (middle) with Stable trends by DBRS). Pursuant to *The Manitoba Hydro Act*, the Province unconditionally guarantees almost all of Manitoba Hydro's outstanding third-party debt (please see the *DBRS Criteria: Guarantees and Other Forms of Explicit Support* methodology for further details). The Province also provides most of the Utility's financing through provincial advances (approximately 98% of total debt as at March 31, 2015).

In July 2015, the Public Utilities Board of Manitoba (the PUB) issued its decision on the Utility's 2015–16 and 2016–17 General Rate Application (GRA). The PUB finalized the previously approved interim rate increase of 2.75% effective May 1, 2014, and approved a 3.95% rate increase effective August 1, 2015. In its application, Manitoba Hydro noted that instead of applying for large rate increases when major projects, such as the Bipole III Transmission Reliability Project (Bipole III), the Keeyask Infrastructure and Generating Station Projects (Keeyask Project) and the Manitoba-Minnesota Transmission Project (MMTP), are brought in service, it currently plans to apply annually for gradual and more moderate increases. However, this rate lag will lead to significant timing differences between the actual capital expenditures (capex) spent and recognition into rates, and will likely result in weaker earnings and cash flows going forward.

As a result of the weaker earnings expected during this period of significant capex, the Utility has forecast substantial negative free cash flows for the medium-term. As such, the Utility's key financial ratios are expected to remain pressured, with leverage increasing from 81.0% at March 31, 2015, to a peak of around 88% in F2022, and above the target capital structure of 75% debt. DBRS notes that Manitoba Hydro's key financial metrics could further weaken in the event of adverse drought conditions or potential cost overruns on major projects. DBRS expects the Utility to continue to finance any cash shortfalls through advances from the Province.

Financial Information

The Manitoba Hydro-Electric Board

	For the year ended March 31				
(CAD millions where applicable)	2015	2014	2013	2012	2011
Total debt in capital structure 1	81.0%	79.4%	78.5%	77.9%	77.2%
Cash flow/Total debt	5.2%	6.4%	6.1%	6.3%	7.1%
EBIT gross interest coverage (times)	0.93	0.96	0.89	0.80	1.00
Net income before non-recurring items	114	178	92	61	150
Cash flow from operations	651	691	589	567	595

1 Adjusted for other comprehensive income.

Issuer Description

The Manitoba Hydro-Electric Board, a wholly owned Crown corporation of the Province of Manitoba, is a vertically integrated electric utility that provides generation, transmission and distribution of electricity to approximately 561,869 customers throughout Manitoba and natural gas service to approximately 274,817 customers via its subsidiary, Centra Gas Manitoba Inc. The Utility also exports electricity to more than 25 electric utilities through its participation in four wholesale markets in Canada and in the midwestern United States.

Rating Considerations

Strengths

1. Debt is a direct obligation of the Province
Manitoba Hydro is an agent of the Crown and its debt securities, except for $65 million of Manitoba Hydro-Electric Board Bonds (less than 1% of total debt at March 31, 2015), are held or guaranteed by the Province; therefore, the ratings assigned to Manitoba Hydro's obligations are a flow-through of the ratings assigned to the Province.

2. Low-cost hydro-based generation
Low-cost hydroelectric-based generating capacity results in one of the lowest variable cost structures in North America, which has enabled Manitoba Hydro to provide electricity to its domestic customers at one of the lowest rates on the continent. This gives the Utility the flexibility to increase rates in the future, especially in light of the substantially heightened capex requirements.

3. Access to export markets
Manitoba Hydro's interconnections (approximately 43% of installed capacity), with firm export transfer capability of 2,100 MW to the United States, 175 MW to Saskatchewan and 200 MW to Ontario, along with additional non-firm transfer capability, provide the Utility with access to favourable export markets. The interconnections also provide a secure supply of electricity for domestic customers during times of poor hydrology.

Challenges

1. Hydrology risk
Given that approximately 92% of Manitoba Hydro's installed generating capacity is hydroelectricity-based, earnings and cash flows are highly sensitive to hydrological conditions. The Utility is also exposed to significant price and volume risk because of its export commitments under the fixed price-to-volume contract, which may require the Utility to procure power supply from import markets if hydrological conditions are unfavourable.

2. High leverage
The Utility has forecast leverage (81.0% as at March 31, 2015) to increase to around 88% during this period of high capex. Additionally, due to the significant lag before electricity rates fully reflect the cost of the ongoing major projects, Manitoba Hydro has forecast weaker earnings, including two years of negative net income, and significant free cash flow deficits for the medium term in its 2015 Integrated Financial Forecast. This will result in further pressure on the Utility's key financial metrics, which could be exacerbated in the event of an adverse circumstance (i.e., severe drought). DBRS notes that Manitoba Hydro has no mandatory dividend payment requirements, which provides some financial flexibility.

3. High level of planned capex
The need to refurbish aging infrastructure, combined with the aggressive development of new hydro generation and transmission facilities, will require Manitoba Hydro to continue to deploy significant capital into its electricity infrastructure over the medium term. The Utility has forecast capex over the next five years will average approximately $2.7 billion per year, which will pressure the already-high debt levels.

Major Projects (Under Construction and Planned)

Project	Estimated Cost ($ millions)	Planned Construction Start Date	In-Service Target Date
Bipole III Transmission Reliability Project	4,700	2013–2014	2018
Keeyask Infrastructure and Generating Station Projects	6,500	2014	2019–2020
Manitoba-Minnesota Transmission Project	350	2015–2016	mid-2020

- ***Bipole III:*** This project involves the construction of a 500-kilovolt (kV) high voltage direct current transmission line, along with new converter stations. Construction began over winter 2013–2014 and the transmission line is expected to be in service for 2018.
- ***Keeyask Project:*** This project includes the development of a 695 MW generation station on the Nelson River. Construction began in July 2014 with the first generator expected to be in service for 2019 and the remaining units to be in service by 2020.
- ***MMTP:*** This proposed project involves the construction of a 500 kV alternating current transmission line from Winnipeg to the Manitoba-Minnesota border, where it will interconnect with the Great Northern Transmission Line to be built by Minnesota Power. The Province authorized Manitoba Hydro to proceed with the project in July 2014 and the Utility filed an Environmental Impact Statement in September 2015, which began the formal regulatory review process.

Earnings and Outlook

(CAD millions where applicable)	2015	2014	2013	2012	2011
	For the year ended March 31				
Total electricity revenues	1,861	1,861	1,733	1,573	1,616
Net gas revenues	154	163	147	132	143
Total revenues	**2,015**	**2,024**	**1,880**	**1,705**	**1,759**
EBITDA	1,066	1,068	991	865	968
EBIT	630	626	568	484	575
Gross interest expense	680	654	636	603	573
Earning before taxes	103	156	79	61	150
Net income before non-recurring items	114	178	92	61	150
Reported net income	114	174	92	61	150
Return on equity 1	4.0%	6.6%	3.5%	2.4%	6.3%

1 Adjusted for other comprehensive income.

F2015 Summary

- Earnings decreased in F2015 as the 2.75% increase in rates effective May 1, 2014, was insufficient to offset rising interest expense from the higher debt load.
- Earnings were also negatively impacted by the warmer weather, which reduced consumption and natural gas revenues. In addition, a U.S. transmission line outage also affected extra-provincial electricity sales.

F2016 Outlook

- Manitoba Hydro has forecast net income for F2016 at around $31 million, with a 3.95% rate increase effective August 1, 2015, offset by increases in finance expense from the higher debt used to fund the ongoing significant capex.
- As a result of rising costs to finance the significant capex program, Manitoba Hydro has forecast weaker net income for the medium term in its 2015 Integrated Financial Forecast.
  - Instead of applying for large rate increases as projects come in service, the Utility plans to apply for more moderate annual rate increases of 3.95% until F2029. As a result, these rate increases are expected to be insufficient for Manitoba Hydro to recover costs related to major projects for the medium term.

Financial Profile

	For the year ended March 31				
(CAD millions where applicable)	**2015**	**2014**	**2013**	**2012**	**2011**
Cash receipts from customers	2,379	2,176	2,015	1,998	2,029
Cash paid to suppliers and employees	(1,222)	(1,053)	(981)	(1,048)	(1,043)
Interest paid	(536)	(502)	(489)	(418)	(422)
Interest received	30	70	44	35	31
Cash flow from operations	**651**	**691**	**589**	**567**	**595**
Dividends paid	0	0	0	0	0
Capital expenditures	(1,746)	(1,394)	(1,037)	(1,124)	(1,166)
Free cash flow	**(1,095)**	**(703)**	**(448)**	**(557)**	**(571)**
Acquisitions & investments	(113)	(103)	(98)	(90)	(88)
Net sinking fund withdrawals/(payments)	(3)	206	22	(75)	527
Net debt change	1,556	707	565	673	192
Other	7	3	(59)	29	(164)
Change in cash	**352**	**110**	**(18)**	**(20)**	**(104)**
Total debt (net sinking fund investments)	12,566	10,757	9,633	9,010	8,365
Cash and equivalents	494	142	32	50	70
Total debt in capital structure 1	81.0%	79.4%	78.5%	77.9%	77.2%
Cash flow/Total debt	5.2%	6.4%	6.1%	6.3%	7.1%
EBIT gross interest coverage (times)	0.93	0.96	0.89	0.80	1.00
Dividend payout ratio	0.0%	0.0%	0.0%	0.0%	0.0%

1 Adjusted for other comprehensive income.

F2015 Summary

- The Utility's key financial metrics continued to weaken in F2015 due to (a) the large increase in debt to fund ongoing capex and (b) lower earnings and cash flow for the year.
- Cash flow from operations decreased, largely due to higher interest payments for the year as a result of the higher debt load, and lower interest received on investments.
- Gross capex of $1.9 billion included (a) $609 million of maintenance capex, (b) $704 million for the Keeyask Project, (c) $365 million for Bipole III and (d) $132 million for the Pointe du Bois Spillway replacement.
- The significant cash flow deficit was funded largely through advances from the Province.

F2016 Outlook

- Manitoba Hydro's key financial metrics are expected to remain pressured during this period of high capex. The Utility has forecast its debt-to-capital ratio to rise to 88% in F2022, significantly higher than the long-term target capital structure of 75% debt. The debt-to-capital ratio is not expected to recover to the target capital structure until F2032.
- Manitoba Hydro has forecast gross capex of approximately $2.7 billion in F2016, including (a) $641 million of maintenance capex, (b) $819 million for the Keeyask Project and (c) $1.2 billion for Bipole III.
  - The Utility has forecast capex to peak in F2017 at $3.5 billion and in F2018 at $3.1 billion when Bipole III comes in service. Following the in-service of the Keeyask Project in 2019–2020, capex is expected to moderate to around $800 million a year.
- The high level of capex is expected to result in a negative free cash flow, which will likely be funded through advances from the Province. The increasing debt load will likely lead to further declines in Manitoba Hydro's key financial metrics.
  - However, with no mandatory dividend payment requirements, this should provide the Utility with some financial flexibility.

Long-Term Debt Maturities and Bank Lines

Debt Profile (CAD millions)

	For the year ended March 31			
	%	2015	2014	2013
Advances from the Province	98.2%	12,485	10,683	9,775
Manitoba Hydro Bonds	0.6%	76	169	55
Manitoba Hydro-Electric Board Bonds*	1.2%	157	158	182
	100.0%	**12,718**	**11,010**	**10,012**
Adjustments to carrying value of dual currency bonds		6	(12)	(20)
Debt discounts and premiums		0	(96)	22
Transaction costs		(44)	(34)	(29)
Total		**12,680**	**10,868**	**9,985**

* Includes $65 million of unguaranteed bonds at March 31, 2015.

Debt Maturities

Year	2016	2017	2018	2019	2020	Thereafter	Total
(CAD millions)	377	311	331	987	340	10,372	**12,718**
%	3%	2%	3%	8%	3%	82%	**100%**

Summary

- The Province supports Manitoba Hydro by advancing funds or guaranteeing the Utility's long-term debt issuances. Long-term debt at March 31, 2015, consisted of the following:
  - $12,485 million in advances from the Province (all of which have annual sinking fund requirements).
  - $76 million of Manitoba Hydro Bonds.
  - $157 million of Manitoba Hydro-Electric Board Bonds.
- Only $65 million of Manitoba Hydro-Electric Board Bonds, which were issued for mitigation projects, do not carry the provincial guarantee.
- Manitoba Hydro maintains a relatively smooth maturity profile with potential volatility from foreign currency debt, mostly mitigated through natural and cash flow hedges, and a moderate level of floating-rate debt (14% of total debt at March 31, 2015), which adds stability to debt servicing costs and minimizes interest rate risk.
- The Utility has bank credit facilities that provide for overdrafts and notes payable of up to $500 million denominated in Canadian and/or U.S. dollars. At March 31, 2015, there were no amounts outstanding. Manitoba Hydro issues short-term promissory notes in its own name for its short-term cash requirements and does not receive short-term funding from the Province. These short-term notes are guaranteed by the Province.

Regulation

Manitoba Hydro is governed by *The Manitoba Hydro Act* and its electricity and natural gas rates are regulated by the PUB.

Electricity

- Each year, Manitoba Hydro reviews its financial targets with particular focus on its debt-to-equity target capital structure of 75% to 25%. If the Utility deems a rate adjustment is necessary to continue progress towards attainment of its financial targets, it submits a rate application to the PUB.
- The PUB reviews the rate adjustment application with the objective of allowing Manitoba Hydro to recover its cost of service and achieve its long-term debt-to-equity target. The PUB does not have the mandate to pre-approve capex. The capex planning responsibility resides with Manitoba Hydro and the government of Manitoba.
- The Utility submitted an application for interim rates effective April 1, 2014, in March 2014. On May 6, 2014, the PUB approved a 2.75% increase in interim rates effective May 1, 2014.
- Manitoba Hydro submitted its 2015–16 & 2016–17 GRA in January 2015, requesting 3.95% rate increases effective April 1, 2015, and April 1, 2016.
  - The PUB advised the Utility that it would not set rates for 2016–17 as part of this application.
  - On July 24, 2015, the PUB finalized the previously approved interim rate increase of 2.75% effective May 1, 2014, and approved a 3.95% increase in rates effective August 1, 2015. In its decision, the PUB indicated that it would consider various options regarding a process to review rates effective for April 1, 2016.

Regulation (CONTINUED)

- For the 2015 rate increase, the PUB directed 1.80% of the revenues associated with the rate increase to be applied to general revenues, while the remaining 2.15% be placed in a deferral account to mitigate rate increases when Bipole III comes in service. This was similar to the PUB's direction for rate increases approved in 2013–14 and 2014–15, where a portion of the revenues was also allocated to the Bipole III deferral account.
- On November 18, 2015, the Utility submitted its Supplemental Filing for Interim Rates effective April 1, 2016, requesting a 3.95% general rate increase.
- While Manitoba Hydro is the sole retail electricity supplier in Manitoba, under *The Manitoba Hydro Amendment Act* (the Act), other utilities may access the transmission system to reach customers in neighbouring provinces and states.
- The Act also explicitly allows Manitoba Hydro to build new generating capacity for export sales, to offer new energy-related services, to enter into strategic alliances and joint ventures, and to create subsidiaries.
- There are presently no plans to move to full retail competition in the Province.
- Manitoba retail customers currently enjoy rates that are among the lowest in North America as a result of Manitoba Hydro's predominantly hydroelectric generation and efficient resource management.

Natural Gas Distribution

- Manitoba Hydro distributes natural gas through its wholly owned subsidiary, Centra Gas Manitoba Inc. (Centra Gas). In accordance with the rate-setting methodology for natural gas, commodity rates are changed every quarter based on 12-month forward natural gas market prices.
  - The commodity cost of gas is a pass-through with no markup to customers.
  - Non-commodity costs, such as transportation and storage are also passed on.
- The PUB allows Centra Gas to target an annual profit of approximately $3 million, which is fairly modest compared with Manitoba Hydro's consolidated earnings.
- Centra Gas filed its 2015–16 Cost of Gas Application in June 2015, requesting, effective November 1, 2015, the approval of supplemental gas, transportation and distribution rates, and for rate riders to disposal of balances in its deferral accounts.

Watershed Storage Capacity

Manitoba Hydro draws water from five distinct watersheds: Nelson River, Winnipeg River, Saskatchewan River, Churchill River (including the Laurie River) and Burntwood River. This provides the Utility with some geographic diversification, especially during times of low hydrology. The main generation source is the Nelson River, which accounted for approximately 76% of power generated in F2015.

Source Of Electrical Energy Generated And Imported For the year ended March 31, 2015

Nelson River	**75.66%**
Billion kWh generated	**27.4**
Limestone	24.89%
Kettle	23.66%
Long Spruce	19.90%
Kelsey	5.84%
Jenpeg	1.37%
Winnipeg River	**10.47%**
Billion kWh generated	**3.8**
Seven Sisters	3.11%
Great Falls	2.58%
Pine Falls	1.66%
Pointe du Bois	0.84%
Slave Falls	1.27%
McArthur	1.00%
Thermal	**0.19%**
Billion kWh generated	**0.1**
Brandon	0.17%
Selkirk	0.02%
Saskatchewan River	**6.45%**
Billion kWh generated	**2.3**
Grand Rapids	6.45%
Laurie River	**0.16%**
Billion kWh generated	**0.1**
Laurie River #1	0.07%
Laurie River #2	0.08%
Burntwood River	**3.79%**
Billion kWh generated	**1.4**
Wuskwatim	3.79%
Purchases (excl. wind)	**0.60%**
Billion kWh imported	**0.2**
Wind	**2.69%**
Billion kWh imported	**1.0**

Source: Manitoba Hydro

Watershed Storage Capacity (CONTINUED)

Favourable characteristics inherent in Manitoba Hydro's watersheds include the following:

- Cold temperatures reduce overall evaporation rates, as much of the water is frozen for up to five months of the year.
- A significant portion of the watersheds consists of rock, which has lower seepage rates and higher runoff than predominantly soil-covered watersheds.
- Lake Winnipeg, Cedar Lake and Southern Indian Lake serve as large storage reservoirs. The Utility's water storage capacity is a competitive advantage in trading electricity (buying surplus U.S. power at low off-peak prices and selling its electricity during peak demand periods at higher prices).

In addition to its own generating stations in Manitoba, Manitoba Hydro purchases all electricity from two wind farms in southern Manitoba (St. Joseph and St. Leon). The installed capacity of these facilities is 258.5 MW. The Wuskwatim Generating Station is owned by the Wuskwatim Power Limited Partnership, in which Manitoba Hydro is the majority owner. Manitoba Hydro purchases all the electricity generated from the Wuskwatim Generating Station.

Generating Capacity

Manitoba Hydro's Generating Stations and Capabilities

For the year ended March 31, 2015

Power Station	Location	# of Units	Net Capacity (MW)
Hydroelectric			
Great Falls	Winnipeg River	6	129
Seven Sisters	Winnipeg River	6	165
Pine Falls	Winnipeg River	6	87
McArthur Falls	Winnipeg River	8	56
Pointe du Bois	Winnipeg River	16	75
Slave Falls	Winnipeg River	8	68
Grand Rapids	Saskatchewan River	4	479
Kelsey	Nelson River	7	287
Kettle	Nelson River	12	1,220
Jenpeg	Nelson River	6	122
Long Spruce	Nelson River	10	980
Limestone	Nelson River	10	1,350
Laurie River (2)	Laurie River	3	10
Wuskwatim	Burntwood River	3	211
Total Hydroelectric Generation		**105**	**5,239**
Thermal			
Brandon (coal: 93 MW, gas: 234 MW)		3	327
Selkirk (gas)		2	125
Total Thermal Generation		**5**	**452**
Isolated Diesel Capabilities			
Brochet			3
Lac Brochet			2
Shamattawa			3
Tadoule Lake			2
Total Isolated Diesel Generation			**10**
Total Generation Capacity			**5,701**

Source: Manitoba Hydro

The Manitoba Hydro-Electric Board

(CAD millions)	Mar. 31 2015	2014	2013		Mar. 31 2015	2014	2013
Assets				**Liabilities & Equity**			
Cash & equivalents	494	142	32	S.T. borrowings	0	0	0
Accounts receivable	470	520	421	Accounts payable	560	561	397
Inventories	99	81	93	Current portion L.T.D.	377	408	656
Prepaid expenses & other	0	0	4	Other current liab.	95	100	103
Total Current Assets	**1,063**	**743**	**550**	**Total Current Liab.**	**1,032**	**1,069**	**1,156**
Net fixed assets	15,250	13,627	12,508	Long-term debt (net sinking fund investments)	12,189	10,349	8,977
Goodwill & intangibles	293	281	276	Sinking fund investments	114	111	352
Investments & others	988	988	1,208	Other L.T. liab.	1,470	1,225	1,121
				Shareholders' equity	2,789	2,885	2,936
Total Assets	**17,594**	**15,639**	**14,542**	**Total Liab. & SE**	**17,594**	**15,639**	**14,542**

Balance Sheet & Liquidity & Capital Ratios	For the year ended March 31 2015	2014	2013	2012	2011
Current ratio	1.03	0.70	0.48	0.65	1.22
Total debt in capital structure	81.8%	78.9%	76.6%	75.8%	74.6%
Total debt in capital structure 1	81.0%	79.4%	78.5%	77.9%	77.2%
Cash flow/Total debt	5.2%	6.4%	6.1%	6.3%	7.1%
(Cash flow-dividends)/Capex	0.37	0.50	0.57	0.50	0.51
Dividend payout ratio	0.0%	0.0%	0.0%	0.0%	0.0%
Coverage Ratios (times)					
EBIT gross interest coverage	0.93	0.96	0.89	0.80	1.00
EBITDA gross interest coverage	1.57	1.63	1.56	1.43	1.69
Fixed-charge coverage	0.93	0.96	0.89	0.80	1.00
Profitability Ratios					
Purchased power/Electricty revenues	7.8%	8.6%	7.7%	9.3%	6.6%
Operating margin	31.3%	30.9%	30.2%	28.4%	32.7%
Net margin	5.7%	8.8%	4.9%	3.6%	8.5%
Return on equity 1	4.0%	6.6%	3.5%	2.4%	6.3%

1 Adjusted for other comprehensive income.

Rating History

	Current	2014	2013	2012	2011	2010
Long-Term Obligations	A (high)	A (high)	A (high)	A (high)	A (high)	A (high)
Short-Term Obligations	R-1 (middle)	R-1 (middle)	R-1 (middle)	R-1 (middle)	R-1 (middle)	R-1 (middle)

Note: These Obligations are based on the status of the Manitoba Hydro-Electric Board as a Crown agent of the Province of Manitoba and the unconditional guarantee provided by the Province on Manitoba Hydro's third-party debt, and thus reflect the Province's debt ratings.

Previous Action

- Confirmed, August 17, 2015.

Related Research

- DBRS Confirms Province of Manitoba at A (high) and R-1 (middle), August 17, 2015.
- Manitoba, Province of: Rating Report, August 17, 2015.

Short-Term Promissory Notes Programme

- $500 million

Previous Report

- Manitoba Hydro-Electric Board, The: Rating Report, October 23, 2014.

Notes:
All figures are in Canadian dollars unless otherwise noted.

For the definition of Issuer Rating, please refer to Rating Definitions under Rating Policy on **www.dbrs.com**.

Generally, Issuer Ratings apply to all senior unsecured obligations of an applicable issuer, except when an issuer has a significant or unique level of secured debt.

Rating Report

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DBRS

Insight beyond the rating.

Ratings

Debt	Rating	Rating Action	Trend
Issuer Rating	A (high)	Confirmed	Stable
Long-Term Debt *	A (high)	Confirmed	Stable
Short-Term Debt *	R-1 (middle)	Confirmed	Stable

* Includes guaranteed long- and short-term obligations issued by the Manitoba-Hydro Electric Board.

Rating Update

DBRS Limited (DBRS) has confirmed the Issuer Rating and Long-Term Debt ratings of the Province of Manitoba (the Province) at A (high), along with its Short-Term Debt rating at R-1 (middle), all with Stable trends. Weak fiscal discipline has led to further delays in the Province's anticipated fiscal recovery timeline, with a return to balance not foreseen until 2018–19 for core government operations. Despite fiscal challenges, debt remains manageable for the current ratings and a well-diversified and resilient economy should keep Manitoba somewhat insulated from the economic challenges facing some of its more resource-dependent neighbours.

Based on preliminary results, the Province recorded a deficit of $424 million in 2014–15. On a DBRS-adjusted basis, after including capital expenditures as incurred rather than as amortized, this equates to a shortfall of $1.3 billion, or 2.0% of GDP, and was consistent with expectations. As a result, DBRS-adjusted debt is estimated to have grown by $1.3 billion, or 5.4%, as of March 31, 2015, pushing the debt-to-GDP ratio up to 38.2%, from 37.6% a year earlier. This positions Manitoba with the fourth-highest debt burden among Canadian provinces.

For 2015, the Province has assumed real GDP growth of 2.5%, which now appears somewhat optimistic in relation to the private sector consensus forecast tracked by DBRS of 2.2%. Regardless, Manitoba is expected to be among the provincial growth leaders, given its well-diversified economy and only modest exposure to the energy sector. While real growth has disappointed in both Canada and the United States in the first half of 2015, a strengthening U.S. economy and weaker Canadian dollar should be supportive of a transition to stronger export-led growth for Manitoba. In 2016, the current consensus points to real GDP growth of 2.5%, above the 2.3% budget assumption.

Despite a sound economic outlook, Manitoba's fiscal outlook continues to disappoint with efforts to restore fiscal balance now further delayed. The 2015 budget points to a return to balance by 2018–19 for core government operations, which compares to an expected balance by 2016–17 on a summary budget basis included in last year's plan. For 2015–16, a shortfall of $422 million is projected and equates to a DBRS-adjusted deficit of $1.1 billion. This represents 1.7% of GDP and is a wider-than-average fiscal gap relative to provincial peers. Over the medium term, debt growth is expected to slow to between 3% and 5% annually, as the Province continues to address the fiscal imbalance. Provided targets are adhered to, this points to the debt burden stabilizing around 40% of GDP by 2017–18, a modest deterioration from that envisioned last year but still considered manageable for the existing ratings.

With a federal election scheduled for this fall, Manitoba's next election – originally planned for October 2015 – is expected to be postponed until April 2016. Based on recent polls, a change in government is possible, with Progressive Conservatives well ahead of the governing New Democratic Party.

Financial Highlights

	For the year ended March 31				
(all financial figures DBRS adjusted)	2015-16B	2014-15P	2013-14	2012-13	2011-12
Debt */GDP	39.6%	38.2%	37.6%	36.4%	35.6%
Surplus (deficit)/GDP	(1.7%)	(2.0%)	(2.1%)	(2.2%)	(3.5%)
Federal transfers/total revenue	26.0%	26.6%	27.2%	29.2%	31.8%
Interest costs/total revenue	5.3%	5.3%	5.4%	5.6%	5.5%
Real GDP growth rate	2.5%	2.4%	2.2%	3.3%	2.1%

* DBRS-defined: tax-supported debt + unfunded pension liabilities. B = Budget.
Source: Province of Manitoba, Statistics Canada, and DBRS calculations.

Issuer Description

Manitoba is located in Central Canada and ranks fifth among Canadian provinces by population and sixth in terms of GDP. The Province is home to significant renewable energy resources, with almost all electricity generated from water.

Rating Considerations

Strengths

1. Diversified and resilient economy

Manitoba has one of the most resilient and well-diversified economies in the country. This strength was evident during the 2009 downturn, when the Province experienced only a very mild recession. The economy boasts a well-balanced mix of industries, including agriculture and mining, manufacturing, financial services and transportation, and has one of the lowest unemployment rates in Canada. In addition, the composition of Manitoba's exports also tends to be more diverse than that of other provinces. As a result of these factors, the provincial economy shows less volatility than its manufacturing- and resource-dependent neighbours.

2. Manageable debt and sound debt management practices

As of March 31, 2015, Manitoba's debt burden stood at 38.2% of GDP, and, although it has been creeping up since 2009–10, it is comparable to levels seen in the late 1990s and remains manageable for the current ratings. The Province maintains a relatively smooth debt maturity profile, with no unhedged foreign currency debt (excluding Manitoba Hydro) and a moderate level of floating-rate debt, which adds stability to debt-servicing requirements.

3. Abundant low-cost hydroelectricity

Manitoba benefits from an abundance of low-cost hydroelectricity, resulting in some of the lowest electricity rates in North America. This gives the Province a distinct advantage when competing for new business investment. Furthermore, construction began on the Keeyask generating station (695 MW for $6.5 billion) in July 2014 with an anticipated in-service date of 2019. Potential development of the Conawapa site (1,485 MW), has prudently been postponed due to energy conservation efforts and increasing supplies of low-cost energy from shale gas and renewable alternatives such as wind and solar. In this environment, it is becoming more difficult to secure additional export contracts sufficient to advance the development of Conawapa.

Challenges

1. Delayed fiscal recovery

Manitoba has further delayed its fiscal recovery target with a return to balance not anticipated until 2018–19. Furthermore, this target is based on core government operations only, not the consolidated entity, which may mean a somewhat longer string of deficits on a consolidated basis. This now marks one of the longest fiscal recovery plans among all provinces, despite having experienced only a very mild recession in 2009.

2. Renewal of public sector collective agreements

Adherence to fiscal targets will be dependent on the successful renewal of a number of collective agreements, including those with teachers and civil servants, which may be challenging in an environment of gradually improving economic conditions.

3. High reliance on federal transfers

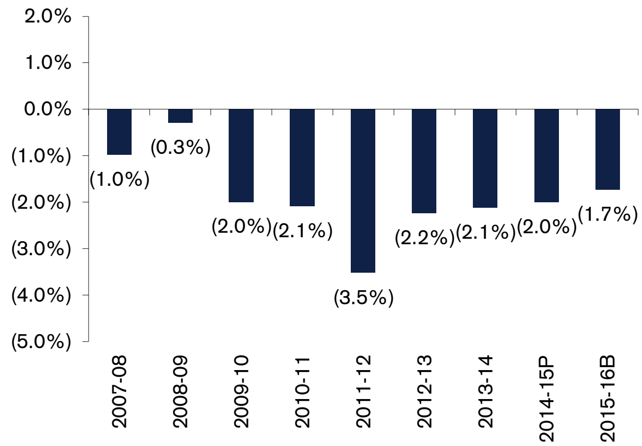
Despite its relatively resilient economy, Manitoba receives approximately 27% of its revenues by way of federal transfers, including roughly 12% from equalization, leaving it exposed to changes in federal transfer programs. This represents the highest reliance on federal revenues outside of Atlantic Canada.

4. Below-average income and GDP per capita

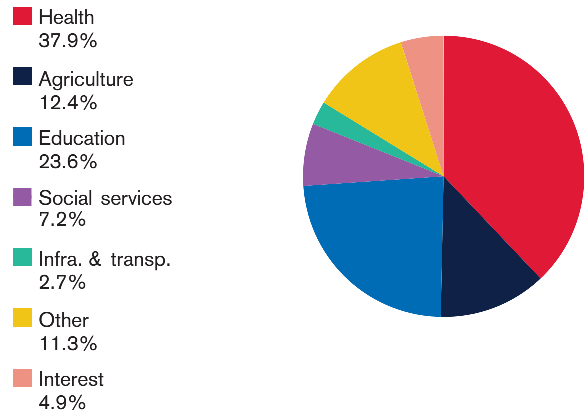
Manitoba boasts a well-diversified economy and healthy labour market; however, it continues to exhibit below-average wealth. The Province recorded primary household income per capita of $31,396 in 2013, below the national average of $35,189 (the latest year for which information is available). Manitoba also generates below-average GDP per capita, suggesting that productivity and high value-added sectors may be lagging.

2015-16 Budget

DBRS-Adjusted Surplus (Deficit)-to-GDP



2015-16 DBRS-Adjusted Expenditures (Total: $16.1 billion)



Manitoba's fiscal outlook continues to disappoint, with efforts to restore balance now further delayed. Based on last year's plan, a balanced position was projected by 2016–17, on a consolidated basis. However, in the 2015 budget, fiscal balance is not anticipated until 2018–19 and is based on forecasts for core government operations (excluding government business enterprises, health authorities, school divisions, etc.). For 2015–16, a shortfall of $422 million is projected and equates to a DBRS-adjusted deficit of $1.1 billion (after including capital expenditures as incurred rather than as amortized). This represents 1.7% of GDP and is a wider-than-average fiscal gap relative to provincial peers.

Total DBRS-adjusted revenues are forecast to grow by just 1.3% in 2015–16, based on assumed nominal GDP growth of 3.8% for calendar 2015. The 2015 budget was light on revenue measures, with the most notable change being an increase to the small business income tax threshold. Starting January 1, 2016, the threshold at which the zero percent corporate income tax (CIT) rate applies will increase to $450,000 from $425,000. Despite this modest relief, CIT receipts are projected to grow by 6.6%. Personal income tax (PIT) collections are forecast to rise by 4.8%, followed by 3.9% growth for retail sales taxes. Meanwhile, most other revenue sources are projected to see only modest growth or even slight declines. Of note, federal transfers are estimated to fall by almost 1.0%, as increases in health and social transfers will not be sufficient to offset lower equalization and other transfer payments.

Based on budget projections, total DBRS-adjusted spending is forecast to rise by just 0.4% in 2015–16, an ambitious target when compared with average expenditure growth of 3.3% over the past five years. The government has emphasized its desire to protect core services and these areas will continue to be the primary drivers of expenditure growth. Health care expenditures are projected to rise by 3.2%, although efforts made to reduce the number of health authorities to five from eleven, direct patients to lower-cost forms of care and move to generic drugs have helped to slow the rate of growth. A new four-year agreement with doctors will help to provide cost certainty and also aims to find a further $50 million in efficiency savings over the term. Social services spending is budgeted to grow by 2.6%, driven by funding for 900 new child care spaces, while education will see an increase of 2.1%, due to continued efforts to reduce class sizes and increased operating funding for colleges and universities. Achieving these targets will be dependent on the government's ability to secure further collective agreements within the assumed budget envelopes. In particular, agreements have yet to be reached with civil servants and teachers. Gross capital spending is budgeted to decline by almost 5% but remains in line with the historical five-year average. Interest charges, net of sinking fund earnings, are projected to rise by 1.2%, although given the persistence of low interest rates, there is likely to be savings in this area.

Outlook

Over the medium term, the budget forecast points to a return to balance by 2018–19, although DBRS notes that these projections are now based on core government operations only and not the consolidated entity. As a result, DBRS anticipates that on a consolidated basis, deficits may persist somewhat longer, but nonetheless, the fiscal gap is expected to close gradually. The government remains averse to raising taxes and as such, any budget pressures that arise due to weaker-than-planned economic performance or cost escalation are likely to necessitate further expenditure reductions. To achieve this, would require greater fiscal discipline than has been achieved so far.

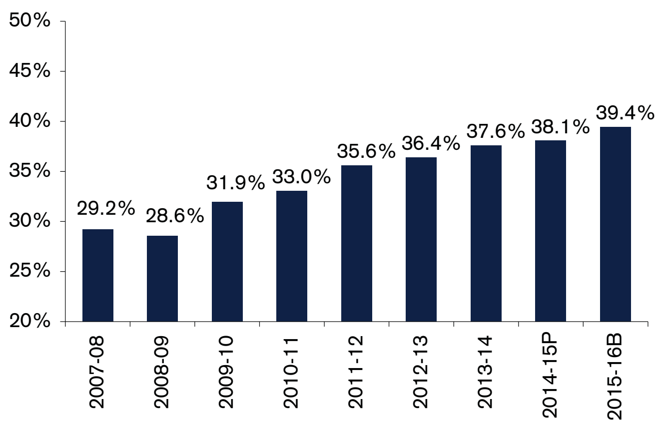
2014-15 Preliminary Results

Based on preliminary results, the Province recorded a deficit of $424 million in 2014–15. On a DBRS-adjusted basis, this equates to a shortfall of $1.3 billion, or 2.0% of GDP, and was consistent with expectations. Total revenues advanced by 4.0% year over year, and exceeded budget expectations largely due to higher than anticipated federal disaster assistance funding related to prior year flooding. Federal transfers grew by 1.8% as rising health and social transfers, along with other conditional federal transfers, were more than sufficient to offset lower equalization payments, which declined for the fifth straight year. Own-source revenues grew at a faster pace, driven by an 8.8% increase in sales tax collections reflecting the full-year impact of the 1.0% rate increase implemented in 2013. In addition, CIT and PIT receipts advanced by 10.9% and 4.5%, respectively.

Total DBRS-adjusted expenditures are estimated to have grown by 3.5% in 2014–15. Similar to revenues, spending growth exceeded expectations, driven by overspending in health care and higher than anticipated flood costs. Health care expenditures advanced by 3.4%, driven by volume pressures, although this is below the historical five-year average and demonstrates that the Province continues to make progress in this area despite missing budget targets. Education and social services also experienced growth of 4.1% and 4.4%, respectively, although this was partly offset by reductions in agricultural and economic development programs. Gross capital spending fell short of budget expectations, but remained consistent with the prior year's level. Interest charges grew by 3.0%, and too were below expectations due to the low interest rate environment.

Debt Profile

DBRS-Adjusted Debt-to-GDP



Steady deficits are continuing to boost provincial debt. DBRS-adjusted debt, defined as tax-supported debt plus unfunded pension liabilities, is estimated to have grown by $1.3 billion, or 5.4%, to reach $24.3 billion as of March 31, 2015. This somewhat exceeded expectations, but faster than anticipated growth in nominal GDP resulted in the debt-to-GDP ratio rising only modestly to 38.2%, from 37.6% a year earlier. This positions Manitoba with the fourth-highest debt burden among Canadian provinces.

In 2014–15, the Province completed total borrowing of $5.4 billion, primarily sourced through domestic markets, while one U.S. dollar deal was also transacted. DBRS's practice is to net pre-financing against debt, which amounted to $235 million for tax-supported obligations and $170 million for Manitoba Hydro in response to strong investor demand and an ongoing low-rate environment. Debt management practices remain prudent as the Province reported no unhedged foreign currency exposure and only moderate floating rate debt (22% of total debt) as of March 31, 2015. Furthermore, the Province aims for a smooth maturity profile and tries to limit maturing debt to no more than $2.0 billion in any fiscal year. This adds stability to borrowing costs, which accounted for only 5.3% of total revenues in 2014–15.

Sizable and growing unfunded pension liabilities continue to pressure DBRS-adjusted debt metrics. At March 31, 2015, unfunded pension liabilities were estimated at $2.3 billion, up 10.9% from the previous year. The civil service superannuation plan and teachers' pension plan account for majority of unfunded pension obligations. DBRS notes that contribution rates have been increasing annually since 2012 for both plans and indexing is limited to two-thirds of the national CPI, conditional upon one-half of the increase being funded within pension assets. The government periodically borrows to fund cash contributions to the plans in an effort to reduce unfunded liabilities, although no substantive changes have been made to plan design recently.

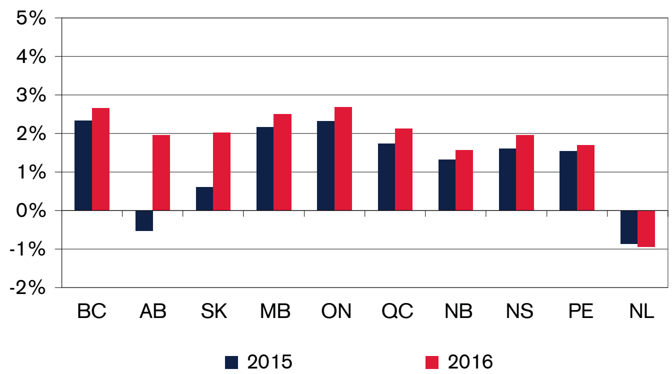
Outlook

For 2015–16, DBRS-adjusted debt is projected to rise by $1.9 billion, or 7.7%, and reflects ongoing deficits, capital spending in excess of amortization and rising unfunded pension liabilities. This is expected to push the debt-to-GDP ratio up to 39.6%, a level not seen since the late 1990s. Gross borrowing requirements are forecast at $4.7 billion and will be used to fund: refinancing needs ($2.0 billion); crown corporations ($2.0 billion), namely Manitoba Hydro; the fiscal shortfall and capital investment ($600 million). In addition, $100 million will be used to reduce unfunded pension obligations. At the time of writing, approximately $1.5 billion, or 30% of borrowing needs, had been fulfilled.

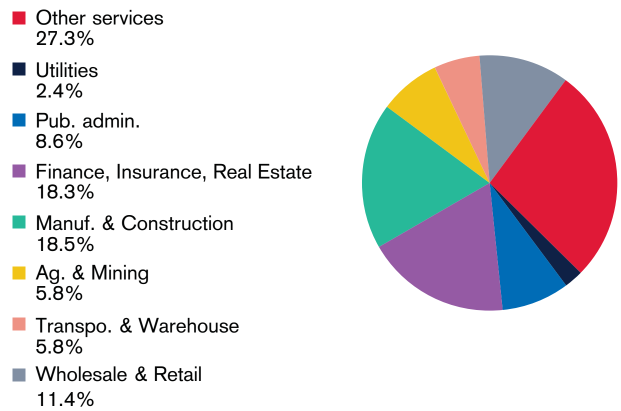
Over the medium term, debt growth is expected to slow to between 3% and 5% annually, as the Province continues to address the fiscal imbalance. Provided targets are adhered to, this points to the debt burden stabilizing around 40% of GDP, a modest deterioration from that envisioned last year but still considered manageable for the existing ratings.

Economy

Real GDP Growth Outlooks*



2014 Real GDP Breakdown**



*Based on major Canadian banks' forecasts at the time of this report. **Statistics Canada, CANSIM 379-0028. Figures may not add due to rounding.

The Province estimates real GDP to have grown by 2.4% in 2014, in line with the national average and somewhat above their 2014 budget assumption. However, based on preliminary estimates from Statistics Canada, real GDP is estimated to have grown by just 1.1% (GDP by industry). The Province attributes the difference to initially weak capital expenditure performance, which has subsequently been revised higher, although not yet reflected in Statistics Canada's GDP estimates, suggesting that upward revisions are likely later this fall. During the year, crop production was down from record levels achieved in 2013, but remained above the ten-year historical average. Meanwhile, crude oil production, which had been a key contributor to growth in recent years, is estimated to have slowed in 2014 as a result of the downturn in oil prices throughout the course of the year and lack of new discoveries. Driven by new developments in the utility sector, non-residential construction investment experienced solid growth, more than offsetting weakness in residential investment, which shrank year over year. In particular, housing starts declined by almost 17% due to a combination of lower construction of both single- and multi-family residences, although this was partially offset by renovation spending. Despite the decline, housing starts remained well above the historical ten-year average, supported by solid population growth. Manitoba has enjoyed relative success through the provincial nominee program, which has contributed to strong international migration in recent years and outweighed interprovincial outmigration. In turn, this helped to boost retail trade by a sound 4.3%. Employment growth was positive, albeit modest, during the year, with gains in full-time positions more than offsetting declines in part-time jobs. By sector, performance was mixed as health care, education and wholesale trade all saw healthy employment gains while business services, culture and recreation, and professional services experienced job losses. The unemployment rate remained unchanged at 5.4% in 2014 and represents the third-lowest rate among provinces.

Outlook

For 2015, the Province has assumed real GDP growth of 2.5%, which now appears somewhat optimistic in relation to the private sector consensus tracked by DBRS of 2.2%. Regardless, Manitoba is expected to be among the provincial growth leaders, given its well-diversified economy and only modest exposure to the energy sector. According to Statistics Canada's July 2015 survey of capital repair and expenditure intentions, non-residential construction, machinery and equipment investment is forecast to rise by 4.5% in 2015, well above the national average, which is expected to experience a decline. Population growth is projected to remain strong, likely buoyed by lower interprovincial outmigration to the more resource-intensive provinces. This should support the housing market, although a moderation is expected with starts forecast to decline by 3.5%, according to CMHC's second-quarter outlook. Both the labour force and employment are expected to see continued growth, helping to hold the unemployment rate steady. As of July 2015, the unemployment rate stood at 5.6%, slightly weaker than budget assumptions. Retail trade performance has also been soft, up only slightly year over year, as of May 2015.

While real growth has disappointed in both Canada and the United States in the first half of 2015, a strengthening U.S. economy and weaker Canadian dollar should be supportive of a transition to stronger export-led growth for Manitoba. In 2016, Manitoba is again expected to be among the provincial growth leaders as the current private sector consensus points to real GDP growth of 2.5%, above the 2.3% budget assumption. Slower than anticipated growth in the United States, or China, Manitoba's second-largest international export market, and weather and commodity prices volatility are viewed as key risks to the outlook over the medium term.

Economic Statistics

	For the year ended April 30						
	2016P	**2015P**	**2014**	**2013**	**2012**	**2011**	**2010**
Nominal GDP ($ millions)	69,178	66,136	63,715	61,323	59,126	55,758	52,896
Nominal GDP growth	4.6%	3.8%	3.9%	3.7%	6.0%	5.4%	4.5%
Real GDP growth	2.3%	2.5%	2.4%	2.2%	3.3%	2.1%	2.6%
Population (thousands)	1,316	1,299	1,282	1,265	1,250	1,234	1,221
Population growth	1.3%	1.3%	1.3%	1.2%	1.4%	1.0%	1.0%
Employment (thousands)	641	634	627	626	622	612	609
Unemployment rate	5.4%	5.4%	5.4%	5.4%	5.3%	5.5%	5.4%
Housing starts (units)	5,900	6,000	6,220	7,465	7,242	6,083	5,888
Retail sales ($ millions)	18,861	18,221	18,034	17,297	16,652	16,443	15,770
Inflation rate (CPI)	2.3%	0.9%	1.9%	2.2%	1.6%	3.0%	0.8%
Household income per capita ($)	30,337	32,488	31,704	31,396	30,579	29,314	28,260

Sources: Statistics Canada (actuals); Manitoba Finance and DBRS estimates; CMHC (housing projections). P= Projected. n.a. = not available.

Province of Manitoba

	Budget	Projected	Budget			
Budget Summary * ($ millions)	**2015-16**	**2014-15**	**2014-15**	**2013-14**	**2012-13**	**2011-12**
Revenue	14,912	14,720	14,561	14,152	13,540	13,621
Program expenditure	15,270	15,214	15,088	14,694	14,097	14,839
Program surplus (deficit)	**(358)**	**(494)**	**(527)**	**(542)**	**(557)**	**(1,218)**
Interest expense	791	781	803	759	765	748
DBRS-Adjusted Surplus (Deficit)	**(1,149)**	**(1,275)**	**(1,330)**	**(1,301)**	**(1,322)**	**(1,966)**
DBRS adjustments:						
Capital expenditures less amortization	727	851	973	779	762	965
Other non-recurring items, incl. assets sales	-	-	-	-	-	-
Surplus (deficit), as reported	(422)	(424)	(357)	(522)	(560)	(1,001)
Tax-supported debt + unfunded pension	**26,169**	**24,308**	**24,142**	**23,057**	**21,515**	**19,840**
Gross borrowing requirements (all entities)	4,725	5,357	4,766	4,528	3,493	5,424
Gross capital expenditure	1,331	1,396	1,553	1,333	1,273	1,441

* DBRS adjusts reported figures to exclude certain non-recurring items (e.g. asset sales). DBRS also recognizes capital expenditures as incurred, rather than as amortized, to improve inter-provincial comparability.

Selected Financial Indicators (DBRS-Adjusted)

Debt */GDP	39.6%	38.2%	38.6%	37.6%	36.4%	35.6%
Surplus (deficit)/GDP	(1.7%)	(2.0%)	(2.1%)	(2.1%)	(2.2%)	(3.5%)
Surplus (deficit)/total revenue	(7.7%)	(8.7%)	(9.1%)	(9.2%)	(9.8%)	(14.4%)
Interest costs/total revenue	5.3%	5.3%	5.5%	5.4%	5.6%	5.5%
Total tax revenues/total revenue	53.5%	52.0%	54.0%	50.7%	49.2%	47.6%
Federal transfers/total revenue	26.0%	26.6%	26.0%	27.2%	29.2%	31.8%
Program expenditures/total revenue	102.4%	103.4%	103.6%	103.8%	104.1%	108.9%
Health expenditures/total expenditures	37.9%	36.9%	36.4%	36.9%	36.7%	34.2%
Program expenditure growth	0.4%	3.5%	2.7%	4.2%	(5.0%)	9.4%
Total expenditure growth	0.4%	3.5%	2.8%	4.0%	(4.7%)	9.2%
Total revenue growth	1.3%	4.0%	2.9%	4.5%	(0.6%)	3.4%

* DBRS-defined: tax-supported debt + unfunded pension liabilities.

Background Political Information

Party in power:	New Democratic Party	**Legislature seats:**	37 of 57
Premier:	Greg Selinger	**Election to be held by:**	October 2015 *

* If a federal election is held within two weeks of this date, the provincial election will be postponed until April 2016.

Province of Manitoba

	Budget	Projected	Budget			
Revenue ($ millions)	**2015-16**	**2014-15**	**2014-15**	**2013-14**	**2012-13**	**2011-12**
Personal income tax	3,262	3,113	3,102	2,978	2,846	2,697
Retail sales tax	2,292	2,207	2,207	2,028	1,767	1,658
Corporate taxes	1,210	1,135	1,096	1,024	965	919
Gasoline & motive fuel tax	346	340	340	329	332	269
Tobacco taxes	252	267	286	272	252	249
Education property tax 1	493	475	701	434	380	554
Energy, mining, and other taxes	118	114	131	105	124	142
Total tax revenue	7,973	7,651	7,864	7,169	6,667	6,488
Lottery income 2	582	601	575	554	298	338
Liquor control commission 2	-	-	-	-	261	254
Manitoba Hydro	125	120	62	174	92	61
Natural resource levies	173	170	178	176	168	187
Fees, permits, licences, & other	2,178	2,267	2,089	2,237	2,102	1,961
Total Own-Source Revenue	**11,030**	**10,809**	**10,768**	**10,310**	**9,587**	**9,289**
Equalization payments	1,738	1,750	1,750	1,799	1,872	1,942
Canada health & social transfer	1,698	1,623	1,610	1,524	1,487	1,417
Other federal transfers	**445**	**539**	**433**	**519**	**594**	**973**
Total Federal Transfers	**3,882**	**3,912**	**3,793**	**3,842**	**3,953**	**4,332**
DBRS-Adjusted Revenue	**14,912**	**14,720**	**14,561**	**14,152**	**13,540**	**13,621**
Expenditures ($ millions)						
Health	6,088	5,900	5,791	5,706	5,454	5,328
Education and training	3,789	**3,709**	**3,895**	**3,562**	**3,339**	**3,389**
Social services	1,151	1,121	1,115	1,074	1,035	1,013
Justice	539	535	542	534	500	460
Infrastructure and transportation	433	534	500	501	540	525
Agriculture, economic, & resource dev.	1,994	1,818	1,977	1,914	1,883	2,209
Other general government	700	784	444	624	584	950
Capital expenditures less amortization 3	727	851	973	779	762	965
Other	(150)	(38)	(150)	-	-	-
DBRS-Adjusted Program Expenditures	**15,270**	**15,214**	**15,088**	**14,694**	**14,097**	**14,839**
Net interest expense 4	791	781	803	759	765	748
DBRS-Adjusted Expenditures	**16,061**	**15,995**	**15,891**	**15,453**	**14,862**	**15,587**
DBRS-Adjusted Surplus (Deficit)	**(1,149)**	**(1,275)**	**(1,330)**	**(1,301)**	**(1,322)**	**(1,966)**
DBRS adjustments:						
Capital expenditures less amortization 3	727	851	973	779	762	965
Non-recurring revenue (expenditure)	-	-	-	-	-	-
Surplus (deficit), as reported	**(422)**	**(424)**	**(357)**	**(522)**	**(560)**	**(1,001)**

1 Starting in 2012-13 , education property tax is now reported net of tax credits. As a result, figures are not directly comparable with prior years. 2 In 2013-14, the Manitoba Lotteries Commission was merged with the Manitoba Liquor Control Commission. 3 This adjustment converts capital expenditures to a pay-as-you-go basis. 4 Interest expense is net of sinking fund earnings.

Province of Manitoba

Balance Sheet (Consolidated Statement)

($ millions)	As at March 31		
Financial Assets	**2014**	**2013**	**2012**
Cash and cash equivalents	1,802	1,522	1,579
Amounts receivable	1,548	1,661	1,647
Loans & advances 1	11,828	10,871	10,050
Equity in gov't enterprises	3,820	3,766	3,617
Net tangible capital assets	10,599	9,842	9,097
Other assets	2,488	2,655	2,934
Total Financial Assets	**32,085**	**30,317**	**28,924**

	As at March 31		
Liabilities	**2014**	**2013**	**2012**
A/P and accrued charges	4,043	3,862	3,936
Debt 1	32,662	30,602	28,742
Unamortized for. exch. fluc.	(33)	(39)	(44)
Unfunded pension liability	2,038	1,828	1,634
Other liabilities	-	-	-
Total Liabilities	**38,710**	**36,253**	**34,268**
Accumulated Deficit	**(6,625)**	**(5,936)**	**(5,344)**
Total Liabilities	**32,085**	**30,317**	**28,924**

Net Public Sector Debt *	As at March 31							
($ millions)	**2016B**	**2015P**	**2014**	**2013**	**2012**	**2011**	**2010**	**2009**
Net general purpose debt 2	17,560	16,318	15,730	14,851	13,956	11,907	10,949	9,739
Crown corporation & gov't agencies	3,034	2,655	2,511	2,246	1,926	1,641	1,478	1,341
Schools and universities	710	671	590	538	495	461	432	384
Health facilities	1,535	1,477	1,262	1,149	1,094	1,015	949	831
Municipalities 3	926	926	926	903	735	723	602	544
Net Tax-Supported Debt	**23,765**	**22,047**	**21,019**	**19,687**	**18,206**	**15,747**	**14,410**	**12,839**
Self-supporting debt:								
Manitoba Hydro 2	14,171	12,418	10,838	9,609	8,999	8,362	7,730	7,499
Total net public sector debt	**37,936**	**34,465**	**31,857**	**29,296**	**27,205**	**24,109**	**22,140**	**20,338**
Unfunded Pension Liabilities 4	2,404	2,261	2,038	1,828	1,634	1,731	1,768	1,991
Per Capita (CAD) 4								
Tax-supp. debt + unf. pension liabilities	20,150	18,960	18,221	17,205	16,082	14,316	13,386	12,382
Total public sector debt	29,211	26,883	25,175	23,427	22,051	19,747	18,319	16,980
As a % of GDP 4								
Tax-supp. debt + unf. pension liabilities	39.6%	38.2%	37.6%	36.4%	35.6%	33.0%	31.9%	28.6%
Total public sector debt	57.4%	54.1%	51.9%	49.5%	48.8%	45.6%	43.7%	39.2%
Debt Breakdown by Currency 5								
Cdn$ pay	n/a	100%	100%	100%	100%	100%	100%	100%
Non-CAD pay	n/a	0%	0%	0%	0%	0%	0%	0%
Fixed/Floating Rate Debt Breakdown 5								
Fixed rate	n/a	78%	79%	77%	80%	76%	82%	80%
Floating rate	n/a	22%	21%	23%	20%	24%	18%	20%

Unfunded Pension Liabilities (Tax-Supported) ($ millions)	**Valuation Date**	**Mar. 31, 2015**
Civil service 6	Dec. 2012	2,603
Teachers 6	Jan. 2012	3,323
Other plans (includes MLAs, judges, other)	Various	1,835
	Total liabilities:	7,761
	Less pension assets:	5,500
	Total Unfunded Pension Liabilities:	**2,261**

Gross Debt Maturity Profile Public Sector Debt	($ millions)	%
2015-16	3,840	10.8%
2016-17	2,680	7.5%
2017-18	2,526	7.1%
2018-19	2,736	7.7%
2019-20	2,509	7.1%
2020-21 to 2024-25	7,089	20.0%
2025-26+	14,148	39.8%
Total	**35,528**	**100%**

* Net of sinking fund and Debt Retirement Fund assets. B = budget; P = projected; n/a = not applicable.
1 Includes asset and liability items related to debt of The Manitoba Hydro-Electric Board and Manitoba Lotteries Corporation. 2 Excludes pre-financing of $235 million in 2014-15P for general purpose debt and $170 million for Manitoba Hydro. 3 Not guaranteed by the Province. DBRS estimate for 2015P; 2016B. 4 Excludes pension liabilities of self-supporting Crown corporations. 5 Net of hedges (if any). Floating rate debt is defined as debt that matures or is repriced within 12 months. 6 Civil Service includes amounts for indexation and unamortized pension adjustment; Teachers includes amount for indexation.

Rating History

	Current	2014	2013	2012	2011	2010
Issuer Rating	A (high)	A (high)	A (high)	A (high)	NR	NR
Long-Term Debt	A (high)	A (high)	A (high)	A (high)	A (high)	A (high)
Short-Term Debt	R-1 (middle)	R-1 (middle)	R-1 (middle)	R-1 (middle)	R-1 (middle)	R-1 (middle)

Previous Action

- Confirmed, October 17, 2014.

Related Research

- Rating Canadian Provincial Governments, June 9, 2015.
- DBRS Criteria: Guarantees and Other Forms of Explicit Support, February 23, 2015.
- Manitoba Hydro-Electric Board, The, October 23, 2014.

Treasury Bill Limit

- $1.95 billion.

Previous Report

- Manitoba, Province of, Rating Report, October 17, 2014.

Notes:
All figures are in Canadian dollars unless otherwise noted.

For the definition of Issuer Rating, please refer to Rating Definitions under Rating Policy on **www.dbrs.com**.

Generally, Issuer Ratings apply to all senior unsecured obligations of an applicable issuer, except when an issuer has a significant or unique level of secured debt.

S&P Global Ratings (/en_US/web/guest/home)

Province of Manitoba Downgraded To 'AA-' From 'AA' On Rising Debt Burden; Outlook Is Negative

14-Jul-2016 16:44 EDT
View Analyst Contact Information

OVERVIEW

We are lowering our long-term issuer credit and senior unsecured ratings on the Province of Manitoba to 'AA-' from 'AA'.
The downgrade reflects our expectation that Manitoba will have a sustained tax-supported debt burden of more than 270% of consolidated operating revenue in the next several years, which is materially higher than that of domestic and international peers.
We are affirming our 'A-1+' short-term rating on the province as well as the 'A-1+' short-term rating on Manitoba Hydro-Electric Board's US$500 million commercial paper program, which is unconditionally guaranteed by the province.
The negative outlook reflects our view that the province faces significant medium-term challenges to restoring its fiscal balances and that there is a one-in-three chance that the province's financial targets will not be met and that budgetary performance will deteriorate in the next two years.

RATING ACTION

On July 14, 2016, S&P Global Ratings lowered its long-term issuer credit and senior unsecured debt ratings on the Province of Manitoba to 'AA-' from 'AA'. At the same time, S&P Global Ratings affirmed its 'A-1+' short-term debt rating on the province as well as its 'A-1+' short-term rating on Manitoba Hydro-Electric Board's (MHEB) US$500 million commercial paper program, which is unconditionally guaranteed by the province. The outlook is negative.

RATIONALE

The downgrade reflects our assessment of the significant rise in Manitoba's debt burden. This stems from the province's ongoing fiscal shortfalls and significant debt on-lent to the MHEB, which we no longer consider self-supporting mainly due to its high and rising leverage. The negative outlook reflects our view that there is at least a one-in-three chance that we could lower the ratings by one notch in the next 12 to 24 months should Manitoba fail to meet its fiscal targets, leading to further weakening in its budgetary performance.

When the newly elected Progressive Conservative party introduced its first budget at the end of May 2016, a mere six weeks after coming to power, it also stated that the year-end deficit for fiscal 2016 would be more than C$1 billion, over 50% higher than the previous government's update provided in March 2016. The new government has set a target to return to fiscal balance within a lengthy eight years, but did not provide a detailed fiscal plan beyond the current fiscal year. Based on our current estimates, we expect that in fiscal 2016, Manitoba will have generated a modest operating deficit of 2.2% of operating revenues (all figures adjusted by S&P Global Ratings) and a sizable after-capital deficit of about 10% of total revenues. In our base-case scenario we assume the government, aided by its majority mandate in the legislature and our expectation of moderating capital expenditures, will be able to enact appropriate fiscal measures to maintain average budgetary performance in our 2015-2019 forecast horizon, with near-balanced operating results and after-capital deficits averaging around 10% of total revenues.

We expect Manitoba's projected fiscal shortfalls to propel further growth in what is already a very high debt burden, which is the province's principal rating constraint. By our estimates, Manitoba's tax-supported debt (including on-lent debt to MHEB) could approach 320% of consolidated operating revenues by fiscal 2018, compared with 274% in fiscal 2015. This growth is substantially higher than what we foresaw last year, primarily reflecting the province's larger-than-expected fiscal deficits and capital financing requirements. Our assessment of the province's debt burden fully incorporates the debt on-lent to MHEB (nearly 40% of total tax-supported debt), whereas previously we had considered MHEB's status as a self-supporting entity to be a mitigating factor. We also expect Manitoba's interest expense will remain close to 6% of operating revenues over the next two years.

Nevertheless, supporting the ratings is our view of Manitoba's very strong economy, strong financial management and budgetary flexibility, low contingent liabilities, adequate liquidity, and a very predictable and well-balanced institutional framework.

In our view, Manitoba's economy remains well-diversified and wealthy despite slower growth in 2015, with nominal GDP per capita averaging almost US$43,200 in 2014-2016. The provincial government estimates that real GDP increased by 1.6% in 2015, from 2.4% in 2014. Under our base-case scenario, we expect real GDP growth of 2.2% and 2.4% and nominal GDP growth of 3.8% and 4.4% in 2016 and 2017, respectively, providing moderate support to Manitoba's revenues. The 2015 unemployment rate was 5.6%, up modestly from 5.4% in 2014. The rate was the second-lowest of all provinces and well below the 2015 national average of 6.9%. The unemployment rate should stay fairly steady in the next two years although the government has forecast employment growth to weaken to 0.4% and 1.1% in 2016 and 2017, respectively, from 1.5% in 2015.

Manitoba's financial management is strong in our view. The government's majority mandate eases any constraints on its ability to pass the revenue and expenditure measures needed to restore fiscal balances. Nevertheless, the government has chosen a gradual path to fiscal recovery from the deficits the province faced after the 2008-2009 financial crisis and we expect to see more concrete measures in the next budget. The province's revenue forecasts are reliable, in our opinion, and we view expenditure controls as fairly strong historically, although the large negative adjustment to the estimated deficit at the most recent fiscal year-end clouds this view somewhat. The management and governance of government business enterprises are strong, in our opinion. We believe debt management and related policies are prudent and risk-averse, and cash management and cash-flow planning are effective. The government is supported by what we view as a capable and experienced administration.

The province also has strong budgetary flexibility, in our view. For fiscal 2016, modifiable (own-source) revenues represented an estimated 74% of operating revenues, which was consistent with values in the past 10 years. Capital spending accounted for about 10% of total expenditures. We estimate that, in our fiscal years 2015-2019 base-case forecast, these ratios will remain largely stable on an average basis. We believe that tax competition between Alberta and other Canadian provinces, especially those in western Canada, has decreased due to changes in Alberta's corporate and personal income taxation regime, thereby lessening the constraints on Manitoba's ability to raise tax revenues. As well, we expect that the government will remain committed to its core infrastructure commitments, which we believe reduces the likelihood that it will postpone a material amount of projected capital spending.

In our view, Manitoba has low contingent liabilities mostly related to the operational risk associated with MHEB's power-generating assets, which we believe could produce considerable liabilities for the province. In our view, the government would be likely to support the utility in the event of financial distress. We believe that any such support would be limited to less than 10% of the province's consolidated operating revenues. Contingent liabilities beyond the utility are modest.

The ratings also continue to reflect our assessment of the very predictable and well-balanced institutional framework for all Canadian provinces. Manitoba receives significant transfers from the federal government through Canada Health Transfer and Canada Social Transfer payments. Total transfers (operating and capital) were an estimated C$3.8 billion in fiscal 2016 (about 26% of adjusted operating revenues).

Liquidity

The province has adequate liquidity. In fiscal 2017, we estimate that it will hold an average of almost C$1.9 billion in adjusted free cash and liquid assets, which represents about 54% of the forecast debt service requirements during the year. At the end of fiscal 2015, it also held sinking fund holdings of close to C$1.3 billion, of which we include only the portion that has been earmarked for debt redemption in the next 12 months in our liquidity calculation. We believe that Manitoba has strong access to capital markets for short- and long-term debt funding, which bolsters our assessment of the province's liquidity. We expect that liquidity will remain adequate in the next several years, with free cash and investments sufficient to cover more than 40% of next 12 months' debt service.

OUTLOOK

The negative outlook reflects our view that in the next two years there is at least a one-in-three chance that we could lower the ratings by one notch if Manitoba's new government fails to take the revenue and expenditure measures needed to avoid sustained deficits, or after-capital deficits exceed 10% of total revenues. We could also lower the ratings if forecast free cash and liquid assets were not sufficient to cover at least 40% of the upcoming debt service requirements. We could revise the outlook back to stable if the government introduces strong measures leading to materially and rapidly improving budgetary balances.

KEY STATISTICS

Table 1

Province of Manitoba -- Economic Statistics

	--Year ended Dec. 31--				
	2013	**2014**	**2015e**	**2016bc**	**2017bc**
Population*	1,265,342	1,280,242	1,293,400	1,308,921	1,323,319
Population growth (%)	1.2	1.2	1.0	1.2	1.1
GDP per capita (C$)	49,063	50,129	50,942	52,251	53,957
Real GDP growth (%)	2.7	2.1	1.6	2.2	2.4
Unemployment rate (%)	5.4	5.4	5.6	5.8	5.5

Note: The data and ratios above result in part from S&P Global Ratings' own calculations, drawing on national as well as international sources, reflecting S&P Global Ratings' independent view on the timeliness, coverage, accuracy, credibility, and usability of available information. Sources typically include national statistical offices. *As of July 1. e--Estimate. bc--Base case.

Table 2

Province of Manitoba -- Financial Statistics

				--Budget year*--					
(Mil. C$)	**2013**	**2014**	**2015e**	**2016bc**	**2017bc**	**2018bc**	**2016dc**	**2017dc**	**2018dc**
Operating revenues	13,956	14,424	14,604	15,099	15,442	15,794	15,019	15,352	15,609
Operating expenditures	13,759	14,165	14,921	15,078	15,391	15,710	15,178	15,503	15,834
Operating balance	197	259	(317)	21	51	83	(159)	(151)	(225)
Operating balance (% of operating revenues)	1.4	1.8	(2.2)	0.1	0.3	0.5	(1.1)	(1.0)	(1.4)
Capital revenues	29	13	43	43	43	43	43	43	43
Capital expenditures	1,333	1,534	1,561	1,625	1,500	1,500	1,855	1,750	1,500
Balance after capital accounts	(1,107)	(1,262)	(1,899)	(1,791)	(1,406)	(1,374)	(1,972)	(1,858)	(1,682)
Balance after capital accounts (% of total revenues)	(7.9)	(8.7)	(13.0)	(11.8)	(9.1)	(8.7)	(13.1)	(12.1)	(10.7)
Debt repaid	2,648	2,977	2,645	2,570	2,388	2,239	2,570	2,388	2,239
Balance after debt repayment and onlending	(3,755)	(4,239)	(4,544)	(4,361)	(3,794)	(3,613)	(4,542)	(4,246)	(3,921)
Balance after debt repayment and onlending (% of total revenues)	(26.8)	(29.4)	(31.0)	(28.8)	(24.5)	(22.8)	(30.2)	(27.6)	(25.1)
Gross borrowings	4,528	5,358	6,309	6,500	4,267	3,987	6,500	4,767	4,237
Balance after borrowings	773	1,119	1,765	2,139	474	374	1,958	522	316
Operating revenue growth (%)	4.9	3.4	1.2	3.4	2.3	2.3	2.8	2.2	1.7
Operating expenditure growth (%)	3.5	3.0	5.3	1.1	2.1	2.1	1.7	2.1	2.1
Modifiable revenues (% of operating revenues)	72.6	73.6	73.8	72.8	72.8	72.8	72.7	72.8	72.8
Capital expenditures (% of total									

expenditures)	8.8	9.8	9.8	11.0	8.9	8.7	10.9	10.1	8.7
Direct debt (outstanding at year-end)	28,813	31,979	36,242	41,543	43,193	45,067	41,543	43,693	45,817
Direct debt (% of operating revenues)	206.5	221.7	248.2	275.1	279.7	285.4	276.6	284.6	293.5
Tax-supported debt (% of consolidated operating revenues)	229.6	245.1	273.9	304.8	308.7	313.7	306.4	313.7	322.2
Interest (% of operating revenues)	5.9	5.8	5.7	5.8	6.2	6.3	5.8	5.8	5.8
Debt service (% of operating revenues)	24.9	26.5	23.8	22.8	21.6	20.5	22.9	21.4	20.2

Note: The data and ratios above result in part from S&P Global Ratings' own calculations, drawing on national as well as international sources, reflecting S&P Global Ratings' independent view on the timeliness, coverage, accuracy, credibility, and usability of available information. The main sources are the financial statements and budgets, as provided by the issuer. Base case reflects S&P Global Ratings' expectations of the most likely scenario. Downside case represents some but not all aspects of S&P Global Ratings' scenarios that could be consistent with a downgrade. Upside case represents some but not all aspects of S&P Global Ratings' scenarios that could be consistent with an upgrade. *Budget year 2016 is fiscal year 2017. e--Estimate. bc--Base case. dc-Downside case.

RATINGS SCORE SNAPSHOT

Table 3

Province of Manitoba -- Ratings Score Snapshot

Key rating factors	Assessment
Institutional Framework	Very predictable and well-balanced
Economy	Very strong
Financial Management	Strong
Budgetary Flexibility	Strong
Budgetary Performance	Average
Liquidity	Adequate
Debt Burden	Very high
Contingent Liabilities	Low

Note: S&P Global Ratings' ratings on local and regional governments are based on eight main rating factors listed in the table above. Section A of S&P Global Ratings' "Methodology For Rating Non-U.S. Local And Regional Governments," published on June 30, 2014, summarizes how the eight factors are combined to derive the foreign currency rating on the government.

KEY SOVEREIGN STATISTICS

Sovereign Risk Indicators (/en_US/web/guest/article/-/view/sourceId/9598282), May 3, 2016. Interactive version available at http://www/spratings.com/sri (http://www/spratings.com/sri)

RELATED CRITERIA AND RESEARCH

Related Criteria

Methodology For Rating Non-U.S. Local And Regional Governments (/en_US/web/guest/article/-/view/sourceId/8636295), June 30, 2014
Methodology And Assumptions For Analyzing The Liquidity Of Non-U.S. Local And Regional Governments And Related Entities And For Rating Their Commercial Paper Programs (/en_US/web/guest/article/-/view/sourceId/5654122), Oct. 15, 2009
Criteria: Use of CreditWatch And Outlooks (/en_US/web/guest/article/-/view/sourceId/5612636), Sept. 14, 2009

Related Research

2015 Annual International Public Finance Default Study and Rating Transitions (/en_US/web/guest/article/-/view/sourceId/9703918), June 30, 2016

In accordance with our relevant policies and procedures, the Rating Committee was composed of analysts that are qualified to vote in the committee, with sufficient experience to convey the appropriate level of knowledge and understanding of the methodology applicable (see 'Related Criteria And Research'). At the onset of the committee, the chair confirmed that the information provided to the Rating Committee by the primary analyst had been distributed in a timely manner and was sufficient for Committee members to make an informed decision.

After the primary analyst gave opening remarks and explained the recommendation, the Committee discussed key rating factors and critical issues in accordance with the relevant criteria. Qualitative and quantitative risk factors were considered and discussed, looking at track-record and forecasts.

The committee's assessment of the key rating factors is reflected in the Ratings Score Snapshot above.

The chair ensured every voting member was given the opportunity to articulate his/her opinion. The chair or designee reviewed the draft report to ensure consistency with the Committee decision. The views and the decision of the rating committee are summarized in the above rationale and outlook. The weighting of all rating factors is described in the methodology used in this rating action (see 'Related Criteria And Research').

RATINGS LIST
Downgraded

	To	From
Manitoba (Province of)		
Issuer credit rating	AA-/Negative/A-1+	AA/Stable/A-1+
Senior unsecured	AA-	AA

Ratings Affirmed

Manitoba (Province of)	
Commercial paper	
Global scale	A-1+
Canada scale	A-1(High)
Manitoba Hydro-Electric Board	
Commercial paper	A-1+

Certain terms used in this report, particularly certain adjectives used to express our view on rating relevant factors, have specific meanings ascribed to them in our criteria, and should therefore be read in conjunction with such criteria. Please see Ratings Criteria at www.standardandpoors.com for further information. Complete ratings information is available to subscribers of RatingsDirect at www.globalcreditportal.com and at www.spcapitaliq.com. All ratings affected by this rating action can be found on the S&P Global Ratings' public website at www.standardandpoors.com. Use the Ratings search box located in the left column.

Primary Credit Analyst: Adam J Gillespie, Toronto (1) 416-507-2565; adam.gillespie@spglobal.com (mailto:adam.gillespie@spglobal.com)
Secondary Contact: Bhavini Patel, CFA, Toronto (1) 416-507-2558; bhavini.patel@spglobal.com (mailto:bhavini.patel@spglobal.com)

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Manitoba Hydro Corporate Update

Presentation to S & P

October 27, 2015

Agenda

- Corporate Profile
- Financial Results
- Capital Overview
- Power Sale Contracts
- Liquidity & Projected Financing
- Financial Targets
- Rates

Corporate Profile

- One of the largest integrated electricity and natural gas utilities in Canada.
- 562,000 electricity customers and 275,000 natural gas customers.
- $18 billion total assets.
- $2 billion annual revenues.
- 5,701 MW generating capability.
- Among the lowest electricity rates in North America.
- One of Canada's "Top 100" Employers.

Financial Results

Financial Results

For the Fiscal Years Ended March 31st ($ are in millions)

	Actual 2014	Actual 2015	Forecast 2016	Forecast 2017
Revenues (net of cost of gas)	$2,060	$2,046	$2,121	$2,203
Expenses	(1,908)	(1,943)	(2,007)	(2,144)
Non-Controlling Interest	22	11	12	8
Net Income	$174	$114	$126	$67
Total Assets	$15,639	$17,594	$19,100	$22,030
Retained Earnings	$2,716	$2,830	$2,901	$2,968
Financial Ratios:				
Debt/ Equity	76:24	79:21	81:19	83:17
Interest Coverage	1.28	1.17	1.17	1.07

Manitoba Hydro

Financial Results - IFRS

For the 3 Months Ended June 30th ($ are in millions)

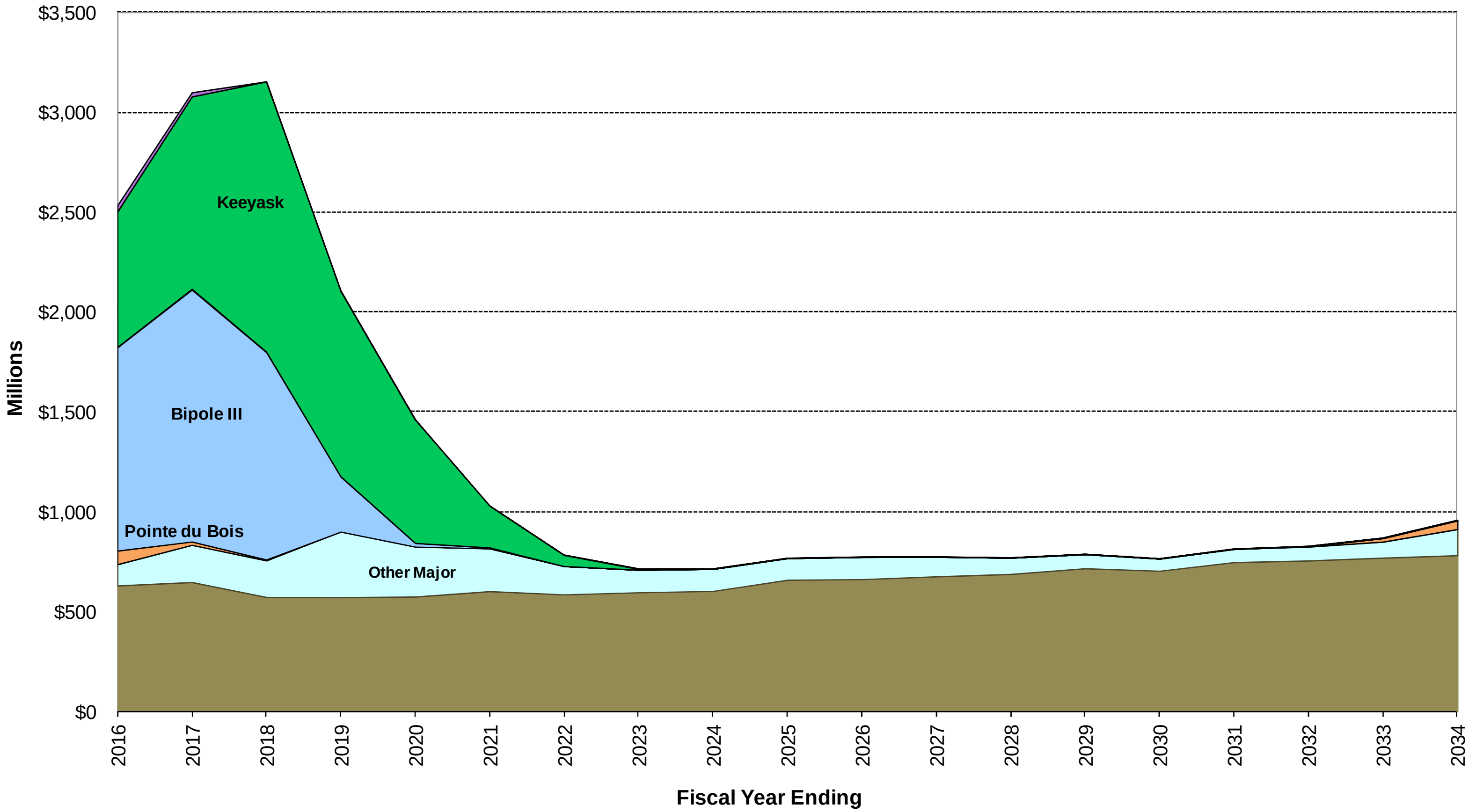
	3 Months June 2014	3 Months June 2015
Revenues	$502	$502
Expenses	(505)	(534)
Regulatory Deferral Movement	7	0
Non-Controlling Interest	6	3
Net Income	$10	($29)
Total Assets	$15,779	$17,929
Retained Earnings	$2,653	$2,697

Capital Overview

Major Generation and Transmission Projects

Bipole III	(2018/19)	$4.65 billion
695 MW Keeyask G.S.	(2019/20)	$6.50 billion

Capital Expenditures (CEF14)



Long-Term Export Contracts

Future Long-Term Export Contracts

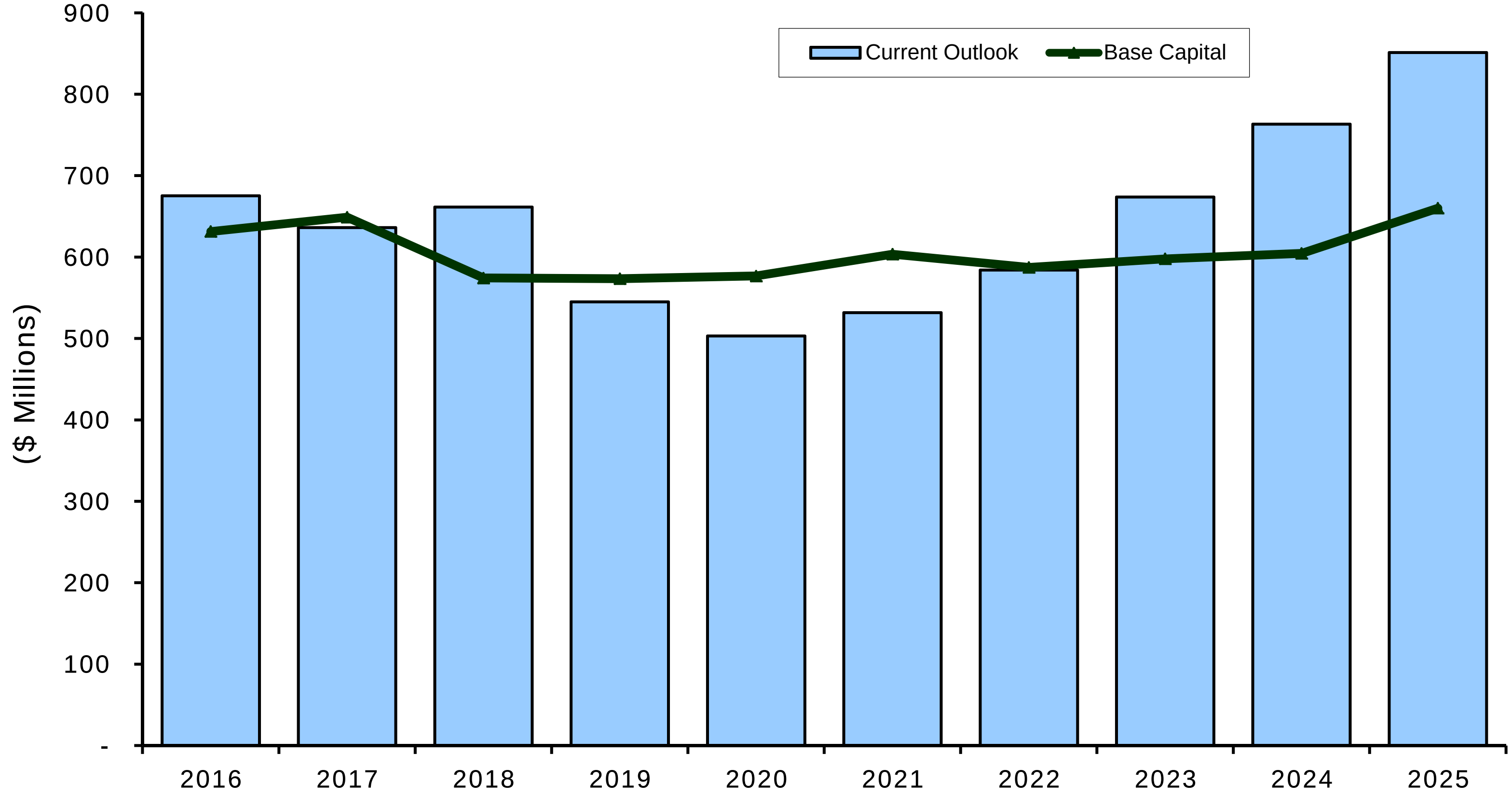
- Minnesota Power
  - 250 MW System Participation Sale starting in 2020 (15 years)
  - 133 MW Energy Sale starting in 2020 (20 years)
- Northern States Power
  - 125 MW System Power Sale starting in 2021 (4 years)
  - 75 MW System Power Sale starting in 2016 (4 years)
- SaskPower
  - 25 MW System Power Sale starting in 2015 (7 years)
  - 100 MW System Power Sale starting in 2020 (20 years)

Future Long-Term Export Contracts

- Wisconsin Public Service
  - 108 MW System Power Sale starting in 2016 (5 years)
  - 100 MW System Power Sale starting in 2021 (4 years)
  - 100 MW Energy Sale starting in 2025 (4 years)
  - 308 MW System Power Sale dependent on Conawapa
  - 8 MW Energy Sale starting in 2023 (6 years)
- NextEra Energy
  - 100 MW Capacity Sale starting in 2016 (2 years)
- American Electric Power Energy Partners
  - 79/50 MW Capacity Sale starting in 2016 (4 years)

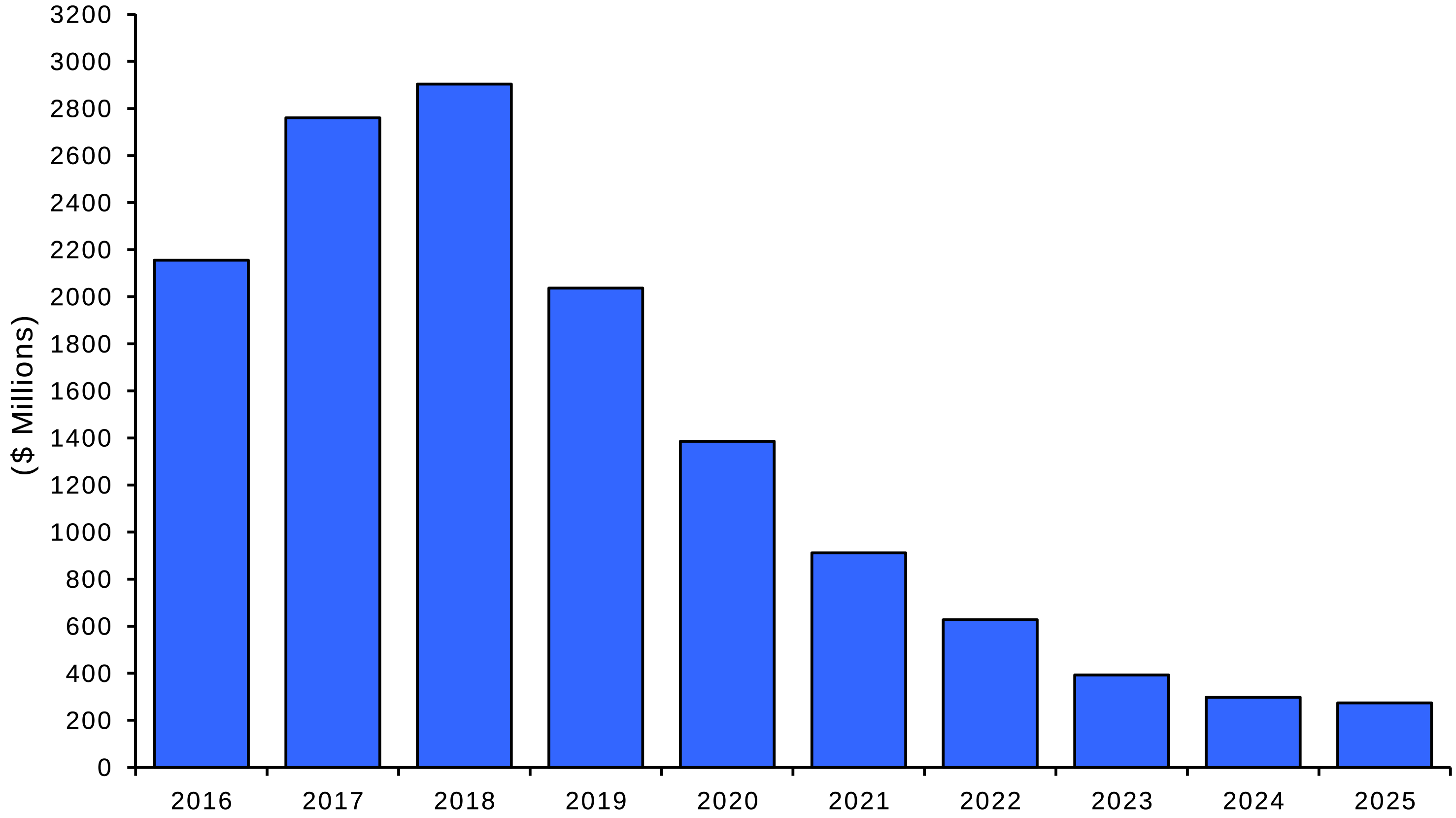
Liquidity & Financing

Cash Flow from Operations (IFF14)



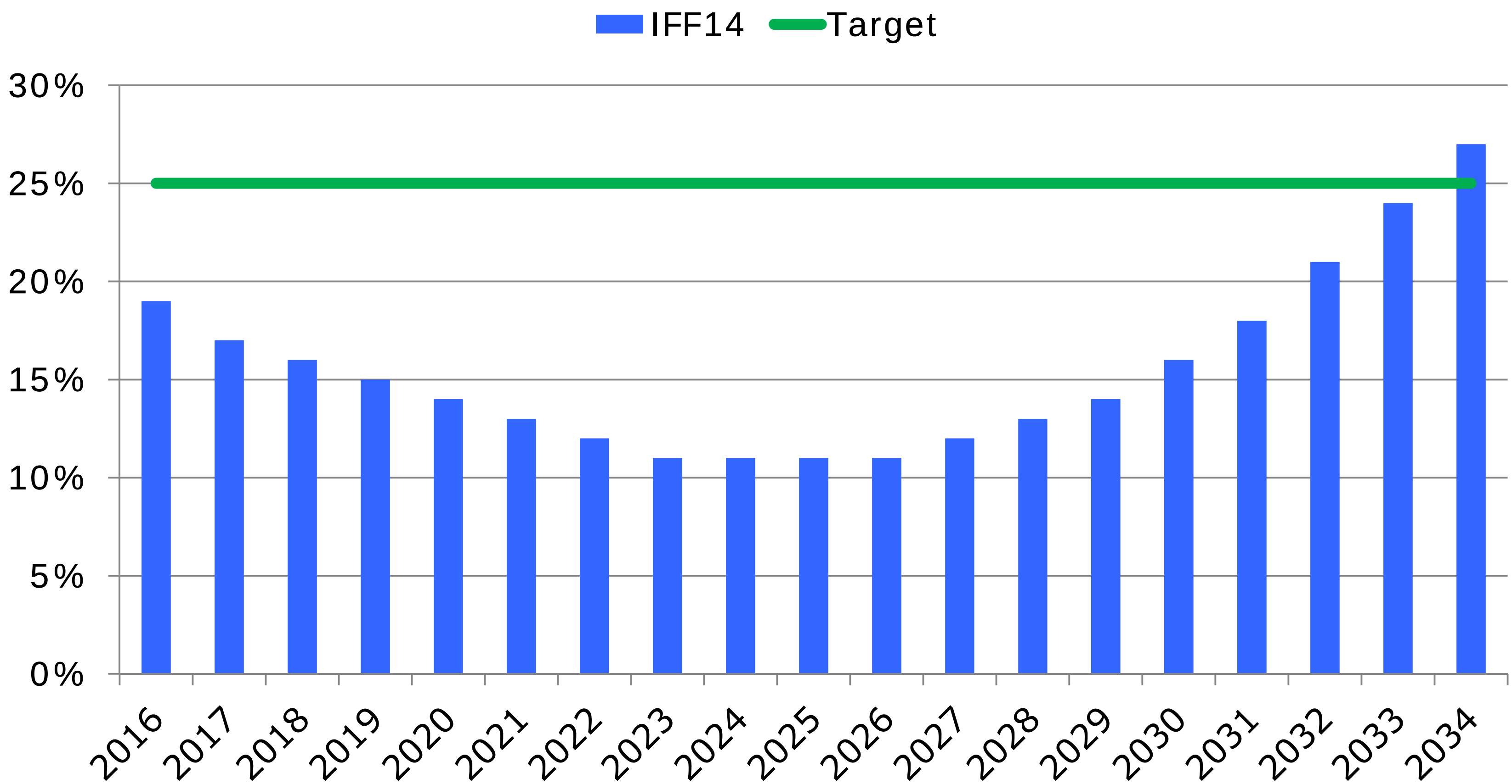
Manitoba Hydro

Forecasted New Debt Financing Requirements (IFF14)



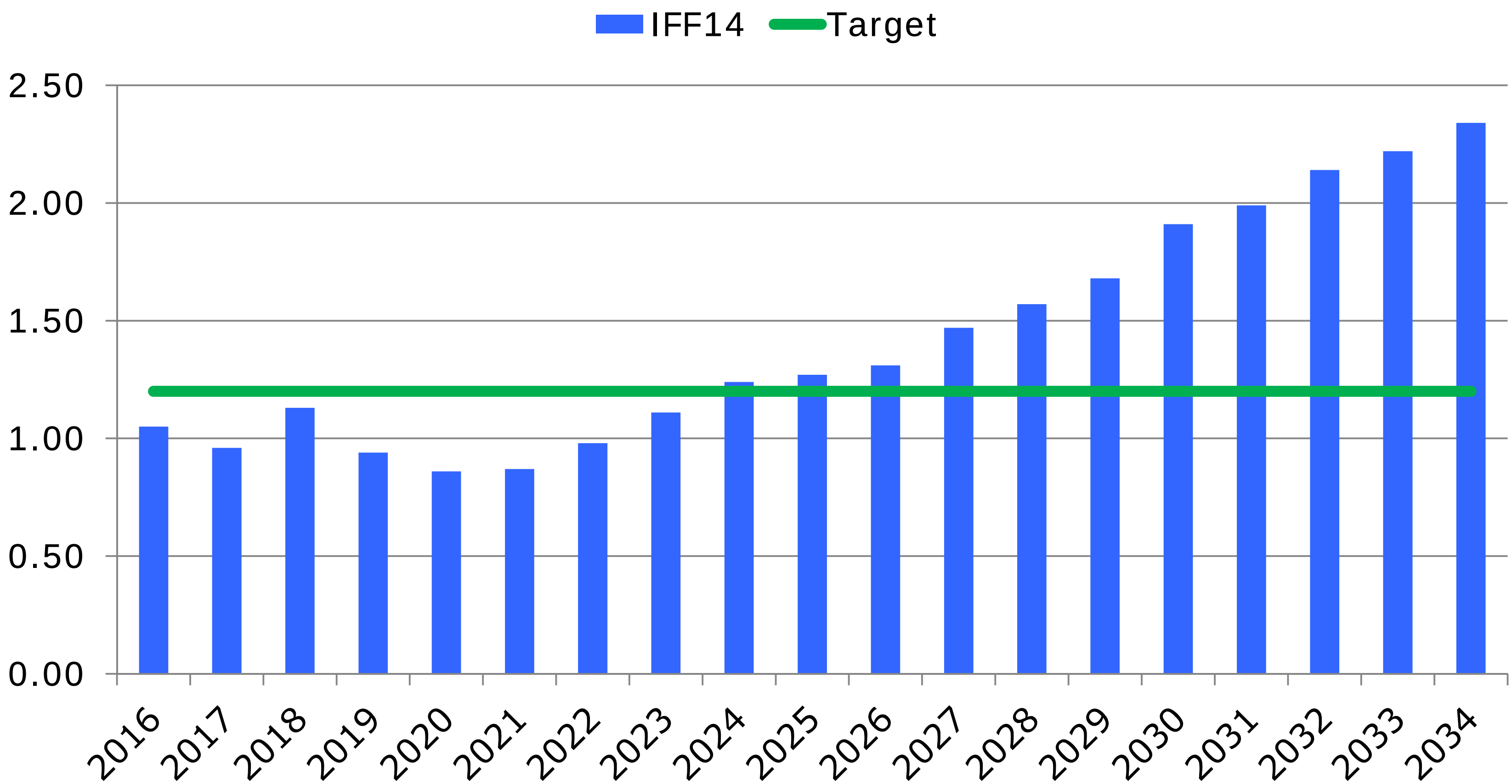
Financial Targets

Equity Ratio



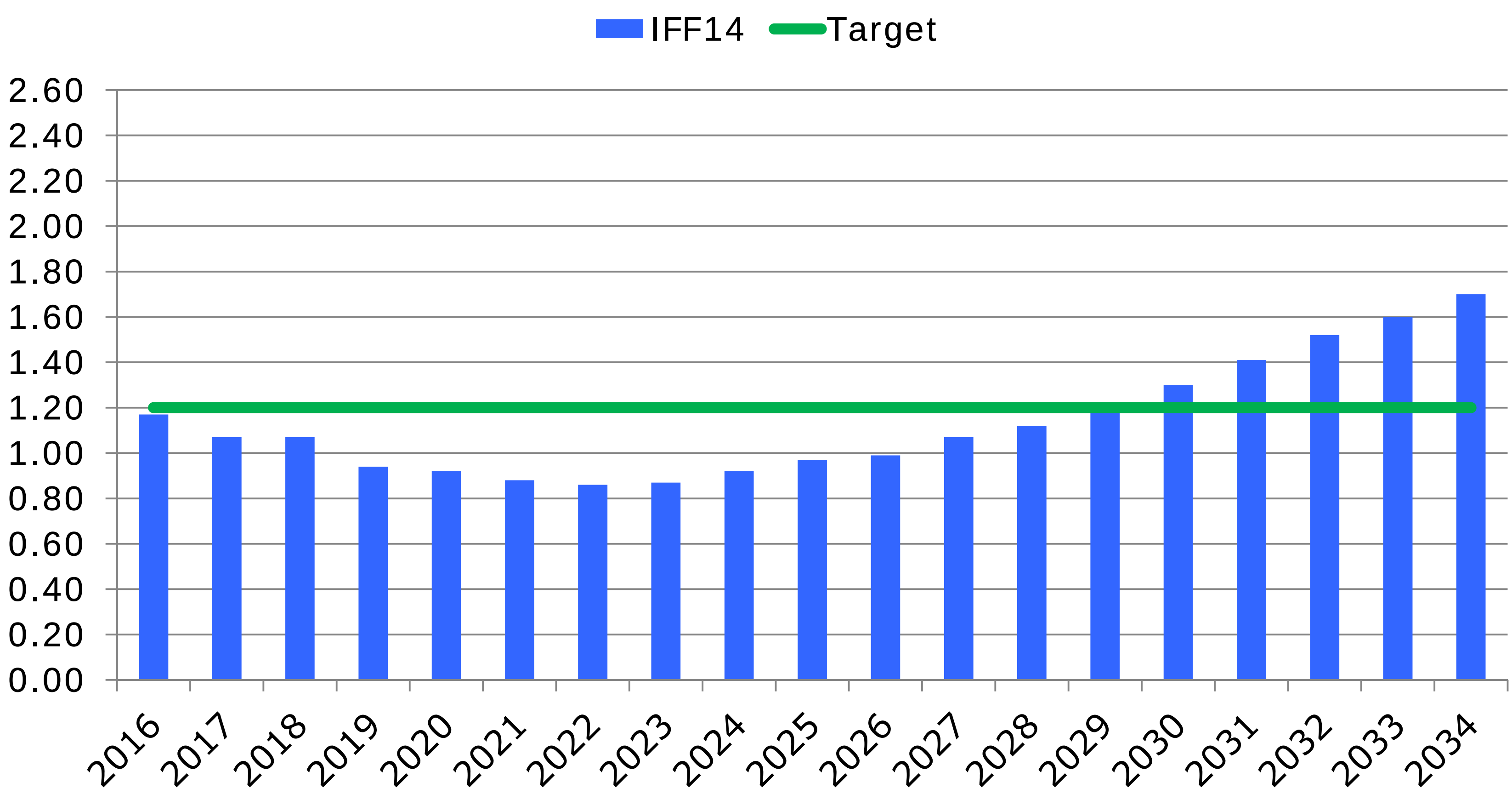
Manitoba Hydro

Capital Coverage Ratio



Manitoba Hydro

Interest Coverage Ratio

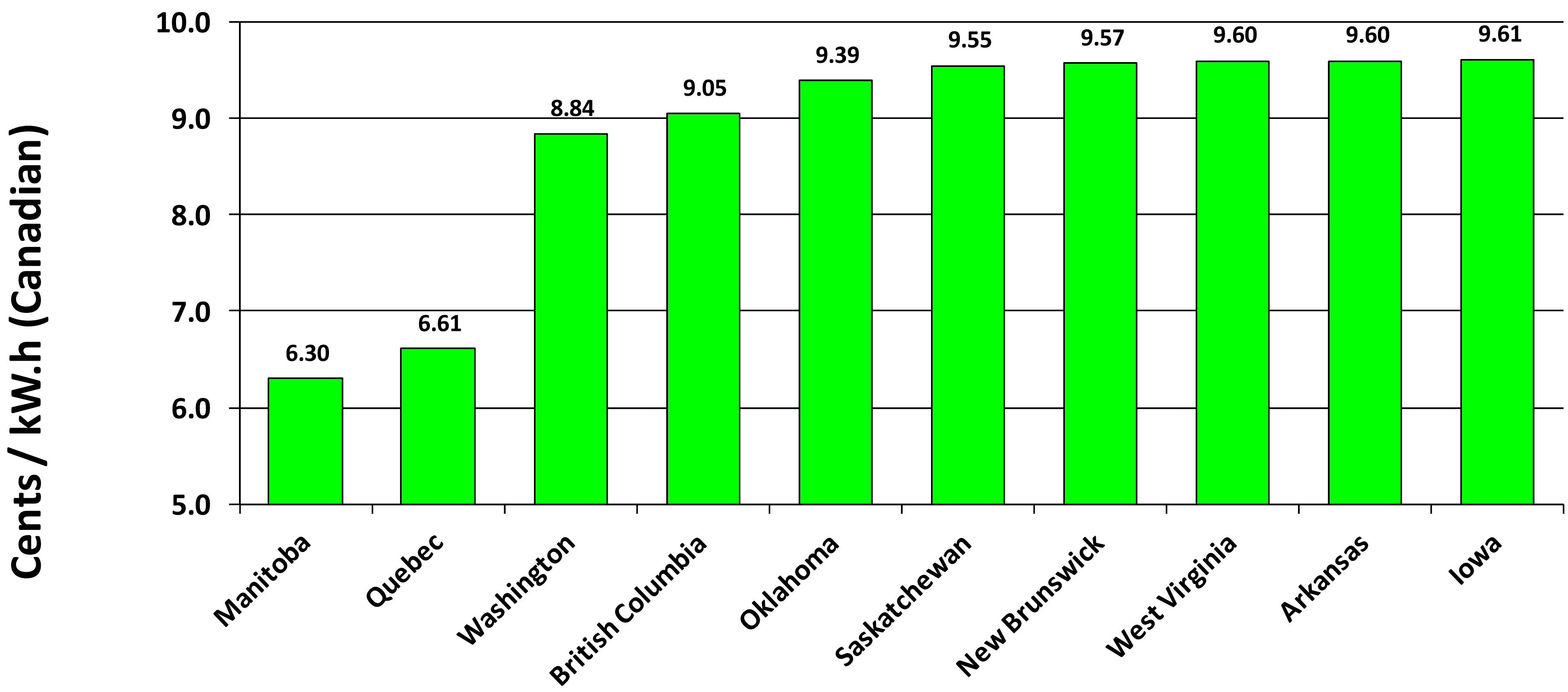


Manitoba Hydro

Rates

Average Retail Price of Electricity

Top 10 Provinces/ States in North America



Source: US Dept of Energy (December 2014) & Edison Electric Survey (January 2015)
(Exchange rate as of September 23, 2015: 1 US$ = 1.3278 Cdn)

Manitoba Hydro

Utility Rate Changes

	2007	2008	2009	2010	2011	2012	2013	2014	2015	Cumulative	Current Rate Index*
Manitoba Hydro	2.25%	5.00%	2.90%	2.80%	2.00%	4.40%	3.50%	2.75%	3.95%	33.7%	100
Hydro Quebec	1.90%	2.90%	1.20%	0.35%	-0.40%	-0.50%	2.41%	4.30%	2.90%	16.0%	105
BC Hydro	2.10%	0.83%	9.28%	7.29%	7.77%	7.07%	1.44%	9.00%	6.00%	63.2%	144
SaskPower	4.20%	0.00%	8.50%	4.50%	0.00%	0.00%	4.90%	5.50%	3.00%	34.7%	152
NB Power	5.90%	3.00%	3.00%	3.00%	0.00%	0.00%	2.00%	2.00%	1.60%	22.3%	164
NS Power	3.80%	0.00%	9.30%	0.00%	6.05%	8.70%	3.00%	3.00%	0.00%	38.7%	212

* The Current Rate Index is based on the Edison Electric Institute's Survey and compares the average price per kWh (in Canadian $) for the various utilities. Manitoba Hydro's average price is $0.0630/kWh. The Survey is based on 12 months data ending December 2014.

Domestic Rate Strategy

Recent PUB Board Orders

- On July 24, 2015 the PUB issued Orders 73/15 and 77/15 which approved a 3.95% across-the-board rate increase for all customer classes effective August 1, 2015
- On January 16, 2015, Manitoba Hydro filed its 2015/16 & 2016/17 General Rate Application with the PUB, in which Manitoba Hydro requested approval, on an interim basis, of a 3.95% across-the-board rate increase effective April 1, 2015 and another effective April 1, 2016.

Domestic Rate Strategy

Future Plans

- MH will continue to request domestic rate increases in support of the Finance goal in the Corporate Strategic Plan to "maintain a strong financial structure."

Manitoba Hydro

Questions?

Manitoba Hydro Corporate Update

Presentation to Moody's

July 20, 2017

Agenda

- Corporate Profile
- Financial Results
- Capital Overview
- Power Sale Contracts
- Liquidity & Projected Financing
- Financial Targets
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- Among the lowest electricity rates in North America.
- One of Canada's "Top 100" Employers.

Manitoba Hydro

Financial Results

Financial Results - IFRS

For the Fiscal Years Ended March 31st ($ are in millions)

	2016	Preliminary 2017	Forecast 2018	Forecast 2019
Revenues	$2,258	$2,327	$2,512	$2,780
Expenses	(2,266)	(2,323)	(2,425)	(2,578)
Net Movement in Regulatory Balances	47	55	93	109
Non-Controlling Interest	10	12	8	1
Net Income	$49	$71	$188	$312
Total Assets and Regulatory Deferral Balance	$19,779	$22,338	$25,533	$28,366
Retained Earnings	$2,828	$2,899	$3,087	$3,399
Financial Ratios:				
Debt/ Equity	83:17	84:16	85:15	85:15
EBITDA Interest Coverage	1.57	1.54	1.66	1.83

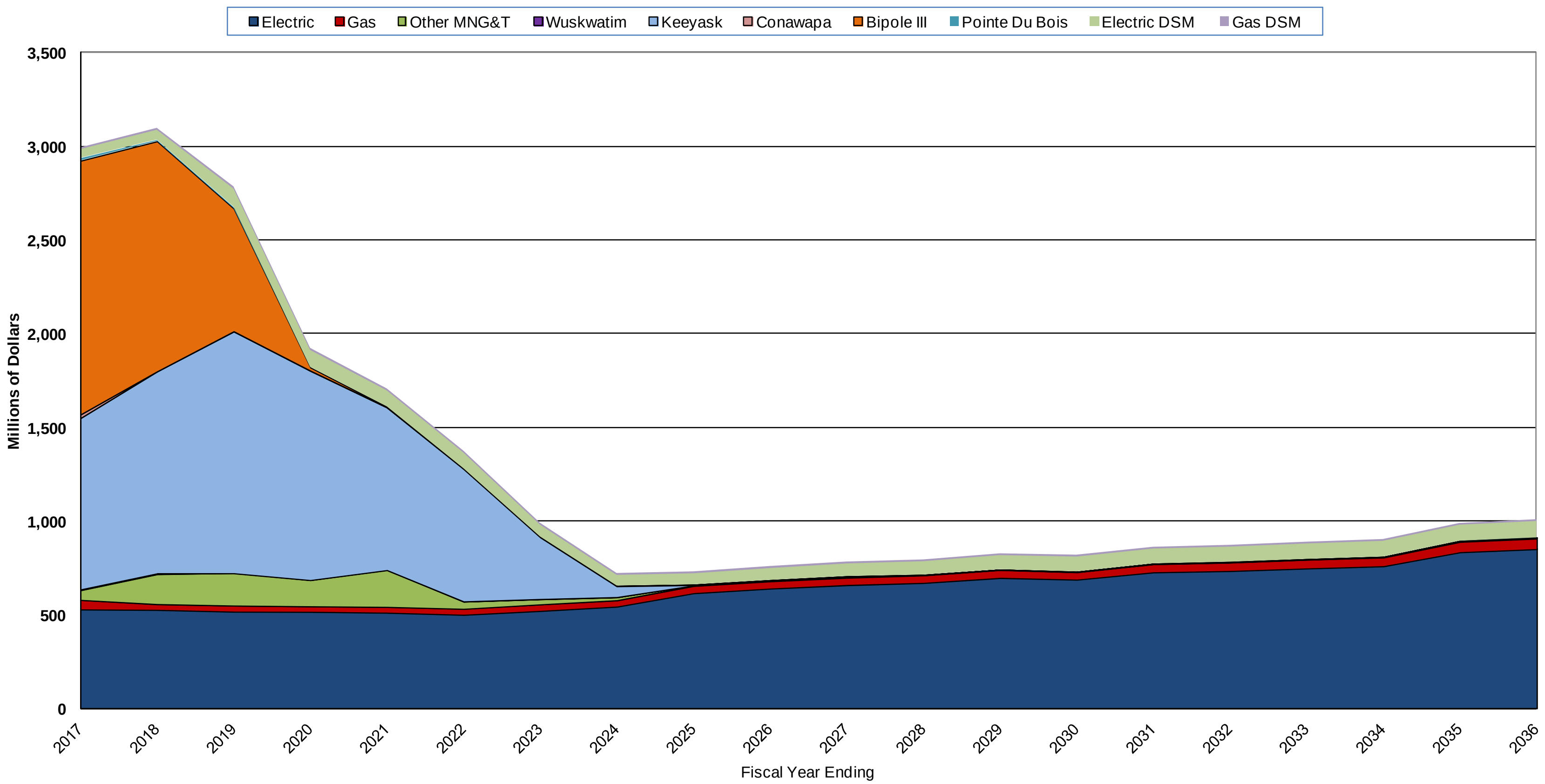
Manitoba Hydro

Capital Overview

Major Generation and Transmission Projects

- Bipole III (2018/19) $5.04 billion
- 695 MW Keeyask G.S. (2021/22) $8.70 billion

Capital Expenditures (CEF16)



Manitoba Hydro

Long-Term Export Contracts

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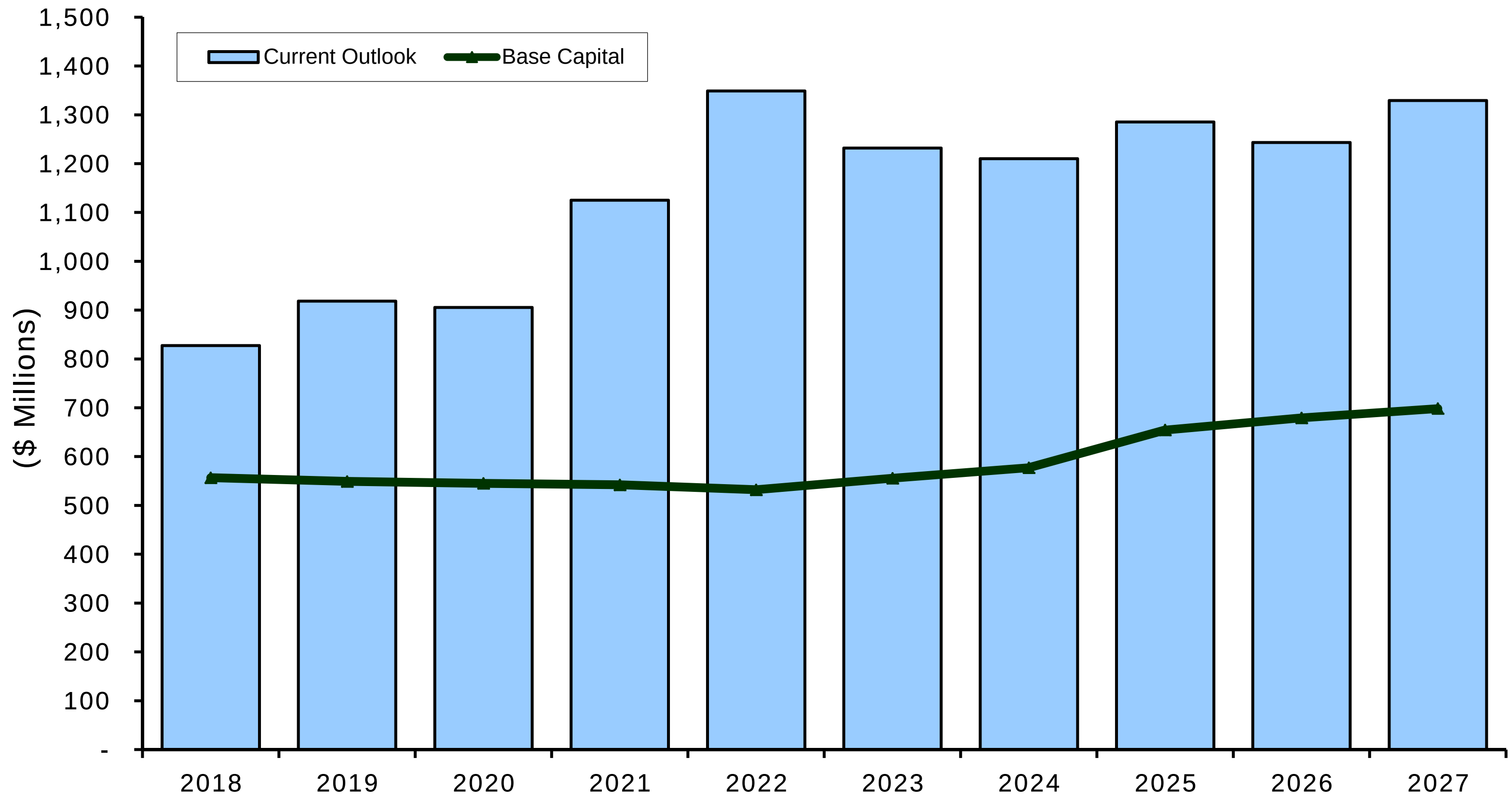
  - 100 MW Energy Sale starting in 2025 (4 years)
  - 308 MW System Power Sale TBD (Ending in 2036)
  - 8 MW Energy Sale starting in 2023 or 2021 (6 years)
- Basin Electric Power
  - 50 MW Capacity Sale starting in 2018 (2 years)
  - 50 MW Capacity Sale starting in 2020 (1 year)

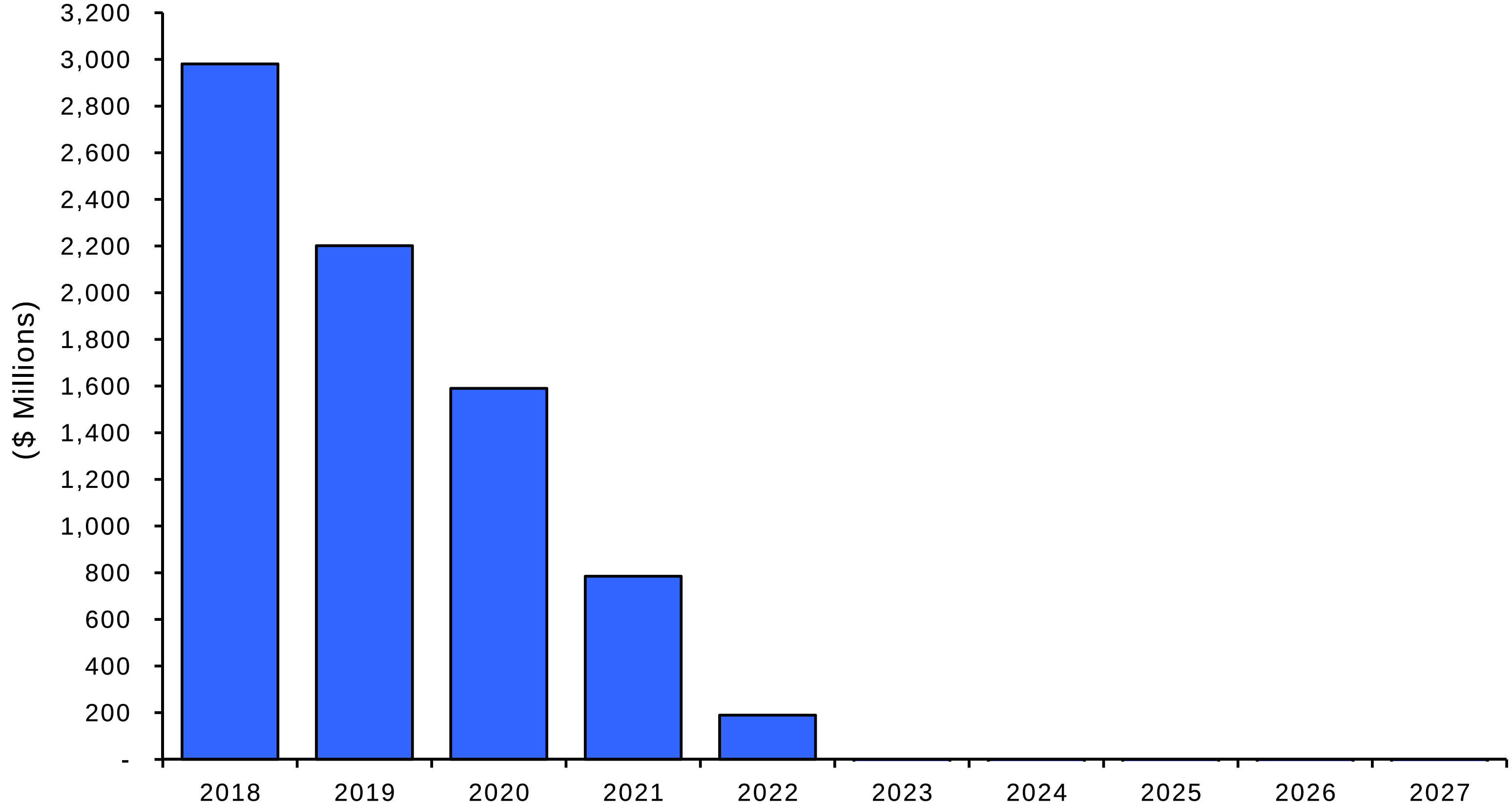
Liquidity & Financing

Cash Flow from Operations (IFF16 Update)



Manitoba Hydro

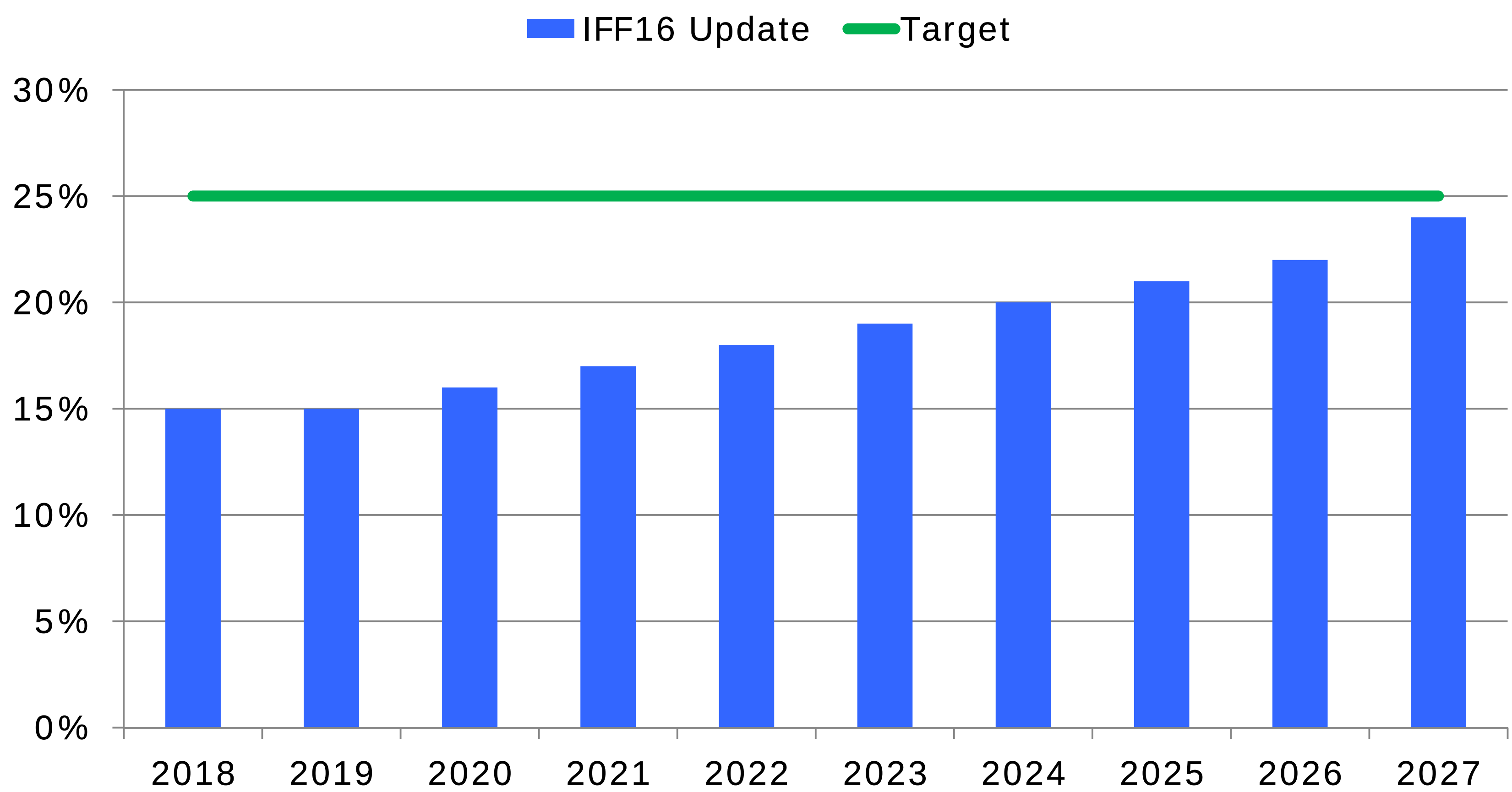
Forecasted New Debt Financing Requirements (IFF16 Update)



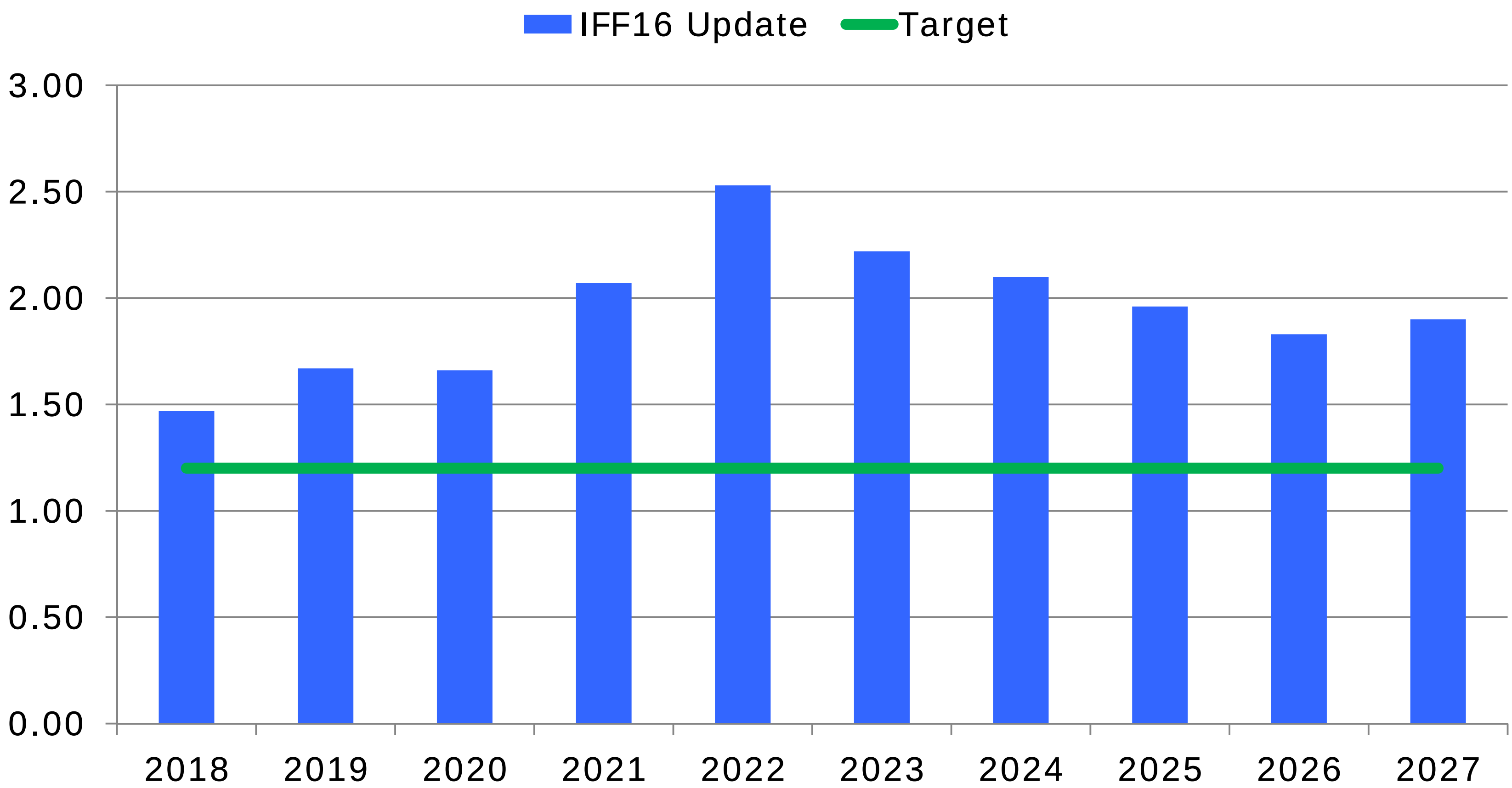
Manitoba Hydro

Financial Targets

Equity Ratio

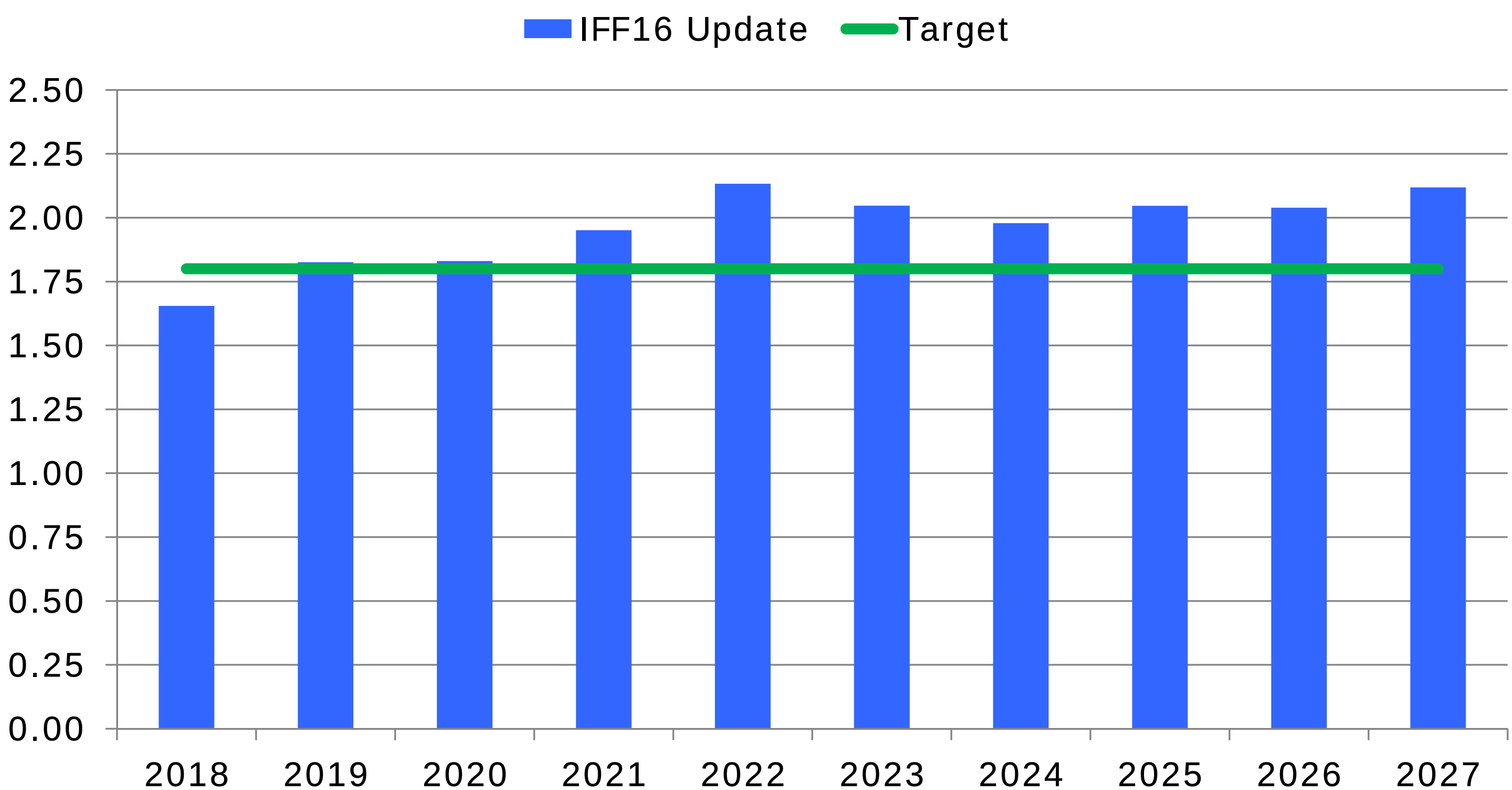


Capital Coverage Ratio



Manitoba Hydro

EBITDA Interest Coverage Ratio

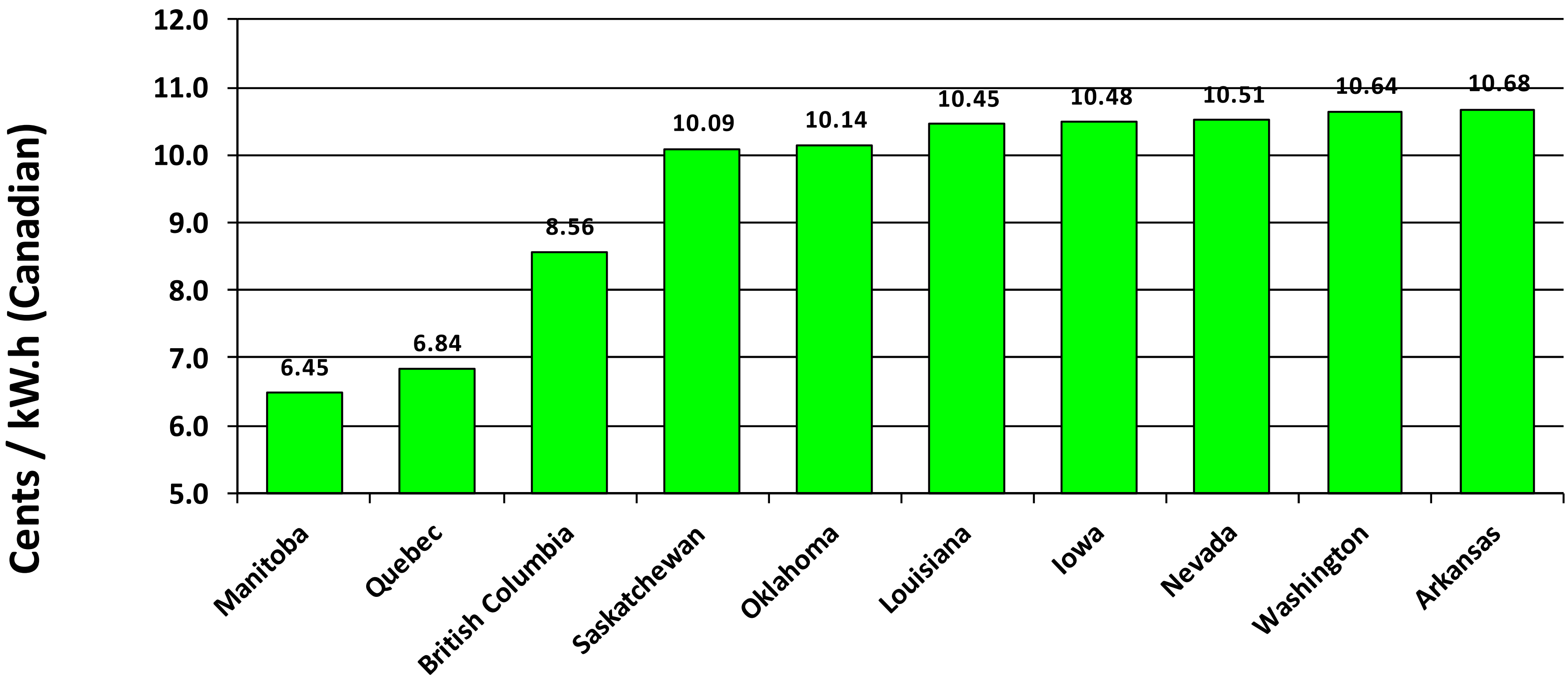


Manitoba Hydro

Rates

Average Retail Price of Electricity

Top 10 Provinces/ States in North America



Source: US Dept of Energy (December 2016) & Edison Electric Survey (January 2017)
(Exchange rate as of April 26 ,2017: 1 US$ = 1.3592 Cdn)

Manitoba Hydro

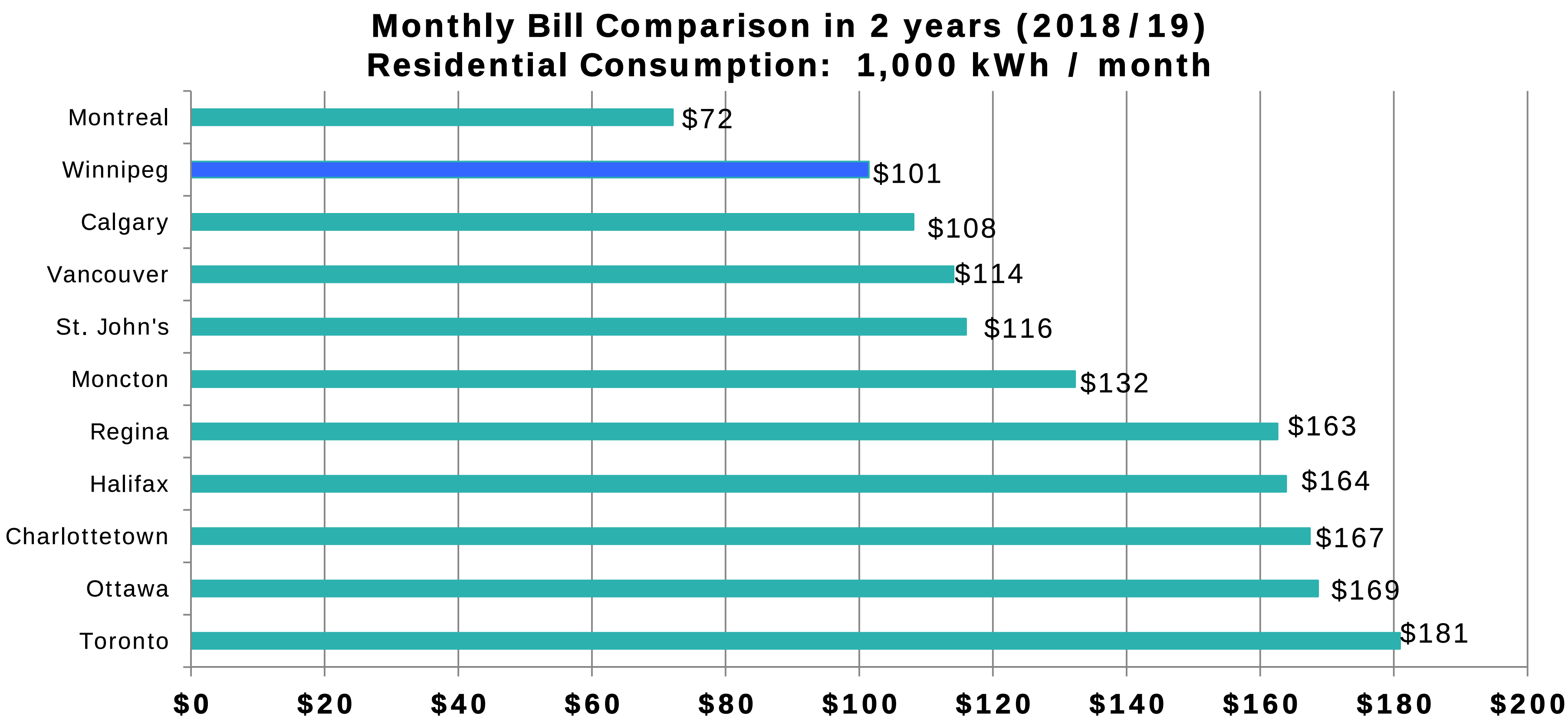
Utility Rate Changes

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Cumulative	Current Rate Index*
Manitoba Hydro	2.25%	5.00%	2.90%	2.80%	2.00%	4.40%	3.50%	2.75%	3.95%	3.36%	7.90%	49.1%	100
Hydro Quebec	1.90%	2.90%	1.20%	0.35%	-0.40%	-0.50%	2.41%	4.30%	2.90%	0.70%	0.70%	17.6%	106
BC Hydro	2.10%	0.83%	9.28%	7.29%	7.77%	7.07%	1.44%	9.00%	6.00%	4.00%	3.50%	75.7%	132
SaskPower	4.20%	0.00%	8.50%	4.50%	0.00%	0.00%	4.90%	5.50%	5.00%	5.00%	3.50%	49.2%	156
New Brunswick Power	5.90%	3.00%	3.00%	3.00%	0.00%	0.00%	2.00%	2.00%	1.60%	1.66%	1.77%	26.6%	162
Nova Scotia Power	3.80%	0.00%	9.30%	0.00%	6.05%	8.70%	3.00%	3.00%	0.00%	-1.00%	1.50%	39.4%	205

* This index is based on the Edison Electric Institute Survey and compares the average price per kWh for the various utilities. Manitoba Hydro's average price is $0.0648/kWh in Canadian dollars based on 12 months data ending December 2016.

Residential Monthly Bill Comparison

In 2018/19 – Residential Consumption 1,000 kWh/ month



Domestic Rate Strategy

Recent PUB Board Orders

- On May 5, 2017, Manitoba Hydro filed its 2017/18 & 2018/19 General Rate Application with the PUB. In this filing, Manitoba Hydro is requesting approval of a 7.9% rate increase effective August 1, 2017 and a further 7.9% rate increase effective April 1, 2018.
- On July 11, 2017, Manitoba Hydro filed an update to its financial forecast for electric operations as part of the 2017/18 & 2018/19 General Rate Application with the PUB.

Domestic Rate Strategy

Recent PUB Board Orders

- On May 17, 2016, the PUB issued Order 68/16 approving a 3.36% electricity rate increase for all customer classes effective August 1, 2016; Manitoba Hydro had requested a 3.95% across-the-board rate increase.

Domestic Rate Strategy

Future Plans

- MH will continue to request domestic rate increases in support of the Finance goal in the Corporate Strategic Plan to “maintain a strong financial structure.”

Questions?

Manitoba Hydro Corporate Update

Presentation to DBRS

June 8, 2017

Agenda

- Corporate Profile
- Financial Results
- Capital Overview
- Power Sale Contracts
- Liquidity & Projected Financing
- Financial Targets
- Rates

Corporate Profile

- One of the largest integrated electricity and natural gas utilities in Canada.
- 573,000 electricity customers and 279,000 natural gas customers.
- $22 billion total assets.
- $2 billion annual revenues.
- 5,680 MW generating capability.
- Among the lowest electricity rates in North America.
- One of Canada's "Top 100" Employers.

Financial Results

Financial Results - IFRS

For the Fiscal Years Ended March 31st ($ are in millions)

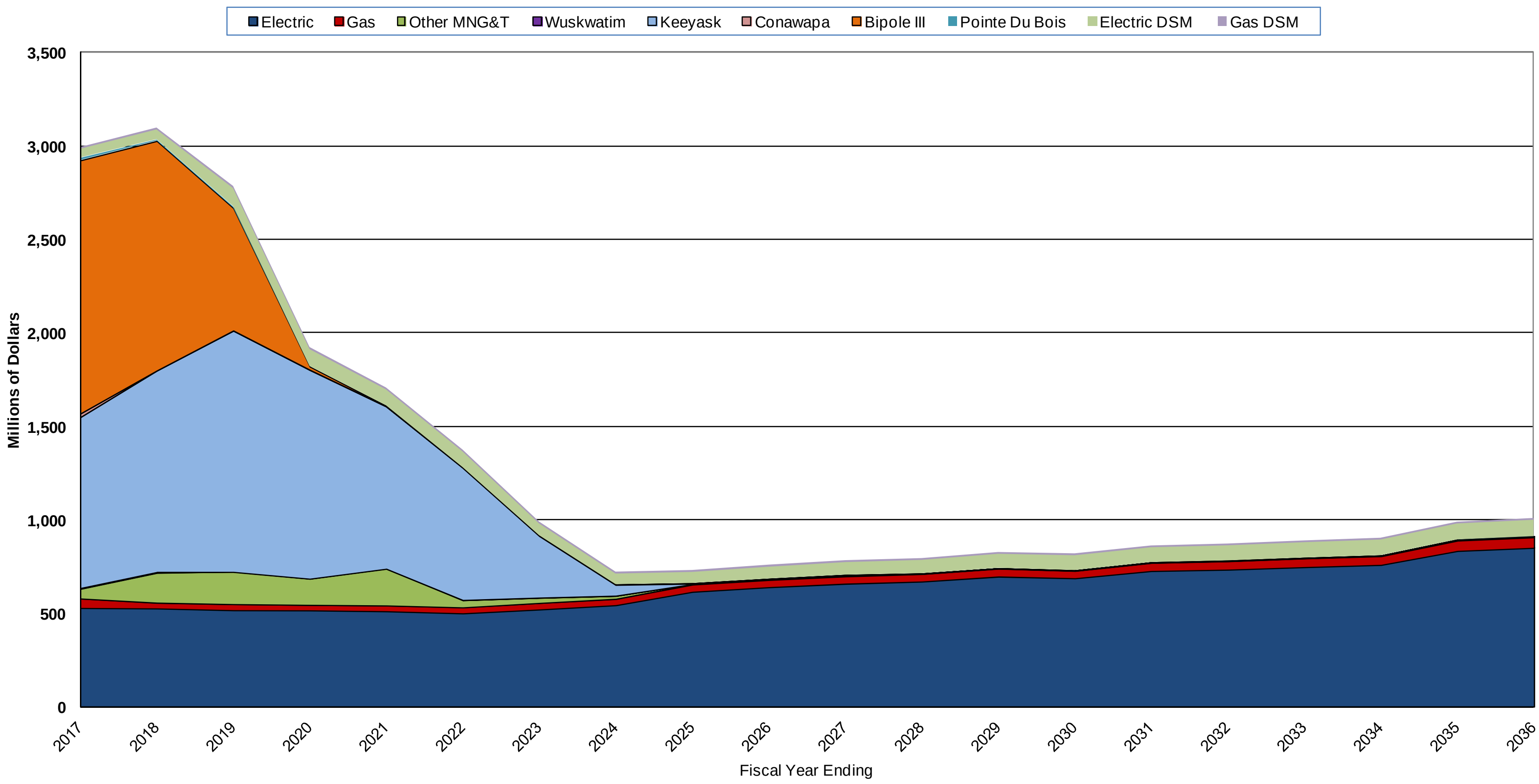
	2016	Preliminary 2017	Forecast 2018	Forecast 2019
Revenues	$2,258	$2,330	$2,442	$2,736
Expenses	(2,266)	(2,323)	(2,417)	(2,585)
Net Movement in Regulatory Balances	47	55	88	100
Non-Controlling Interest	10	12	9	1
Net Income	$49	$74	$122	$252
Total Assets and Regulatory Deferral Balance	$19,780	$22,341	$25,424	$28,390
Retained Earnings	$2,828	$2,902	$2,993	$3,245
Financial Ratios:				
Debt/ Equity	83:17	84:16	85:15	85:15
EBITDA Interest Coverage	1.55	1.51	1.60	1.79

Capital Overview

Major Generation and Transmission Projects

Bipole III	(2018/19)	$5.04 billion
695 MW Keeyask G.S.	(2021/22)	$8.70 billion

Capital Expenditures (CEF16)



Manitoba Hydro

Long-Term Export Contracts

Future Long-Term Export Contracts

- Minnesota Power
  - 250 MW System Participation Sale starting in 2020 (15 years)
  - 133 MW Energy Sale starting in 2020 (20 years)
- Northern States Power
  - 125 MW System Power Sale starting in 2021 (4 years)

Future Long-Term Export Contracts

- SaskPower
  - 100 MW System Power Sale starting in 2020 (20 years)
- Wisconsin Public Service
  - 100 MW System Power Sale starting in 2021 (4 years)
  - 100 MW Energy Sale starting in 2025 (4 years)
  - 308 MW System Power Sale TBD (Ending in 2036)
  - 8 MW Energy Sale starting in 2023 or 2021 (6 years)
- Basin Electric Power
  - 50 MW Capacity Sale starting in 2018 (2 years)
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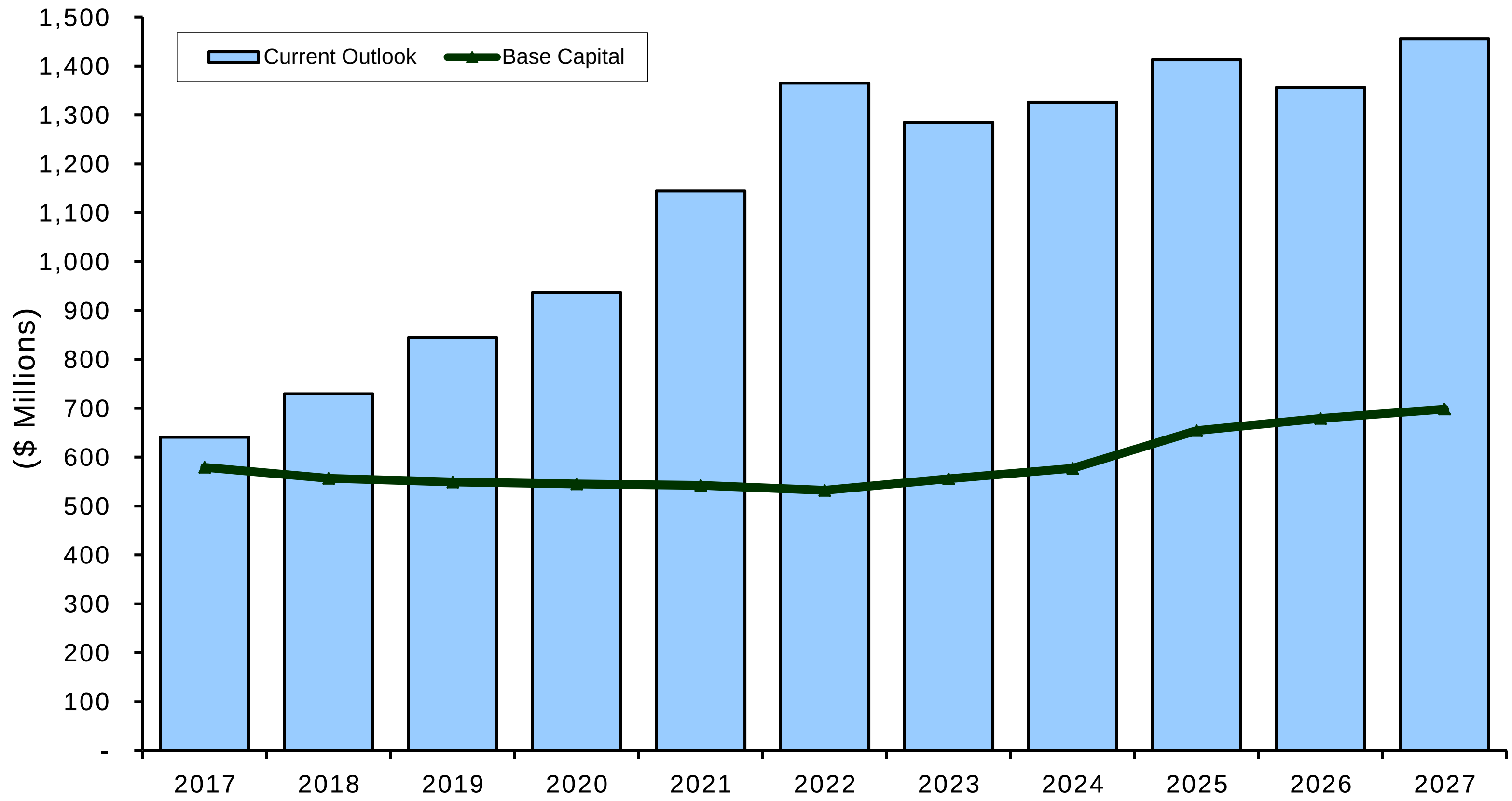
Manitoba Hydro

Liquidity & Financing

Cash Flow from Operations (IFF16)



Manitoba Hydro

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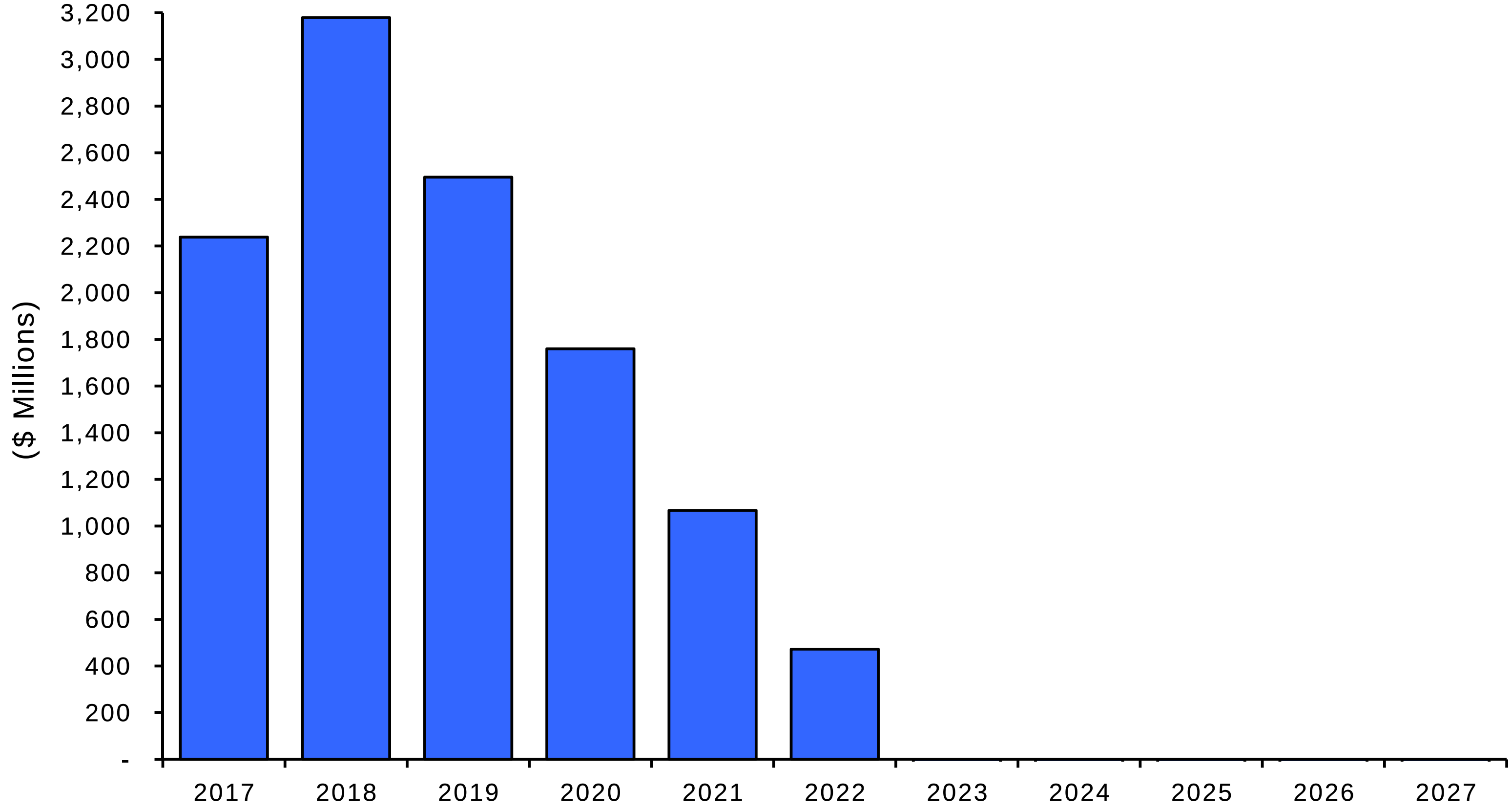

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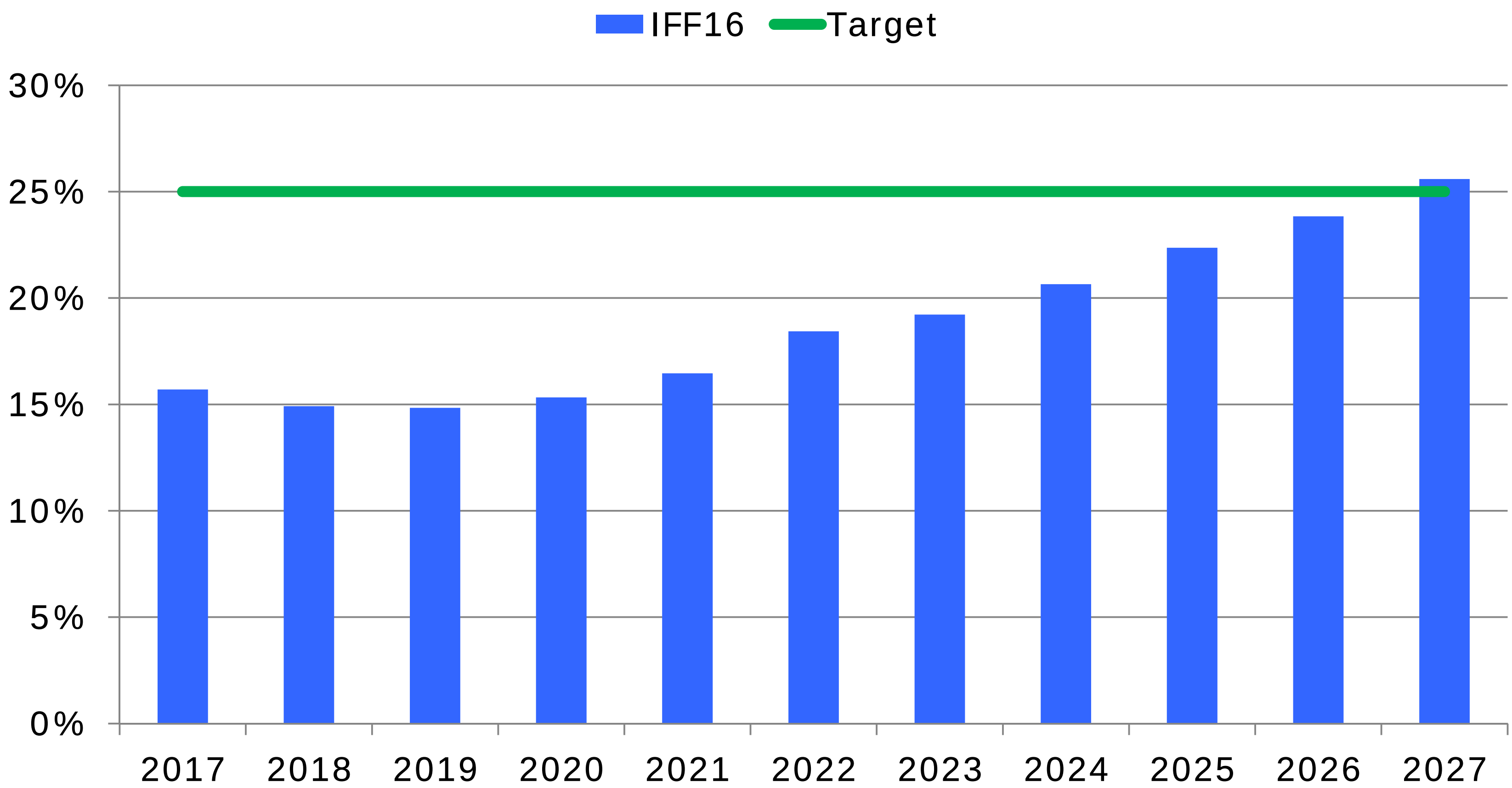
Equity Ratio



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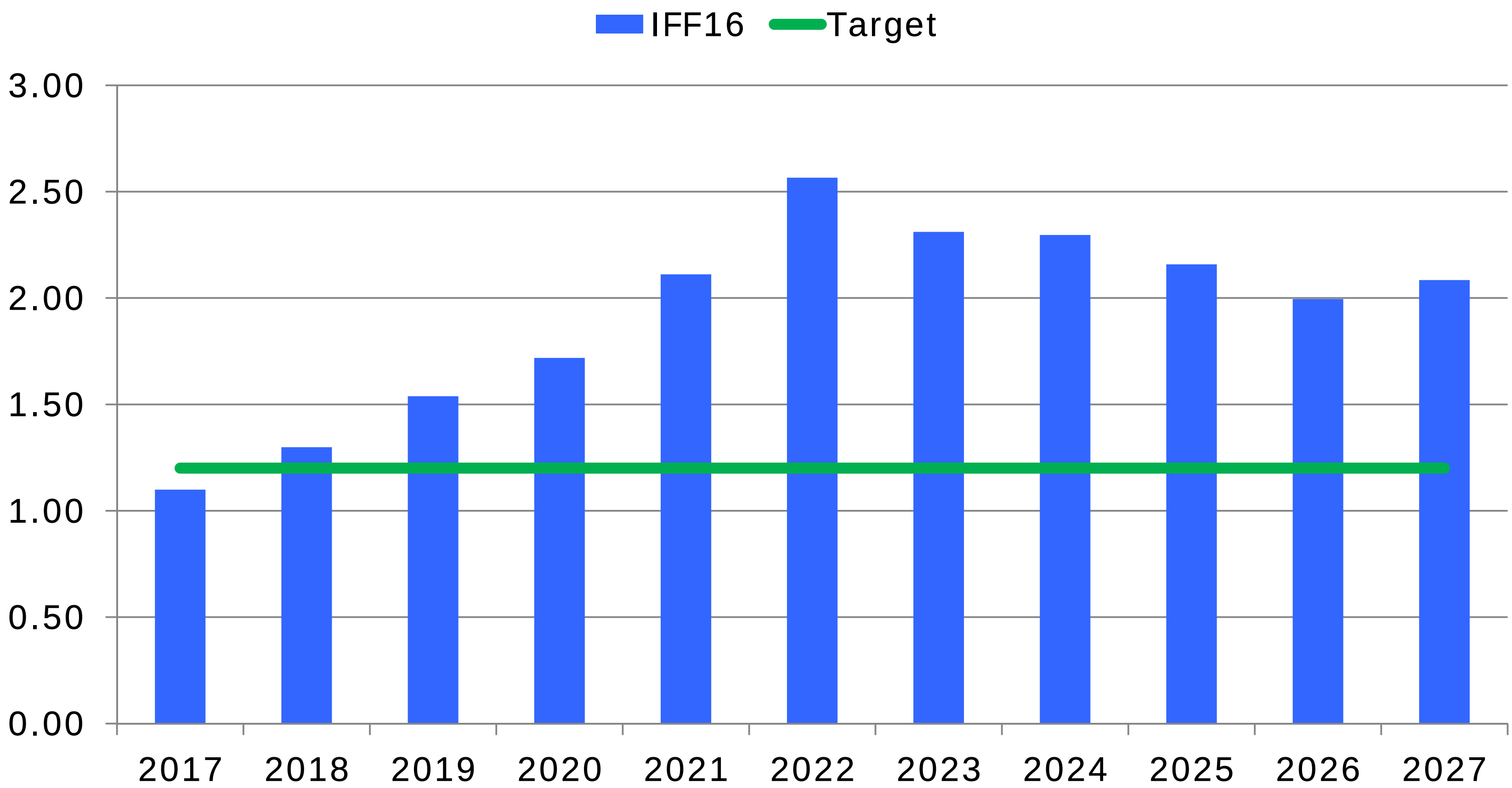

Manitoba Hydro

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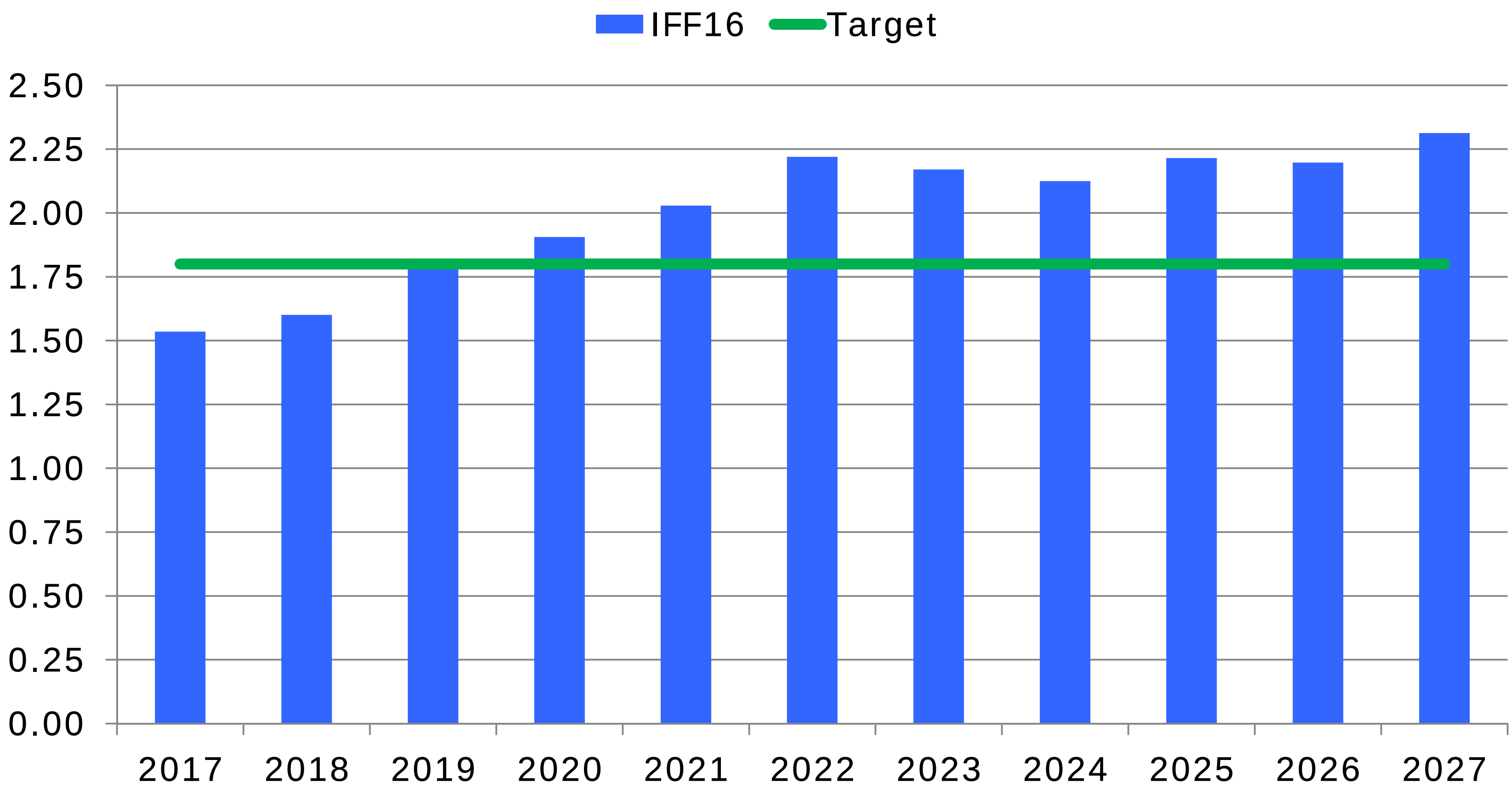

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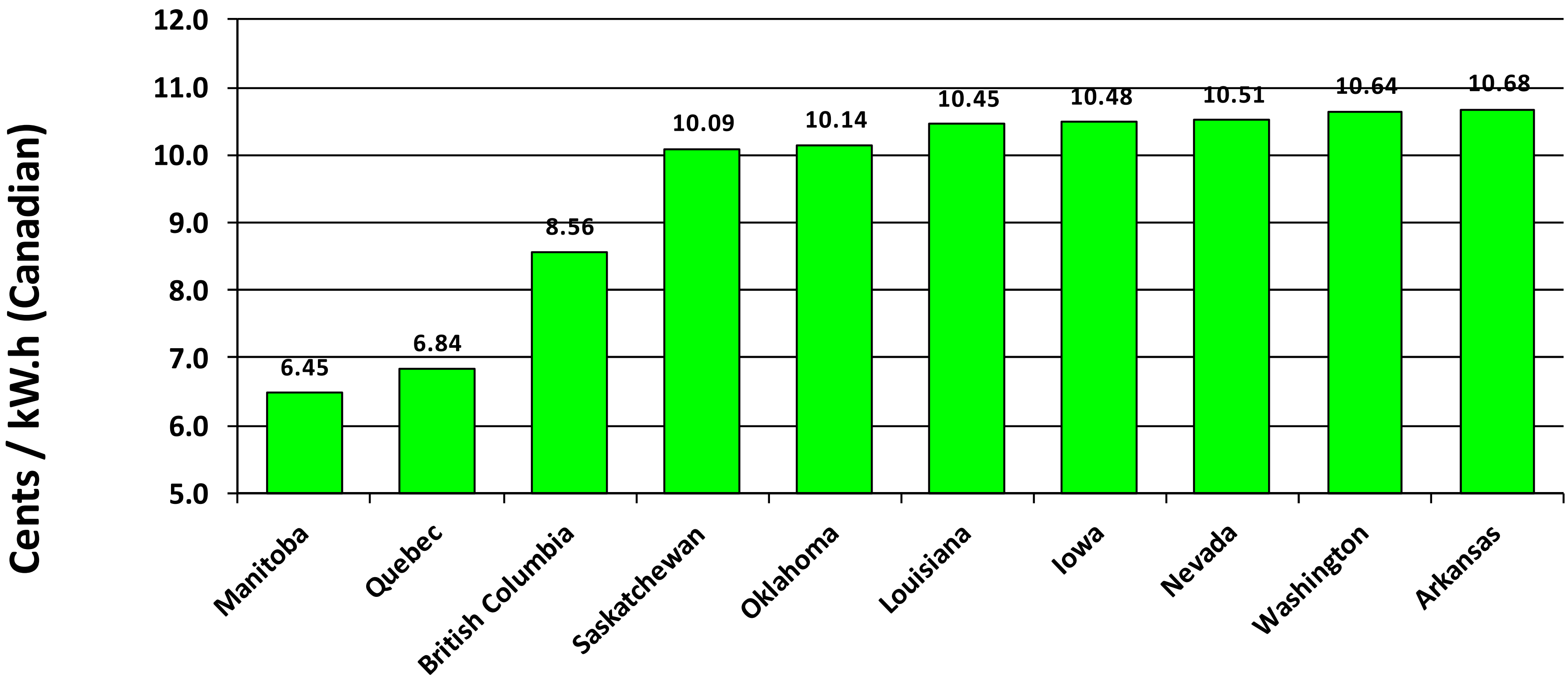

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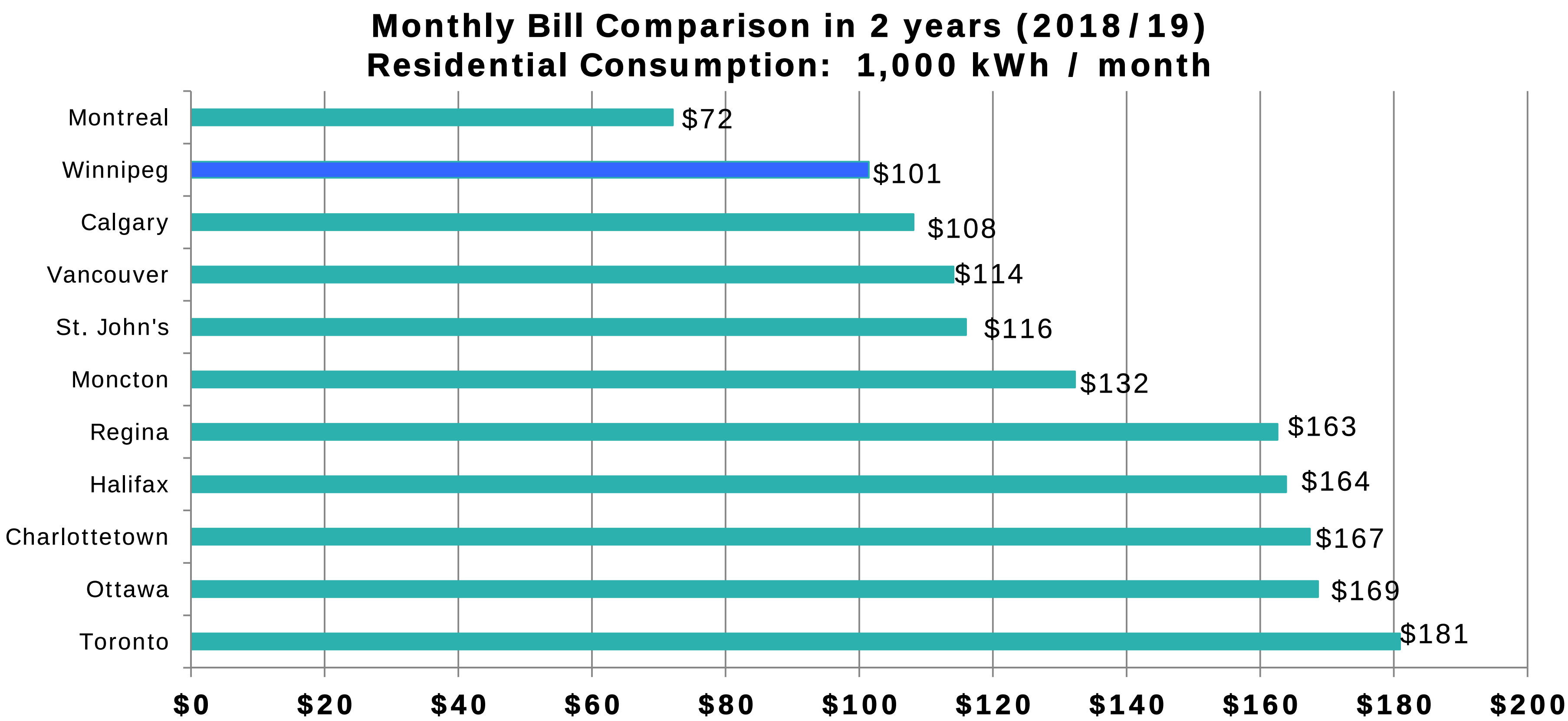

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Domestic Rate Strategy

Future Plans

- MH will continue to request domestic rate increases in support of the Finance goal in the Corporate Strategic Plan to "maintain a strong financial structure."

REFERENCE:

PUB/MH I-60b Attachment pg. 13, 17, 24

PREAMBLE TO IR (IF ANY):

QUESTION:

a) Please explain why the cashflow to capex ratio as presented in the application was not included to the DBRS June 8, 2017 presentation given the current significance of this metric to the current rate application.

b) Please indicate whether this metric is provided to and/or discussed with the credit rating agencies.

RATIONALE FOR QUESTION:

RESPONSE:

a) Manitoba Hydro prepares a standard presentation for all credit rating agencies that includes information on Corporate Profile, Financial Results, Capital Overview, Power Sale Contracts, Liquidity & Projected Financing, Financial Targets and Rates. Currently, Manitoba Hydro has financial targets for an interest coverage ratio, a capital coverage ratio and a debt/equity ratio. Manitoba Hydro does not have a financial target set for the cash flow to capex ratio. Manitoba Hydro monitors a number of financial performance metrics, including the cash flow to capex ratio, not included in its presentations to the credit rating agencies.

b) Manitoba Hydro does not provide the cash flow to capex ratio calculation to the credit rating agencies. While the ratio itself has not been explicitly discussed, cash flow and capital expenditures are discussed during the rating agency meetings. As shown in PUB/MH II-19a, the credit rating agencies calculate their own cash flow to capex ratios. DBRS and S&P include their calculations in their rating reports on Manitoba Hydro.

31

REFERENCE:

Tab 4 pg. 26

PREAMBLE TO IR (IF ANY):

QUESTION:

a) Please file any analyses undertaken by Manitoba Hydro or third parties that address the impact of a further provincial credit rating downgrade on Manitoba Hydro's borrowing costs.
b) Please demonstrate the impact on borrowing costs that MH incurred when the Province's credit rating with S&P was downgraded from AA to AA- in 2016.

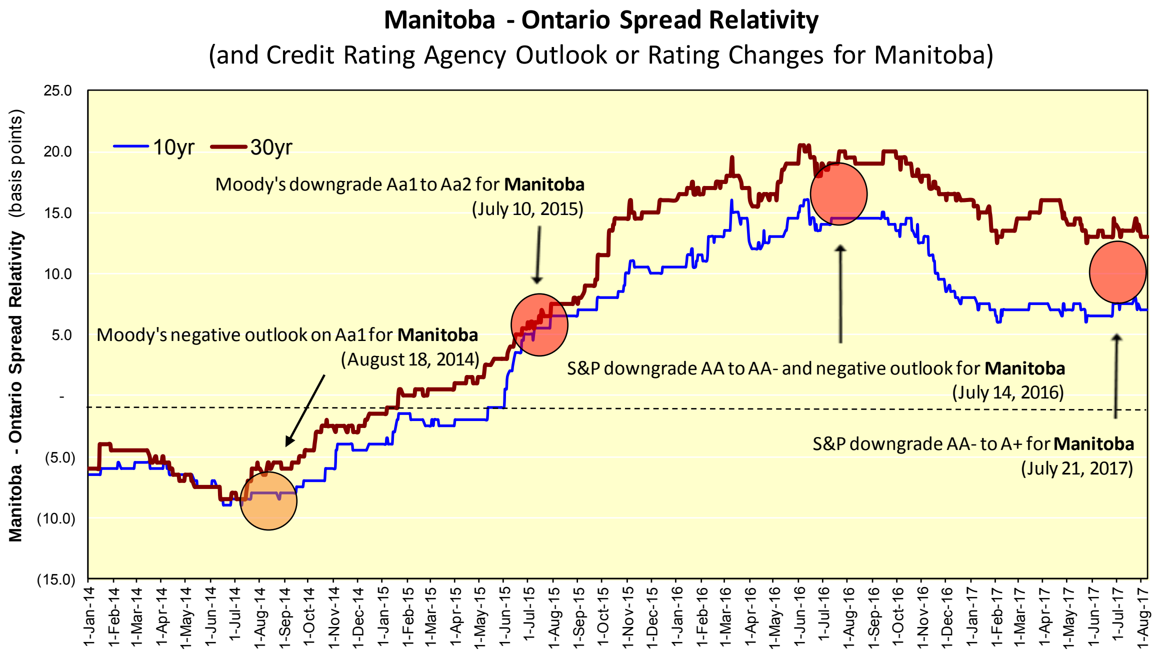
RATIONALE FOR QUESTION:

RESPONSE:

a) Manitoba Hydro is not aware of any analysis that addresses the impact of a further provincial credit rating downgrade on Manitoba Hydro's borrowing costs.

b) The provincial credit spread that investors demand from the Province of Manitoba, over and above the benchmark Government of Canada bond yield, is dependent on many variables. Please see PUB/MH I-59 for a discussion of these variables. Isolating the immediate impact of a provincial credit rating downgrade on Manitoba Hydro's borrowing costs is not feasible.

Manitoba Hydro has examined the Province of Manitoba's relative credit spread performance as compared to the Province of Ontario. The Province of Ontario bonds are considered to be the relative benchmarks for provincial credit spreads as Ontario is the largest issuer of provincial bonds and provides investors with beneficial financial market liquidity. The following chart shows the relative performance of the Manitoba 10 year and 30 year credit spreads as compared to the Ontario credit spreads throughout the period of rating agency downgrades.



Note 1: Data compiled represents indicative new issue levels (source: BMO Capital Markets).
Note 2: Moody's placed the Province of Ontario's Aa2 credit rating on negative outlook on July 2, 2014.
Note 3: S&P downgraded the Province of Ontario's AA- credit rating to A+ on July 6, 2015.
Note 4: Moody's revised the Province of Ontario's Aa2 credit rating to stable from negative on April 26, 2016.

Occasionally, credit rating announcements may move the financial markets on the day of the event, but more commonly, financial markets may price in changes in creditworthiness in advance of a credit rating announcement. Prior to the July 14, 2016 downgrade by S&P to the credit rating of the Province of Manitoba, Manitoba Hydro's relative credit spreads increased by approximately 16-18 basis points depending on the term to maturity. The impact on Manitoba Hydro's borrowing costs immediately following the event was minimal.

Actions by credit rating agencies are but one contributor to the pricing in the financial markets for the Province of Manitoba's bonds. These credit events, while important in the determination of borrowing costs, cannot be viewed in isolation. Bond investors have access to the same information as rating agencies and typically conduct their own analysis and changes in credit metrics and investor sentiment may impact the capital markets independently of any rating agency downgrade.

REFERENCE:

Appendix 4.1. Pgs.6-7

PREAMBLE TO IR (IF ANY):

Within the May 2015 Financial Targets Review report prepared by KPMG, they note the following related to self-supporting entities:

As noted in our analysis in Chapter 6, the exact point at which rating agencies might deem Manitoba Hydro (and its debt) to be no longer self-supporting is not clear. Similarly, it may not be clear when debt reaches a level where it cannot reasonably be expected to be repaid by ratepayers. However, to create a working definition of financial distress for the purposes of scenario analysis, the following general approach was used:

Manitoba Hydro would be deemed to be no longer self-supporting once it reaches a position of near zero retained earnings and rates have increased in real terms such that Manitoba can no longer be considered a cost-competitive jurisdiction with respect to electricity rates.

QUESTION:

With reference to the above commentary as well as any communications between Manitoba Hydro and the credit rating agencies, S&P, Moody's and DBRS, please provide a discussion of the point at which Manitoba Hydro would consider itself no longer self-supporting.

RATIONALE FOR QUESTION:

RESPONSE:

In Manitoba Hydro's experience, credit rating agencies often do not specify or adhere to explicit metrics or tests in concluding whether a given issuer is self-supporting. Please see Manitoba Hydro's response to MIPUG/MH I-8 for information on the approach of S&P Global Ratings. The rating agencies will also typically consider the historical and forecast trend in numerous quantitative metrics in addition to absolute level of such metrics at any one point in time. Moreover, Manitoba Hydro agrees with KPMG's comment noted above that "*the exact point at which rating agencies might deem Manitoba Hydro (and its debt) to be no longer self-supporting is not clear*". In Manitoba Hydro's view, the willingness of a credit rating agency (or the capital markets) to continue regarding the Corporation's debt as self-supporting is equally a function of an agency or investor's assessment of willingness and ability of both Manitoba Hydro, its stakeholders and the regulator to take adequate steps to address ongoing financial sustainability. Such assessments by definition include a degree of qualitative judgment.

According to rating agencies, self-supporting government-owned entities have the following attributes:

- Ability to generate sufficient funds to support their own operations (including interest payments)
- Do not require support from governments to avoid financial distress

As articulated in Tab 2 and throughout the Application, at current electricity rates and inclusive of the impact of a significant expense reduction from corporate restructing, Manitoba Hydro will continue to suffer significant negative cash flow on its core operations including under high water conditions. This means that Manitoba Hydro does not have sufficient cash receipts to cover all of its ongoing costs inclusive of interest on the nearly complete Bipole III Reliability Project. The capital and associated interest costs of the Keeyask project are entirely excluded from this analysis. As noted at Tab 2, page 20, Manitoba Hydro estimates the degree of cash flow deficiency to be approximately $250 million per annum in the absence of any rate increases or $200 million taking into account impact of Order 80/17 which approved a 3.36% interim electric rate increase effective August 1, 2017 that will add approximately $50 million per year to cash flow.

On this basis only, absent ameliorative action, Manitoba Hydro would already fail the above noted test of a self-supporting entity. Manitoba Hydro believes other factors are and will continue to be considered by the rating agencies before concluding Manitoba Hydro is no longer self-supporting. Manitoba Hydro believes that rating agencies and capital markets participants would look to the existence of a financial plan that remediates the above-noted cash flow deficiency over a reasonably short period of time. Rating agencies and capital market participants would assess such plan for its credibility and likelihood of achievement. Important components of that assessment in the example of Manitoba Hydro would include:

- Availability and likelihood of achieving cost reduction targets to support cash flow
- Magnitude of impact of key risks largely outside of Manitoba Hydro's control such as interest rate escalation, export prices and hydrology
- Likelihood of receiving approval from the regulator for any rate increases that are a component of the plan

Another test of whether an issuer is self-supporting is its ability to raise necessary debt capital in the absence of a government guarantee. S&P Global Ratings has deemed Manitoba Hydro to be not self-supporting by virtue of its current standalone credit profile of non-investment grade ("junk bond") quality. With a non-investment grade (BB+ or below) credit rating, Manitoba Hydro would be highly unlikely to be able to access the capital markets in the amounts required to fund its business plan and even if it were, it would be at an interest cost (measured in credit spread) that would be multiples of what the Corporation enjoys now. Without the guarantee of the Province of Manitoba, Manitoba Hydro would be effectively unable to fund its business plan and meet refinancing obligations as they come due and thus could not support itself. In Manitoba Hydro's view, such a position is largely theoretical as Manitoba Hydro <u>does</u> have its debt guaranteed by the Province of Manitoba and therefore the importance of not being deemed self-sustaining on its own is the contagion impact the Corporation's debt has on the credit profile and borrowing cost for the Province (and itself). The PUB itself recognized this on page 23 of 62 in Order 43/13 wherein it stated:

"The Board notes that Manitoba Hydro shares the benefit of the flow-through credit rating of the Province, which affords it preferential interest rates on its debt and access to funds to meet its major capital spending program. However, as its debt grows, there is a potential for Manitoba Hydro's financial condition to affect the credit rating of the Province. It is important that Manitoba Hydro remains a financially strong and viable organization."

Based on its experience as an issuer in the capital markets and its regular dialogue with rating agencies and capital market participants, Manitoba Hydro's view is there is no "bright line" test of self-supporting status. The risk of losing such status exists along a continuum.

Negative cash flow, immaterial net income and rapidly escalating debt balances will cause credit metrics to further deteriorate and move the Corporation farther toward the riskier end of the continuum.

At some point, absent a credible financial plan and consistent progress against same, credit agencies will reach the conclusion that debt on-lent to Manitoba Hydro by the Province of Manitoba cannot be supported by Manitoba Hydro alone. As such, other rating agencies may reach the same point of view that S&P Global Ratings already has which is to include Manitoba Hydro's debt in the calculation of Province of Manitoba credit metrics. Inclusive of borrowings to complete in-flight major capital projects, inclusion of Manitoba Hydro's debt would almost double the debt of the Province of Manitoba which could lead to a major deterioration in its credit standing in the view of such rating agencies.

Regardless of credit rating agency actions, it is capital market participants (bond investors) who set the interest rate at which the Province of Manitoba and Manitoba Hydro borrow. As noted in the response to PUB/MH I-59, a multitude of factors inclusive of credit rating agency downgrades can impact borrowing costs. The degree to which financial deterioration remains unchecked or inadequately addressed increases the likelihood investors perceive increasing levels of risk and thus demand higher levels of compensation in the form of higher interest rates.

Manitoba Hydro believes that the above noted KPMG definition of a point where Manitoba Hydro would be deemed no longer self-supporting as "*once it reaches a position of near zero retained earnings and rates have increased in real terms such that Manitoba can no longer be considered a cost-competitive jurisdiction with respect to electricity rates*" requires the additional context KPMG provides in Chapter 7 of its report (page 115) wherein they state *"Loss of such status could potentially be avoided if Manitoba Hydro immediately takes steps, such as increasing rates, to increase its equity position. On the other hand, self-supporting status could be affected at equity ratios <u>above zero</u> in the event that its ongoing financial trajectory appears to be negative and <u>if there are no steps being taken to correct this</u>"* (emphasis added). In other words, the ability or willingness to take necessary and preemptive action (particularly through rate increases) is a significant factor in assessing self-supporting status. Manitoba Hydro would concur with this view.

Specific commentary from rating agencies on these matters includes:

i. Moody's

At present, Moody's considers Manitoba Hydro to be self-supporting as it states[1]:

"Given its steady revenue stream that generates sufficient cash flow to support operations including interest payments, we view Manitoba Hydro as a self-supporting entity and therefore exclude the related debt from our debt metrics of the province."

Moody's assesses current financial metrics as well as future expectations and note the increase in the contingent liability that Manitoba Hydro's credit profile poses to the Province:

"We note, however, that Manitoba Hydro's total reported debt net of sinking funds has risen considerably, doubling from CAD6.9 billion at March 31, 2008 to an estimated CAD14.2 billion as of March 31, 2016. We expect that its debt will continue to rise over the medium-term as the utility moves forward with construction projects, including the Keeyask hydroelectric station and the Bipole III transmission line, in anticipation of demand increases over the next few years and in order to boost electricity exports. The anticipated increase in debt continues to pressure the province's rating since it raises the contingent liability of the province."

Moody's reinforces Manitoba Hydro's argument that rate increases are required in order for Manitoba Hydro to continue to be self-supporting:

"Manitoba Hydro has flexibility to increase utility rates to ensure that its own revenues will continue to support its operations and debt payments. Political willingness to approve rate increases when Manitoba Hydro's credit metrics will reach their low point will be critical to recover expected capital expenditures and restore credit metrics."

[1] All quotes from Moody's Credit Opinion on the Province of Manitoba August 3, 2016

ii. DBRS

DBRS highlights the possibility that it may reassess Manitoba Hydro's self-supporting status in the future as it indicates[2]:

"DBRS considers Manitoba Hydro to be self-supporting, as it is able to fund its own operations and service debt obligations. However, DBRS could consider reclassifying a portion of the Utility's debt to be tax-supported should the financial health of the Utility deteriorate to the point where its expenses cannot be recovered through rates. If this were to occur, it could potentially put downward pressure on the Province's credit rating."

DBRS reinforces Manitoba Hydro's argument that rate increases of 3.95% are no longer sufficient to remain self-supporting given the current circumstances:

"DBRS had noted that rate increases of 3.95% were expected to be insufficient for Manitoba Hydro to recover costs related to major projects for the medium term."

DBRS provides support for Manitoba Hydro's current financial plan:

"…the Utility has begun reviewing initiatives to help alleviate pressure on its key financial ratios, such as improving operational efficiencies, requesting annual rate increases higher than the previously planned 3.95%, as well as a potential equity injection from the Province. DBRS sees these initiatives, if actualized, as positive to Manitoba Hydro's financial profile, as they will provide some financial flexibility for the Utility, especially in the event of adverse drought conditions or further cost overruns on the projects."

iii. S&P Global Ratings

Of the three credit rating agencies, S&P raises the bar on risk and indicates that self-supporting entities generally have an investment grade stand-alone credit profile.[3] On July 14, 2016, S&P downgraded the Province of Manitoba, placed it on negative outlook, indicated that it no longer viewed Manitoba Hydro as being self-supporting

[2] All quotes from DBRS rating report on Manitoba Hydro November 25, 2016

[3] Standard & Poors Methodology For Rating Non-U.S. Local And Regional Governments, page 44

and chose to include all of Manitoba Hydro's on-lent debt in the Province's total debt. For the first time in Manitoba Hydro's history, a credit rating agency did not consider Manitoba Hydro to be self-supporting. On July 21, 2017, S&P downgraded the Province of Manitoba once again.

"By our estimates, Manitoba's tax-supported debt (including debt on-lent to MHEB) will exceed 300% of operating revenues by fiscal 2020. Our assessment of the province's debt burden fully incorporates the debt on-lent to MHEB, which accounts for more than 40% of total tax-supported debt and for which the province expects to borrow heavily to finance capital projects over the next several years. We do not view MHEB as self-supporting due to its very high and rising leverage."[4]

[4] All quotes from S&P Credit Opinion on the Province of Manitoba July 29, 2016

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REFERENCE:

PUB/MH I-24; PUB/MH I-27 (a); PUB/MH I-32

PREAMBLE TO IR (IF ANY):

QUESTION:

a) Please indicate what portion of the Manitoba Hydro debt is issued by Manitoba Hydro and what portion is issued by the Province of Manitoba.

b) Please indicate the debt issuances (amounts, maturities, interest rates) that are outstanding that have been issued by: (a) the Province of Manitoba and (b) Manitoba Hydro.

c) Please describe the process followed by Manitoba Hydro in securing the Corporation's debt.

d) Please indicate whether the Corporation controls the timing of issuances and terms of debt as issued.

e) Please explain why Manitoba Hydro has a separate credit rating report.

RATIONALE FOR QUESTION:

RESPONSE:

a) The vast majority of Manitoba Hydro's debt is issued by the Province of Manitoba and advanced to Manitoba Hydro. Manitoba Hydro issues all Manitoba Hydro-Electric Board (MHEB) bonds which include mitigation bonds issued as part of settlement agreements with First Nations as well as bonds issued at the time of the Winnipeg Hydro acquisition. In addition, Manitoba Hydro has issued HydroBonds in conjunction with the Province of Manitoba in the past. When the HydroBonds program first began it made up a more sizeable portion of yearly borrowings, but it has since declined and is now no longer utilized. To view a breakdown of the portions of debt issued by the Province of Manitoba and advanced to Manitoba Hydro versus the portion of debt issued by Manitoba Hydro itself as of August 31, 2017 see the response to part b) below.

b) The following table lists Manitoba Hydro's outstanding debt as of August 31, 2017 as either issued by the Province of Manitoba or Manitoba Hydro.

Manitoba Hydro Outstanding Long Term Debt Issues as of August 31, 2017

Issued by Province of Manitoba	Principal Book Value	CAD Yield Rate	Maturity Date
C-011	55,454,000	7.490 %	9/22/2017
BM	254,960,000	6.543 %	1/15/2018
C132	200,000,000	6.670 %	4/2/2018
GD	100,000,000	1.954 %	9/5/2018
GD-1	100,000,000	1.724 %	9/5/2018
GD-2	100,000,000	1.729 %	9/5/2018
EE	228,380,000	10.101 %	9/14/2018
BU-1	87,096,900	10.548 %	12/3/2018
BU-2	43,508,850	10.548 %	12/3/2018
BU-3	43,407,540	10.547 %	12/3/2018
BU-4	28,366,800	10.536 %	12/3/2018
BU-5	59,783,900	10.540 %	12/3/2018
GQ-3	24,240,000	1.370 %	11/21/2019
CO77-3	50,000,000	2.995 %	2/11/2020
CO77-2	100,000,000	4.579 %	2/11/2020
GE-1A	25,216,800	7.193 %	3/15/2020
GE-1B	49,495,000	6.971 %	3/15/2020
GE-1C	47,595,000	6.497 %	3/15/2020
GE-1	68,948,000	6.857 %	3/15/2020
C138-A	100,000,000	4.570 %	5/15/2020
C138-B	100,000,000	4.650 %	5/15/2020
FP-2	125,000,000	4.244 %	6/3/2020
FP-3	250,000,000	3.469 %	6/3/2020
GE-2	254,543,480	8.547 %	10/2/2020
GE-3	58,856,520	8.547 %	10/2/2020
GM	400,410,000	1.773 %	11/30/2020
GO-2	250,000,000	1.644 %	9/5/2021
GO-3	300,000,000	1.561 %	9/5/2021
CO	376,080,000	10.437 %	9/15/2021
GQ-1	438,760,000	8.733 %	2/1/2022
GT	683,350,000	1.630 %	5/4/2022
GC	296,355,000	2.009 %	9/6/2022
GQ-2	188,040,000	3.728 %	9/16/2022
GF	300,000,000	3.398 %	6/2/2023
GH	300,000,000	2.825 %	6/2/2024
C140	101,640,000	2.916 %	3/3/2025
GJ-3	150,000,000	2.549 %	6/2/2025
GJ-4	150,000,000	2.539 %	6/2/2025
C119-2	150,000,000	2.165 %	9/5/2025
DT	170,000,000	7.952 %	12/22/2025
DT-2	130,000,000	7.333 %	12/22/2025
GN	150,000,000	2.643 %	6/2/2026
GN-3	500,000,000	2.206 %	6/2/2026
GN-4	150,000,000	2.580 %	6/2/2026

Manitoba Hydro Outstanding Long Term Debt Issues as of August 31, 2017

Issued by Province of Manitoba	Principal Book Value	CAD Yield Rate	Maturity Date
C145-4	70,659,562	1.918 %	6/9/2026
C145-5	50,085,000	2.014 %	6/9/2026
GP	257,100,000	2.254 %	6/22/2026
GS	150,000,000	2.687 %	6/2/2027
GS-2	300,000,000	2.741 %	6/2/2027
C119-1	100,000,000	6.575 %	9/1/2029
CL	300,000,000	10.796 %	3/5/2031
CLW	299,945,000	10.581 %	3/5/2031
C116	100,000,000	4.650 %	3/5/2031
C148	95,810,000	2.966 %	3/24/2031
CO52	30,000,000	5.730 %	10/29/2032
FP-1	175,000,000	5.196 %	4/12/2035
C135	100,000,000	4.801 %	12/3/2035
FA-1	25,000,000	5.091 %	3/5/2037
FA-2	75,000,000	5.129 %	3/5/2037
FA-3	50,000,000	5.112 %	3/5/2037
FA-4	50,000,000	4.505 %	3/5/2037
FJ	250,000,000	5.104 %	9/12/2037
PB-2	300,000,000	4.759 %	3/5/2038
C132-2A	85,000,000	4.997 %	11/1/2038
C132-2B	19,000,000	4.927 %	11/1/2038
C136-3	31,000,000	5.058 %	11/1/2038
C138-2	50,000,000	4.897 %	11/1/2038
C119-3C	15,000,000	5.245 %	12/1/2038
C119-3A	50,000,000	5.245 %	12/1/2038
C119-3B	50,000,000	5.232 %	12/1/2038
C136	50,000,000	5.020 %	3/1/2039
C136-2	50,000,000	4.882 %	3/1/2039
C154	58,600,000	2.752 %	6/25/2039
FK-2	300,000,000	5.174 %	3/5/2040
FR-2	250,000,000	4.599 %	3/5/2041
FR-3	175,000,000	3.215 %	3/5/2041
CO40	50,000,000	2.980 %	3/5/2042
FT	400,000,000	4.492 %	3/5/2042
GA	300,000,000	3.413 %	3/5/2043
GA-2	250,000,000	4.311 %	3/5/2043
CO68	50,000,000	4.069 %	3/5/2044
GG	300,000,000	4.096 %	9/5/2045
GG-2	250,000,000	3.819 %	9/5/2045
GG-3	300,000,000	3.642 %	9/5/2045
GG-4	400,000,000	3.589 %	9/5/2045
C152	50,837,500	2.778 %	8/8/2046
C153	76,290,841	2.801 %	8/30/2046

Manitoba Hydro Outstanding Long Term Debt Issues as of August 31, 2017

Issued by Province of Manitoba	Principal Book Value	CAD Yield Rate	Maturity Date	
GK	300,000,000	2.902 %	9/5/2046	
GK-2	300,000,000	2.898 %	9/5/2046	
GK-3	150,000,000	3.227 %	9/5/2046	
GK-4	300,000,000	3.526 %	9/5/2046	
GK-5	225,000,000	3.440 %	9/5/2046	
GK-6	150,000,000	3.275 %	9/5/2046	
GR-3	300,000,000	3.310 %	9/5/2048	
FN	200,000,000	4.726 %	3/5/2050	
FN-2	75,000,000	3.629 %	3/5/2050	
FN-3	50,000,000	3.281 %	3/5/2050	
C129	50,000,000	3.178 %	9/5/2052	
C129-2	55,000,000	3.918 %	9/5/2052	
C129-3	50,000,000	4.065 %	9/5/2052	
C129-4	50,000,000	4.099 %	9/5/2052	
C129-5	50,000,000	4.087 %	9/5/2052	
C129-6	50,000,000	3.906 %	9/5/2052	
C129-7	20,000,000	3.915 %	9/5/2052	
C129-8	20,000,000	3.895 %	9/5/2052	
C129-9	60,000,000	3.858 %	9/5/2052	
C129-10	50,000,000	3.786 %	9/5/2052	
C129-11	25,000,000	3.702 %	9/5/2052	
C129-12	40,000,000	3.699 %	9/5/2052	
C139	50,000,000	3.666 %	9/5/2054	
C139-2	25,000,000	3.625 %	9/5/2054	
C110	125,000,000	4.629 %	3/5/2060	
C109	50,000,000	4.638 %	3/5/2063	
C137	50,000,000	3.496 %	3/5/2063	
C137-2	25,000,000	3.887 %	3/5/2063	
C137-3	37,000,000	4.019 %	3/5/2063	
C137-4	60,000,000	3.868 %	3/5/2063	
C137-5	50,000,000	3.354 %	3/5/2063	
C137-6	62,000,000	3.378 %	3/5/2063	
C109-5	50,000,000	3.597 %	3/5/2063	
C109-6	50,000,000	3.555 %	3/5/2063	
C109-7	50,000,000	3.506 %	3/5/2063	
C137-7	75,000,000	3.502 %	3/5/2063	
C137-8	50,000,000	3.232 %	3/5/2063	
C137-9	25,000,000	2.835 %	3/5/2063	
C137-10	100,000,000	2.854 %	3/5/2063	
C137-11	100,000,000	3.457 %	3/5/2063	
C137-12	100,000,000	3.404 %	3/5/2063	
C137-13	50,000,000	3.342 %	3/5/2063	
C137-16	150,000,000	3.163 %	3/5/2063	
Total Issued by Province:	**$18,032,815,693**			**99.18%**

Manitoba Hydro Outstanding Long Term Debt Issues as of August 31, 2017

Issued by Manitoba Hydro	Principal Book Value	CAD Yield Rate	Maturity Date	
MHEB - Mitigation Bonds				
4A	3,468,000	9.100 %	12/31/2021	
3V	3,500,000	10.000 %	12/30/2018	
3W	1,000,000	10.000 %	12/30/2018	
4B	3,974,418	7.553 %	4/1/2031	
4C	1,350,000	5.840 %	4/1/2031	
4Y	4,767,923	7.378 %	5/1/2031	
4Z	7,041,000	7.100 %	6/9/2057	
5C-1	10,000,000	3.723 %	12/31/2024	
5C-2	10,000,000	4.049 %	12/31/2029	
5C-3	10,000,000	4.245 %	12/31/2034	
5C-4	10,000,000	4.311 %	12/31/2039	
MHEB - Winnipeg Hydro Bonds				
4N	30,000,000	5.900 %	2/2/2029	
4M	30,000,000	5.900 %	2/2/2029	
4L	20,000,000	6.250 %	11/17/2017	
HydroBonds				
HB12-5FX	700,700	1.940 %	6/15/2018	
HB12-5FL	3,809,650	1.378 %	6/15/2018	
Total Issued by Manitoba Hydro:	**$149,611,691**			**0.82%**
Total Outstanding:	**$18,182,427,383**			**100%**

Note: USD debt issues translated at the August 31, 2017 foreign exchange rate of 1.2536.

c) Manitoba Hydro has statutory authority to raise financing as provided in the Manitoba Hydro Act, the Loan Act and the Financial Administration Act.

The Loan Act provides authority for new borrowings and the Financial Administration Act provides authority for refinancing maturing debt. With each debt issue which is executed for Manitoba Hydro, the appropriate authority is abated. Authority levels are monitored by both the Province of Manitoba and Manitoba Hydro to ensure that the Corporation remains within its legislative overall borrowing authority limits.

If Manitoba Hydro directly issues securities (MHEB or HydroBonds), a resolution or minutes of the MHEB authorizing the issue or sale of securities is required as proof that the issue of securities is necessary. An Order in Council (OIC) providing authority to

Manitoba Hydro to raise money is approved in the Legislature for each security issued by Manitoba Hydro.

Each year, Manitoba Hydro prepares an Integrated Financial Forecast which projects the Corporation's financial results and position for the forecast period. If the total investing activities exceed the level of internally generated cash flow, these cash requirements to fund the remaining portion of the total capital investments will require external debt financing. Manitoba Hydro submits a request for this new external debt financing for the following year, including a 9 to 12 month bridge to the next year, to the Province of Manitoba. The Loan Act is approved each year in the Provincial Legislature and grants Manitoba Hydro borrowing authority to meet the Corporation's projected new debt financing requirements.

The Manitoba Hydro Treasury Department meets quarterly with the Province to discuss joint upcoming financing requirements. In addition, regular conference calls are held with the Province to discuss borrowing requirements, market tone, investor demand, and events which are impacting the financial markets. Treasury also keeps abreast of current market developments through direct discussions with the financial institutions included in the Province of Manitoba's debt underwriting syndicate.

Manitoba Hydro prepares specific financing recommendations which consider currency of issuance dependent on which market is more attractive, the dollar value depending on cash and liquidity requirements, the term dependent on the Corporation's current maturity schedule and strategy, market appetite, the economic environment, interest rate expectations, mitigation of interest rate risk, management of foreign exchange risk and refinancing requirements on maturing debt with associated interest rate swaps. Upon authorization and direction by Manitoba Hydro's Treasurer, the Department of Finance at the Province of Manitoba executes the financing recommendation on behalf of the Corporation. On the date of issue, Manitoba Hydro is normally present at the Province's office prior to and during execution of the debt transaction. Post-issuance, the Province is responsible for all administrative and legal requirements. The Province sends a term sheet for the provincial advance to Manitoba Hydro which mirrors the terms of the bond issue which they transacted in the marketplace and thereby provides a record of the terms by which the Corporation has borrowed from the Province of Manitoba.

Manitoba Hydro pays a 1% guarantee fee on its debt which includes a fee for the guarantee risk assumed by the Province but also includes an immaterial component for service costs incurred by the Province acting as fiscal agent on behalf of Manitoba Hydro.

d) Manitoba Hydro controls the timing of issuance and terms of debt issued for the Corporation. The timing and call for execution of a financing strategy is made considering the factors mentioned in part c).

e) Manitoba Hydro has a separate credit rating report for the benefit of investors as a reference as the Corporation's long and short term credit ratings are a flow through from the Province of Manitoba's credit rating. Manitoba Hydro's long and short term debt borrowings are unconditionally guaranteed as to principal and interest by the Province of Manitoba (except for mitigation bonds issued by the Manitoba Hydro-Electric Board). As Manitoba Hydro's net debt represents approximately 39% of the total Province of Manitoba debt at March 31, 2017, the credit rating agencies (DBRS, Moody's Investors Service, and S&P) will continue to monitor Manitoba Hydro's cash flow, capital expenditures, approved rate increases and progress toward financial targets as will global debt investors.

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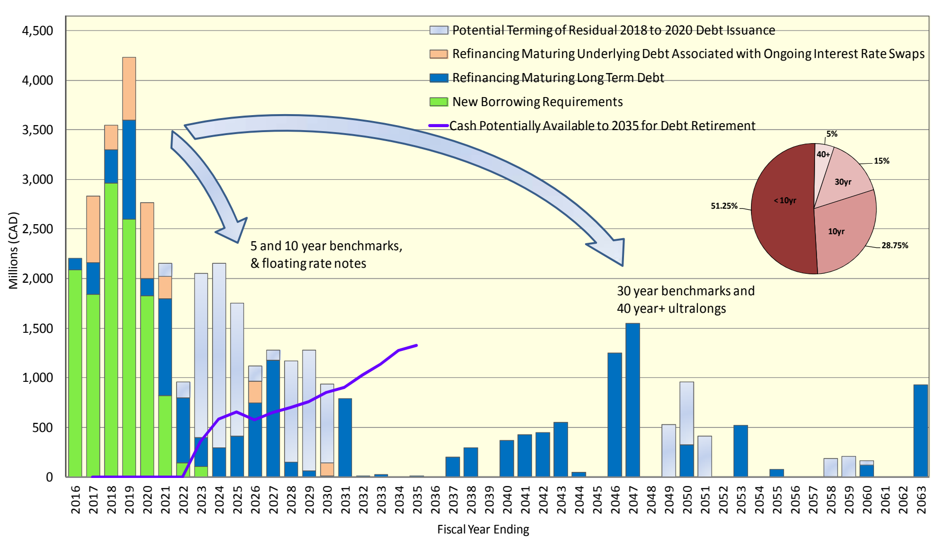
Manitoba Hydro 2017 Debt Management Strategy:
The Path Toward Debt Retirement

Manitoba Hydro's fundamental debt management objective is to provide **low cost, stable funding** to meet the financial obligations and liquidity needs of the Corporation, while *maintaining risk at prudent levels* and *reserving sufficient flexibility* to adapt to changing circumstances.

Since 2006/07 Manitoba Hydro's debt management strategies and activities have been significantly impacted by the Corporation's increasing cash requirements. In preparation for the increasing levels of capital investment and debt financing, the interest rate risk on the existing debt portfolio was reduced by decreasing the percentage of floating rate debt within the existing debt portfolio. In order to reduce refinancing risk, Manitoba Hydro also adopted a leapfrogging strategy that favored longer dated debt maturities that largely skipped over the future period of large borrowings for new cash requirements – thereby also enhancing debt stability by extending the debt portfolio's weighted average term to maturity (WATM) by over 5 years. Manitoba Hydro also took advantage of the low interest rate environment to decrease the debt portfolio's weighted average interest rate (WAIR) by over 2%.

Chart 13 **Manitoba Hydro Consolidated Borrowing Requirements & Maturity Schedule**
Phase 2 (2016 - 2020): Peak Shaving and Debt Smoothing



Note 1: Actual financings and debt maturities as at March 31, 2017 with forecasted new borrowings thereafter.
Note 2: Manitoba Hydro will consider the availability of sinking fund withdrawals to reduce the required refinancing of maturing debt.

From 2015/16 to 2019/20, Manitoba Hydro has and will continue to smooth the maturity schedule by layering new borrowings from the peak years into available maturity buckets. The leapfrogging approach undertaken since 2008 has provided the opportunity for Manitoba Hydro to now shorten the WATM of new debt issuance from approximately 20 to 12 years. The financial benefit associated with this opportunity has the potential to provide an approximate $150 to $200 million reduction in debt servicing costs over the next 5 years.

In order to reduce the interest rate risk on the total debt portfolio, Manitoba Hydro will lower the percentage of floating rate debt within the portfolio to below 10%. To mitigate the pressure on Manitoba credit spreads, the Corporation will also undertake a variety of debt management activities such as establishing benchmark sized debt issues and diversifying the investor base by continuing to issue Manitoba bonds into international markets. To mitigate liquidity risk and provide financing flexibility to secure debt during periods of constructive investor tone, Manitoba Hydro also intends to maintain unencumbered positive cash balances by securing funds approximately three months in advance of its cash requirements.

With the potential availability of cash following the in-service of new major generation and transmission, and the forecast improvement in operating cash flow stemming from cost reductions and rate increases, an opportunity exists to use this future cash to permanently retire significant levels of debt at that time. This debt off-ramping is a key factor in the planned reduction in finance expense and the recovery of Manitoba Hydro's financial ratios. It is vital that Manitoba Hydro's debt profile provide this off-ramp opportunity with shorter maturities because it is expensive and cumbersome to retire long-dated debt permanently.

The following document outlines the debt management objectives, strategies and activities that will address Manitoba Hydro's projected financing requirements.

Available in accessible formats upon request

Manitoba Hydro
Treasury Division
April 2017

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1.0 Debt Management Objectives

Manitoba Hydro's fundamental debt management objective is to provide **low cost, stable funding** to meet the financial obligations and liquidity needs of the Corporation, while *maintaining risk at prudent levels* and *reserving sufficient flexibility* to adapt to changing circumstances.

The Corporation's debt management has adapted in response to evolving financing requirements, financial market conditions and risk parameters. This document outlines the debt management strategies and tactics that will address Manitoba Hydro's projected financing requirements, along with an overview of the measures that will assess performance.

2.0 Debt Management Context

Manitoba Hydro is a capital intensive organization that makes significant investments in new and sustaining infrastructure. These investing activities are funded through cash sourced from internally generated cash flows (cash provided by operating activities) and/or external financing activities. As a Crown Corporation solely owned by the Province of Manitoba, Manitoba Hydro does not have access to private share capital as a source of funds. Therefore, Manitoba Hydro uses debt as a primary source of external financing.

Manitoba Hydro is currently in the midst of a period of intensive capital investment that totals $10.4 billion for the period from 2017/18 to 2021/22. Over the next few years, the majority of the capital expenditures will be funded by new debt financing. The increasing financial leverage will continue to place pressure upon Manitoba Hydro's financial metrics, and could elevate the contingent credit liability to the Province of Manitoba. Moving forward, both the level of Manitoba Hydro's net fixed assets and net debt (notwithstanding a substantial increase in cash flow in Manitoba Hydro's updated financial plan) are forecasted to grow until the 2020s before the projected level of net debt begins to decline after 2022.

The aforementioned level of upcoming debt financings has increased the Corporation's liquidity risk. During the last two years, issuance has been characterized by periods of volatility and uneven market tone, thereby escalating market liquidity risk. To ensure smooth business continuity and financing flexibility while facing these challenges, Manitoba Hydro seeks to maintain unencumbered positive cash balances as part of its prudential liquidity practice.

Given the significant level of upcoming debt financings, the Corporation's sensitivity to interest rate changes will also be elevated during the next few years. For example, as of March 31, 2017, approximately 22% (or $4.3 billion) of the prospective debt portfolio is subject to interest rate risk. Over the next five years, approximately 50% will be subject to interest rate risk. The interest rate risk on the existing debt portfolio has been reduced by decreasing the percentage of floating rate debt within the debt portfolio and by selecting debt maturities, that upon refinancing will not compete with new borrowing requirements.

In order to mitigate the foreign currency exchange risk on USD revenues, Manitoba Hydro borrows partly in USD to match interest outflows from USD debt. Manitoba Hydro's sensitivity analysis with a +/- $0.10 change in the USD/CAD exchange rate on IFF16 USD revenues and expenses indicates that the Corporation's near term net exposure to USD/CAD currency fluctuations is largely eliminated.

Manitoba Hydro's debt management document is intended to give some background context for the Corporation's debt management strategies and activities. Section 2.1 will provide a more detailed overview of Manitoba Hydro's capital investments and cash flow. Section 2.2 will provide a more detailed commentary on the financial markets within which Manitoba Hydro will access the required financing, as well as the Corporation's associated risk policies and guidelines; most notably for liquidity risk, interest rate risk and foreign currency exchange risk.

2.1 Manitoba Hydro's Capital Investments and Cash Flow

The Capital Expenditure Forecast (CEF16) is a projection of Manitoba Hydro's capital expenditures for new and replacement facilities. The CEF16 totals $10.4 billion for the five year period from 2017/18 to 2021/22. Expenditures for major new generation & transmission total $7.7 billion, with the balance of $2.7 billion comprised of expenditures for requirements such as infrastructure renewal, system safety and security, new and increasing load requirements, and ongoing efficiency improvements.

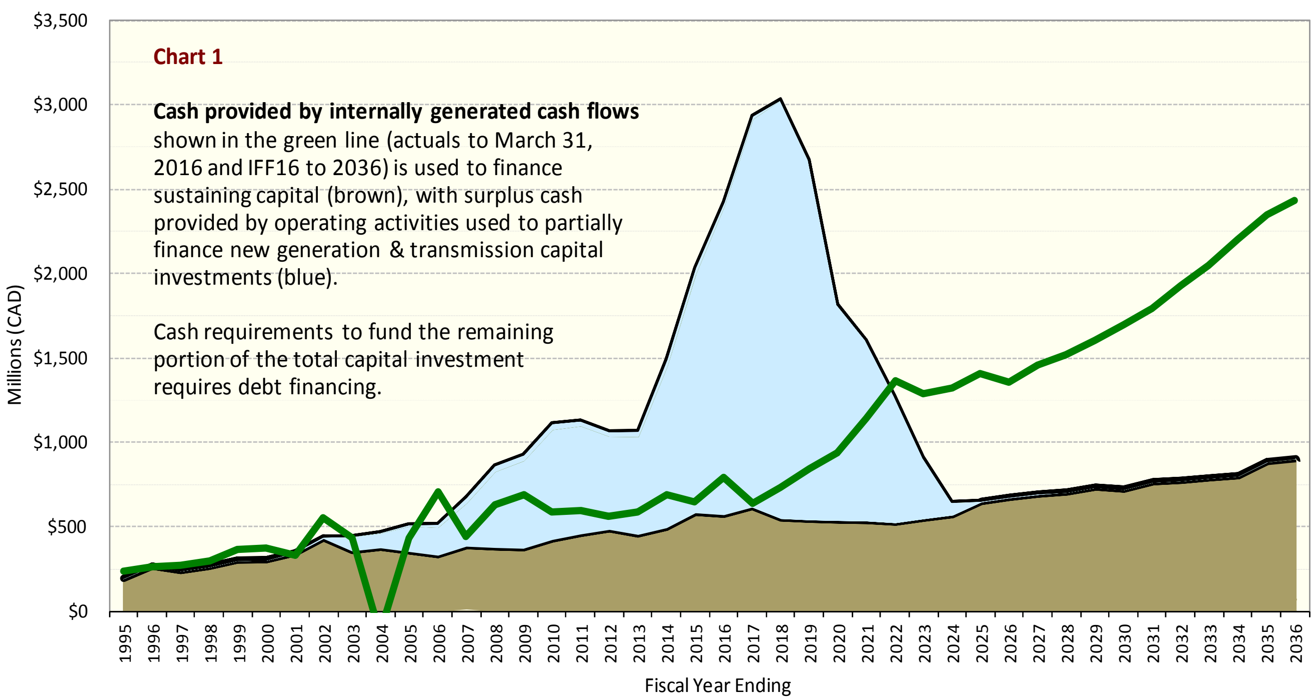
The following chart depicts Manitoba Hydro's actual capital expenditures from 1995 to 2016, along with projected capital expenditures to 2036. This chart illustrates the growth in Manitoba Hydro's sustaining capital (brown), as well as the additional level of capital investments for new generation & transmission (blue).

Internally generated cash flows (green line) provide the base source of funding for the Corporation's capital expenditures. The total net cash provided by operating activities for the five year period to March 31, 2022 is forecast to be approximately $5.0 billion, with an average during this timeframe of $1 billion per fiscal year. For fiscal years 2022/23 – 2026/27, with the in-service of the Keeyask generating station, forecast rise in export prices, impact of cost reductions and cumulative contribution from rate increases, the total net cash provided by operating activities during this latter timeframe is projected to improve to approximately $6.8 billion, or nearly $1.4 billion per fiscal year.

The chart also illustrates that after 2022, the projected cash provided by operating activities exceeds the level of projected capital expenditures, thereby providing the opportunity to use potentially available cash to reduce net debt levels by retiring debt maturities as they become due.

However, over the next few years, the total investing activities greatly exceed the level of internally generated cash flow. Cash requirements to fund the remaining portion of the total capital investments will require **significant levels of debt financing**. Utilizing available internally generated cash flow from operations to fund capital expenditures reduces the amount that would otherwise need to be borrowed each year by Manitoba Hydro.

When combined with debt refinancing requirements, the total forecasted annual debt financing requirements for Manitoba Hydro in the next two year period will peak at levels that are unprecedented in the Corporation's history.



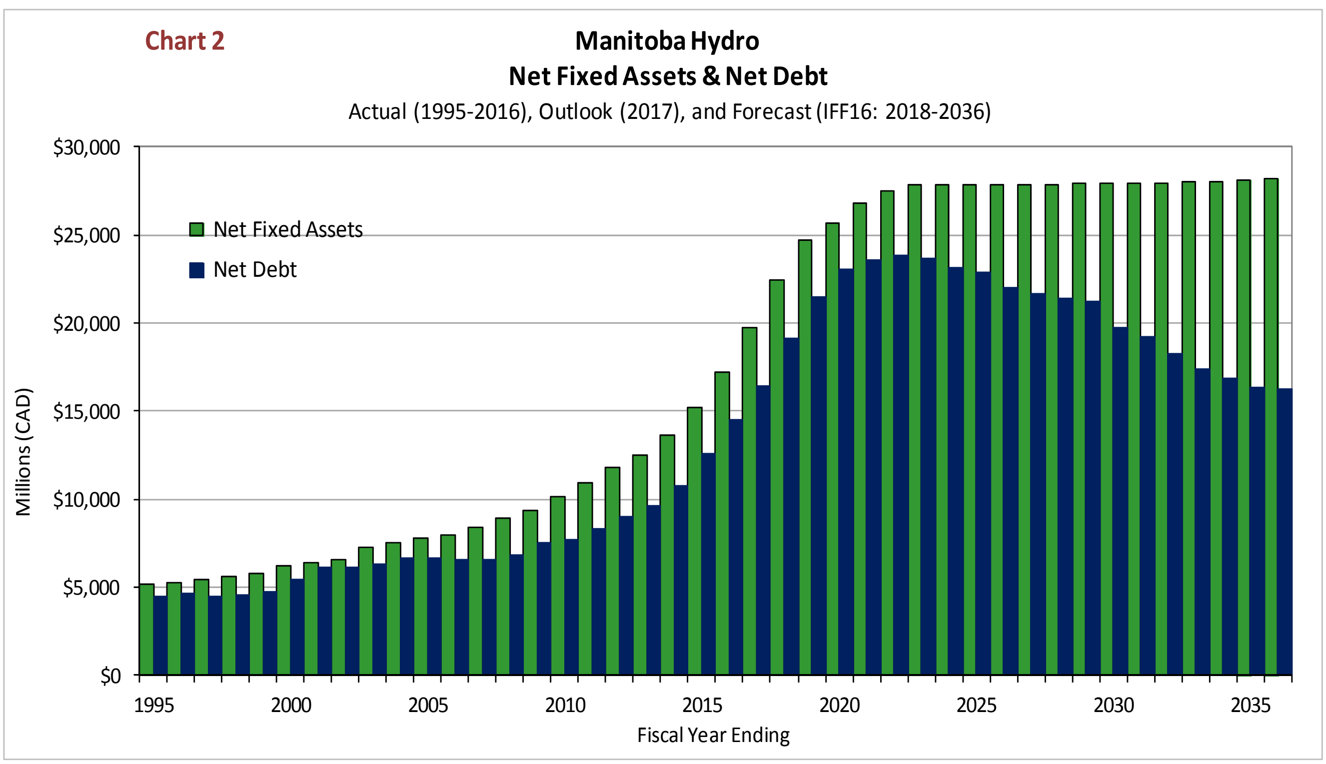
Manitoba Hydro's authority to issue debt is provided through *The Loan Act*, *The Financial Administration Act*, and *The Manitoba Hydro Act*. *The Loan Act* is approved each year and grants Manitoba Hydro borrowing authority to meet the Corporation's projected new debt financing requirements. Refunding authority to refinance maturing long term debt is provided through *The Financial Administration Act*.

The Manitoba Hydro Act grants the Corporation the power to issue short term promissory notes in the name of the Manitoba Hydro-Electric Board up to an aggregate sum of $500 million of principal outstanding at any one time. Short term borrowings are considered to have terms to maturity at issuance of less than one year. The primary objective of the short term borrowing program is to safeguard the Corporation from liquidity risk by providing a credit facility to support the Corporation's temporary cash requirements.

Both long and short term debt borrowings are unconditionally guaranteed as to principal and interest by the Province of Manitoba (except for mitigation bonds issued by the Manitoba Hydro-Electric Board). The Provincial Guarantee Fee (PGF) is an annual fee payable to the Province of Manitoba in exchange for this debt guarantee and is calculated using a rate of 1% multiplied by the applicable outstanding debt at March 31st of the previous fiscal year.

Manitoba Hydro arranges long term financing in the form of advances from the Province of Manitoba. Manitoba Hydro's long and short term credit ratings are a flow-through of the Province of Manitoba's credit ratings. As Manitoba Hydro's net debt represents approximately 39% of the total Province of Manitoba debt at March 31, 2017, the credit rating agencies (DBRS, Moody's Investors Service, and S&P) will continue to monitor Manitoba Hydro's cash flow, capital expenditures, and approved rate increases. The credit rating agencies will also monitor Manitoba Hydro's financial performance as measured by its level of retained earnings and financial ratios such as interest coverage and debt:equity.

The level of Manitoba Hydro's debt is also considered in the context of the associated capital investments that are in-service or under construction. The following chart illustrates the **growth in net fixed assets (green) and net debt (blue)** since 1995. While net debt grew to approximately $16.4 billion as at March 31, 2017, the corresponding net investment in generation, transmission, distribution and other assets had also grown at a greater pace to a net book value of approximately $19.8 billion at March 31, 2017. Moving forward, both the level of net fixed assets and net debt are forecasted to grow until the 2020s before the projected level of net debt begins to decline after 2022.



The changes in the debt portfolio will have a significant impact upon finance expense. The following chart depicts the actual and forecasted finance expense from 2009/10 to 2035/36.

The level of total interest on short and long term debt (green line) generally follows the growth in the size of the debt portfolio financing the expansion of the Corporation's net capital assets. Commencing with 2015/16, the gross interest expense levels begin to rise sharply in accordance with the escalation in capital financing, until 2022/23 when the overall levels flatten as capital investments subside.

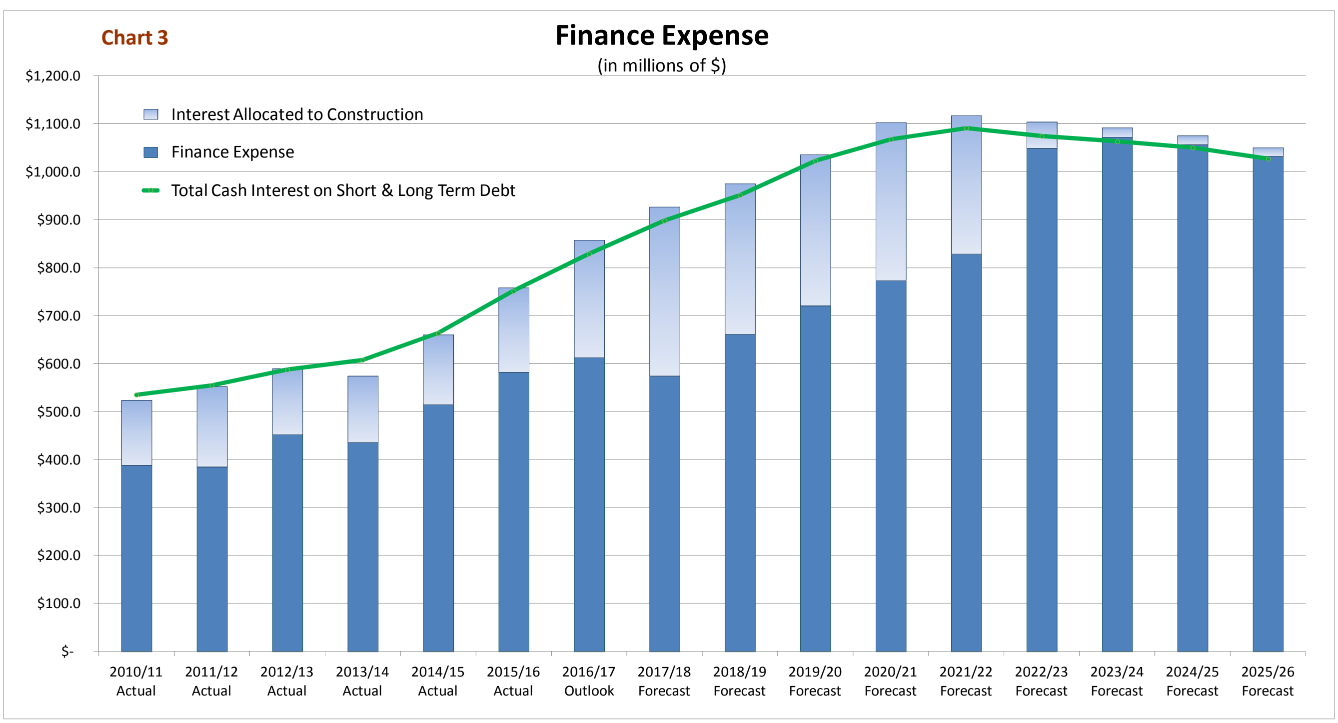
The interest allocated to construction (lightly shaded blue bars) is the interest capitalized during the construction of a project, which is a reduction to finance expense and a charge to the capital project. The interest associated with a capital project is not included in finance expense until the project is placed into service and is the primary factor that reduces the level of total interest on short and long term debt to arrive at net finance expense (dark blue bars) on the financial statements.

Consequently, although cash will still be required to pay the gross interest on debt, during periods of intensive capital construction, the accounting net finance expense is temporarily shielded from the full weight of the gross interest expense by the interest allocated to construction.

By 2022/23, as the level of capital investments subside, the net finance expense closely approaches the total cash interest on short and long term debt of approximately $1.1 billion per year.

After the in-service of the major generation and transmission assets, the allocation of potentially available cash toward debt retirement is projected to lower finance expense by approximately $350 million per year by the end of the forecast period in 2035/36. This plan relies on interest rates forecast to remain near generational lows, rate increases from domestic customers, rising export prices and substantial operating cost reductions.

While the forecasted increases in net finance expense primarily arise as capital assets go in-service and net finance expense is no longer reduced by the associated interest allocated to construction, gross interest expense arising from debt obligations will be affected by changing interest rates for new and refinanced debt requirements, as well as the debt portfolio's floating rate debt. Macro-economic conditions affecting the interest rate environment may also affect other aspects of Manitoba Hydro's operations and financial performance, for example extraprovincial energy prices.



2.2 Financial Market Commentary and Treasury Financial Risks

This section of the debt management document will provide a commentary on the financial markets within which Manitoba Hydro will access the required financing, as well as the Corporation's associated risk policies and guidelines; most notably for liquidity risk, interest rate risk, and foreign currency exchange risk.

Liquidity risk refers to the risk that Manitoba Hydro will not have sufficient cash or cash equivalents to meet its financial obligations as they come due. Manitoba Hydro will meet its financial obligations when due through cash generated from operations, short term borrowings, long term borrowings advanced from the Province of Manitoba, and where applicable, sinking fund withdrawals.

Overall financing requirements of Manitoba Hydro and its subsidiaries are managed on a consolidated basis. The Corporation closely monitors its cash receipts and disbursements on a daily basis as part of regular cash balancing activities. The Corporation also monitors short term debt balances and forecasted cash requirements to ensure that it has sufficient cash to meet near term financial obligations as they come due.

Liquidity risk can generally be subdivided into two categories:

1) **operational liquidity risk** (the availability of internally generated cash flow from operations), and
2) **market liquidity risk** (the availability of externally sourced debt financing from within the financial markets).

Operational liquidity risk arising from the availability of internally generated cash flow from operations is most pronounced for Manitoba Hydro during drought conditions as cash shortfalls occur or are exacerbated as revenues decline. For example, during the 2003/04 drought, cash flows from operating activities were negative. In order to maintain business continuity and to fund ongoing capital investments, additional debt financing was required during that time. Since then, water levels have generally been favorable and the cash provided by internally generated cash flows (before sustaining capital expenditures) has been positive and relatively steady averaging over $600 million per year. Nonetheless, proforma for the in-service of Bipole III, Manitoba Hydro's current operations are cash negative.

Market liquidity risk arising from the availability of externally sourced debt financing has become elevated for Manitoba Hydro in the past few years due to evolving investor responses to changing financial market conditions. In the aftermath of the financial crisis and the movement by investors toward safe haven investments, the Government of Canada and provincial bonds were popular and the abundance of investors provided extraordinary availability of market liquidity. However, in the last few years, investor appetite for provincial bonds has become more muted.

In the government sector, issuance in the last couple of years has been characterized by periods of volatility and uneven market tone. Some investors have grown impatient with the low yielding provincial bond market and have increasingly sought out higher yielding assets. Other investors have cautiously maintained a risk averse sentiment by securing higher rated credit. International investors, who provided a significant influx of foreign cash into Canadian securities since the financial crisis, have begun to invest elsewhere. Banking intermediaries and dealers have also been affected by regulatory changes that have applied pressure on their cost of holding inventories of bonds.

The first half of 2016 was characterized by periods of heightened volatility on the back of weaker commodity prices resulting in reduced issuance opportunities. Issuance was steady for the remainder of the year as a more positive tone prevailed in the second half of 2016.

In a survey conducted by the Canadian Fixed-Income Forum (a committee established by the Bank of Canada), market participants reported a slight decline in overall market liquidity over the past two years. [Bank of Canada, *Financial System Review*, December 2016, page 13]

Market Liquidity Risk and the Bank of Canada

"In the face of adverse shocks, certain fixed-income markets that are prone to rapid declines in liquidity might impede the reallocation of securities and exacerbate price movements, causing the shocks to be amplified or propagated." [Bank of Canada, *Financial System Review*, December 2016, page 12]

Liquidity has gained increasing focus with investors. Within Canada, public debt issuance in the 5, 10 and 30 year terms remained the norm, with the investor base becoming increasingly dominated by a few large investors. Ultra long issuance with terms greater than 30 years was sporadic as investor demand for ultralong assets remained low. There was an increase in provincial floating rate note issuance as compared to 2015.

In response to challenging market conditions, investors active in the provincial space increasingly sought out defensive positions in large sized, highly liquid bonds that can be readily traded in the financial markets – most notably bonds issued by Ontario and Quebec, as opposed to less frequent issuers such as Manitoba. Consequently, the past couple of years have seen a re-pricing of liquidity in the provincial markets with widening credit spreads for all but the most liquid issuers.

Internationally, provincial issuers capitalized on non-benchmark issuance in foreign currency markets to diversify their funding base while achieving attractive all-in cost of funds.

Looking ahead, within the context of uneven demand, it is anticipated that provincial supply of bond issuance will again be large in 2017. Throughout the year, issuers are expected to opportunistically access the market in order to lock-in favourable funding and to get ahead of potential competing supply while monitoring for periods of constructive market tone.

To support the Corporation's temporary cash requirements, the Manitoba Hydro Act grants the Corporation the power to issue *short term borrowings* in the name of the Manitoba Hydro-Electric Board up to a limit of $500 million and to have this debt unconditionally guaranteed as to principal and interest by the Province of Manitoba. Short term borrowings are considered to have terms to maturity at issuance of less than one year.

With the high levels of Manitoba Hydro's cash requirements, this short term credit facility only provides a relatively small level of liquidity protection for the Corporation. For example, with total forecasted debt financing of approximately $3.6 billion in 2017/18, the $500 million short term debt limit represents less than two months of cash requirements. In order to maximize the availability of this credit facility for overdraft liquidity protection, the use of the short term debt program has been reduced in recent years. Were the limit raised to a higher level, then more risk mitigation and financing flexibility would be available.

To ensure smooth business continuity and financing flexibility during periods of intensive capital expenditures and uneven market tone, Manitoba Hydro began maintaining larger balances of unencumbered cash as part of its enhanced *prudential liquidity* practice. Manitoba Hydro's intention is to be funded approximately three months in advance of the Corporation's cash requirements.

Sinking fund balances, used to accumulate cash to repay future debt maturities, are another source of cash but are a restricted source of liquidity as the balances can only be withdrawn for debt maturities.[1] As these sinking fund balances are encumbered, the cash is not available for general use. Manitoba Hydro's cash flow projections indicate that the Corporation's investing activities will exceed the cash flow from operations until at least 2022. The net effect is that until 2023, the Corporation will source the incremental cash for sinking fund payments through the issuance of additional debt – thereby incurring additional costs.[2] In the next few years, in order to optimize the Corporation's liquidity practices and to reduce finance expense, Manitoba Hydro will seek to minimize its sinking fund balances.

[1] Manitoba Hydro is legislated under the Manitoba Hydro Act to make sinking fund payments to the Province of Manitoba of not less than 1% of the principal amount of the outstanding debt on the preceding March 31, and 4% of the balance in the sinking fund at such date.

[2] Increasing sinking fund balances are associated with higher gross debt levels which lead to the following incremental costs:

a) Higher levels of the sinking fund management fee (charged at 0.075% of the sinking fund balance at the previous year end);
b) Higher negative cost to carry on the sinking fund balances (as less of a return is typically earned on sinking fund investments than would be paid on the debt to finance the sinking fund contributions); and
c) Higher amounts paid for the Provincial Debt Guarantee Fee (which is based on gross debt levels and not the level of net debt which deducts sinking fund balances).

Interest rate risk is the risk that future cash flows will fluctuate due to changes in market interest rates. There are a number of forms of interest rate risk affecting the existing debt portfolio. Floating or variable rate debt is subject to interest rate reset risk during the life of the debt as the interest rate becomes adjusted at the periodic reset dates. Refinancing risk pertains to the interest rate exposure that exists upon refinancing a short or long term debt issue at its maturity. On a prospective basis, there is also interest rate risk on borrowings for new cash requirements.

Given the significant level of upcoming debt financings, the Corporation's sensitivity to interest rate changes will be elevated during the next few years. Financial market conditions and the Corporation's risk mitigation activities will be especially important during this timeframe.

Actual interest rates in the Canadian capital markets have been on a downward trajectory over the past two decades but are projected to eventually rise to near pre-crisis levels.

The Bank of Canada kept its policy interest rate at 0.5 per cent in 2016, near historical lows. The Bank judged that, in the current economic circumstances, maintaining this policy stance would bring the Canadian economy back to full capacity and inflation sustainably back to target within an acceptable period.

In its April 2017 Monetary Policy Report, The Bank of Canada expects the output gap to close in the first half of 2018. The median forecast on Bloomberg at March 31, 2017 indicated that the Bank of Canada was projected to hold the overnight rate steady until the second quarter of 2018.

Interest Rate Risk and the Bank of Canada

"The Canadian economy is evolving largely as expected, but the outlook needs to be viewed in the context of elevated policy uncertainty at the global level." [Bank of Canada, *Monetary Policy Report*, January 2017, page7]

In the U.S., in December 2015, the U.S. Federal Reserve (the Fed) began the process of normalizing its monetary policy by raising its overnight interest rate. Since that time, the Fed increased the overnight rate in December 2016 and March 2017. The median forecast on Bloomberg at March 31, 2017 indicates that the Fed will have two more rate hikes in 2017 with more expected to follow in 2018.

Markets have been volatile since Donald Trump's election as U.S. President with stocks generally up due to the potential for a boost in economic growth and corporate earnings stemming from spending on infrastructure, lower tax rates, reduced business regulation, and corporate cash being repatriated from overseas. Conversely, a drive to risk sentiment drove bond prices down and yields shot up peaking in mid-March 2017. There has since been some strenthening in bond markets. The primary concern driving this correction is the partial unwind of 'trumpflation' trades as doubts arise regarding the delivery of some of Trump's key policies. Canada's bond yields have been dragged along with the U.S. yields as the markets try to assess Trump policy impacts. Of particular concern to investors in Canadian debt are persistent worries about U.S. protectionism and losing competitiveness due to tax reform.

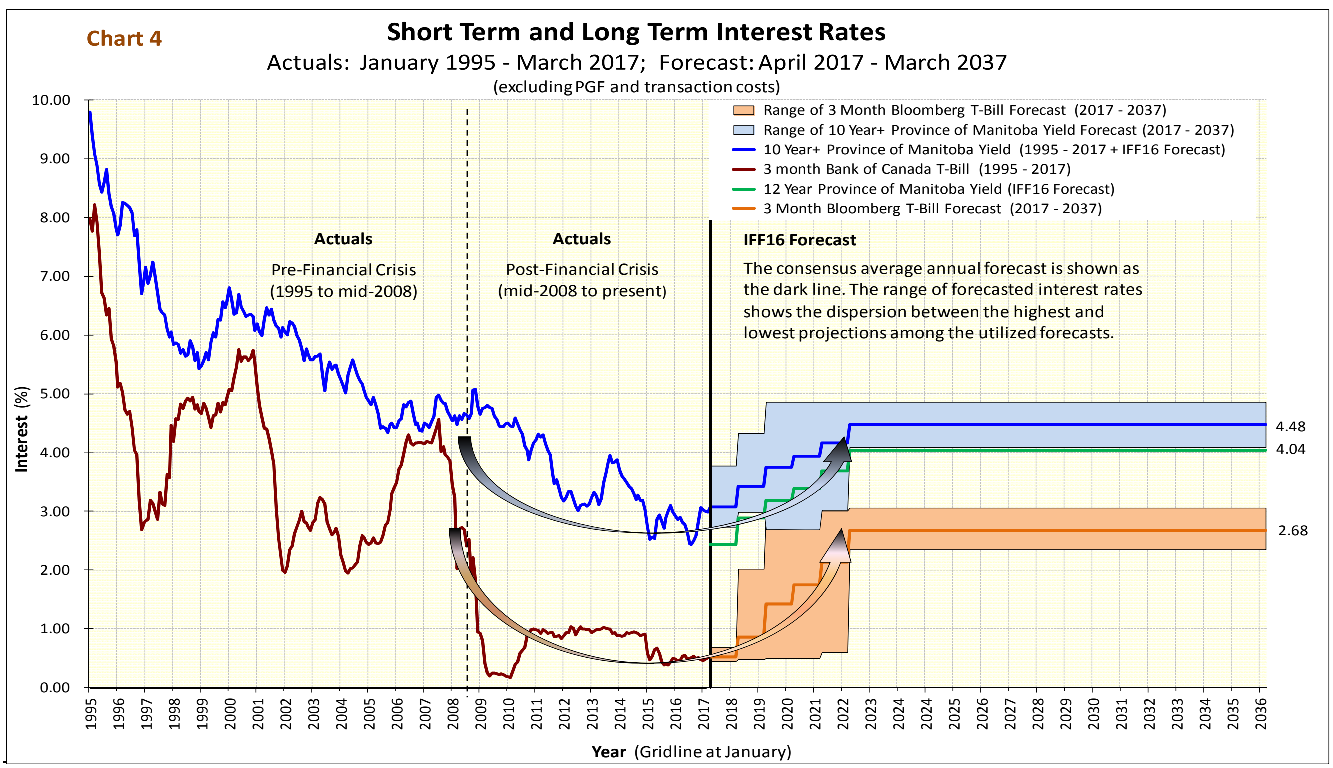
Although economic forecasts during the last few years have generally called for a quicker economic recovery and correspondingly higher interest rates, on an actual basis, the strength and pace of a recovery has been subdued. As a result, monetary policy interventions have continued to anchor interest rates at historically low levels.

To illustrate the changes and trends affecting Manitoba Hydro's short and long term interest rates from 1995 to 2036, the following chart uses 3 month T-Bills for a measure of short term interest rates (red line) and the Province of Manitoba 10 Year+ bond yields for long term interest rates (blue line).[3]

IFF16 will no longer utilize the Manitoba Hydro 10 Yr+ rate (the average of the 10 and 30 year Province of Manitoba bond yields) for forecasting the Corporation's new debt issuance as IFF16 has modeled a reduction of the Weighted Average Term to Maturity (WATM) of forecast Canadian debt issuance from 20 to 12 years. While Manitoba Hydro will continue to support benchmark Canadian maturity terms of 5, 10 and 30 years, the issuance in the 5 year sector will increase from historical debt issuance levels. Manitoba Hydro modeled various debt issuance scenarios with the goal of keeping the interest rate risk close to previous IFF risk levels while decreasing cost. The 12 year terming with the following distribution achieved this goal:

15% floating and 85% fixed (40% in 5 year issuance, 25% in 10 year issuance, 20% in 30+ year issuance)

This 12 year interest rate forecast is represented in the following graph by the green line.



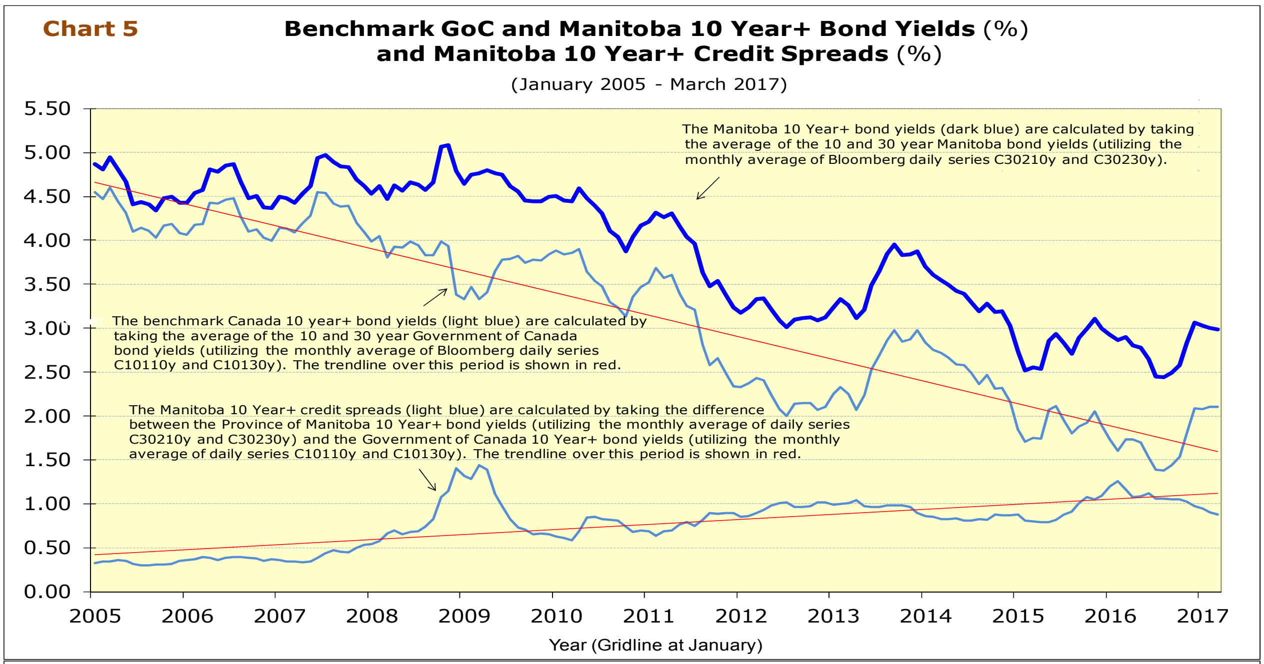
[3] The 10 Year+ Province of Manitoba bond yields (blue line) are calculated by taking the average of the 10 and 30 year Province of Manitoba bond yields. Actual 10 Year+ yields utilize the monthly average of Bloomberg daily series C30210y and C30230y. Forecast 10 Year+ yields are derived from a consensus of external forecast views for the average of 10 and 30 year forecasts. The forecasted long term debt credit spread between the Government of Canada and the Province of Manitoba has been added to each of the forecasters' Government of Canada long term debt forecasts, so that all of the long term debt interest rate projections illustrate Province of Manitoba yields. The long term interest rates exclude the 1.00% PGF and transaction costs (estimated at 6 basis points or 0.06%).

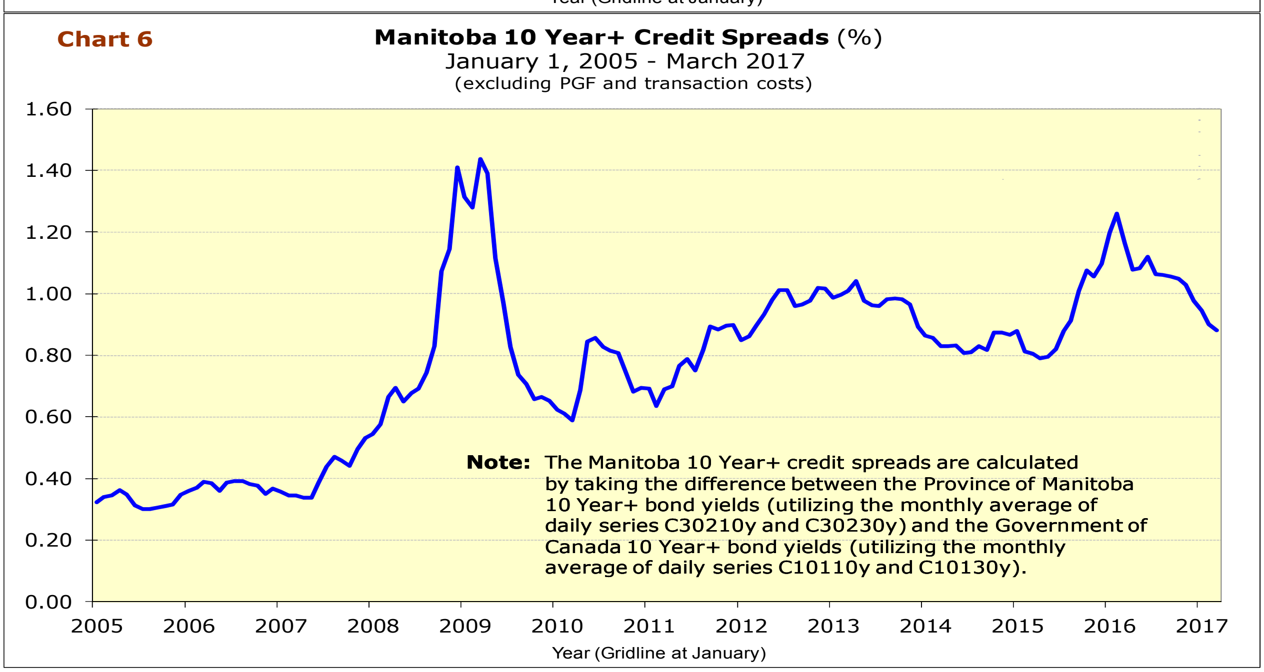
As shown in Chart 5, the Province of Manitoba 10 Year+ bond yields (dark blue line) are comprised of two primary components (shown in the light blue lines): 1) the benchmark Government of Canada (GoC) 10 Year+ bond yields; and 2) the Province of Manitoba 10 Year+ credit spreads.

The credit spread represents the risk premium investors demand over the benchmark GoC bonds to hold the Province of Manitoba bonds. As shown in the red trend lines, the decline in the yields for benchmark GoC bonds have been partially offset by credit spreads that have generally drifted wider over the past ten years.

While the GoC yields are mostly influenced by Bank of Canada monetary policy and external market forces; the credit spreads can be influenced by actions undertaken by Manitoba. Chart 6 provides enhanced focus to the credit spreads by zooming in on the y-axis.

A primary driver of the elevated credit spread levels experienced since the financial crisis has been the growth in the supply of federal, provincial and municipal debt that has been brought to the market. It is anticipated that the high levels of government debt issuance will continue to apply upward pressure on provincial credit spreads.





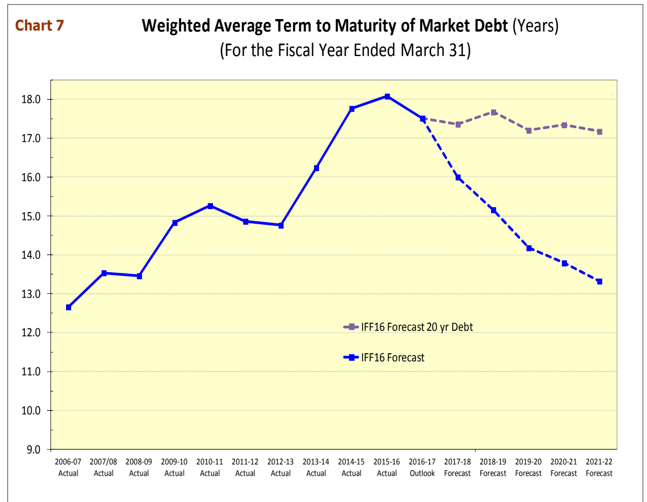
As previously described, from a market demand perspective, issuance in the government sector during the last two years was characterized by periods of volatility and uneven market tone for provincial bonds and a re-pricing of liquidity in the provincial markets with widening credit spreads for all but the most liquid issuers.

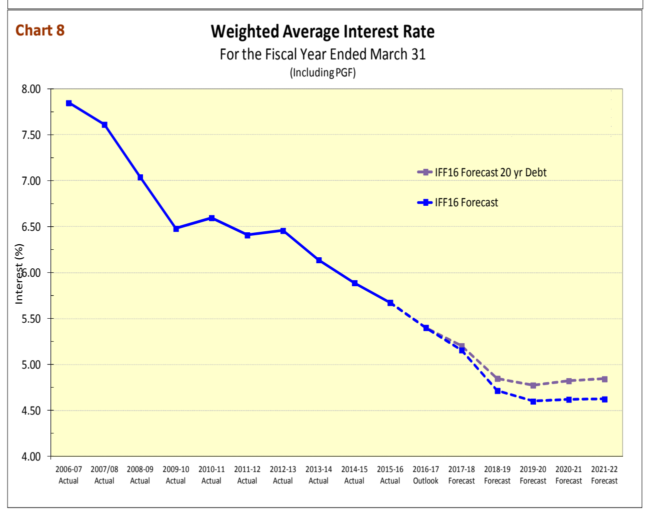
As liquidity improved towards the end of 2016 on the back of continued investor demand and a sustained bid for credit, credit spreads tightened across the curve. To date in 2017, credit spreads have demonstrated a modest tightening bias thus far on the back of better buying activity and stronger demand for credit.

The level of Manitoba Hydro's debt financing may apply pressure on the province's credit spreads. To obtain sufficient demand for the increasing supply of Manitoba bonds, pricing incentives may be required for investors in the form of wider credit spreads and therefore higher bond yields. In order to mitigate the pressure on Manitoba credit spreads, Manitoba Hydro will continue to undertake a number of debt management activities, such as:

- Reducing the interest rate risk exposure on the existing debt portfolio by maintaining the proportion of floating rate debt at or below 10% of the total debt portfolio.
- Managing the refinancing risk within the existing debt portfolio by having a relatively smooth debt maturity schedule.
- Reducing Manitoba Hydro's liquidity risk and enhancing financing flexibility by maintaining positive cash balances and/or access to liquidity.
- Establishing benchmark sized debt issues so that investors may reduce their market risk by having liquid bonds that can be readily traded in the financial markets.
- Diversifying the investor base by varying the terms to maturity for debt issuance so that investors with different term preferences may participate in Manitoba issues.
- Diversifying the investor base beyond the domestic Canadian capital markets by issuing Manitoba bonds into international markets.

The extraordinary interest rate environment has provided the opportunity for Manitoba Hydro to secure low cost, stable funding. As shown on the following charts, since 2006/07, the debt portfolio's weighted





average term to maturity of its market debt portfolio has increased by over 5 years and the net weighted average interest rate has decreased by over 2.0%.

The planned change in IFF16 to reduce the WATM for new issuance to 12 years, which is aligned with the debt retirement opportunity to match future cash flows with debt maturities, will return the WATM to pre-crisis levels, while expecting to beneficially lowering the WAIR.

Against the backdrop of unprecedented capital borrowing requirements and rising interest rates, Manitoba Hydro is in a period of elevated sensitivity to interest rate changes. Manitoba Hydro's **interest rate policy** on its existing debt portfolio is to limit the aggregate of:

i) floating rate debt,
ii) short term debt, and
iii) fixed rate long term debt to be refinanced within the subsequent 12 month period;

to a maximum of 35% of the total debt portfolio.

Manitoba Hydro's **interest rate risk guidelines** for its existing debt portfolio include maintaining an aggregate of floating rate debt and short term debt within 15 – 25% of the total debt portfolio, and having the fixed rate long term debt to be refinanced within a 12 month period being less than 15% of the total debt portfolio. During years in which there are high levels of refinancings and/or new borrowings for prospective cash requirements, in order to manage the overall interest rate risk profile, the Corporation's interest rate risk on its existing debt portfolio may be reduced by decreasing the percentage of aggregated floating rate debt and short term debt to below 15% of the total debt portfolio.

During the past few years, in order to mitigate the interest rate risk arising from the significant level of new capital borrowing requirements, the interest rate risk on the existing debt portfolio has been reduced by decreasing the percentage of floating rate debt within the existing debt portfolio and by selecting debt maturities, that upon refinancing will not compete with new borrowing requirements. Chart 9 shows Manitoba Hydro's interest rate risk profile on the existing debt portfolio as at March 31, 2017.

Chart 9 **Summary of Interest Rate Risk Profile** (%)
(As at March 31, 2017)

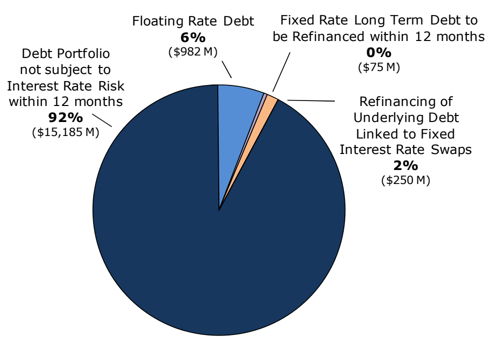
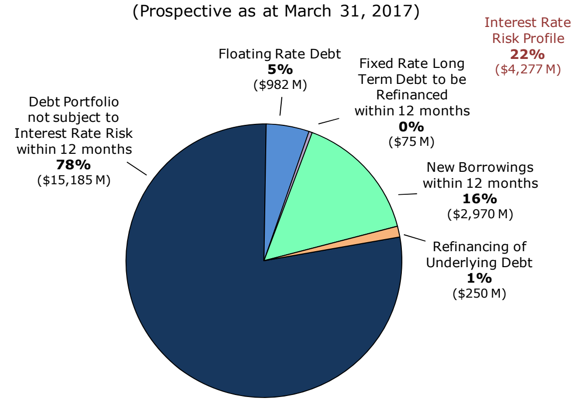


Chart 10, which includes new borrowings and refinancing of underlying debt within the next 12 months, shows that approximately 22% (or $4.3 billion) of the prospective debt portfolio will be subject to interest rate risk over the next 12 months.

Chart 10 **Summary of Interest Rate Risk Profile** (%)
(Prospective as at March 31, 2017)



Foreign currency exchange risk represents the potential for financial gain or loss due to foreign exchange movements for any transaction denominated in a currency other than Canadian (CAD) funds.

The past two years have also seen a significant change in the USD/CAD foreign currency exchange rate. Some of CAD weakness was due to a Canadian economy that has been underperforming relative to the U.S. economy; however, the pressure on commodity prices and in particular oil has been a primary driver. For example, the Canadian dollar had strengthened to the 1.19 range in early May 2015 on the back of rallying oil prices, before weakening to approximately 1.41 by January 31, 2016 due to the retracement in oil prices and the U.S. lift-off in rates while the BoC remains in an extended pause. Since then, oil prices have rebounded slightly and stabilized, which led to the dollar spending much of the past six months hovering between 1.30 and 1.35, closing at approximately 1.33 as of March 31, 2017. The continued divergence in monetary policy is expected to continue to weigh on the currency in 2017.

Manitoba Hydro has significant export revenues denominated in United States dollars (USD); however, the Corporation's exposures to foreign currency rate fluctuations on USD revenues are managed with the combination of natural and accounting hedges. For example, to the extent that the underlying USD inflows and outflows are in balance, while a strengthening US dollar will increase the translation of US export revenues into CAD, this change will be offset by increases in the translation of US dollar expenses (such as US dollar interest expense) into CAD.

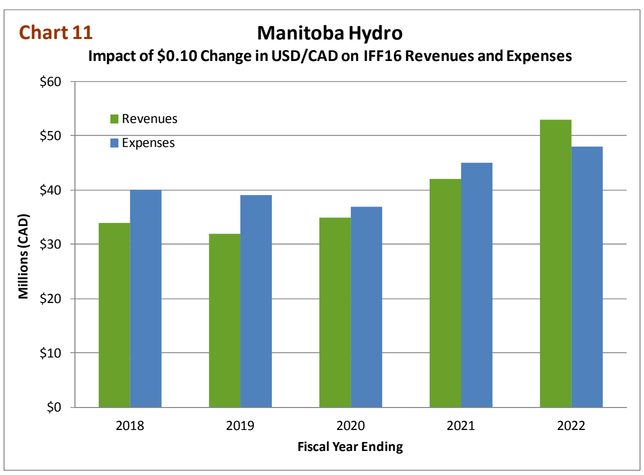
As part of the Corporation's foreign currency exchange risk management program, in order to mitigate the foreign currency exchange risk on USD revenues, Manitoba Hydro includes outflows from USD debt. At March 31, 2017 the portion of Manitoba Hydro's debt portfolio that was made up of USD debt principal was 10%.[4]

The Corporation's foreign currency exchange risk tolerances are described in the following guidelines:

1) If a 10 cent change in the forecasted USD/CAD foreign currency exchange rate results in more than a $10 million change in forecasted net income for the current fiscal year, then an adjustment may be required to the USD cash flows.
2) If the annual net long or short USD cash position (USD cash inflows less USD cash outflows) is greater than $100,000,000 for the current fiscal year and it is forecast that an escalation is occurring in the net cash position in subsequent years, then an adjustment may be required to the USD cash flows.

Both tests are conducted semi-annually or as required.

The following chart depicts the impact of a $0.10 change in the USD/CAD FX rate on IFF16 USD revenues and expenses over the five year period to 2021/22.



As the incremental cumulative increase or decrease in retained earnings over a five year period to 2021/22 is only +/- $13 million, the Corporation's net exposure to USD/CAD currency fluctuations during this timeframe is largely eliminated and within risk tolerance guidelines.

Manitoba Hydro regularly monitors its USD cash balances and although no new USD interest payments are projected to be required in the near term, the USD debt portfolio may occasionally be rebalanced in accordance with US dollar inflows. For example, Manitoba Hydro executed currency swaps to create dual currency bonds BU-1, BU-2, BU-3, BU-4 and BU-5 by converting USD principal for US debt series BU to CAD (the principal was converted to CAD while retaining interest payments in USD), thereby eliminating the need to make USD sinking fund payments for the BU debt series.

In addition to the mitigation of foreign exchange risk, Manitoba Hydro considers a number of factors when determining whether it will seek US dollar versus Canadian dollar debt; including the cost effectiveness of executing a US dollar versus a Canadian dollar issuance for available terms, and the liquidity and interest rate benefits associated with broadened access to capital within a diversified investor base.

Although provincial borrowers frequently issue long bonds in the Canadian capital markets, due to financial market conditions, provincial issuance of US dollar debt with terms greater than 10 years is unusual because the long end of the US curve has not been cost effective compared to Canada for many years. Consequently, historically, Manitoba Hydro has more heavily weighted its shorter dated long term debt issuance with new USD debt issuance, while predominantly using the Canadian debt capital debt markets to secure long term debt with terms equal to or exceeding 10 years.

For example, on June 22, 2016, Manitoba Hydro took advantage of a favorable USD funding opportunity for shorter dated long term debt and secured ten year debt for USD $200 million, which was then swapped to CAD $257.1 million. The net effect was that the debt issue's all-in yield rate was approximately 6.6 basis points lower than the indicative price for the debt had it originated in Canada.

[4] USD debt balances are translated into Canadian dollars at the exchange rate prevailing at the balance sheet date. As described in Note 3(o) of Manitoba Hydro's audited 65th Annual Report for March 31, 2016, "Translation gains and losses are credited or charged to finance expense in the current period except for long-term debt obligations in hedging relationships with future export revenues." In order to mitigate this foreign currency translation risk, Manitoba Hydro has formal accounting cash flow hedges in place between USD long term debt balances and future USD export revenues. Consequently, the unrealized changes in the revaluation of the USD debt are recorded in Other Comprehensive Income (OCI) until future hedged USD export revenues are realized, at which time the associated gains or losses in Accumulated OCI (AOCI) are recognized in net income.

3.0 Financing Requirements and Debt Management Strategies

Debt management strategies and activities will adapt to evolving financing requirements and financial market conditions. During the past ten years, the volume, frequency and complexity of the Corporation's debt management activities have increased. There has been a significant growth in new cash requirements in keeping with increasing capital investments. In addition, with the onset and aftermath of the global financial crisis, the Corporation has observed an elevated sensitivity to interest rate and liquidity risks. Over the next few years, Manitoba Hydro will require unprecedented levels of debt financing and there will be an ongoing need for prudent debt management. In the years following the in-service of the major generation and transmission assets, there will also be an opportunity to lower finance expense by allocating potentially available cash toward debt retirement.

In order to organize the discussion of Manitoba Hydro's past, present and future debt management strategies, the Corporation has thematically categorized its debt management strategies into the following three phases:

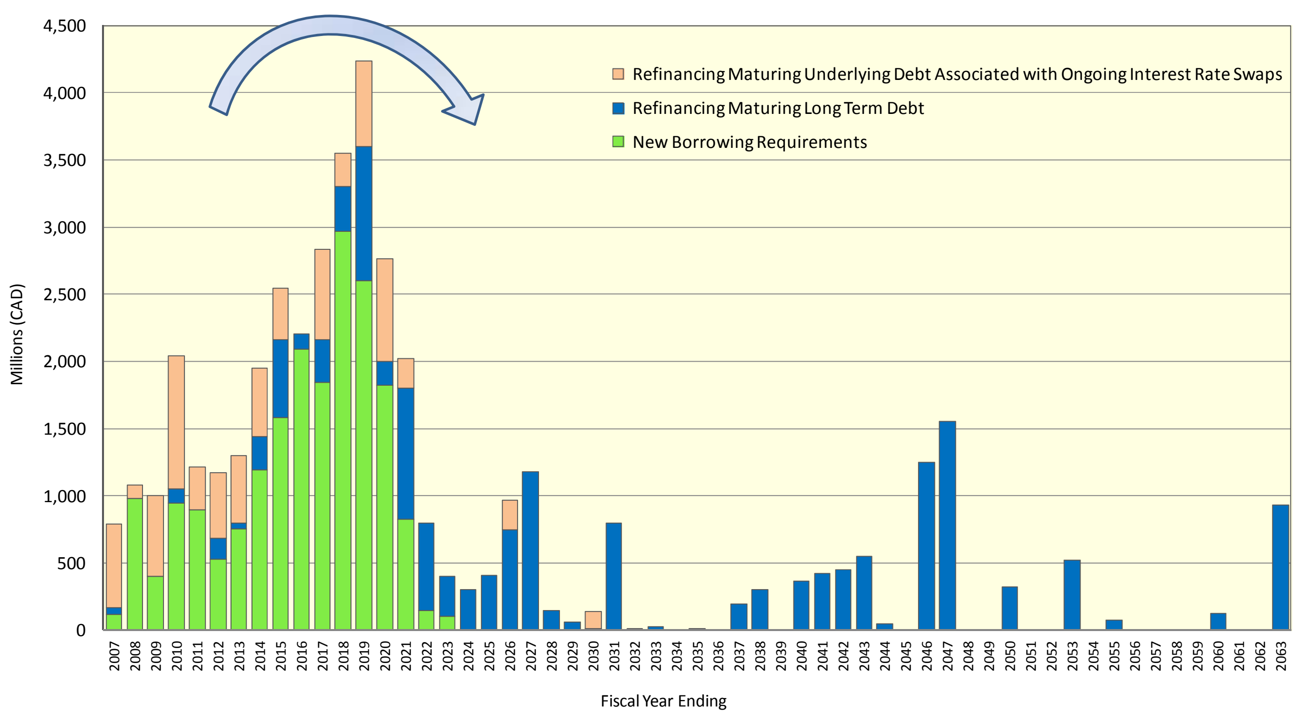
Phase 1 (2007 – 2015): Financial Crisis Response and Leapfrogging
Phase 2 (2016 – 2020): Peak Shaving and Debt Smoothing
Phase 3 (2021 – 2035): Off-Ramping and Debt Retirements

A commentary for each of these phases will be provided in the following sub-sections.

3.1 Phase 1 (2007 – 2015): Financial Crisis Response and Leapfrogging

The following chart shows the actual long term debt financing activities that were undertaken from April 1, 2006 to March 31, 2017. The chart also depicts the existing long term debt maturities as at March 31, 2017 along with the forecasted new borrowing requirements.

Chart 12 Manitoba Hydro Consolidated Borrowing Requirements & Maturity Schedule
Phase 1 (2007 - 2015): Financial Crisis Response and Leapfrogging



Note 1: Actual financings and debt maturities as at March 31, 2017 with forecasted new borrowings thereafter.
Note 2: Manitoba Hydro will consider the availability of sinking fund withdrawals to reduce the required refinancing of maturing debt.

The total volume of financing from April 1, 2006 to March 31, 2015 totalled approximately $12.6 billion, with nearly $6.9 billion (55%) for new borrowing requirements and $5.7 billion (45%) associated with refinancing activities.

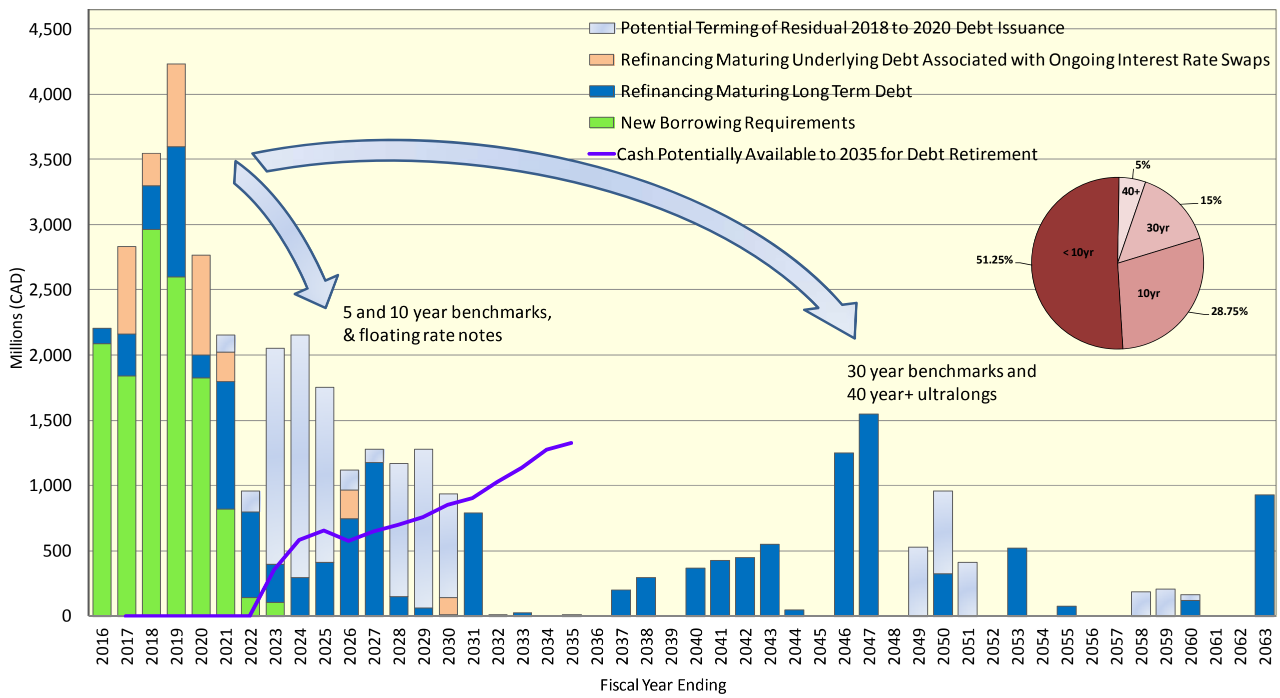
Manitoba Hydro's debt management strategies and activities during this phase were significantly impacted by the global financial crisis and associated financial market conditions, as well as the impending unprecedented levels of debt financing requirements that were forecasted to occur in Phase 2. The following bullets summarize some of the key debt management themes during Phase 1:

- **Investor Appetite and Terms to Maturity**. During the height of the financial crisis, investor risk sentiments and appetite led to a sharp increase in credit spreads and a preference for shorter dated terms to maturity for new debt issuance. For example, the weighted average term to maturity (WATM) for issuance during the 2008/09 fiscal year was only 3 years, with the longest dated debt issuance having a 7 year term to maturity. Manitoba Hydro's first 30 year debt issue after the financial crisis occurred in June 2009. Afterwards, Manitoba Hydro steadily increased the yearly WATM, reaching a high of approximately 28 years in both fiscal 2014 and 2015. This was accomplished by meeting investor appetite for additional 30 year benchmark debt issuance, as well as taking advantage of the investor demand for ultralong debt issues (with terms to maturity ranging up to 50 years). This targeted issuance of bonds with a term to maturity of 30+ years enabled the Corporation to increase the WATM of its total debt portfolio by over 5 years to approximately 17.8 years as at March 31, 2015.
- **Interest Rate Risk and Leapfrogging.** During the past few years, in order to mitigate the interest rate risk arising from the significant level of new capital borrowing requirements during Phase 2, the interest rate risk on the existing debt portfolio was reduced by decreasing the percentage of floating rate debt within the existing debt portfolio. In preparation for the upcoming period of substantial capital investment, during Phase 1 Manitoba Hydro also favoured long term fixed rate financings with maturities of 10 years and longer in order to mitigate the risk of debt maturities coinciding with the substantive financing program for new capital investment. This leapfrogging strategy enabled Manitoba Hydro to not only match the Corporation's long-lived assets with long term debt, but also enhanced future financing flexibility and reduced the refinancing risk within Phase 2.
- **Refinancing Underlying Debt Maturities**. During the early part of Phase 1, Manitoba Hydro also had a need to refinance a large number of maturing underlying floating rate debt issues that were linked with previously executed interest rate swaps (which had longer dated maturities). In the context of elevated credit spreads, in order to maintain interest rate stability with the linked interest rate swaps, the underlying debt secured during this time consisted of shorter dated long term debt that needed frequent rollover refinancing. At the height of this activity during the 2010 fiscal year, nearly 50% of the over $2 billion of total debt financing was driven by the need to refinance maturing underlying debt. With the increased financial market stability that occurred as this phase progressed, Manitoba Hydro was able to achieve a tighter term alignment between the swap and underlying debt maturity dates by securing longer dated underlying debt maturities. On a cumulative basis, $4.5 billion or 36% of the total debt financing during this phase was associated with securing underlying debt. Due to the term alignment activities during Phase 1, the percentage of underlying refinancing requirements within the existing debt portfolio has been reduced for subsequent phases.
- **International Debt Issuance**. In order to expand access to a larger investor pool and reduce the pressure upon Manitoba's credit spreads, Manitoba Hydro continued to use international debt issuance to augment the traditional domestic Canadian debt issuance. During Phase 1, Manitoba Hydro not only secured US dollar debt, but also executed its first Australian dollar issue during the 2015 fiscal year. In phase 2, Manitoba Hydro has and will continue to pursue international issuance, with swapped pricing equal to or better than indicative Canadian yield rates.
- **Weighted Average Interest Rate**. The financial crisis led to a prolonged period of low interest rates that provided Manitoba Hydro with the opportunity to secure debt financing at historically low yield rates, and to reduce the debt portfolio's weighted average interest rate (WAIR) by over 2% since the start of the 2007 fiscal year. It is projected that the WAIR will continue to decline through Phase 2.

3.2 Phase 2 (2016 – 2020): Peak Shaving and Debt Smoothing

The following chart depicts the prospective borrowing requirements and maturity schedule as at March 31, 2017 and includes the potential terming of debt issuance during the 2018, 2019 & 2020 fiscal years (shown in the light blue bars). The level of debt financings during Phase 2 are unprecedented in the Corporation's history.

Chart 13 **Manitoba Hydro Consolidated Borrowing Requirements & Maturity Schedule Phase 2 (2016 - 2020): Peak Shaving and Debt Smoothing**



Note 1: Actual financings and debt maturities as at March 31, 2017 with forecasted new borrowings thereafter.
Note 2: Manitoba Hydro will consider the availability of sinking fund withdrawals to reduce the required refinancing of maturing debt.

The total actual and forecasted volume of financing over the five year period from April 1, 2015 to March 31, 2020 is $15.5 billion, with $11.3 billion (73%) for new borrowing requirements and $4.2 billion (27%) associated with refinancing activities. The following table provides a debt financing comparison between Phases 1 and 2:

	New Borrowing Requirements	Refinancing Long Term Debt	Refinancing Underlying Debt	TOTAL
Phase 1 (2007 – 2015)	$6.9 billion (55%)	$1.2 billion (9%)	$4.5 billion (36%)	$12.6 billion
Phase 2 (2016 – 2020)	$11.3 billion (73%)	$2.0 billion (13%)	$2.2 billion (14%)	$15.5 billion

The following bullets summarize some of the key debt management themes during Phase 2:

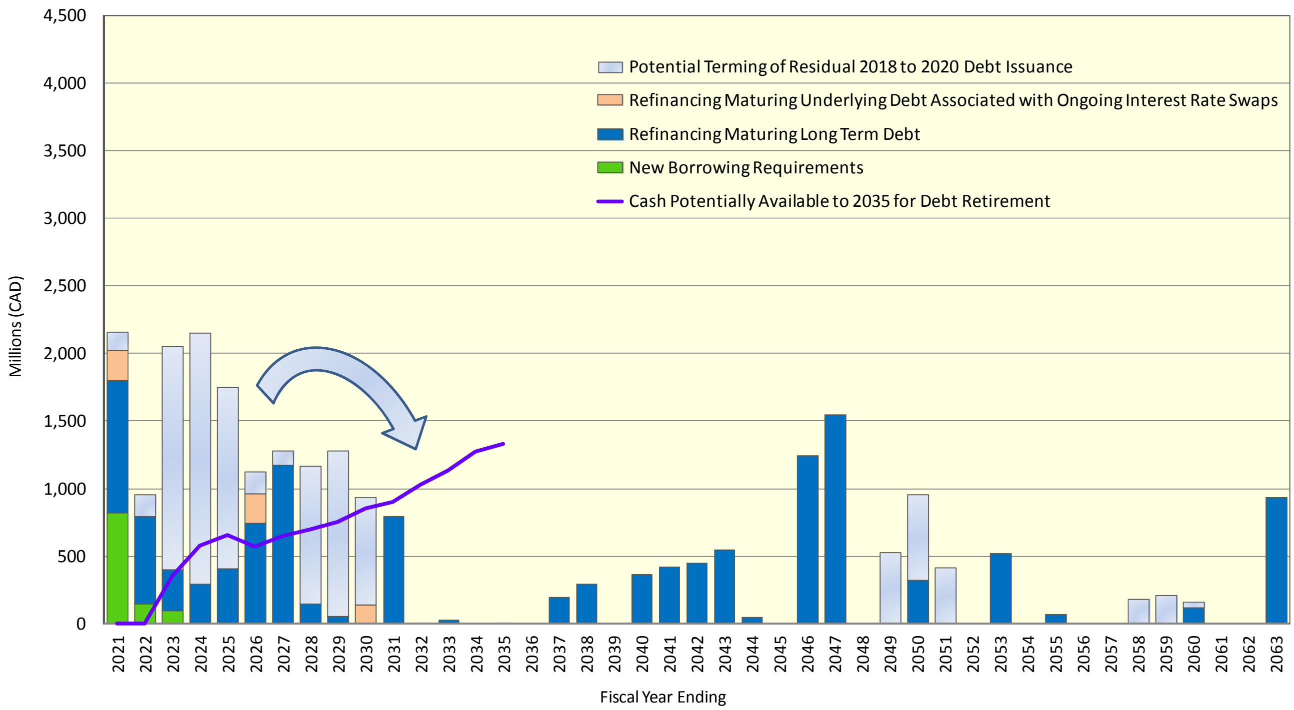
- **Debt Smoothing and Terms to Maturity**. Whereas Phase 1 had leapfrogging terms to maturity for forecasted new debt issuance of 20 years, in Phase 2, commencing in 2017/18, the term to maturity for forecasted new debt issuance will be reduced to 12 years in order to further reduce the weighted average interest rate. For indicative purposes, the chart indicates the potential impact of issuing 51.25% of the Phase 2 debt with 3-7 year terms to maturity, 28.75% with 10 years, 20% with 30+ years. Manitoba Hydro will smooth the maturity schedule by layering new borrowings from peak years into available maturity buckets and to set up the debt portfolio for future debt retirement off-ramping. This reduction in forecasted term to maturity is subject to change if operating cost reductions, export price increases, PUB rate increases do not end up yielding the cash flow required to enable the new terming strategy.

- **Weighted Average Term to Maturity** (WATM). The WATM at March 31, 2017 was 17.5 years and is now well positioned to accommodate a slight reduction in order to secure shorter dated financings into the debt portfolio that are projected to have lower yield rates.
- **Weighted Average Interest Rate** (WAIR). Countering upward pressure from rising forecasted interest rates, the WAIR of the entire debt portfolio is projected to decrease as new and/or refinanced debt is issued at yield rates that are below the weighted average of the existing debt portfolio. In accordance with an upwardly sloped yield curve, the **reduction in the forecasted terms to maturity for new issuance is also anticipated to further lower the WAIR**. The financial benefit associated with this opportunity has the potential to provide an approximate $150 to $200 million reduction in debt servicing costs over the next five years.
- **Prudential Liquidity**. In fiscal 2016, from a market demand perspective, issuance in the government sector was characterized by periods of volatility and uneven market tone for provincial bonds. In order to mitigate liquidity risk and provide financing flexibility to secure debt during periods of constructive investor tone, Manitoba Hydro intends to maintain unencumbered cash balances by securing funds approximately 3 months in advance of the Corporation’s cash requirements. As the use of the $500 million short term credit facility will be reduced to maximize its availability for overdraft liquidity protection, the funding for the positive cash balances is projected to be accessed via long term debt issuance. Were the short term debt limit raised to a higher level, then more risk mitigation and financing flexibility would be available. Where feasible, Manitoba Hydro will minimize sinking fund balances to near zero through in-year payments and withdrawals at debt maturity dates.
- **Credit Spreads**. In order to mitigate the pressure on Manitoba credit spreads, Manitoba Hydro will continue to undertake a number of debt management activities such as the reduction of its liquidity and interest rate risks. In addition, the Corporation will: establish benchmark sized debt issues so that investors may reduce their market risk by having liquid bonds that can be readily traded in the financial markets; diversify the investor base by varying the terms to maturity for debt issuance so that investors with different term preferences may participate in Manitoba issues; and diversify the investor base beyond the domestic Canadian capital markets by issuing Manitoba bonds into international markets.
- **International Debt Issuance**. Manitoba Hydro will continue to obtain international debt issuance, with swapped pricing near or more attractive to indicative Canadian yield rates. It is anticipated that Manitoba Hydro may use the 3, 5 and 10 year maturity buckets for some new USD debt issuance, while predominantly using the Canadian debt capital debt markets to secure long term debt with terms equal to or exceeding 10 years. The international debt issues transacted during 2015/16 and 2016/17 saved approximately $12.4 million over the terms of the respective debt issues as compared to the cost of equivalently termed domestic issuance.
- **Interest Rate Risk and Floating Rate Debt**. As Phase 2 has high levels of refinancings and new borrowings for prospective cash requirements, Manitoba Hydro will seek to mitigate the interest rate risk on the existing debt portfolio by maintaining the percentage of floating rate debt levels at or below 10% of the total debt portfolio.
- **Refinancing Underlying Debt Maturities**. In Phase 2, the refinancing requirements for underlying debt associated with ongoing interest rate swaps will continue through 2019, although they are projected to be a smaller proportion of the total financing requirement.
- **Dual Currency Bond Creation**. It is anticipated that Manitoba Hydro will continue to create dual currency bonds in order to minimize USD sinking fund levels, as well as to rebalance USD cash flows and reduce the balance sheet volatility arising from the translation of USD debt principal to CAD.
- **Finance Expense and Financial Ratios**. It is projected that gross interest expense will sharply rise during Phase 2 due to increasing levels of capital financing, offset by the benefits of the low interest rate environment and capitalized interest credits. USD/CAD changes affecting the US debt portfolio and thereby finance expense, will be largely mitigated by counterbalancing impacts to other income statement categories (such as Extraprovincial Revenues). During this phase it is projected that there will be increasing pressure on Manitoba Hydro’s financial ratios and metrics.

3.3 Phase 3 (2021 – 2035): Off-Ramping and Debt Retirements

The following chart depicts the prospective borrowing requirements and maturity schedule at the beginning of Phase 3 on April 1, 2020 and includes the potential terming of debt issuance during the 2018, 2019 & 2020 fiscal years (shown in the light blue bars). This chart also shows **the cash potentially available for debt retirement** (cash from operating activities less capital investing activities) for the period to the end of the 2035 fiscal year (purple line). Over the 2023–2035 fiscal years, this cash averages $830 million per year for a cumulative total of over $10.8 billion.

Chart 14 **Manitoba Hydro Consolidated Borrowing Requirements & Maturity Schedule Phase 3 (2021 - 2035): Off-Ramping and Debt Retirements**



Note 1: Manitoba Hydro will consider the availability of sinking fund withdrawals to reduce the required refinancing of maturing debt.

With the forecast availability of cash in the early 2020's, an opportunity exists to use this cash to retire debt at its maturity. The increase in cash flow in IFF16 over previous plans allows for this debt off-ramping which is a key factor towards the planned reduction in finance expense and the recovery of Manitoba Hydro's financial ratios.

This off-ramping would be facilitated during this phase by issuing debt with terms to maturity that are aligned with the future availability of cash for debt retirement. Given that this cash may become available in 2023, Manitoba Hydro may be able to issue shorter dated debt maturities during Phase 3, which in an upwardly sloped yield curve would have lower yield rates – thereby further reducing finance expense and keeping the weighted average interest rate of the debt portfolio relatively stable during a period of forecasted rising interest rates. Should Manitoba Hydro's interest rate risk decrease during this phase, Manitoba Hydro may also be able to consider raising the floating rate long term debt percentage to within the 15-25% range. Should Manitoba Hydro's liquidity risk decrease, Manitoba Hydro may also be able to reduce its level of cash on hand.

The following table summarizes the three phased debt management strategies, according to the applicable context, risks, factors and performance measures. Note that future oriented information is subject to change in response to varying internal and external conditions. The colors shown on the table are for illustrative purposes to indicate the relative intensity and impact to the debt management strategies and activities.

Debt Management Context and Risks	**Phase 1 (2006 – 2015) Financial Crisis Response and Leapfrogging**	**Phase 2 (2016 – 2020) Peak Shaving and Debt Smoothing**	**Phase 3 (2021 – 2035) Off-Ramping and Debt Retirements**
Capital Expenditure Levels	Increased, due to new generation & transmission, as well as rising sustaining capital requirements.	Unprecedented high levels.	Forecasted to decrease as major capital projects go in-service, partially offset by increasing requirements for sustaining capital.
Annual Debt Financing Requirements	Increased.	Unprecedented high levels.	Forecasted to decrease as forecasted cash flow from operating activities exceeds capital investing activities.
Financial Market Conditions	The global financial crisis that commenced during 2008 led to a prolonged period of lingering uncertainty and volatility.	Elevated financial market risk arising from ongoing economic uncertainty, evolving investor perspectives and the uncertainty regarding the direction, timing and pace of monetary policy interventions.	Uncertainty is anticipated to remain.
Interest Rate Risk	Rose in line with the global financial crisis and the increasing size of Manitoba Hydro's debt portfolio [IFF10: cumulative retained earnings sensitivity to a +/- 1% interest rate change was over $430 million for the 10 year period from 2011/12 - 2020/21].	Elevated due to magnitude of Manitoba Hydro's annual debt financing requirements and ongoing financial market volatility [IFF16: cumulative retained earnings sensitivity to a +/- 1% interest rate change was nearly $1 billion for the 10 year period from 2017/18 - 2026/27].	Anticipated to decrease over this phase with reduced annual borrowing requirements and a gradual reduction in the size of Manitoba Hydro's net debt portfolio.
Market Liquidity Risk	Market access was uneven at the peak of the crisis, followed by relatively low market liquidity risk. Near the end of this phase, investor appetite for provincial bonds became more muted in favor of large sized, highly liquid bonds that could be readily traded in the financial markets.	Elevated market liquidity risk arising from ongoing financial market uncertainty leading to elevated volatility and uneven market tone; issuers to get ahead of potential competing supply while monitoring for periods of constructive tone.	Although financial market uncertainty is anticipated to remain, Manitoba Hydro's exposure to market liquidity risk is projected to decrease as the Corporation's borrowing requirements decline.
Operational Liquidity Risk	Generally favorable water conditions.	Cash shortfalls from future adverse water conditions may require additional debt financing for business continuity.	Cash shortfalls from future adverse water conditions may require additional debt financing for business continuity.
Foreign Currency Exchange Risk	USD flows were generally balanced and within risk tolerances, with occasional rebalancing [IFF10: cumulative retained earnings sensitivity to a +/- $0.10 change to the USD/CAD rate was under $60 million for the 6 year period from 2011/12 - 2016/17].	USD flows generally balanced and within risk tolerances, with some rebalancing as required [IFF16: cumulative retained earnings sensitivity to a +/- $0.10 change to the USD/CAD rate was approximately $13 million for the 5 year period from 2017/18 - 2021/22].	Consider additional USD rebalancing in keeping with the projected increase of USD cash inflows following the completion of the Keeyask project.

Debt Management Factors	Phase 1 (2006 – 2015) Financial Crisis Response and Leapfrogging	Phase 2 (2016 – 2020) Peak Shaving and Debt Smoothing	Phase 3 (2021 – 2035) Off-Ramping and Debt Retirements
Debt Maturity Profile and **Terms to Maturity for Long Term Debt**	Enhanced future financing flexibility by securing long term debt financing with terms to maturity of 10 years or longer that leapfrogged the high levels of near term refinancings and prospective new debt requirements. Established medium sized 10 and 30 year benchmark issues, and a relatively smooth debt maturity profile.	Primary issuance into the standard 5, 10 and 30 year terms to maturity, with some ultralong terms (30+) where available. Distribute the debt issuance into medium to larger sized benchmark issues; while smoothing the laddering within the debt maturity profile to accommodate future debt retirement off-ramping. Increase issuance in the 5 year term.	Seek to secure more shorter dated debt maturities that, when aligned with positive cash flow, can provide off-ramping opportunities for potential debt retirements.
Use of Global Financing (USD, EUR, ...)	Occasional use to expand market access and for USD outflow purposes, with swapped pricing equal to or better than indicative Canadian yield rates.	More frequent use to further expand market access, with swapped pricing near or better than indicative Canadian yield rates.	Occasional use for USD outflow purposes, with swapped pricing near indicative Canadian yield rates.
Floating Rate Debt Percentage	In order to reduce the total interest rate risk profile, actuals moved from the middle to the lower bounds of the 15-25% guidance level by securing more fixed rate financing at historically low interest rates.	Mitigate interest rate risk on the existing debt portfolio by maintaining the actual percentage at or below 10%.	As Manitoba Hydro's interest rate risk decreases, consider raising the actual floating rate debt percentage to within the 15-25% range.
Short Term Debt Usage (Limited to $500 Million)	Occasional use for temporary working capital and bridging long term debt issuance.	The use of the $500 million credit facility will be reduced to maximize its availability for overdraft liquidity protection.	Occasional use for temporary working capital and bridging long term debt issuance.
Prudential Liquidity (Unencumbered Cash Balances)	Unencumbered cash balances increased from near zero early in this phase, to moderate levels toward the end of the phase as cash requirements increased and market conditions tightened.	Maintain positive cash balances by securing funds approximately 3 months in advance of cash requirements. Prefunding accessed via long term debt funding in order to maintain the availability of the temporary short term credit facility.	In keeping with lower levels of liquidity risk, reduce consolidated cash balances and utilize positive cash flow for debt retirement.
Sinking Fund Approach (Restricted Cash Balances)	Began reducing accumulated sinking fund balances with more frequent withdrawals. In-year sinking fund payments held within the fund over year-end.	Where feasible, further minimize sinking fund balances to near zero through in-year payments and withdrawals at debt maturity dates.	Where feasible, maintain sinking fund balances at near zero through in-year payments and withdrawals at debt maturity dates.
Dual Currency Bond Creation	As part of infrequent rebalancing of USD cash flows and sinking fund balances.	As required, minimize USD sinking fund levels to rebalance USD cash flows and to reduce the balance sheet volatility arising from the translation of USD debt principal to CAD.	As required for the potential rebalancing of USD cash flows following the in-service of Keeyask.

Debt Management Performance Measures	Phase 1 (2006 – 2015) Financial Crisis Response and Leapfrogging	Phase 2 (2016 – 2020) Peak Shaving and Debt Smoothing	Phase 3 (2021 – 2035) Off-Ramping and Debt Retirements
Weighted Average Term to Maturity (WATM)	Increased the WATM to enhance the stability of the debt portfolio by favoring longer dated financings that leapfrogged near term refinancings and prospective new borrowing requirements.	Reduce the WATM by increasing issuance in the 5 year term (as part of potential debt retirement off-ramping) while decreasing issuance in the 10 and 30+ year terms as compared to historical issuance.	Reduce the WATM by layering increasing amounts of shorter dated financings into the debt portfolio as part of potential debt retirement off-ramping.
Weighted Average Interest Rate (WAIR)	Decreased the WAIR by taking advantage of the low interest rate environment to secure low cost financing.	Countering upward pressure from rising forecasted interest rates, the WAIR is still projected to decrease as new and/or refinanced debt is issued at yield rates that are below the weighted average of the entire debt portfolio.	Seek to maintain the WAIR through a period of rising forecasted interest rates as the interest rate exposure is reduced due to lower levels of new debt requirements, low levels of variable debt, and debt maturities that may be retired and not refinanced.
Financial Ratios (Interest Coverage and Debt:Equity)	Attainment of Corporate targets during this phase, with erosion occurring as capital investments became more intensive.	Projected weakening of financial ratios during the period of intensive capital investments and debt financing.	Improvement in financial ratios to levels that meet or exceed targets as internally generated cash flow increases exceeds capital investing activities.
Finance Expense	Primarily increased in accordance with rising levels of capital financing, partially offset by the benefits of the low interest rate environment.	Sharply rising gross interest expense due to increasing levels of capital financing, offset by the benefits of the low interest rate environment and capitalized interest credits. USD/CAD changes affecting the US debt portfolio will be largely mitigated by counterbalancing impacts to other income statement categories (such as Extraprovincial Revenues).	Early in this phase, net finance expense rises in proximity to the gross interest expense as the level of capitalized interest credits become smaller due to the in-service of major generation and transmission capital assets. Net finance expense begins to decrease as debt retirements reduce net debt levels. USD/CAD exchange risk will be mitigated by increasing USD interest expenses through the use of USD debt issuance and dual currency bonds.

4.0 Debt Management Activities

The following section provides an overview of Manitoba Hydro's recent actual financings during the 2015/16 and 2016/17 fiscal years; as well as the forecasted quarterly financing requirements through to the end of the 2018/19 fiscal year. Beyond this tactical timeframe, as the level of financing requirements are projected to remain elevated through the 2021/22 fiscal year, the forecasted annual financing requirements for the 2019/20, 2020/21 and 2021/22 fiscal years will also be provided in this section.

Actual financings will vary from forecast. Actual financings will consider the timing, dollar value, denomination, and fixed versus floating nature of the issue depending on a number of factors including: the cash and liquidity requirements in existence at the time of financing; refinancing requirements on maturing debt and interest rate swaps; the term dependent on the current maturity schedule and forecasted borrowing requirements; interest rate expectations and the mitigation of interest rate risk; the management of foreign exchange risk; and the market appetite and economic environment.

2015/16 The long term financings for the year were CAD $2,208.2 million made up of:

- $2,092.8 million for new borrowing requirements.
- $115.4 million to refinance maturing long term debt.

The actual long term debt financings during this fiscal year, per quarter, were as follows:

Quarter 1 On April 15, 2015, Manitoba Hydro secured long term debt series **GK-2** for CAD $300 million and a September 5, 2046 maturity date. GK-2 was issued at a discount with proceeds of $297.0 million (net of commissions), a fixed rate coupon of 2.850%, and an all-in yield of 2.898%. The debt was issued to finance new borrowing requirements.

On June 11, 2015, Manitoba Hydro secured long term debt series **GJ-3** for CAD $150 million and a June 2, 2025 maturity date. GJ-3 was issued at a discount with proceeds of $148.7 million (net of commissions), a fixed rate coupon of 2.450%, and an all-in yield of 2.549%. The debt was issued to finance new borrowing requirements.

Estate redemptions are processed on all **HydroBonds** as necessary and the floating rate HydroBonds are subject to redemptions on an annual basis. At June 15, 2015 the total HydroBonds redemptions for the preceding 12 month period totaled $50.3 million.

Quarter 2 On July 24, 2015, Manitoba Hydro secured long term debt series **GK-3** for CAD $150 million and a September 5, 2046 maturity date. GK-3 was issued at a discount with proceeds of $139.9 million (net of commissions), a fixed rate coupon of 2.85%, and an all-in yield of 3.227%. The debt was issued to finance new borrowing requirements.

On September 16, 2015, Manitoba Hydro secured long term debt series **GJ-4** for CAD $150 million and a June 2, 2025 maturity date. GJ-4 was issued at a discount with proceeds of $148.9 million (net of commissions), a fixed rate coupon of 2.450%, and an all-in yield of 2.539%. The debt was issued to refinance $49.5 million of HydroBonds, as well as to finance $100.5 million of new borrowing requirements.

On September 29, 2015, Manitoba Hydro secured long term debt series **C137-6** for CAD $62 million and a March 5, 2063 maturity date. C137-6 was issued at a premium with proceeds of $63.0 million (net of commissions), a fixed rate coupon of 3.450% and an all-in yield of 3.378%. The debt was issued to finance new borrowing requirements.

Quarter 3 On October 15, 2015, Manitoba Hydro secured long term debt series **GK-4** for CAD $300 million and a September 5, 2046 maturity date. GK-4 was issued at a discount with proceeds of $262.0 million (net of commissions), a fixed rate coupon of 2.85% and an all-in yield of 3.526%. The debt was issued to finance new borrowing requirements.

On November 6, 2015, Manitoba Hydro executed a currency swap to create dual currency bond **BU-1** by converting USD $66 million (of total $200 million) of principal for debt series BU to CAD $87.1 million. The fixed coupon rate on BU and BU-1 remains at 9.625% on USD $200 million.

On November 10, 2015, Manitoba Hydro secured long term debt series **C109-5** for CAD $50 million and a March 5, 2063 maturity date. C109-5 was issued at a premium with proceeds of $61.6 million (net of commissions), a fixed rate coupon of 4.625% and an all-in yield of 3.597%. The debt was issued to finance new borrowing requirements.

On November 20, 2015, Manitoba Hydro secured long term debt series **C109-6** for CAD $50 million and a March 5, 2063 maturity date. C109-6 was issued at a premium with proceeds of $62.2 million (net of commissions), a fixed rate coupon of 4.625% and an all-in yield of 3.555%. The debt was issued to finance new borrowing requirements.

On November 30, 2015, Manitoba Hydro secured long term debt series **GM** for USD $300 million and a November 30, 2020 maturity date. The issue was swapped to CAD $400.4 million and a fixed rate coupon of 1.773%. The debt was issued to refinance $65.9 million of maturing debt series EY. The remaining $334.5 million of the debt was issued to finance new borrowing requirements.

On December 3, 2015, Manitoba Hydro executed a currency swap to create dual currency bond **BU-2** by converting USD $33 million (of total $200 million) of principal for debt series BU to CAD $43.5 million. The fixed coupon rate on BU and BU-2 remains at 9.625% on USD $200 million.

On December 8, 2015, Manitoba Hydro secured long term debt series **C109-7** for CAD $50 million and a March 5, 2063 maturity date. C109-7 was issued at a premium with proceeds of $62.9 million (net of commissions), a fixed rate coupon of 4.625% and an all-in yield of 3.506%. The debt was issued to finance new borrowing requirements.

On December 8, 2015, Manitoba Hydro secured long term debt series **C137-7** for CAD $75 million and a March 5, 2063 maturity date. C137-7 was issued at a discount with proceeds of $74.1 million (net of commissions), a fixed rate coupon of 3.450% and an all-in yield of 3.502%. The debt was issued to finance new borrowing requirements.

Quarter 4 On January 28, 2016, Manitoba Hydro secured long term debt series **GK-5** for CAD $225 million and a September 5, 2046 maturity date. GK-5 was issued at a discount with proceeds of $200.0 million (net of commissions), a fixed rate coupon of 2.850% and an all-in yield of 3.440%. The debt was issued to finance new borrowing requirements.

On March 9, 2016, Manitoba Hydro executed a currency swap to create dual currency bond **BU-3** by converting USD $33 million (of total $200 million) of principal for debt series BU to CAD $43.4 million. The fixed coupon rate on BU and BU-3 remains at 9.625% on USD $200 million.

On March 17, 2016, Manitoba Hydro secured long term debt series **GN** for CAD $150 million and a June 2, 2026 maturity date. GN was issued at a discount with proceeds of $148.8 million (net of commissions), a fixed rate coupon of 2.550% and an all-in yield of 2.643%. The debt was issued to finance new borrowing requirements.

On March 24, 2016, Manitoba Hydro secured long term debt series **C148** for EUR €65 million and a March 24, 2031 maturity date. The issue was swapped to CAD $95.81 million and a fixed rate coupon of 2.966%. The debt was issued to finance new borrowing requirements.

On March 30, 2015, Manitoba Hydro executed a currency swap to create dual currency bond **BU-4** by converting USD $22 million (of total $200 million) of principal for debt series BU to CAD $28.4 million. The fixed coupon rate on BU and BU-4 remains at 9.625% on USD $200 million.

2016/17 The long term financings for the year were CAD $2,838.6 million made up of:

- $1,988.7 million for new borrowing requirements.
- $174.1 million to refinance maturing long term debt.
- $675.8 million to refinance maturing underlying debt issues associated with ongoing interest rate swaps.

The actual long term debt financings during this fiscal year, per quarter, were as follows:

Quarter 1 On April 6, 2016, Manitoba Hydro secured long term debt series **GO-2** for CAD $250 million and a September 5, 2021 maturity date. GO-2 was issued at a discount with proceeds of $248.8 million (net of commissions), a fixed rate coupon of 1.55%, and an all-in yield of 1.644%. The debt was issued to finance new borrowing requirements.

On May 11, 2016, Manitoba Hydro secured long term debt series **GK-6** for CAD $150 million and a September 5, 2046 maturity date. GK-6 was issued at a discount with proceeds of $137.8 million (net of commissions), a fixed rate coupon of 2.85%, and an all-in yield of 3.275%. The debt was issued to refinance $100.0 million of maturing debt series C121-3. The remaining $50.0 million of the debt was issued to finance new borrowing requirements.

On May 31, 2016, Manitoba Hydro secured long term debt series **C137-8** for CAD $50 million and a March 5, 2063 maturity date. C137-8 was issued at a premium with proceeds of $52.6 million (net of commissions), a fixed rate coupon of 3.45%, and an all-in yield of 3.232%. The debt was issued to refinance $16.1 million of maturing HydroBonds Series 11 five year floating and fixed rate debt as well as $3.2 million of maturing HydroBonds Series 12 three year fixed rate debt. The remaining $30.7 million of the debt was issued to finance new borrowing requirements.

On June 22, 2016, Manitoba Hydro secured long term debt series **GP** for USD $200 million and a June 22, 2026 maturity date. The issue was swapped to CAD $257.1 million and a fixed rate coupon of 2.254%. The debt was issued to refinance $54.6 million (of total $200 million) of maturing debt series AZ (the remainder of series AZ was retired through a sinking fund withdrawal). The remaining $202.5 million of debt series GP was issued to finance new borrowing requirements.

Estate redemptions are processed on all **HydroBonds** as necessary and the floating rate HydroBonds are subject to redemptions on an annual basis. At June 15, 2016 the total HydroBonds redemptions for the preceding 12 month period totaled $0.21 million.

Quarter 2 On August 8, 2016, Manitoba Hydro secured long term debt series **C152** for EUR €35 million and an August 8, 2046 maturity date. The issue was swapped to CAD $50.8 million and a fixed rate coupon of 2.778%. The debt was issued to refinance $0.2 million of HydroBonds Series 12 five year floating rate debt early redemptions. The remaining $50.6 million of the debt was issued to finance new borrowing requirements.

On August 12, 2016, Manitoba Hydro secured long term debt series **C145-4** for AUD $70 million and a June 9, 2026 maturity date. The issue was swapped to CAD $70.7 million and a fixed rate coupon of 1.918%. The debt was issued to finance new borrowing requirements.

On August 26, 2016, Manitoba Hydro secured long term debt series **C137-9** for CAD $25 million and a March 5, 2063 maturity date. C137-9 was issued at a premium with proceeds of $29.0 million (net of commissions), a fixed rate coupon of 3.45%, and an all-in yield of 2.835%. The debt was issued to finance new borrowing requirements.

On August 30, 2016, Manitoba Hydro secured long term debt series **C153** for JPY ¥6 billion and an August 30, 2046 maturity date. The issue was swapped to CAD $76.3 million and a fixed rate coupon of 2.801%. The debt was issued to finance new borrowing requirements.

On August 31, 2016, Manitoba Hydro secured long term debt series **C137-10** for CAD $100 million and a March 5, 2063 maturity date. C137-10 was issued at a premium with proceeds of $115.3 million (net of commissions), a fixed rate coupon of 3.45%, and an all-in yield of 2.854%. The debt was issued to finance new borrowing requirements.

On September 7, 2016, Manitoba Hydro secured long term debt series **C154** for EUR €40 million and a June 25, 2039 maturity date. The issue was swapped to CAD $58.6 million and a fixed rate coupon of 2.752%. The debt was issued to finance new borrowing requirements.

On September 27, 2016, Manitoba Hydro secured long term debt series **GN-3** for CAD $500 million and a June 2, 2026 maturity date. GN-3 was issued at a premium with proceeds of $514.9 million (net of commissions), a fixed rate coupon of 2.55%, and an all-in yield of 2.206%. The debt was issued to finance new borrowing requirements.

Quarter 3 On October 20, 2016, Manitoba Hydro secured long term debt series **C145-5** for AUD $50 million and a June 9, 2026 maturity date. The issue was swapped to CAD $50.1 million and a fixed rate coupon of 2.948%. The debt was issued to finance new borrowing requirements.

On November 21, 2016, Manitoba Hydro secured long term debt series GQ for CAD $700 million and a November 21, 2019 maturity date. The first CAD $474.5 million was swapped to USD $350 million floating rate debt to refinance debt series FH-1 (USD $250 million) and FH-2 (USD $100 million). Forward fixed interest rate swaps that were previously linked to debt series FH-1 and FH-2 were re-linked to the GQ underlying refinancing which amended the fixed rate debt stream to 6.484% (**GQ-1**). In addition, CAD $201.3 million was swapped to USD $150 million fixed rate debt to refinance debt series FH-3 (USD $150 million). Forward fixed interest rate swaps that were previously linked to debt series FH-3 were re-linked to the GQ underlying refinancing which converted the debt from floating rate debt to fixed rate debt at a rate of 2.012% (**GQ-2**). The residual CAD $24.2 million was swapped to CAD floating rate debt at 3 month BA + 0.130% (**GQ-3**) and was issued to finance new borrowing requirements.

On December 13, 2016, Manitoba Hydro executed a currency swap to create dual currency bond **BU-5** by converting USD $46 million (of total $200 million) of principal for debt series BU to CAD $59.8 million. The fixed coupon rate on BU and BU-5 remains at 9.625% on USD $200 million.

Quarter 4 On January 16, 2017, Manitoba Hydro secured long term debt series **GN-4** for CAD $150 million and a June 2, 2026 maturity date. GN-4 was issued at a premium with proceeds of $149.6 million (net of commissions), a fixed rate coupon of 2.55%, and an all-in yield of 2.580%. The debt was issued to finance new borrowing requirements.

On February 8, 2017, Manitoba Hydro secured long term debt series **C137-11** for CAD $100 million and a March 5, 2063 maturity date. C137-11 was issued at a premium with proceeds of $99.8 million (net of commissions), a fixed rate coupon of 3.45%, and an all-in yield of 3.457%. The debt was issued to finance new borrowing requirements.

On February 14, 2017, Manitoba Hydro secured long term debt series **GS** for CAD $150 million and a June 2, 2027 maturity date. GS was issued at a discount with proceeds of $148.8 million (net of commissions), a fixed rate coupon of 2.60%, and an all-in yield of 2.687%. The debt was issued to finance new borrowing requirements.

On March 24, 2017, Manitoba Hydro secured long term debt series **C137-12** for CAD $100 million and a March 5, 2063 maturity date. C137-12 was issued at a premium with proceeds of $101 million (net of commissions), a fixed rate coupon of 3.45%, and an all-in yield of 3.404%. The debt was issued to finance new borrowing requirements.

2017/18 The forecasted long term financings for the year are CAD $3,550 million made up of:

- $2,969.5 million for new borrowing requirements.
- $330.5 million to refinance maturing long term debt.
- $250.0 million to refinance maturing underlying debt issues associated with ongoing interest rate swaps.

Manitoba Hydro will consider the availability of sinking fund withdrawals to reduce the required refinancing of maturing debt.

The forecasted long term debt financings to be undertaken during this fiscal year, per quarter, are as follows:

Quarter 1 It is forecasted that $700 million of long term debt will be issued during this quarter to finance new borrowing requirements.

Estate redemptions are processed on all **HydroBonds** as necessary and the floating rate HydroBonds are subject to redemptions on an annual basis.

Quarter 2 It is forecasted that $944.5 million of long term debt will be issued during this quarter to finance new borrowing requirements. In addition, the following refinancing is forecasted to occur in this quarter: a $55.5 million refinancing of fixed rate debt issue **C011** maturing September 22, 2017. Also forecasted to occur is the following refinancing of underlying physical debt: a $250.0 million refinancing of debt issue **FJ** maturing September 22, 2017 (which has a linked interest rate swap maturing September 12, 2037).

Quarter 3 It is forecasted that $580 million of long term debt will be issued during this quarter to finance new borrowing requirements. In addition, the following refinancing is forecasted to occur in this quarter: a $20.0 million refinancing of fixed rate debt issue **4L** maturing November 17, 2017.

Quarter 4 It is forecasted that $745 million of long term debt will be issued during this quarter to finance new borrowing requirements. In addition, the following refinancing is forecasted to occur in this quarter: a $255.0 million refinancing of floating rate debt issue **BM** maturing January 15, 2018.

2018/19 The forecasted long term financings for the year are CAD $4,204 million made up of:

- $2,598.2 million for new borrowing requirements.
- $1,001.8 million to refinance maturing long term debt.
- $604.0 million to refinance maturing underlying debt issues associated with ongoing interest rate swaps.

Manitoba Hydro will consider the availability of sinking fund withdrawals to reduce the required refinancing of maturing debt.

The forecasted long term debt financings to be undertaken during this fiscal year, per quarter, are as follows:

Quarter 1 It is forecasted that $793.3 million of long term debt will be issued during this quarter to finance new borrowing requirements. In addition, the following refinancings are forecasted to occur in this quarter: a $200.0 million refinancing of fixed rate debt issue **C132** maturing April 2, 2018; and a $6.7 million refinancing of **HydroBonds Series 12** five year floating and fixed rate debt issue maturing June 15, 2018. Also forecasted to occur are the following refinancings of underlying physical debt: a $85.0 million refinancing of debt issue **C132-2A** maturing April 2, 2018 (which is linked to an interest rate swap maturing November 1, 2038); a $19.0 million refinancing debt issue **C132-2B** maturing April 2, 2018 (which is linked to an interest rate swap maturing November 1, 2038); a $400.0 million USD ($500.0 CAD) refinancing debt of issues **GE-1** ($187.5 million CAD); **GE-2** ($253.8 million CAD); and **GE-3** ($58.7 million CAD) maturing June 1, 2018 (which have linked interest rate swaps maturing March 15, 2020 for GE-1, and October 2, 2020 for GE-2 and GE-3).

Estate redemptions are processed on all **HydroBonds** as necessary and the floating rate HydroBonds are subject to redemptions on an annual basis.

Quarter 2 It is forecasted that $671.6 million of long term debt will be issued during this quarter to finance new borrowing requirements. In addition, the following refinancing are forecasted to occur in this quarter: a $100.0 million refinancing of fixed rate debt issue **GD** maturing September 5, 2018; a $200.0 million refinancing of floating rate debt issues **GD-1** ($100.0 million) and **GD-2** ($100.0 million) maturing September 5, 2018; and a $228.4 million refinancing of fixed rate debt issue **EE** maturing September 14, 2018.

Quarter 3 It is forecasted that $533.3 million of long term debt will be issued during this quarter to finance new borrowing requirements. In addition, the following refinancings are forecasted to occur in this quarter: a $87.1 million refinancing of fixed rate debt issue **BU-1** maturing December 3, 2018; a $43.5 million refinancing of fixed rate debt issue **BU-2** maturing December 3, 2018; a $43.4 million refinancing of fixed rate debt issue **BU-3** maturing December 3, 2018; a $28.4 million refinancing of fixed rate debt issue **BU-4** maturing December 3, 2018; a $59.8 million refinancing of fixed rate debt issue **BU-5** maturing December 3, 2018; a $3.5 million refinancing of fixed rate debt issue **3V** maturing December 30, 2018; and a $1.0 million refinancing of fixed rate debt issue **3W** maturing December 30, 2018.

Quarter 4 It is forecasted that $600 million of long term debt will be issued during this quarter to finance new borrowing requirements.

REFERENCE:

Appendix 3.5, Page 17

PREAMBLE TO IR (IF ANY):

QUESTION:

a) Please confirm this chart is for MH16. If not confirmed, please provide.
b) Please extend Chart 13 backwards to 1998.
c) Please provide the underlying data for the Chart (including added values for part b).
d) Please reconcile values in part (b) with Appendix 3.3, projected cash flow statement for 20 year forecast, if different.
e) Please update Chart 13 for MH16 Updated and provide underlying values.
f) Please provide a version of Chart 13 corresponding with Appendix 3.4 with annual rate increases of 3.95% and underlying values.
g) For each version of Chart 13 (MH16, Appendix 3.3 and Appendix 3.4), please specify between borrowings with maturity of under 10 years and borrowings for greater than 10 years.
    i) For borrowings with maturity under 10 years, provide a schedule that shows how much is paid off versus refinanced in each forecast year.
h) Please provide a version of Chart 13 for IFF16, also showing the underlying values, corresponding to the scenario shown in in Figure 2.5 of Tab 2 called “IFF16 Forecast 20yr Debt”.

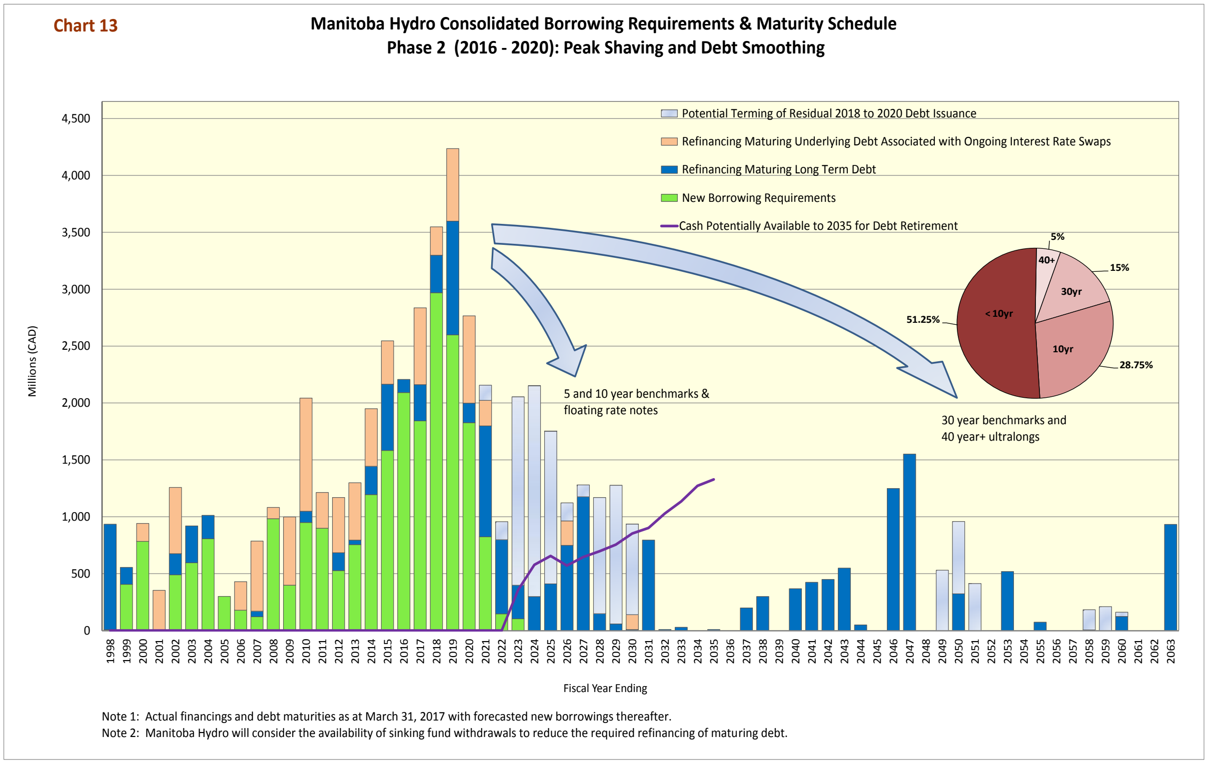
RATIONALE FOR QUESTION:

To understand Hydro’s cash flow requirements regarding future borrowing and debt management plans, and the interaction with rate increase requests

RESPONSE:

a) Confirmed, this chart is based on IFF16.

b) Please find below Chart 13 extended backwards to 1998.



c) The following table provides the underlying data for the Chart in part b).

Fiscal Year	Refinance Underlying Debt with Ongoing Swap	Refinance LTD Maturities	New Borrowings	Potential 2018-2020 Terming	Surplus Cash
1998	-	927.36	8.00	-	-
1999	-	149.10	406.08	-	-
2000	157.98	-	785.02	-	-
2001	355.00	-	0.00	-	-
2002	581.80	187.69	489.51	-	-
2003	-	328.98	591.02	-	-
2004	-	205.99	807.01	-	-
2005	-	-	300.00	-	-
2006	250.60	-	180.00	-	-
2007	616.00	50.00	121.70	-	-
2008	100.00	-	983.60	-	-
2009	600.00	-	400.00	-	-
2010	994.50	100.00	950.00	-	-
2011	315.00	-	900.00	-	-
2012	485.00	158.20	527.30	-	-
2013	504.00	41.10	755.30	-	-
2014	505.90	250.40	1,194.90	-	-
2015	381.00	583.10	1,583.50	-	-
2016	-	115.48	2,092.74	-	-
2017	675.76	319.51	1,843.29	-	-
2018	250.00	330.41	2,969.59	-	-
2019	638.00	1,000.67	2,599.33	-	-
2020	767.50	172.84	1,827.16	-	-
2021	225.00	975.41	824.59	133.13	-
2022	-	653.13	146.87	158.93	-
2023	-	296.36	103.65	1,656.91	356.00
2024	-	300.00	-	1,854.13	578.00
2025	-	411.64	-	1,343.91	656.00
2026	215.00	750.00	-	158.93	571.00
2027	-	1,177.84	-	103.78	646.00
2028	-	150.00	-	1,020.63	696.71
2029	-	60.00	-	1,218.43	755.19
2030	131.00	10.00	-	795.66	852.97
2031	-	795.76	-	-	901.97
2032	-	9.95	-	-	1,028.78
2033	-	30.00	-	-	1,134.24
2034	-	-	-	-	1,272.14
2035	-	10.00	-	-	1,328.10
2036	-	-	-	-	-
2037	-	200.00	-	-	-
2038	-	300.00	-	-	-
2039	-	-	-	-	-
2040	-	368.60	-	-	-
2041	-	425.00	-	-	-
2042	-	450.00	-	-	-
2043	-	550.00	-	-	-
2044	-	50.00	-	-	-
2045	-	-	-	-	-
2046	-	1,250.00	-	-	-
2047	-	1,552.13	-	-	-
2048	-	-	-	-	-
2049	-	-	-	532.50	-
2050	-	325.00	-	635.70	-
2051	-	-	-	415.13	-
2052	-	-	-	-	-
2053	-	520.00	-	-	-
2054	-	-	-	-	-
2055	-	75.00	-	-	-
2056	-	-	-	-	-
2057	-	-	-	-	-
2058	-	7.04	-	177.50	-
2059	-	-	-	211.90	-
2060	-	125.00	-	38.38	-
2061	-	-	-	-	-
2062	-	-	-	-	-
2063	-	934.00	-	-	-

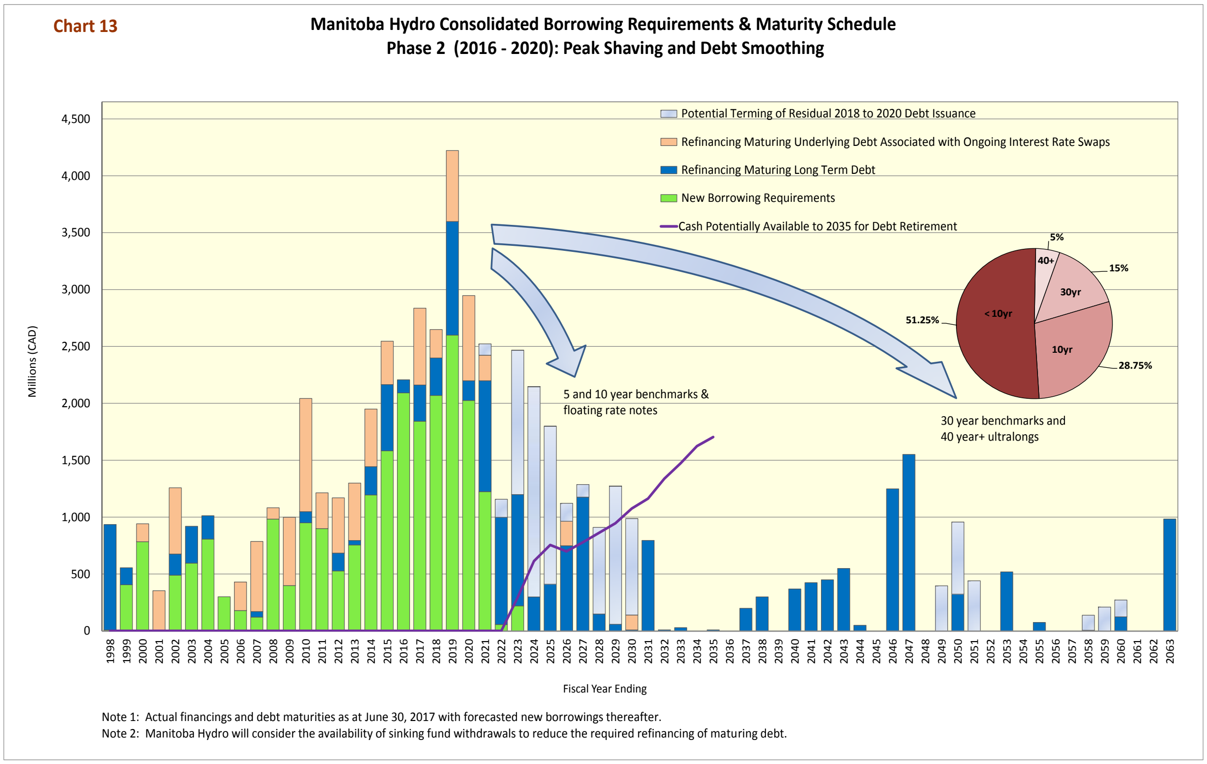
d) Chart 13 in part b) portrays Manitoba Hydro's existing debt maturity schedule at March 31, 2017 based on requirements for actual physical debt issuance ('action date' basis) which include the refinancing of underlying debt attached to an ongoing interest rate swap. The IFF16 assumes that these debt streams mature and will be refinanced at the swap maturity date, therefore the forecasting model does not generate additional borrowings for these refinancings on the cash flow statement (and subsequently does not show the debt retirement either). However, the corporation will have to secure the funds to refinance the underlying maturing debt, therefore it is added in Chart 13 showing the total financing requirements. As such, the total financings in Chart 13 will be different in certain years from 'Proceeds from Long Term Debt' on the cash flow statement. Similarly, in Chart 13 the 'Refinancing Maturing Long Term Debt' will be different from the 'Retirement of Long Term Debt' on the cash flow statement.

As mentioned above, Chart 13 in part b) portrays Manitoba Hydro's existing debt maturity schedule at March 31, 2017 as well as the potential terming of the 2018-2020 debt issuance into the planned new weightings in various terms. The IFF16 cash flow statement reflects the maturity of the debt issued in 2018 in the year 2030 (and in a similar fashion after 12 years for 2019 and beyond) due to the simplifying assumption of a 12 year term to maturity in the forecasting model.

In addition, USD debt maturities in Chart 13 in part b) are translated at the foreign exchange (FX) rate at March 31, 2017, whereas the IFF16 cash flow statement utilizes the forecast FX rate for the given year to translate USD maturities into CAD dollars.

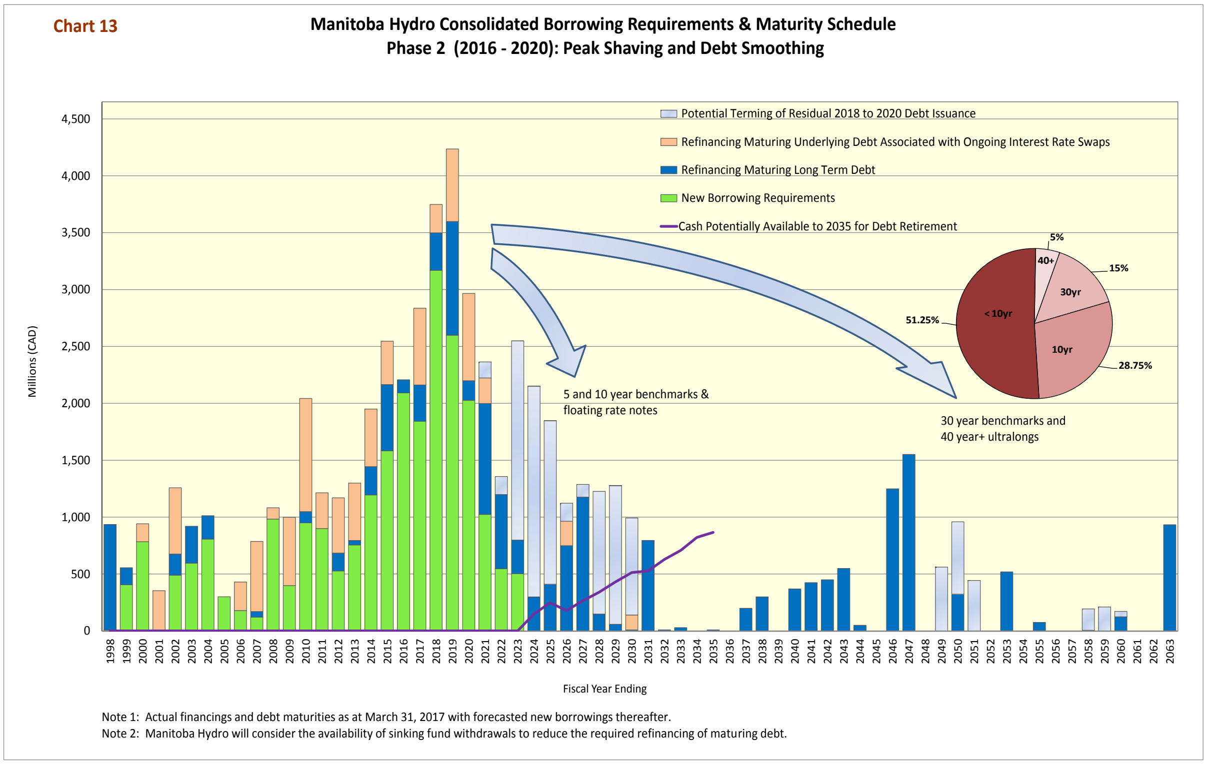
The 'Cash Potentially Available for Debt Retirement' in Chart 13 is calculated as Cash Flow from Operations less investment in Property, Plant & Equipment from the cash flow statement.

e) Please find below Chart 13 based on MH16 Update with Interim and a table including the underlying values.



Fiscal Year	Refinance Underlying Debt with Ongoing Swap	Refinance LTD Maturities	New Borrowings	Potential 2018-2020 Terming	Surplus Cash
1998	-	927.36	8.00	-	-
1999	-	149.10	406.08	-	-
2000	157.98	-	785.02	-	-
2001	355.00	-	-	-	-
2002	581.80	187.69	489.51	-	-
2003	-	328.98	591.02	-	-
2004	-	205.99	807.01	-	-
2005	-	-	300.00	-	-
2006	250.60	-	180.00	-	-
2007	616.00	50.00	121.70	-	-
2008	100.00	-	983.60	-	-
2009	600.00	-	400.00	-	-
2010	994.50	100.00	950.00	-	-
2011	315.00	-	900.00	-	-
2012	485.00	158.20	527.30	-	-
2013	504.00	41.10	755.30	-	-
2014	505.90	250.40	1,194.90	-	-
2015	381.00	583.10	1,583.50	-	-
2016	0.00	115.48	2,092.74	-	-
2017	675.76	319.51	1,843.29	-	-
2018	250.00	330.41	2,069.59	-	-
2019	623.82	999.55	2,600.45	-	-
2020	748.85	174.24	2,025.76	-	-
2021	225.00	975.41	1,224.59	99.38	-
2022	-	942.78	57.22	158.39	-
2023	-	979.71	220.30	1,269.96	294.35
2024	-	300.00	-	1,847.92	613.50
2025	-	411.64	-	1,389.50	754.92
2026	215.00	750.00	-	158.39	699.00
2027	-	1,177.84	-	110.58	779.04
2028	-	150.00	-	761.88	862.43
2029	-	60.00	-	1,214.35	946.12
2030	131.00	10.00	-	847.79	1,075.39
2031	-	795.76	-	-	1,162.70
2032	-	10.09	-	-	1,337.32
2033	-	30.00	-	-	1,473.68
2034	-	-	-	-	1,624.27
2035	-	10.00	-	-	1,703.73
2036	-	-	-	-	-
2037	-	200.00	-	-	-
2038	-	300.00	-	-	-
2039	-	-	-	-	-
2040	-	368.60	-	-	-
2041	-	425.00	-	-	-
2042	-	450.00	-	-	-
2043	-	550.00	-	-	-
2044	-	50.00	-	-	-
2045	-	-	-	-	-
2046	-	1,250.00	-	-	-
2047	-	1,552.13	-	-	-
2048	-	-	-	-	-
2049	-	-	-	397.50	-
2050	-	325.00	-	633.57	-
2051	-	-	-	442.33	-
2052	-	-	-	-	-
2053	-	520.00	-	-	-
2054	-	-	-	-	-
2055	-	75.00	-	-	-
2056	-	-	-	-	-
2057	-	-	-	-	-
2058	-	7.04	-	132.50	-
2059	-	-	-	211.19	-
2060	-	125.00	-	147.44	-
2061	-	-	-	-	-
2062	-	-	-	-	-
2063	-	984.00	-	-	-

f) Please see Chart 13 below based on IFF16 with 3.95% rate increases and a table including the underlying values:



Fiscal Year	Refinance Underlying Debt with Ongoing Swap	Refinance LTD Maturities	New Borrowings	Potential 2018-2020 Terming	Surplus Cash
1998	-	927.36	8.00	-	-
1999	-	149.10	406.08	-	-
2000	157.98	-	785.02	-	-
2001	355.00	-	0.00	-	-
2002	581.80	187.69	489.51	-	-
2003	-	328.98	591.02	-	-
2004	-	205.99	807.01	-	-
2005	-	-	300.00	-	-
2006	250.60	-	180.00	-	-
2007	616.00	50.00	121.70	-	-
2008	100.00	-	983.60	-	-
2009	600.00	-	400.00	-	-
2010	994.50	100.00	950.00	-	-
2011	315.00	-	900.00	-	-
2012	485.00	158.20	527.30	-	-
2013	504.00	41.10	755.30	-	-
2014	505.90	250.40	1,194.90	-	-
2015	381.00	583.10	1,583.50	-	-
2016	-	115.48	2,092.74	-	-
2017	675.76	319.51	1,843.29	-	-
2018	250.00	330.41	3,169.59	-	-
2019	638.00	1,000.67	2,599.33	-	-
2020	767.50	172.84	2,027.16	-	-
2021	225.00	975.41	1,024.59	140.63	-
2022	-	653.13	546.87	158.93	-
2023	-	296.36	503.65	1,751.91	-
2024	-	300.00	-	1,854.13	149.65
2025	-	411.64	-	1,438.91	247.40
2026	215.00	750.00	-	158.93	178.65
2027	-	1,177.84	-	111.28	265.29
2028	-	150.00	-	1,078.13	339.95
2029	-	60.00	-	1,218.43	430.27
2030	131.00	10.00	-	853.16	512.62
2031	-	795.76	-	-	527.40
2032	-	9.95	-	-	627.80
2033	-	30.00	-	-	707.42
2034	-	-	-	-	821.59
2035	-	10.00	-	-	866.45
2036	-	-	-	-	-
2037	-	200.00	-	-	-
2038	-	300.00	-	-	-
2039	-	-	-	-	-
2040	-	368.60	-	-	-
2041	-	425.00	-	-	-
2042	-	450.00	-	-	-
2043	-	550.00	-	-	-
2044	-	50.00	-	-	-
2045	-	-	-	-	-
2046	-	1,250.00	-	-	-
2047	-	1,552.13	-	-	-
2048	-	-	-	-	-
2049	-	-	-	562.50	-
2050	-	325.00	-	635.70	-
2051	-	-	-	445.13	-
2052	-	-	-	-	-
2053	-	520.00	-	-	-
2054	-	-	-	-	-
2055	-	75.00	-	-	-
2056	-	-	-	-	-
2057	-	-	-	-	-
2058	-	7.04	-	187.50	-
2059	-	-	-	211.90	-
2060	-	125.00	-	48.38	-
2061	-	-	-	-	-
2062	-	-	-	-	-
2063	-	934.00	-	-	-

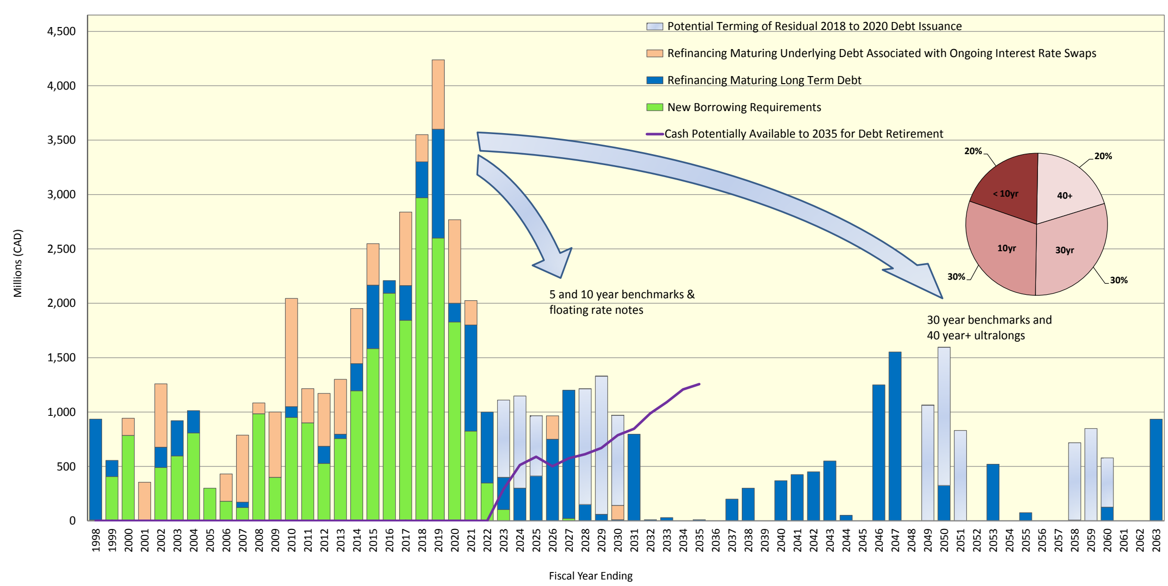
g) In each version of Chart 13, the short light blue arrow points to the potential terming of 2018 to 2020 debt issuance with terms of 10 years or less, and the longer light blue arrow points to the potential terming of debt issuance greater than 10 years.

In each version of Chart 13, 'Cash Potentially Available for Debt Retirement' is represented by the line graph. In each scenario, should all forecast assumptions hold (rate increases, cost savings, export prices, interest rate forecasts, in-service dates) this surplus cash could be available to retire debt or be used for other purposes. Any amount of cash made available for debt retirement would repay an equivalent amount of debt maturities which would otherwise need to be refinanced.

h) Please see the Chart 13 below based on IFF16 20 year debt and a table including the underlying data:

Chart 13

Manitoba Hydro Consolidated Borrowing Requirements & Maturity Schedule
Phase 2 (2016 - 2020): Peak Shaving and Debt Smoothing



Note 1: Actual financings and debt maturities as at March 31, 2017 with forecasted new borrowings thereafter.
Note 2: Manitoba Hydro will consider the availability of sinking fund withdrawals to reduce the required refinancing of maturing debt.

Fiscal Year	Refinance Underlying Debt with Ongoing Swap	Refinance LTD Maturities	New Borrowings	Potential 2018-2020 Terming	Surplus Cash
1998	-	927.36	8.00	-	-
1999	-	149.10	406.08	-	-
2000	157.98	-	785.02	-	-
2001	355.00	-	-	-	-
2002	581.80	187.69	489.51	-	-
2003	-	328.98	591.02	-	-
2004	-	205.99	807.01	-	-
2005	-	-	300.00	-	-
2006	250.60	-	180.00	-	-
2007	616.00	50.00	121.70	-	-
2008	100.00		983.60	-	-
2009	600.00		400.00	-	-
2010	994.50	100.00	950.00	-	-
2011	315.00		900.00	-	-
2012	485.00	158.20	527.30	-	-
2013	504.00	41.10	755.30	-	-
2014	505.90	250.40	1,194.90	-	-
2015	381.00	583.10	1,583.50	-	-
2016	-	115.48	2,092.74	-	-
2017	675.76	319.51	1,843.29	-	-
2018	250.00	330.41	2,969.59	-	-
2019	638.00	1,000.67	2,599.33	-	-
2020	767.50	172.84	1,827.16	-	-
2021	225.00	975.41	824.59	-	-
2022	-	653.13	346.87	-	-
2023	-	296.36	103.65	710.00	291.00
2024	-	300.00	-	847.60	513.00
2025	-	411.64	-	553.50	589.00
2026	215.00	750.00	-	-	502.00
2027	-	1,177.84	22.16	-	575.00
2028	-	150.00	-	1,065.00	612.71
2029	-	60.00	-	1,271.40	670.19
2030	131.00	10.00	-	830.25	786.97
2031	-	795.76	-	-	845.97
2032	-	9.95	-	-	987.78
2033	-	30.00	-	-	1,090.24
2034	-	-	-	-	1,208.14
2035	-	10.00	-	-	1,257.10
2036	-	-	-	-	-
2037	-	200.00	-	-	-
2038	-	300.00	-	-	-
2039	-	-	-	-	-
2040	-	368.60	-	-	-
2041	-	425.00	-	-	-
2042	-	450.00	-	-	-
2043	-	550.00	-	-	-
2044	-	50.00	-	-	-
2045	-	-	-	-	-
2046	-	1,250.00	-	-	-
2047	-	1,552.13	-	-	-
2048	-	-	-	-	-
2049	-	-	-	1,065.00	-
2050	-	325.00	-	1,271.40	-
2051	-	-	-	830.25	-
2052	-	-	-	-	-
2053	-	520.00	-	-	-
2054	-	-	-	-	-
2055	-	75.00	-	-	-
2056	-	-	-	-	-
2057	-	-	-	-	-
2058	-	7.04	-	710.00	-
2059	-	-	-	847.60	-
2060	-	125.00	-	453.50	-
2061	-	-	-	-	-
2062	-	-	-	-	-
2063	-	934.00	-	-	-

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PUB MFR 56
Finance Expense-Debt Levels

A continuity schedule of the short and long-term debt for the fiscal years 2004 to 2032 detailing the retirement of existing debt and the issue of new debt, including the debt ratio. Indicate the proportion of short-term debt to total debt for each of the years. [Attachment 38, 2016/17 Interim Application]

Table 1 below of short and long term debt conforms to the Corporation's financial statement presentation, with measurement in Canadian dollars (CAD) and which in accordance with accounting standards specify the most outward obligation dates on any debt series (the latter of physical debt or forward interest rate swap maturity dates).

Long term debt refers to borrowings which have a term to maturity at issuance equal to or greater than one year, and is made up of fixed rate debt with non-variable interest rates and floating rate debt which have a periodic interest rate resetting mechanism prior to maturity. Note that some of the long term debt issues may be retired at their maturity. Manitoba Hydro will consider the availability of sinking fund withdrawals and surplus cash to reduce the required refinancing of maturing debt.

Short term debt refers to borrowings with non-variable interest rates which have a term to maturity at issuance of less than one year. The short term borrowing program is a $500 million credit facility with a primary objective to safeguard the Corporation from liquidity risk by providing sufficient liquidity for the Corporation's temporary cash requirements. Manitoba Hydro uses its short term debt line to fund its working capital requirements and to bridge the timing between long term debt issues.

Table 1 Short and Long Term Debt Continuity Schedule

MANITOBA HYDRO
Continuity Schedule
Consolidated Short and Long Term Debt

Forecast as per IFF16
(in $ millions Canadian Dollars)

Long Term Debt	**Actual 2004**	**Actual 2005**	**Actual 2006**	**Actual 2007**	**Actual 2008**	**Actual 2009**	**Actual 2010**	**Actual 2011**	**Actual 2012**	**Actual 2013**	**Actual 2014**	**Actual 2015**	**Actual 2016**	**Forecast 2017**	**Forecast 2018**	**Forecast 2019**
Opening Balance	7,268	7,390	7,204	7,169	7,227	7,571	8,187	8,538	8,647	9,382	9,985	10,868	12,680	14,527	16,295	19,338
Long Term Debt Proceeds	1,013	300	180	173	981	423	1,425	915	698	807	1,320	2,210	2,165	2,063	3,400	3,600
Long Term Debt Matured	(473)	(241)	(111)	(80)	(311)	(366)	(452)	(723)	(25)	(242)	(613)	(654)	(362)	(320)	(330)	(1,002)
Carrying Value Adjustments*	(418)	(245)	(104)	(35)	(327)	559	(622)	(83)	62	38	176	256	44	25	(26)	(36)
Closing Balance	**7,390**	**7,204**	**7,169**	**7,227**	**7,571**	**8,187**	**8,538**	**8,647**	**9,382**	**9,985**	**10,868**	**12,680**	**14,527**	**16,295**	**19,338**	**21,900**

* Carrying Value Adjustments include changes in in the value of US dollar denominated debt upon conversion to CAD, as well as changes to the portfolio carrying value for transaction costs, premiums/ discounts, and dual currency bonds.

Short Term Debt	**Actual 2004**	**Actual 2005**	**Actual 2006**	**Actual 2007**	**Actual 2008**	**Actual 2009**	**Actual 2010**	**Actual 2011**	**Actual 2012**	**Actual 2013**	**Actual 2014**	**Actual 2015**	**Actual 2016**	**Forecast 2017**	**Forecast 2018**	**Forecast 2019**
Opening Balance	128	93	59	-	148	-	100	-	-	-	-	-	-	-	-	-
Increase (Decrease)	(35)	(34)	(59)	148	(148)	100	(100)	-	-	-	-	-	-	-	-	-
Closing Balance	**93**	**59**	**-**	**148**	**-**	**100**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

Total Debt	**Actual 2004**	**Actual 2005**	**Actual 2006**	**Actual 2007**	**Actual 2008**	**Actual 2009**	**Actual 2010**	**Actual 2011**	**Actual 2012**	**Actual 2013**	**Actual 2014**	**Actual 2015**	**Actual 2016**	**Forecast 2017**	**Forecast 2018**	**Forecast 2019**
Long Term Debt	7,390	7,204	7,169	7,227	7,571	8,187	8,538	8,647	9,382	9,985	10,868	12,680	14,527	16,295	19,338	21,900
Short Term Debt	93	59		148	-	100	-	-	-	-	-	-	-	-	-	-
Total Debt	**7,483**	**7,263**	**7,169**	**7,375**	**7,571**	**8,287**	**8,538**	**8,647**	**9,382**	**9,985**	**10,868**	**12,680**	**14,527**	**16,295**	**19,338**	**21,900**
Proportion of Short Term Debt to Total Debt	1%	1%	0%	2%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Consolidated Debt Ratio	87%	85%	81%	80%	73%	77%	73%	73%	74%	75%	76%	82%	83%	84%	85%	85%

MANITOBA HYDRO
Continunity Schedule
Consolidated Short and Long Term Debt

Forecast as per IFF16
(in $ millions Canadian Dollars)

Long Term Debt	**Forecast 2020**	**Forecast 2021**	**Forecast 2022**	**Forecast 2023**	**Forecast 2024**	**Forecast 2025**	**Forecast 2026**	**Forecast 2027**	**Forecast 2028**	**Forecast 2029**	**Forecast 2030**	**Forecast 2031**	**Forecast 2032**	**Forecast 2033**	**Forecast 2034**	**Forecast 2035**	**Forecast 2036**
Opening Balance	21,900	23,496	24,022	23,766	23,661	23,362	22,953	22,205	21,829	21,681	21,624	19,967	19,174	18,365	17,566	17,190	16,784
Long Term Debt Proceeds	2,000	1,800	800	400	-	-	-	800	-	-	1,850	3,600	1,200	1,000	400	-	-
Long Term Debt Matured	(356)	(1,278)	(1,020)	(469)	(300)	(412)	(750)	(1,178)	(150)	(60)	(3,510)	(4,396)	(2,012)	(1,803)	(780)	(410)	(275)
Carrying Value Adjustments*	(48)	3	(35)	(36)	1	2	2	2	2	3	3	3	3	4	4	4	4
Closing Balance	**23,496**	**24,022**	**23,766**	**23,661**	**23,362**	**22,953**	**22,205**	**21,829**	**21,681**	**21,624**	**19,967**	**19,174**	**18,365**	**17,566**	**17,190**	**16,784**	**16,513**

*

Short Term Debt	**Forecast 2020**	**Forecast 2021**	**Forecast 2022**	**Forecast 2023**	**Forecast 2024**	**Forecast 2025**	**Forecast 2026**	**Forecast 2027**	**Forecast 2028**	**Forecast 2029**	**Forecast 2030**	**Forecast 2031**	**Forecast 2032**	**Forecast 2033**	**Forecast 2034**	**Forecast 2035**	**Forecast 2036**
Opening Balance	-	-	-	-	-	-	-	-	-	-	-	11	-	45	42	-	-
Increase (Decrease)	-	-	-	-	-	-	-	-	-	-	11	(11)	45	(4)	(42)	-	-
Closing Balance	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**11**	**-**	**45**	**42**	**-**	**-**	**-**

Total Debt	**Forecast 2020**	**Forecast 2021**	**Forecast 2022**	**Forecast 2023**	**Forecast 2024**	**Forecast 2025**	**Forecast 2026**	**Forecast 2027**	**Forecast 2028**	**Forecast 2029**	**Forecast 2030**	**Forecast 2031**	**Forecast 2032**	**Forecast 2033**	**Forecast 2034**	**Forecast 2035**	**Forecast 2036**
Long Term Debt	23,496	24,022	23,766	23,661	23,362	22,953	22,205	21,829	21,681	21,624	19,967	19,174	18,365	17,566	17,190	16,784	16,513
Short Term Debt	-	-	-	-	-	-	-	-	-	-	11	-	45	42	-	-	-
Total Debt	**23,496**	**24,022**	**23,766**	**23,661**	**23,362**	**22,953**	**22,205**	**21,829**	**21,681**	**21,624**	**19,978**	**19,174**	**18,410**	**17,608**	**17,190**	**16,784**	**16,513**
Proportion of Short Term Debt to Total Debt	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Consolidated Debt Ratio	85%	84%	82%	81%	79%	78%	76%	74%	72%	70%	68%	65%	62%	58%	54%	49%	45%

REFERENCE:

Appendix 3.5 Pgs. 4, Chart 1, Pg. 17 Chart 13 Debt off ramping - Cash Flow; Appendix 4.1 Figure 3-5

PREAMBLE TO IR (IF ANY):

MH states its debt management retirement strategy is predicated on:

Manitoba Hydro will smooth the maturity schedule by layering new borrowings from peak years into available maturity buckets and to set up the debt portfolio for future debt retirement off-ramping.

This reduction in forecasted term to maturity is subject to change if operating cost reductions, export price increases, PUB rate increases do not end up yielding the cash flow required to enable the new terming strategy. Chart 13 illustrates free cash flow for debt retirement.

QUESTION:

a) Please provide a table indicating the determination of free cash flow including consideration of all capital expenditures for each for the 20 year forecast MH16 Update. Provide a cash flow to capex ratio table and graph on this basis.
b) Please provide the same analysis in (a) based on rate increases of 3.95% for 20 years.

RATIONALE FOR QUESTION:

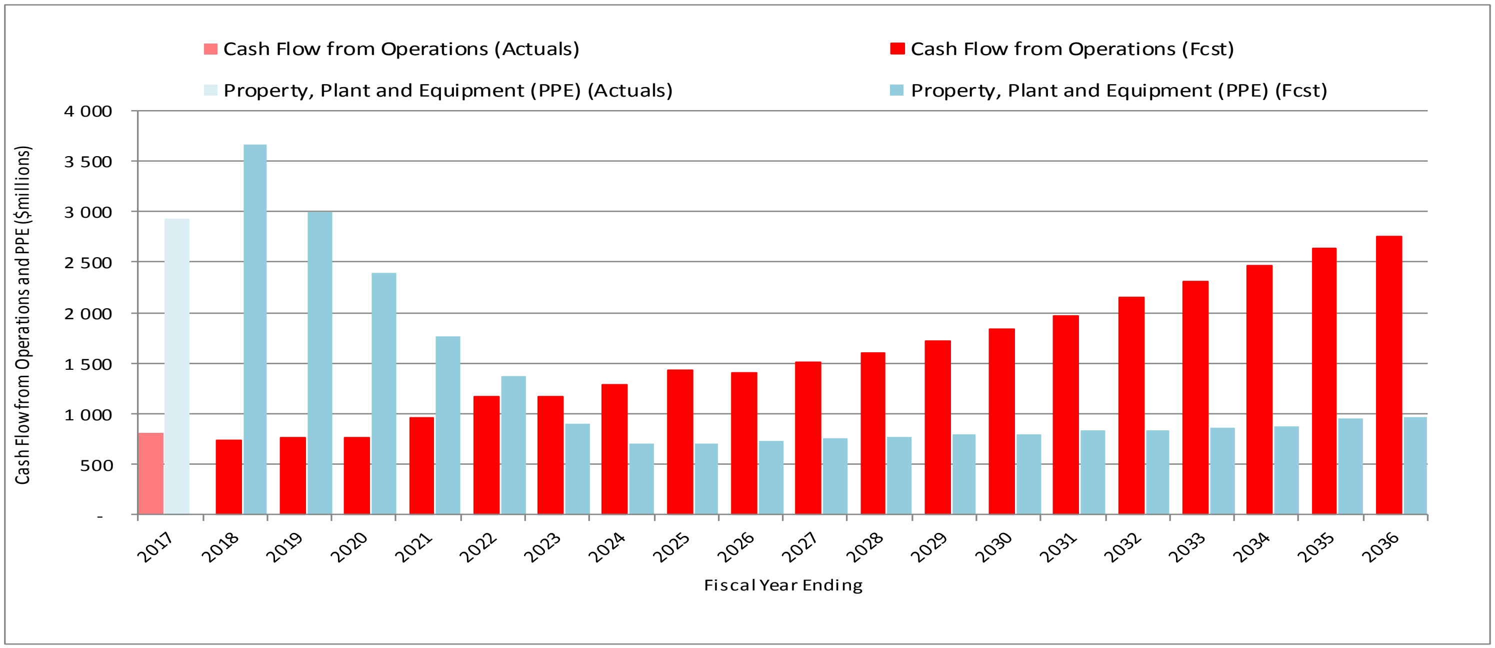
RESPONSE:

a) Figure 1 below contains a table and graph that illustrate the values for Cash Flow from Operations and Property, Plant and Equipment (PPE), net of contribution from the MH16 Update with Interim scenario.

Figure 1

	Actuals	Forecast ------>									
	2 017	2 018	2 019	2 020	2 021	2 022	2 023	2 024	2 025	2 026	2 027
Cash Flow from Operations	810	734	767	759	961	1 169	1 171	1 287	1 437	1 408	1 512
Property, Plant and Equipment (PPE)	2 925	3 660	3 002	2 391	1 760	1 368	898	700	704	732	756

	2 028	2 029	2 030	2 031	2 032	2 033	2 034	2 035	2 036
Cash Flow from Operations	1 604	1 720	1 843	1 972	2 155	2 307	2 473	2 637	2 752
Property, Plant and Equipment (PPE)	767	798	793	832	840	857	870	948	966



Figures 2 & 3 below contain the table and graph, calculated on the same basis as Figure 3-5 from KPMG's report on the Manitoba Hydro Financial Target Review (Appendix 4.1), to illustrate the cash flow to capex ratio for the MH16 Update with Interim scenario.

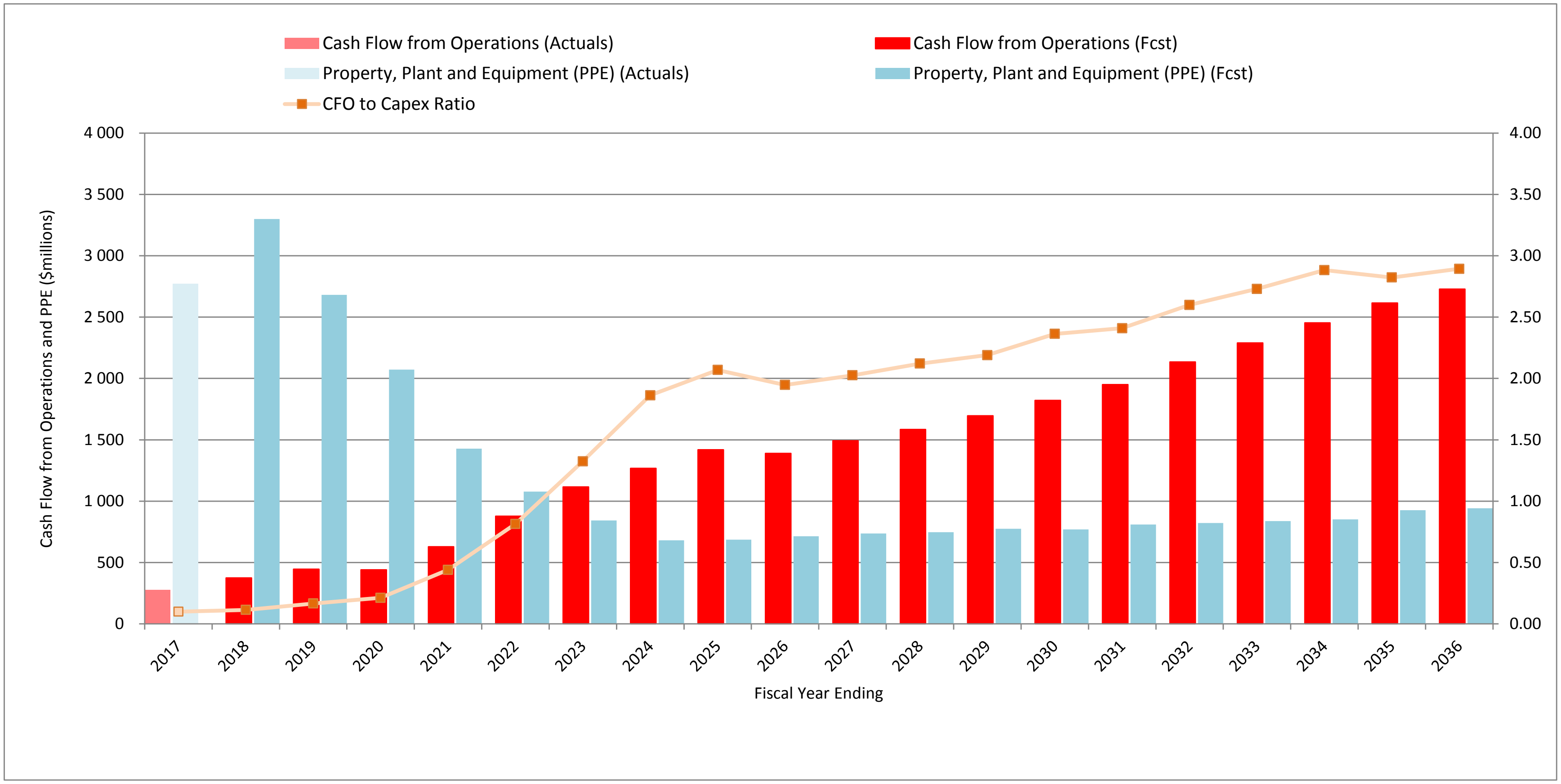
Figure 2

Cash Flow from Operations to CapEx

	Actuals	Forecast																		
For the year ended March 31	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**
Net Income Attributable to MH	53	93	211	205	349	518	434	411	530	489	577	650	755	873	989	1 147	1 280	1 423	1 579	1 668
Cash Receipts from Customers *	1 997	2 152	2 233	2 307	2 582	2 877	3 130	3 325	3 474	3 414	3 500	3 578	3 679	3 789	3 896	4 007	4 123	4 243	4 370	4 413
Cash Paid to Suppliers and Employees **	(933)	(892)	(843)	(870)	(885)	(894)	(904)	(935)	(953)	(953)	(966)	(980)	(996)	(1 012)	(1 035)	(1 030)	(1 043)	(1 063)	(1 087)	(1 097)
Interest Paid	(553)	(531)	(635)	(700)	(762)	(834)	(1 063)	(1 112)	(1 101)	(1 072)	(1 037)	(1 019)	(1 014)	(997)	(908)	(837)	(795)	(742)	(696)	(632)
Add: Total Capitalized Interest	(250)	(360)	(320)	(319)	(333)	(290)	(55)	(19)	(19)	(18)	(20)	(20)	(24)	(22)	(23)	(19)	(18)	(19)	(21)	(24)
Interest Received	17	5	12	22	26	20	8	10	17	20	14	26	51	63	20	15	22	36	49	67
Adjusted Cash Flow from Operations	**278**	**375**	**447**	**441**	**628**	**878**	**1 116**	**1 268**	**1 419**	**1 390**	**1 492**	**1 584**	**1 696**	**1 821**	**1 950**	**2 135**	**2 289**	**2 454**	**2 616**	**2 728**
CEF16 Expenditures *	3 021	3 660	3 002	2 391	1 760	1 368	898	700	704	732	756	767	798	793	832	840	857	870	948	966
Less: Total Capitalized Interest	(250)	(360)	(320)	(319)	(333)	(290)	(55)	(19)	(19)	(18)	(20)	(20)	(24)	(22)	(23)	(19)	(18)	(19)	(21)	(24)
Cash Flows in CEF16 including Deferreds***	**2 770**	**3 300**	**2 682**	**2 073**	**1 428**	**1 078**	**843**	**680**	**686**	**714**	**737**	**747**	**775**	**771**	**809**	**821**	**839**	**851**	**927**	**943**
CFO to Capex Ratio	**0.10**	**0.11**	**0.17**	**0.21**	**0.44**	**0.81**	**1.32**	**1.86**	**2.07**	**1.95**	**2.03**	**2.12**	**2.19**	**2.36**	**2.41**	**2.60**	**2.73**	**2.88**	**2.82**	**2.89**
Cash Flow Deficiency	**(2 493)**	**(2 925)**	**(2 235)**	**(1 632)**	**(799)**	**(200)**	**274**	**587**	**733**	**676**	**755**	**837**	**922**	**1 051**	**1 141**	**1 314**	**1 450**	**1 603**	**1 689**	**1 785**

* Per Cash Flow Statement restated for Bipole III deferred revenue reclassified from contributions which were net against PP&E (CEF16 Expenditures)
** Adjusted for payables associated with Bipole III and Keeyask
*** CFO - Internally generated funds less portion of capitalized interest related to (Keeyask, MMTP & GNTL)
**** Total gross capital and deferred expenditures excluding Keeyask, Bipole III, MMTP & GNTL; Bipole III deferred revenue reclassified from PP&E to Cash Flows from Operating Activities

Figure 3


Cash Flow from Operations (Actuals)
Cash Flow from Operations (Fcst)
Property, Plant and Equipment (PPE) (Actuals)
Property, Plant and Equipment (PPE) (Fcst)
CFO to Capex Ratio
Cash Flow from Operations and PPE ($millions)
4 000
3 500
3 000
2 500
2 000
1 500
1 000
500
0
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
2017
2018
2019
2020
2021
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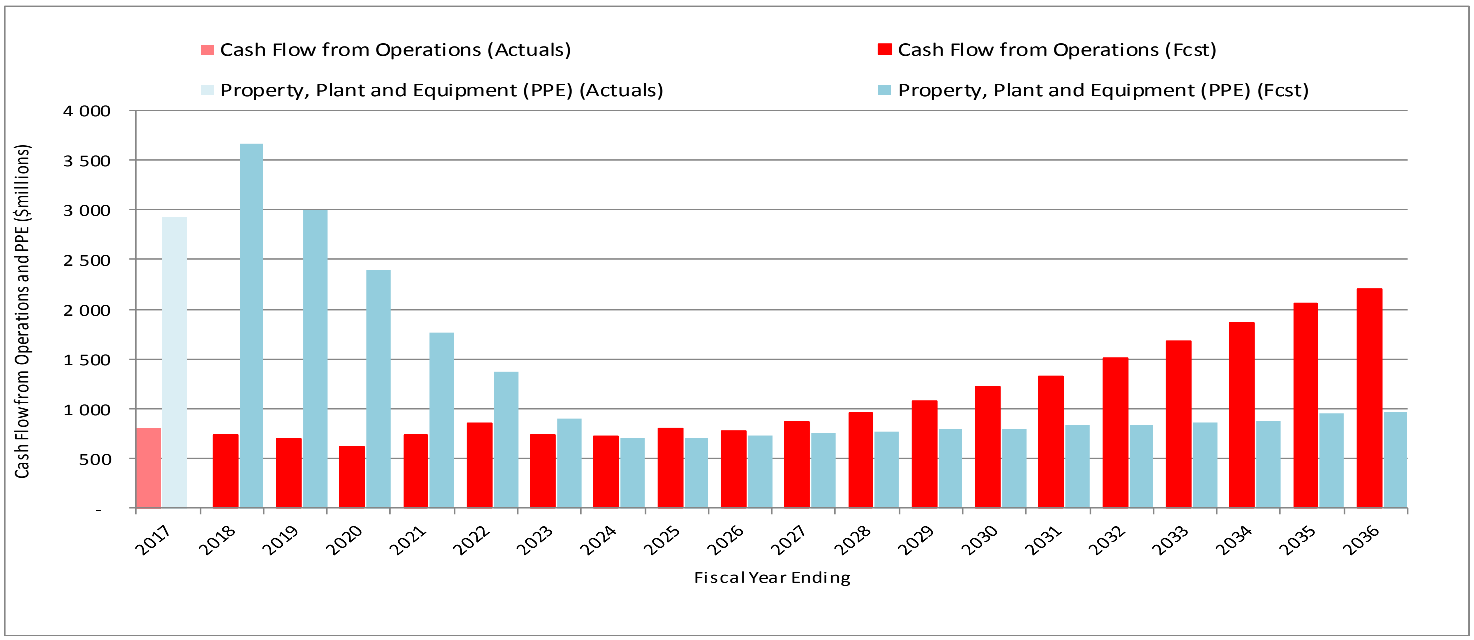
2035
2036
Fiscal Year Ending

b) Figure 4 below contains a table and graph to illustrate the Cash Flow from Operations and Property, Plant and Equipment (PPE), net of contribution from the MH16 Update with Interim, adjusted for 3.95% for 20 years beginning in fiscal 2019.

Figure 4

	Actuals	Forecast ------>									
	2017	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**
Cash Flow from Operations	810	734	703	621	742	850	736	722	807	773	863
Property, Plant and Equipment (PPE)	2 925	3 660	3 002	2 391	1 760	1 368	898	700	704	732	756

	2028	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**
Cash Flow from Operations	959	1 080	1 217	1 326	1 514	1 677	1 859	2 065	2 211
Property, Plant and Equipment (PPE)	767	798	793	832	840	857	870	948	966



Figures 5 & 6 below contains a table and graph of the cash flow to capex ratio for the MH16 Update with Interim scenario, adjusted for 3.95% for 20 years beginning in fiscal 2019.

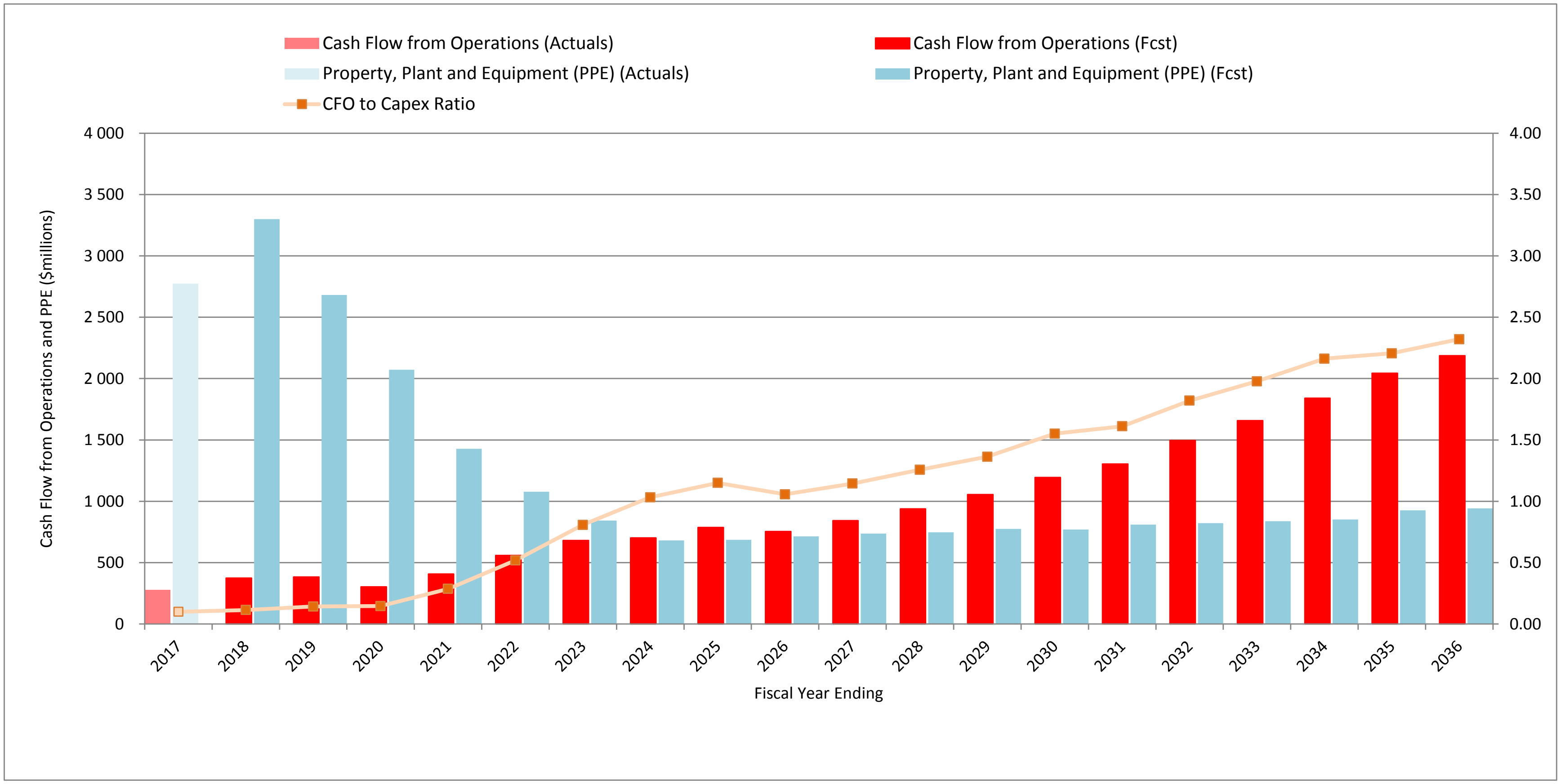
Figure 5

Cash Flow from Operations to CapEx

	Actuals	Forecast																		
For the year ended March 31	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**
Net Income Attributable to MH	53	93	148	66	125	194	(6)	(158)	(105)	(151)	(76)	(2)	115	246	340	503	649	814	1 002	1 131
Cash Receipts from Customers *	1 997	2 152	2 170	2 173	2 371	2 577	2 734	2 821	2 931	2 897	3 011	3 120	3 255	3 403	3 550	3 704	3 869	4 041	4 227	4 334
Cash Paid to Suppliers and Employees **	(933)	(892)	(843)	(870)	(885)	(894)	(903)	(935)	(953)	(952)	(966)	(980)	(995)	(1 012)	(1 035)	(1 030)	(1 043)	(1 063)	(1 086)	(1 096)
Interest Paid	(553)	(531)	(635)	(704)	(771)	(853)	(1 102)	(1 170)	(1 178)	(1 178)	(1 191)	(1 195)	(1 203)	(1 198)	(1 204)	(1 174)	(1 173)	(1 146)	(1 116)	(1 075)
Add: Total Capitalized Interest	(250)	(360)	(320)	(319)	(333)	(290)	(55)	(19)	(19)	(18)	(20)	(20)	(24)	(22)	(23)	(19)	(18)	(19)	(21)	(24)
Interest Received	17	5	11	22	26	19	7	6	6	6	9	15	23	25	15	14	24	27	40	48
Adjusted Cash Flow from Operations	**278**	**375**	**383**	**303**	**409**	**559**	**680**	**703**	**788**	**755**	**843**	**939**	**1 056**	**1 195**	**1 304**	**1 495**	**1 659**	**1 840**	**2 044**	**2 187**
CEF16 Expenditures *	3 021	3 660	3 002	2 391	1 760	1 368	898	700	704	732	756	767	798	793	832	840	857	870	948	966
Less: Total Capitalized Interest	(250)	(360)	(320)	(319)	(333)	(290)	(55)	(19)	(19)	(18)	(20)	(20)	(24)	(22)	(23)	(19)	(18)	(19)	(21)	(24)
Cash Flows in CEF16 including Deferreds*	**2 770**	**3 300**	**2 682**	**2 073**	**1 428**	**1 078**	**843**	**680**	**686**	**714**	**737**	**747**	**775**	**771**	**809**	**821**	**839**	**851**	**927**	**943**
CFO to Capex Ratio	**0.10**	**0.11**	**0.14**	**0.15**	**0.29**	**0.52**	**0.81**	**1.03**	**1.15**	**1.06**	**1.14**	**1.26**	**1.36**	**1.55**	**1.61**	**1.82**	**1.98**	**2.16**	**2.21**	**2.32**
Cash Flow Deficiency	**(2 493)**	**(2 925)**	**(2 299)**	**(1 770)**	**(1 019)**	**(518)**	**(162)**	**22**	**103**	**41**	**107**	**192**	**281**	**425**	**495**	**674**	**820**	**989**	**1 117**	**1 245**

* Per Cash Flow Statement restated for Bipole III deferred revenue reclassified from contributions which were net against PP&E (CEF16 Expenditures)
** Adjusted for payables associated with Bipole III and Keeyask
*** CFO - Internally generated funds less portion of capitalized interest related to (Keeyask, MMTP & GNTL)
**** Total gross capital and deferred expenditures excluding Keeyask, Bipole III, MMTP & GNTL; Bipole III deferred revenue reclassified from PP&E to Cash Flows from Operating Activities

Figure 6


Cash Flow from Operations (Actuals)
Cash Flow from Operations (Fcst)
Property, Plant and Equipment (PPE) (Actuals)
Property, Plant and Equipment (PPE) (Fcst)
CFO to Capex Ratio
Cash Flow from Operations and PPE ($millions)
4 000
3 500
3 000
2 500
2 000
1 500
1 000
500
0
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
2017
2018
2019
2020
2021
2022
2023
2024
2025
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2029
2030
2031
2032
2033
2034
2035
2036
Fiscal Year Ending

35

REFERENCE:

PUB-MFR-59

PREAMBLE TO IR (IF ANY):

QUESTION:

a) Please extend Table 1 for forecast years as provided in Appendix 3.3.

b) Please update Table 1 (and extend for forecast years) for Appendix 3.6 (MH16 Update).

RATIONALE FOR QUESTION:

RESPONSE:

The following tables provide the principal amount of long term debt outstanding at fiscal year end, the relative proportion of long term debt maturing within specific time frames and the weighted average term to maturity of the total long term debt portfolio. Actuals are provided for the fiscal years ended March 31, 2004 through 2017. In part a) IFF16 forecast figures are provided for March 31, 2018 to March 31, 2036, and in part b) MH16 Update with Interim forecast figures are provided for the same time frame.

Note that the tables were prepared using debt maturities conforming to the Corporation's financial statement presentation, which specifies the most outward obligation dates on any debt series (the latter of physical debt or forward interest rate swap maturity dates). Also note that the forecasted long term debt percentages and weighted average terms to maturity ("WATM") will be affected by the simplifying forecast modeling assumption of a 12 year term to maturity for all new long term debt issuance. Actual terms to maturity for new long term debt issues will vary from forecast, and the distribution of the future transacted long term debt issues will have a combination of various maturities. Should underlying forecast assumptions (rate increases, cost savings, export prices, interest rates, in-service dates) not materialize as planned, Manitoba Hydro will re-evaluate and adjust its debt management strategy and the targeted WATM of new debt issuance as it deems necessary.

MANITOBA HYDRO

MIPUG-MH I-19 a) Finance Expense - Debt Levels

Actuals are shown for March 31, 2004 - 2017 and IFF16 forecast information shown for March 31, 2018 to 2036.

($ in CAD millions)

	Debt Maturing Less than 10 Years		Debt Maturing Between 10 - 20 Years		Debt Maturing Greater than 20 Years		Total Long Term Debt	Weighted Average Term to Maturity
	$	% of Total	$	% of Total	$	% of Total	$	(Years)
March 31, 2004	2,586	35.1 %	3,521	47.7 %	1,268	17.2 %	7,375	13.8
March 31, 2005	2,377	33.1 %	3,346	46.5 %	1,468	20.4 %	7,191	13.8
March 31, 2006	2,397	33.5 %	3,317	46.3 %	1,443	20.2 %	7,158	13.7
March 31, 2007	2,623	36.3 %	3,094	42.9 %	1,501	20.8 %	7,218	12.9
March 31, 2008	2,996	39.5 %	2,513	33.1 %	2,081	27.4 %	7,590	13.5
March 31, 2009	3,763	45.8 %	2,026	24.7 %	2,421	29.5 %	8,209	13.6
March 31, 2010	3,963	46.0 %	1,805	21.0 %	2,846	33.0 %	8,614	14.8
March 31, 2011	3,967	45.6 %	2,241	25.7 %	2,496	28.7 %	8,704	15.3
March 31, 2012	4,841	51.4 %	1,619	17.2 %	2,962	31.4 %	9,422	14.9
March 31, 2013	5,179	51.7 %	1,499	15.0 %	3,332	33.3 %	10,010	14.8
March 31, 2014	5,160	46.9 %	1,500	13.6 %	4,349	39.5 %	11,009	16.2
March 31, 2015	5,264	41.4 %	1,370	10.8 %	6,084	47.8 %	12,717	17.8
March 31, 2016	6,096	41.7 %	1,441	9.9 %	7,071	48.4 %	14,607	18.1
March 31, 2017	7,270	44.1 %	1,641	9.9 %	7,582	46.0 %	16,492	17.5
March 31, 2018 *	7,027	36.2 %	5,341	27.5 %	7,032	36.2 %	19,399	16.0
March 31, 2019 *	6,049	27.5 %	9,281	42.3 %	6,632	30.2 %	21,961	15.2
March 31, 2020 *	8,655	36.7 %	8,639	36.7 %	6,263	26.6 %	23,558	14.2
March 31, 2021 *	11,773	48.9 %	6,469	26.9 %	5,838	24.2 %	24,080	13.8
March 31, 2022 *	12,539	52.6 %	5,895	24.7 %	5,388	22.6 %	23,822	13.3
March 31, 2023 *	14,074	59.3 %	4,802	20.3 %	4,838	20.4 %	23,715	12.6
March 31, 2024 *	14,948	63.8 %	3,679	15.7 %	4,788	20.4 %	23,415	11.7
March 31, 2025 *	14,946	65.0 %	3,269	14.2 %	4,788	20.8 %	23,003	10.9
March 31, 2026 *	14,471	65.0 %	4,244	19.1 %	3,538	15.9 %	22,253	10.3
March 31, 2027 *	13,493	61.7 %	6,396	29.2 %	1,986	9.1 %	21,875	9.9
March 31, 2028 *	13,893	64.0 %	5,846	26.9 %	1,986	9.1 %	21,725	9.0
March 31, 2029 *	15,033	69.4 %	4,646	21.4 %	1,986	9.2 %	21,665	8.0
March 31, 2030 *	11,992	60.4 %	6,202	31.2 %	1,661	8.4 %	19,855	8.7
March 31, 2031 *	8,021	42.1 %	9,377	49.2 %	1,661	8.7 %	19,059	10.3
March 31, 2032 *	7,261	39.8 %	9,327	51.1 %	1,661	9.1 %	18,249	10.5
March 31, 2033 *	9,208	52.8 %	7,097	40.7 %	1,141	6.5 %	17,446	10.6
March 31, 2034 *	10,279	60.2 %	5,647	33.1 %	1,141	6.7 %	17,067	10.1
March 31, 2035 *	11,269	67.7 %	4,322	25.9 %	1,066	6.4 %	16,657	9.4
March 31, 2036 *	12,844	78.4 %	2,472	15.1 %	1,066	6.5 %	16,382	8.5

* The forecasted debt percentages and weighted average terms to maturity will be affected by the simplifying modeling assumption of a 12 year term to maturity for all new debt issuance. Actual terms to maturity will vary from forecast.

MANITOBA HYDRO

MIPUG-MH I-19 b) Finance Expense - Debt Levels

Actuals are shown for March 31, 2004 - 2017 and MH16 Update with Interim forecast information shown for March 31, 2018 to 2036.

($ in CAD millions)

	Debt Maturing Less than 10 Years		Debt Maturing Between 10 - 20 Years		Debt Maturing Greater than 20 Years		Total Long Term Debt	Weighted Average Term to Maturity
	$	% of Total	$	% of Total	$	% of Total	$	(Years)
March 31, 2004	2,586	35.1 %	3,521	47.7 %	1,268	17.2 %	7,375	13.8
March 31, 2005	2,377	33.1 %	3,346	46.5 %	1,468	20.4 %	7,191	13.8
March 31, 2006	2,397	33.5 %	3,317	46.3 %	1,443	20.2 %	7,158	13.7
March 31, 2007	2,623	36.3 %	3,094	42.9 %	1,501	20.8 %	7,218	12.9
March 31, 2008	2,996	39.5 %	2,513	33.1 %	2,081	27.4 %	7,590	13.5
March 31, 2009	3,763	45.8 %	2,026	24.7 %	2,421	29.5 %	8,209	13.6
March 31, 2010	3,963	46.0 %	1,805	21.0 %	2,846	33.0 %	8,614	14.8
March 31, 2011	3,967	45.6 %	2,241	25.7 %	2,496	28.7 %	8,704	15.3
March 31, 2012	4,841	51.4 %	1,619	17.2 %	2,962	31.4 %	9,422	14.9
March 31, 2013	5,179	51.7 %	1,499	15.0 %	3,332	33.3 %	10,010	14.8
March 31, 2014	5,160	46.9 %	1,500	13.6 %	4,349	39.5 %	11,009	16.2
March 31, 2015	5,264	41.4 %	1,370	10.8 %	6,084	47.8 %	12,717	17.8
March 31, 2016	6,096	41.7 %	1,441	9.9 %	7,071	48.4 %	14,607	18.1
March 31, 2017	7,270	44.1 %	1,641	9.9 %	7,582	46.0 %	16,492	17.5
March 31, 2018 *	7,027	38.0 %	4,441	24.0 %	7,032	38.0 %	18,499	16.2
March 31, 2019 *	6,049	28.7 %	8,381	39.8 %	6,632	31.5 %	21,061	15.4
March 31, 2020 *	7,555	33.1 %	9,039	39.5 %	6,263	27.4 %	22,858	14.4
March 31, 2021 *	10,873	45.7 %	7,069	29.7 %	5,838	24.6 %	23,780	13.9
March 31, 2022 *	11,639	49.0 %	6,709	28.3 %	5,388	22.7 %	23,735	13.5
March 31, 2023 *	13,995	57.3 %	5,604	22.9 %	4,838	19.8 %	24,437	12.7
March 31, 2024 *	14,871	61.6 %	4,479	18.6 %	4,788	19.8 %	24,137	11.8
March 31, 2025 *	15,669	66.0 %	3,269	13.8 %	4,788	20.2 %	23,726	11.0
March 31, 2026 *	15,194	66.1 %	4,244	18.5 %	3,538	15.4 %	22,976	10.4
March 31, 2027 *	14,216	63.5 %	6,196	27.7 %	1,986	8.9 %	22,398	10.0
March 31, 2028 *	14,616	65.8 %	5,556	25.0 %	1,986	8.9 %	22,203	9.0
March 31, 2029 *	15,556	70.1 %	4,646	20.9 %	1,986	9.0 %	22,188	8.0
March 31, 2030 *	13,415	68.2 %	4,602	23.4 %	1,661	8.4 %	19,678	8.0
March 31, 2031 *	9,444	51.7 %	7,177	39.3 %	1,661	9.1 %	18,282	9.5
March 31, 2032 *	7,684	44.5 %	7,927	45.9 %	1,661	9.6 %	17,272	9.8
March 31, 2033 *	8,204	50.5 %	6,897	42.5 %	1,141	7.0 %	16,242	10.3
March 31, 2034 *	8,679	56.1 %	5,647	36.5 %	1,141	7.4 %	15,467	10.1
March 31, 2035 *	9,269	64.1 %	4,122	28.5 %	1,066	7.4 %	14,457	9.8
March 31, 2036 *	10,644	75.1 %	2,472	17.4 %	1,066	7.5 %	14,182	9.0

* The forecasted debt percentages and weighted average terms to maturity will be affected by the simplifying modeling assumption of a 12 year term to maturity for all new debt issuance. Actual terms to maturity will vary from forecast.

REFERENCE:

PUB MFR 58 Debt Maturities – Appendix 11.41 2015 & 2016 GRA)

PREAMBLE TO IR (IF ANY):

QUESTION:

a) Please plot on the same bar graph, figure 1 and figure 2, the comparative maturity schedule presented at the last GRA Appendix 11.41.

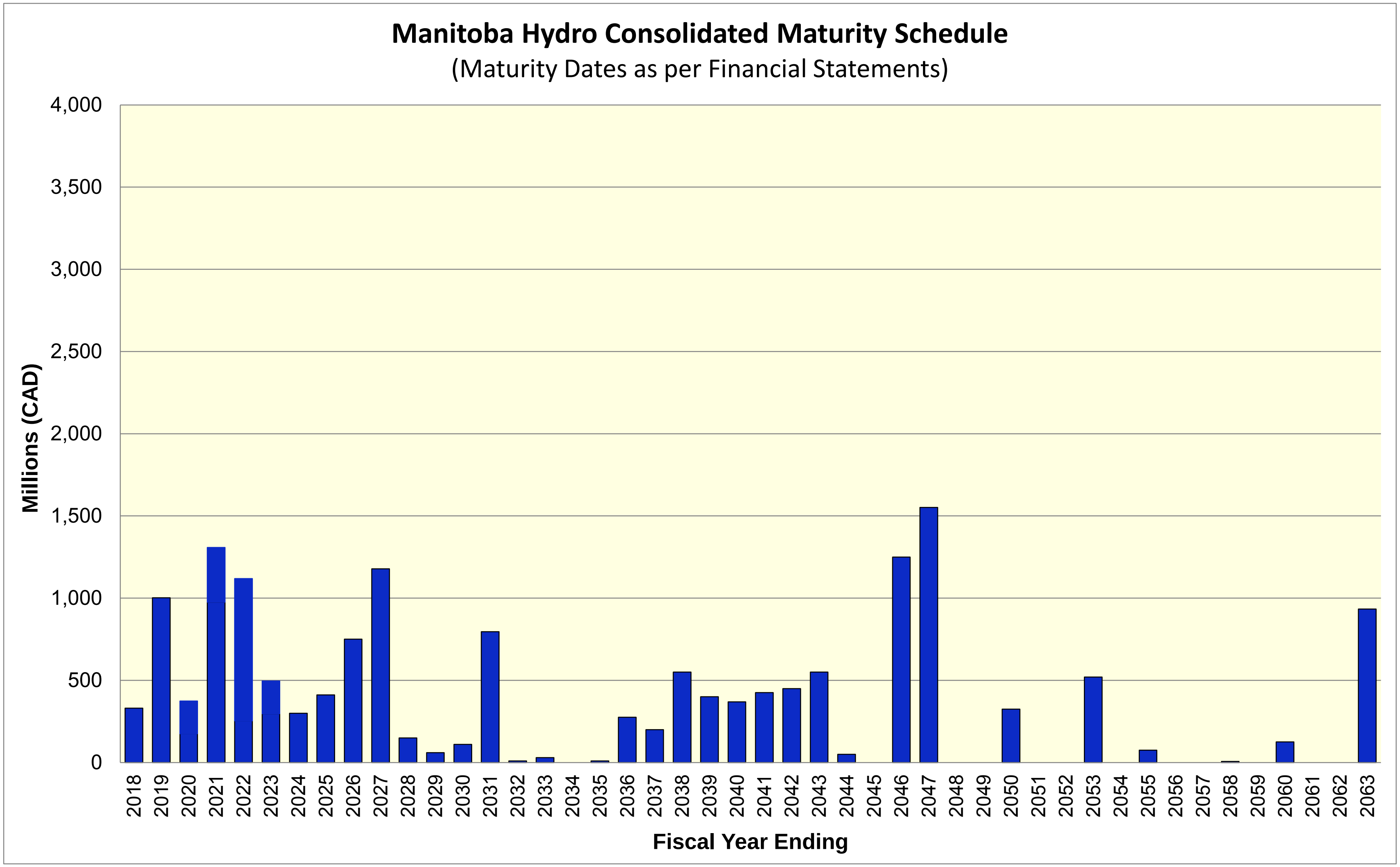
b) Please provide the table of supporting data points of the sum of debt maturing on a financial statement and action date basis.

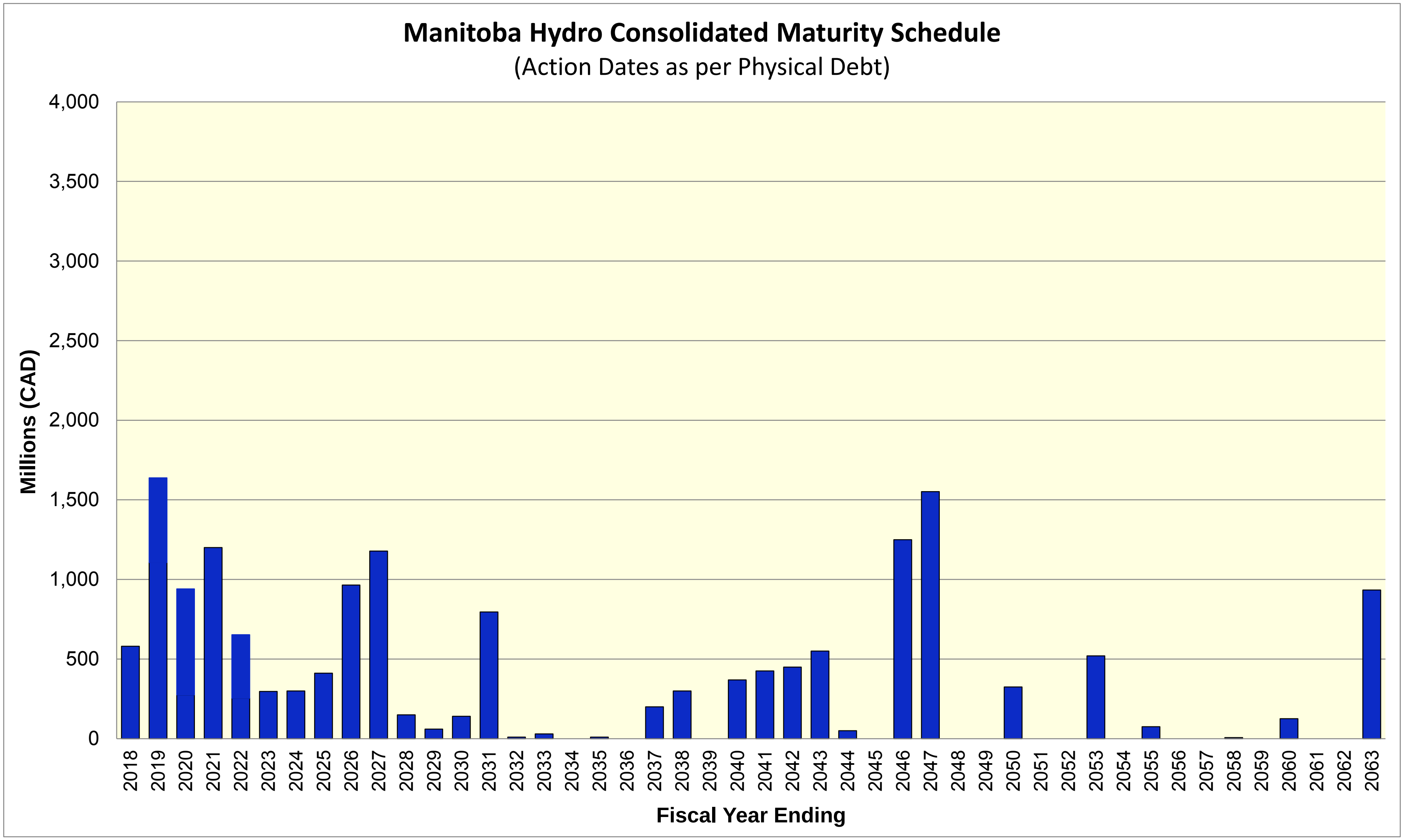
RATIONALE FOR QUESTION:

RESPONSE:

a) The following graphs show Manitoba Hydro's Maturity Schedule as of March 31, 2017 on both a financial statement (Maturity Date) and Action Date basis.

The Maturity Dates conform to the Corporation's financial statement presentation, which in accordance with accounting standards specify the most outward obligation dates on any debt series (the latter of physical debt or forward interest rate swap maturity dates). The Action Dates identify the maturities of the physical debt. Therefore, in cases where the maturity of underlying physical debt is before the linked forward interest rate swap for a debt series, a refinancing of the underlying physical debt will be required on the action date.


Manitoba Hydro Consolidated Maturity Schedule
(Maturity Dates as per Financial Statements)
Millions (CAD)
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050 2051 2052 2053 2054 2055 2056 2057 2058 2059 2060 2061 2062 2063
Fiscal Year Ending


Manitoba Hydro Consolidated Maturity Schedule
(Action Dates as per Physical Debt)
Millions (CAD)
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
2018
2019
2020
2021
2022
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2063
Fiscal Year Ending

b) The supporting data for the maturity schedule graphs is as follows:

Manitoba Hydro LTD Maturity Data
At March 31, 2017

Fiscal Year	Financial Statements	Action Date
2018	330.4	580.4
2019	1,001.8	1,638.7
2020	374.1	940.3
2021	1,308.5	1,200.4
2022	1,119.4	653.1
2023	496.2	296.4
2024	300.0	300.0
2025	411.6	411.6
2026	750.0	965.0
2027	1,177.8	1,177.8
2028	150.0	150.0
2029	60.0	60.0
2030	110.0	141.0
2031	795.8	795.8
2032	10.0	10.0
2033	30.0	30.0
2034	0.0	0.0
2035	10.0	10.0
2036	275.0	0.0
2037	200.0	200.0
2038	550.0	300.0
2039	400.0	0.0
2040	368.6	368.6

Fiscal Year	Financial Statements	Action Date
2041	425.0	425.0
2042	450.0	450.0
2043	550.0	550.0
2044	50.0	50.0
2045	0.0	0.0
2046	1,250.0	1,250.0
2047	1,552.1	1,552.1
2048	0.0	0.0
2049	0.0	0.0
2050	325.0	325.0
2051	0.0	0.0
2052	0.0	0.0
2053	520.0	520.0
2054	0.0	0.0
2055	75.0	75.0
2056	0.0	0.0
2057	0.0	0.0
2058	7.0	7.0
2059	0.0	0.0
2060	125.0	125.0
2061	0.0	0.0
2062	0.0	0.0
2063	934.0	934.0

REFERENCE:

Tab 6, Page 16

PREAMBLE TO IR (IF ANY):

QUESTION:

b) Manitoba Hydro indicated at Appendix 3.5 page 8 that Sinking Fund balances "can only be withdrawn for debt maturities". Please indicate the source of this understanding on limit on withdrawal.

c) In the current cash constrained and low interest rate environment, please indicate why Hydro continues to assume that investments in Sinking Funds will be maintained (Appendix 3.5 page 8). Has Hydro sought relief from the Sinking Fund requirements from the province?

RATIONALE FOR QUESTION:

RESPONSE:

Response to part b):

The *Manitoba Hydro Act* C.C.S.M. c. H190 limits the use of the sinking fund for repayment of borrowings under section 41:

> "Investment by Minister of Finance
>
> 41(5) The Minister of Finance shall invest and keep invested the moneys and investments so held by the Minister of Finance, in securities authorized by *The Financial Administration Act* for the investment of funds, and shall apply them towards the repayment of advances made to, and moneys borrowed or assumed by, the corporation or liability for the repayment of which is an obligation of the corporation and to which reference is made in subsection (1), as they fall due; and the Minister of Finance shall pay to the corporation all interest earned from the investment of the moneys so reserved and set aside and paid to and held by the Minister of Finance."

The reference to subsection (1) is as follows:

> "Establishment of sinking fund
>
> 41(1) The board shall reserve and set aside, out of the reserves or funds of the corporation established and maintained under section 40 and out of such other revenues and funds of the corporation as may be available for such purposes,
>
> (a) such annual or other periodic amounts as may be required to be reserved and set aside as a sinking fund under any agreement or undertaking entered into, or assumed, by the corporation or the responsibility for the performance or implementation of which is an obligation of the corporation, relative to the repayment of moneys borrowed by the corporation and
>
> (b) such additional annual or other periodic amounts as the Lieutenant Governor in Council may from time to time direct to be reserved and set aside as a sinking fund for the repayment of any other moneys borrowed by, or advanced to, the corporation and applied to the cost of acquisition or construction of property and works of the corporation, or indebtedness assumed by the corporation or the liability for the repayment of which is an obligation of the corporation, in respect of the cost of any property or works of the corporation, or otherwise."

Response to part c):

Amendment of legislation falls under the purview of the Province of Manitoba and not of Manitoba Hydro. Manitoba Hydro will continue to comply with legislated requirements unless and until they are amended.

Manitoba Hydro does state in the Debt Management Strategy on page 8 that: "In the next few years, in order to optimize the Corporation's liquidity practices and to reduce finance expense, Manitoba Hydro will seek to minimize its sinking fund balances."

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REFERENCE:

PUB/MH I-32 (a)

PREAMBLE TO IR (IF ANY):

QUESTION:

a) Please discuss how the Corporation may revise its debt management strategy based on IFF15-level rate increases (3.95%) rather than what is being proposed in IFF16 Update with Interim.

b) Please discuss the change in the interest rate refinancing risk profile.

RATIONALE FOR QUESTION:

RESPONSE:

a) As seen in chart 13 of the Debt Management Strategy (Appendix 3.5 of the GRA), in order to reduce the weighted average term to maturity (WATM) on new debt issuance to 12 years, Manitoba Hydro would be more heavily weighting maturities of between 3 to 10 years as compared to the WATM modeling of 20 years in previous IFFs. However, as indicated in the Debt Management Strategy, this reduction in forecasted term to maturity is subject to change if operating cost reductions, export price increases, and PUB approved rate increases result in an expectation of insufficient cash flow to enable the risk/reward balance of this new terming strategy.

Due to the layering of additional maturities at the shorter end of the maturity spectrum, it is critical that forecasted cash flows from expected rate increases (and cost savings) do materialize in order to retire a portion of the debt as it matures in order to mitigate refinancing risk. If Keeyask experiences construction delays which extend the in-service date, the delay in new capital borrowings would pressure interest rate risk in a period with higher than previously forecast refinancings.

If Manitoba Hydro were to assume annual rate increases of 3.95% as opposed to the rates being proposed in MH16 Update with Interim, the Corporation would have to consider revising its debt management strategy to increase the WATM of new debt issuance in order to keep the balance of risks at a manageable level and commensurate with the potential savings from borrowing at the lower rates typically associated with shorter maturities. If the outlook for future cash flows and/or the timing of borrowing requirements should change, a longer WATM profile may be found to be prudent risk management and which consequentially would also increase its weighted average interest rate compared to the MH16 Update with Interim forecast. All else being equal, this would be expected to erode or eliminate the interest savings opportunity from a shortened maturity profile. The benefits of interest savings would be re-evaluated in context of increased near-term refinancing risk.

b) If Manitoba Hydro were to adopt MH15 level rate increases with the MH16 Update with Interim, there would be a significant reduction in cash available for debt retirement as well as an increase in debt maturities in the period 2023-2032. If Manitoba Hydro does not realize the cash flow as planned in MH16 Update with Interim, interest rate risk will increase in comparison to previous plans as the Corporation will be refinancing more long term debt earlier than previously forecast. Without the requested rate increases, the ratio of cash available for debt retirement to debt maturities is significantly reduced thus increasing the Corporation's refinancing risk. As seen in the table below, in the ten year period from 2023-2032, Manitoba Hydro would see a decrease of $6.1 billion in cash available for debt retirement while in the same timeframe see an increase of $1.8 billion in debt maturities. The table below summarizes the impact of adopting MH15 level rate increases for 5 and 10 year timeframes:

Ratio of Cash Available for Debt Retirement to Debt Maturities
(in Millions of Dollars)

5 year Period From 2023-2027	**Cash Available for Debt Retirement**	**Debt Maturities**	**Ratio**
IFF16 Update with Interim with IFF15 Level Rate Increases	$225.1	$9,665.7	2.3%
IFF16 Update with Interim	$3,140.8	$9,343.2	33.6%
Difference	($2,915.8)	$322.5	
10 year Period From 2023-2032			
IFF16 Update with Interim with IFF15 Level Rate Increases	$2,411.1	$16,499.1	14.6%
IFF16 Update with Interim	$8,524.8	$14,724.1	57.9%
Difference	($6,113.7)	$1,775.0	

Without the expectation of having cash flow available for debt retirement as proposed in MH16 Update with Interim, a 12 year WATM terming strategy could unduly pressure the Corporation's risk profile particularly should other forecast risks materialize. As demonstrated in the table above, a significantly lower proportion of maturing debt is "covered" by cash availability if 3.95% rate increases are assumed. Regardless of debt terming strategy or rate increase profile, interest expense will be, by a factor of approximately 1.5x or more, the largest expense of Manitoba Hydro. Therefore, it is a significant contributor to potential volatility in revenue requirement. In the absence of an expectation of sufficient cash flows, Manitoba Hydro is unlikely to conclude its ratepayers are best served by significantly increasing refinancing risk in the fairly near term in order to capture interest savings. The 12 year terming strategy is only prudent as a component of a financial plan that sees the Corporation abating the growth of its debt prior to the completion of Keeyask and accelerating its return to more prudent, manageable and sustainable debt levels thereafter.

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REFERENCE:

Appendix 3.5, Interest Rate forecasting

PREAMBLE TO IR (IF ANY):

MH states IFF16 will no longer utilize the Manitoba Hydro 10 Yr.+ rate (the average of the 10 and 30-year Province of Manitoba bond yields) for forecasting the Corporation's new debt issuance as IFF16 has modeled a reduction of the Weighted Average Term to Maturity (WATM) of forecast Canadian debt issuance from 20 to 12 years.

QUESTION:

a) Please indicated the range of maturities issued for each of the years 2016/17 2017/18 and indicate the weighted Average Term to Maturity related to those issues.

b) Please provide a ten+ year historical of the spread between Government of Canada issued by the Province and the relative spread supporting the graph Chart 6.

RATIONALE FOR QUESTION:

RESPONSE:

a) For 2016/17 the range of maturities for actual new debt issuance was 3 to 47 years. The weighted average term to maturity for these issues was 18.5 years. For 2017/18 the assumption incorporated in IFF16 (which is the basis for the 2017 Debt Management Strategy found in Appendix 3.5) is that all new Canadian debt issuance will have a 12 year term to maturity. Actual debt issuance will vary from forecast. The 12 year weighted average term to maturity was derived utilizing the following allocation:

	IFF16 Allocation
3 Year Floating Rate Debt	3.75%
5 Year Floating Rate Debt	3.75%
5 Year Fixed Rate Debt	40.00%
7 Year Floating Rate Debt	3.75%
10 Year Floating Rate Debt	3.75%
10 Year Fixed Rate Debt	25.00%
30 Year Fixed Rate Debt	15.00%
40 Year Fixed Rate Debt	5.00%

b) Please see Manitoba Hydro's response to PUB/MH I-30a.

REFERENCE:

Appendix 3.5 Interest Rate Risk Chart 13

PREAMBLE TO IR (IF ANY):

MH is forecasting changing the distribution of debt issues to achieve a 12 year terming: 15% floating and 85% fixed (40% in 5-year issuance, 25% in 10-year issuance, 20% in 30+ year issuance).

MH has stated in order to mitigate the pressure on Manitoba credit spreads, that it would reduce the interest rate risk exposure on the existing debt portfolio by maintaining the proportion of floating rate debt at or below 10% of the total debt portfolio.

At the 2015 & 2016 GRA MH articulated a further strategy of reducing the interest rate risk exposure on the existing debt portfolio by extending the weighted average term to maturity by issuing longer dated debt, including the issuance of ultra-long debt with terms to maturity beyond 30 years. [PUB/MH II-72 a-d]

QUESTION:

a) Given the forecast mix of borrowings please provide an update to Chart 9 and Chart 10 in 2020.
b) Please explain whether the 40% assumed issuance maturing in 5 years increases or decrease Interest rate risk.
c) Please explain why MH has dropped the strategy of extending the weighted average term to maturity given the interest rate environment.

RATIONALE FOR QUESTION:

RESPONSE:

a) Given the planned mix of borrowings in the Debt Management Strategy (which was prepared in conjunction with IFF16), the projected interest rate risk profiles as of

March 31, 2020 are provided. Chart 10 below, which includes new borrowings within the next 12 months, shows that approximately 20% (or $5.2 billion) of the prospective debt portfolio will be subject to interest rate risk over the next 12 months as at March 31, 2020. While this is down from 22% at March 31, 2017 in Appendix 3.5, there has been a trade off in risk between that stemming from new borrowings (down 9%) and that related to floating rate & refinancing risk (up 7%).

Chart 9 **Summary of Interest Rate Risk Profile** (%)
(As at March 31, 2020)

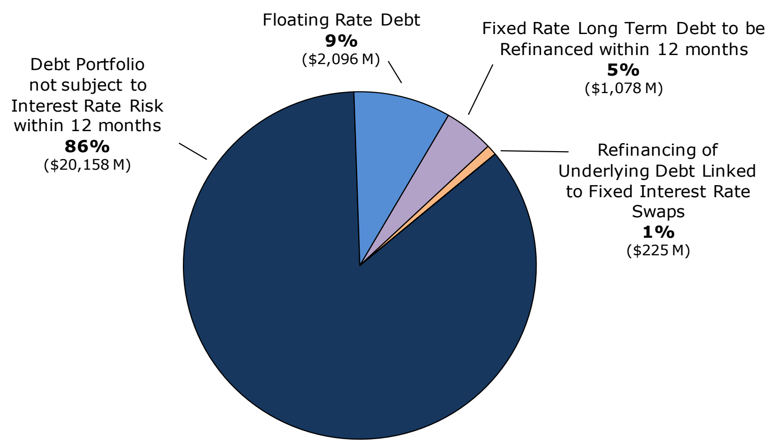
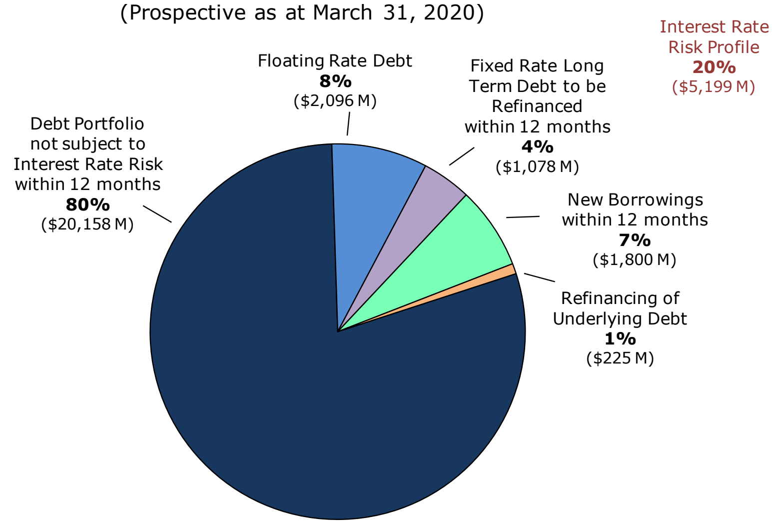


Chart 10 **Summary of Interest Rate Risk Profile** (%)
(Prospective as at March 31, 2020)



b) Manitoba Hydro's current financial plan addresses the serious deterioration in the Corporation's financial position. In order to mitigate customer rate impacts, Manitoba Hydro explored opportunities that would provide cost savings to the Corporation. With the increased expected cash flow from IFF16, Manitoba Hydro will be able to retire long term debt in advance of previous IFFs. If all forecast assumptions hold, an increase in planned 5 year debt issuance will provide cost savings to the Corporation while maintaining interest rate risk at reasonable levels. There is no interest rate risk on debt which is reasonably anticipated to be retired upon maturity using positive cash flow. However, if Manitoba Hydro does not obtain its requested level of rate increases and is not able to realize the cash flow as planned, interest rate risk will increase in comparison to previous plans as the Corporation will be refinancing more long term debt earlier than previously forecast.

c) In the decade prior to the preparation of IFF16, Manitoba Hydro's debt management strategies and activities were significantly impacted by the Corporation's increasing cash requirements, as well as the financial market conditions arising out of the global financial crisis. In preparation for the increasing levels of capital investment and debt financing, the interest rate risk on the existing debt portfolio was reduced during this time frame by decreasing the percentage of floating rate debt within the existing debt portfolio. In order to mitigate refinancing risk, Manitoba Hydro also adopted a "leapfrogging" strategy that favored longer dated debt maturities that largely skipped over the future period of unprecedented borrowings for new cash requirements, thereby also enhancing debt stability by extending the debt portfolio's weighted average term to maturity (WATM) by 5 years from 12.5 years at March 31, 2007 to 17.5 years at March 31, 2017. Manitoba Hydro also took advantage of the low interest rate environment to decrease the debt portfolio's weighted average interest rate (WAIR) by over 2% from 7.75% at March 31, 2007 to 5.41% at March 31, 2017.

The leapfrogging approach undertaken since 2008 along with Manitoba Hydro's new financial plan, have provided the opportunity for the Corporation to consider shortening the term to maturity of new debt issuance. However, there are risk and reward tradeoffs that must be considered when adjusting the expectations for shorter weighted average term to maturity and the associated reduction in weighted average interest rate:

- The financial benefit associated with this opportunity has the potential to provide approximately $500 million reduction in debt servicing costs over the next 10 years to the end of 2026/27.
- The amount of debt maturing increases in 2023-2027 due to an increased amount of three and five year debt issued in 2018-2022. During this period, the proposed change in weightings will add approximately $3 billion in debt coming due as compared to previous weightings which produce a WATM for new debt issuance of 20 years. As discussed in part b) above, without increased cash flow expectations, this would elevate refinancing risk as compared to previous IFFs. Previous IFFs projected minimal net income and cash flow during this period. Should cash flows from expected rate increases and cost savings not materialize, this refinancing risk will not have been mitigated as surplus cash will not be available for debt retirement.

Manitoba Hydro's interest rate policy on its existing debt portfolio is to limit the aggregate of:

i. floating rate debt,
ii. short term debt, and
iii. fixed rate long term debt to be refinanced within the subsequent 12 month period;
iv. to a maximum of 35% of the total debt portfolio.

Manitoba Hydro's interest rate risk guidelines for its existing debt portfolio include maintaining an aggregate of floating rate debt and short term debt within 15 – 25% of the total debt portfolio, and having the fixed rate long term debt to be refinanced within a 12 month period being less than 15% of the total debt portfolio.

When selecting the new forecast weightings for new debt issuance that are used in IFF16, Manitoba Hydro considered the impact to the interest rate risk profile and selected weightings which would keep the risk profile within Manitoba Hydro policy and guideline limits and targets, while providing for cost savings versus the previously used forecast weightings.

IFF16, with the new 12 year weighted average term to maturity for new debt issuance assumption, provides for interest rate risk profiles in all years of the forecast which are below the policy and guideline limits thus limiting interest rate risk for Manitoba Hydro. Given the current expectation that interest rates are expected to rise in the next few years, Manitoba Hydro deems it to be prudent to remain at the lower end of its interest rate risk policy and guideline limits.

Should underlying forecast assumptions (including rate increases, cost savings, export prices, interest rates, in-service dates) not materialize as planned, Manitoba Hydro will re-evaluate and adjust its debt management strategy and the targeted weighted average term to maturity of new debt issuance as it deems necessary. All else being equal, this would be expected to erode the interest savings opportunity from a shortened maturity profile. The benefits of interest savings would be re-evaluated in context of increased near-term refinancing risk.

REFERENCE:

Appendix 3.5 Pgs. 5, Chart 2 – Capitalized Interest

PREAMBLE TO IR (IF ANY):

QUESTION:

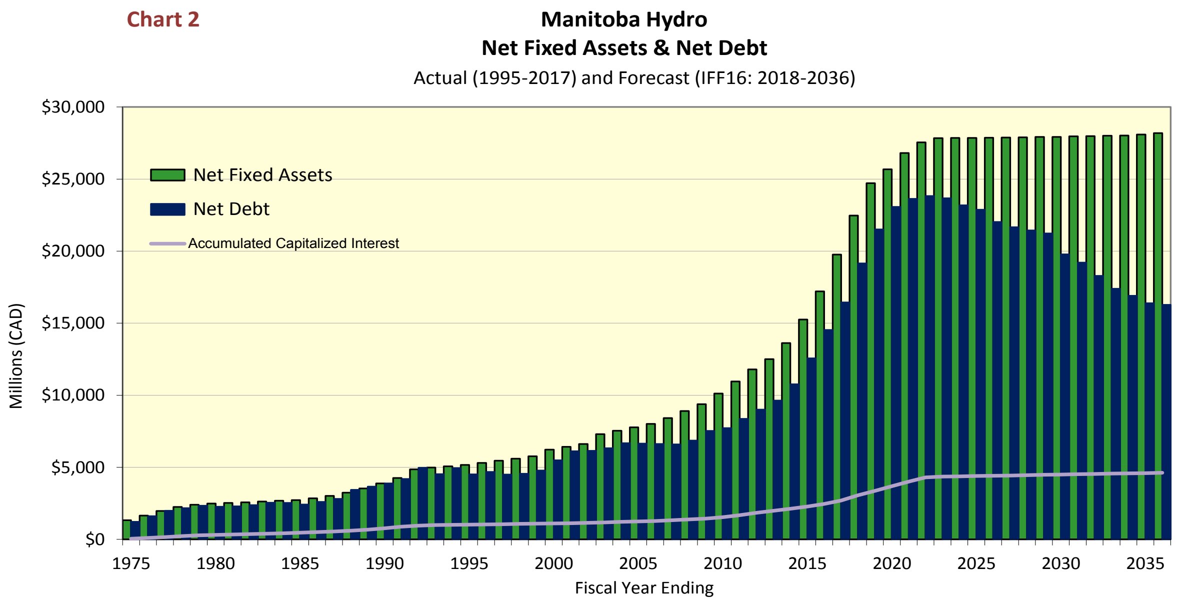
Please provide an update to chart 2 including accumulated capitalized interest including a table of respective data points, similar to PUB/MH I-9 (2015 & 2016 GRA).

RATIONALE FOR QUESTION:

RESPONSE:

Chart 2 from the Debt Management Strategy (Appendix 3.5) shows net assets which are the total property, plant and equipment less accumulated depreciation plus construction work in progress. Net long term debt is gross debt less sinking fund investments. Actual values are provided for fiscal years ending 1975 to 2017. Forecast data commencing in fiscal 2018 is based on IFF16. The Chart has been reproduced below, including the corresponding data points (with accumulated capitalized interest commencing in 1975).

Chart 2



Fiscal Year Ending	Net Assets	Net Long Term	Accumulated Capitalized Interest	Fiscal Year Ending	Net Assets	Net Long Term	Accumulated Capitalized Interest
1975	1,336	1,225	50	2006	8,010	6,614	1,281
1976	1,656	1,616	98	2007	8,415	6,597	1,328
1977	1,972	1,990	160	2008	8,912	6,852	1,388
1978	2,259	2,168	234	2009	9,382	7,521	1,444
1979	2,413	2,331	292	2010	10,128	7,716	1,543
1980	2,489	2,271	320	2011	10,954	8,365	1,681
1981	2,529	2,298	342	2012	11,797	9,011	1,851
1982	2,569	2,373	368	2013	12,508	9,634	1,992
1983	2,632	2,541	397	2014	13,627	10,757	2,134
1984	2,685	2,528	429	2015	15,250	12,565	2,279
1985	2,731	2,423	468	2016	17,208	14,527	2,456
1986	2,856	2,603	502	2017	19,757	16,438	2,704
1987	3,015	2,805	547	2018	22,469	19,154	3,057
1988	3,242	3,443	605	2019	24,713	21,512	3,371
1989	3,541	3,656	681	2020	25,679	23,071	3,685
1990	3,882	3,889	778	2021	26,806	23,624	4,014
1991	4,267	4,199	888	2022	27,556	23,823	4,304
1992	4,857	4,972	960	2023	27,849	23,665	4,359
1993	4,983	4,533	993	2024	27,857	23,187	4,379
1994	5,067	4,948	1,009	2025	27,859	22,874	4,398
1995	5,170	4,508	1,023	2026	27,870	22,030	4,416
1996	5,310	4,685	1,042	2027	27,889	21,656	4,436
1997	5,464	4,493	1,058	2028	27,902	21,440	4,456
1998	5,608	4,559	1,077	2029	27,930	21,222	4,480
1999	5,774	4,772	1,097	2030	27,932	19,784	4,502
2000	6,235	5,488	1,112	2031	27,962	19,212	4,525
2001	6,428	6,114	1,128	2032	27,984	18,279	4,545
2002	6,626	6,146	1,154	2033	28,003	17,389	4,563
2003	7,305	6,320	1,182	2034	28,017	16,897	4,582
2004	7,536	6,675	1,213	2035	28,100	16,384	4,604
2005	7,776	6,642	1,246	2036	28,185	16,271	4,628

REFERENCE:

PUB MFR 57 and MFR 58

PREAMBLE TO IR (IF ANY):

QUESTION:

a) Please provide on most recent issuances but extending MFR 57 to the latest issuance of debt.

b) Please provide the following table detailing the debt issuances and corresponding interest rates by year through 2022/23:

Year	Debt Issued in year	WAIR of debt issued in year	WAIR of all outstanding debt at March 31	Forecast interest rate IFF 16 Updated	Notional Interest
2016	(i.e. 3000)	(i.e. 4%)			
2017					
2018					
2019					
2020					
2021					
2022					
2023					
Total					

RATIONALE FOR QUESTION:

RESPONSE:

a) The Attachment to this response provides the terms for Manitoba Hydro's actual new and amended long term debt financings for fiscal years 2014/15, 2015/16, 2016/17 and 2017/18 year to date.

b) Please see below a table detailing new borrowings and corresponding interest rates (including Provincial Guarantee Fee):

Year	Debt Issued in year (millions)	WAIR of debt issued in year	WAIR of all outstanding debt at March 31	Forecast interest rate MH16 Update with Interim	Notional Interest in year (millions)
2016	$ 2,208.2	3.87%	5.68%		$ 85.5
2017	$ 2,162.8	3.48%	5.41%		$ 75.3
2018	$ 2,400.0	3.40%	5.13%	3.40%	$ 81.6
2019	$ 3,600.0	3.85%	4.71%	3.85%	$ 138.6
2020	$ 2,200.0	4.29%	4.61%	4.29%	$ 94.4
2021	$ 2,200.0	4.55%	4.62%	4.55%	$ 100.1
2022	$ 1,000.0	5.01%	4.66%	5.01%	$ 50.1
2023	$ 1,200.0	5.30%	4.73%	5.30%	$ 63.6
Total	$ 16,971.0				$ 689.1

Note 1: Debt Issued excludes refinancing of underling debt linked to ongoing interest rate swaps

Note 2: All rates include 1% PGF

REFERENCE:

PUB MFR 78

PREAMBLE TO IR (IF ANY):

QUESTION:

a) Please explain how the weighted average interest rate is calculated and where in the evidence the required inputs can be found.
b) With respect to Figure 1 in PUB MFR 78, please extend the graph to include the years up to 2033/34.
c) Please include in the response to part (b) the weighted average interest rates based on: i) IFF14, ii) IFF15, and iii) IFF16-Updated.

RATIONALE FOR QUESTION:

To understand the basis for the weighted average interest rate calculation and how the values have changed from previous forecasts.

RESPONSE:

a) The weighted average interest rate for a given year is calculated by dividing interest expense by the principal notional equivalent (Pn) of debt outstanding (e.g. If $100M of debt is outstanding for 6 months of the year, the Pn is $50M). The two components are obtained as follows:

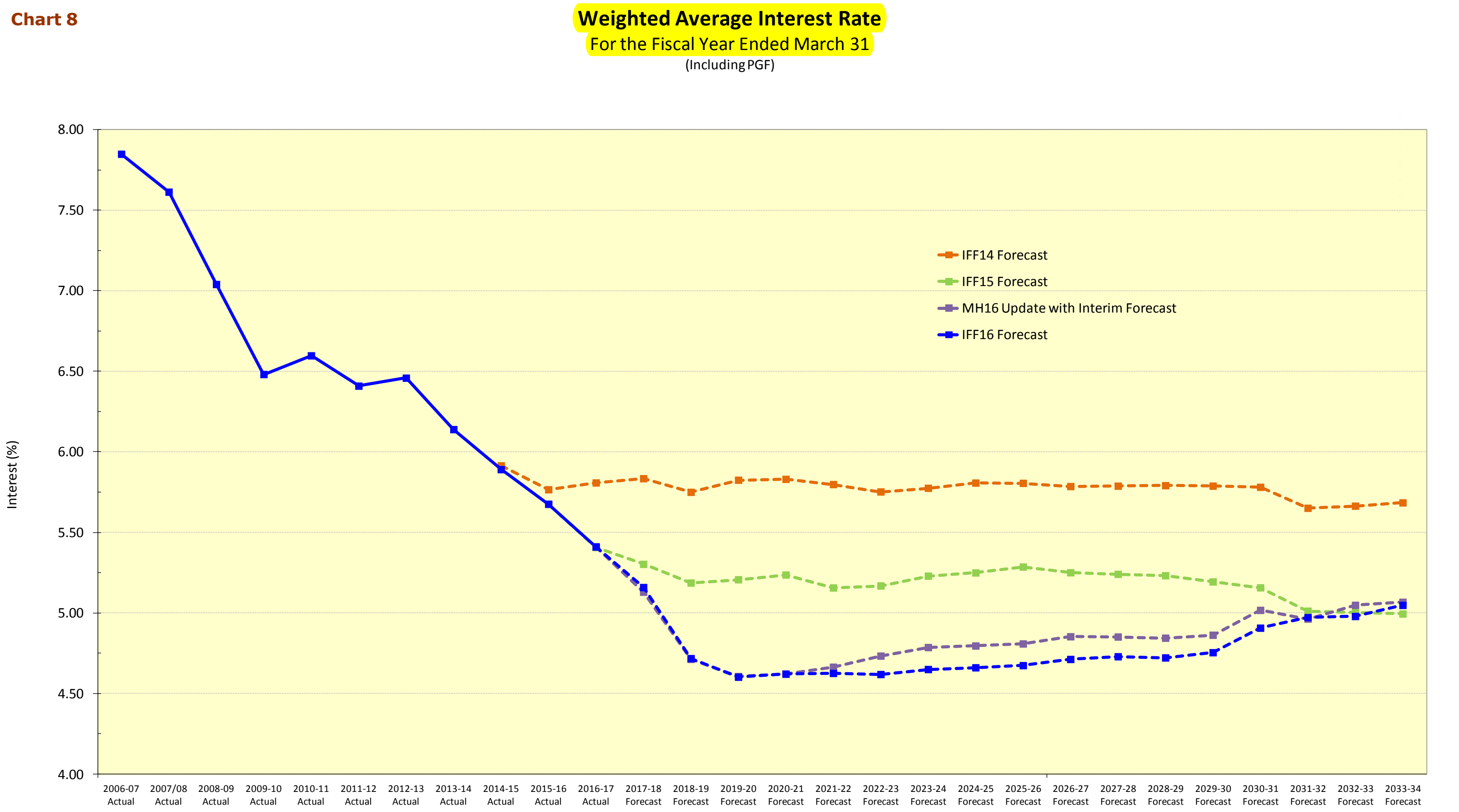
Interest Expense: CAD and USD Long Term Debt Interest Expense (in CAD Dollars)
+ Short Term Debt Interest Expense
+ Provincial Guarantee Fee
+ Amortization of Premiums/Discounts and Commissions

Pn: CAD and USD Pn (in CAD)
+ Short Term Debt Pn

Response to parts b) and c):

The following chart shows a reduction in the weighted average interest rate (WAIR) of Manitoba Hydro's debt portfolio in the first 12 years of the IFF16 and MH16 Update with Interim vs both IFF14 and IFF15, thus providing the Corporation with cost savings. This is possible due to the decision to change the terming assumption for new long term debt issuance in the financial forecasting model to 12 years in IFF16 from the previous 20 years used in IFF14 and IFF15, as well as overall lower forecast benchmark rates. It should be noted that the reversal in the IFF16 WAIR beginning in fiscal year 2030 is the result of the forecasting model's simplifying assumption that all new long term debt issued will be at a 12 year term, which would notionally result in large refinancing requirements 12 years after Manitoba Hydro's peak borrowing years. However, in practice, Manitoba Hydro's actual terming of new debt issuance, while targeting a WATM of 12 years, will vary from this forecast term. Manitoba Hydro will choose debt maturities which create a debt maturity profile to allow for debt to be retired as surplus cash flows become available.

Chart 8


Weighted Average Interest Rate
For the Fiscal Year Ended March 31
(Including PGF)
Interest (%)
IFF14 Forecast
IFF15 Forecast
MH16 Update with Interim Forecast
IFF16 Forecast
8.00
7.50
7.00
6.50
6.00
5.50
5.00
4.50
4.00
2006-07 Actual
2007/08 Actual
2008-09 Actual
2009-10 Actual
2010-11 Actual
2011-12 Actual
2012-13 Actual
2013-14 Actual
2014-15 Actual
2015-16 Actual
2016-17 Actual
2017-18 Forecast
2018-19 Forecast
2019-20 Forecast
2020-21 Forecast
2021-22 Forecast
2022-23 Forecast
2023-24 Forecast
2024-25 Forecast
2025-26 Forecast
2026-27 Forecast
2027-28 Forecast
2028-29 Forecast
2029-30 Forecast
2030-31 Forecast
2031-32 Forecast
2032-33 Forecast
2033-34 Forecast

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Terms for New and Amended Long Term Debt

(April 1, 2014 to July 31, 2017)

The terms for Manitoba Hydro's new and amended long term debt financings are provided for fiscal years 2014/15, 2015/16, 2016/17 and 2017/18 year to date.

2014/15 Total long term financings for the year were CAD $2,547.6, made up of:

- $1,583.5 million for new borrowing requirements.
- $583.1 million to refinance maturing long term debt
- $381.0 million to refinance maturing underlying debt issues associated with ongoing interest rate swaps.

The actual long term debt financings undertaken during this fiscal year, per quarter, were as follows:

Quarter 1 On April 10, 2014, Manitoba Hydro secured long term debt series **C136** for CAD $50 million and a September 5, 2029 maturity date. The debt, which was swapped to floating rate debt, was issued to partially refinance debt series FS-2C ($100 million). A forward fixed interest rate swap that was previously linked to debt issue FS-2C was re-linked to the C136 underlying refinancing, which amended the fixed rate on $50 million of the debt stream to 5.020%.

On April 14, 2014, Manitoba Hydro secured long term debt series **C136-2** for CAD $50 million and a September 5, 2029 maturity date. The debt, which was swapped to floating rate debt, was issued to partially refinance debt series FS-2C ($100 million). A forward fixed interest rate swap that was previously linked to debt series FS-2C was re-linked to the C136-2 underlying refinancing, which amended the fixed rate on $50 million of the debt stream to 4.882%.

On April 14, 2014, Manitoba Hydro secured long term debt series **C129-9** for CAD $60 million and a September 5, 2052 maturity date. C129-9 was issued at a discount with proceeds of $51.5 million (net of commissions), a fixed rate coupon of 3.150%, and an all-in yield of 3.858%. The debt was issued to finance new borrowing requirements.

On April 14, 2014, Manitoba Hydro secured long term debt series C138 for CAD $200 million and a May 15, 2020 maturity date. The debt, which was a floating rate note, was issued to refinance debt series FS-2A ($100 million) and FS-2B ($100 million). Forward fixed interest rate swaps that were previously linked to debt series FS-2A and FS-2B were re-linked to the C138 underlying refinancing, which amended the fixed rate on the debt streams to 7.312% (**C138-A**) and 7.443% (**C138-B**).

On April 15, 2014, Manitoba Hydro secured long term debt series **C136-3** for CAD $31 million and a September 5, 2029 maturity date. The debt, which was swapped to floating rate debt, was issued to partially refinance debt series FS-2D ($81 million). A forward fixed interest rate swap that was previously linked to debt series FS-2D was re-linked to the C136-3 underlying refinancing, which amended the fixed rate on $31 million of the debt stream to 5.058%.

On April 23, 2014, Manitoba Hydro secured long term debt series **C129-10** for CAD $50 million and a September 5, 2052 maturity date. C129-10 was issued at a discount with proceeds of $43.6 million (net of commissions), a fixed rate coupon of 3.150%, and an all-in yield of 3.786%. The debt was issued to finance new borrowing requirements.

On April 30, 2014, Manitoba Hydro secured long term debt series **GG-2** for CAD $250 million and a September 5, 2045 maturity date. GG-2 was issued at a premium with proceeds of $260.5 million (net of commissions), a fixed rate coupon of 4.050%, and an all-in yield of 3.819%. The debt was issued to finance new borrowing requirements.

On May 5, 2014, Manitoba Hydro secured long term debt series **C138-2** for CAD $50 million and a May 15, 2020 maturity date. The debt, which was a floating rate note, was issued to partially refinance debt series FS-2D ($81 million). A forward fixed interest rate swap that was previously linked to debt series FS-2D was re-linked to the C138-2 underlying refinancing, which amended the fixed rate on $50 million of the debt stream to 4.897%.

On June 9, 2014, Manitoba Hydro secured long term debt series **C129-11** for CAD $25 million and a September 5, 2052 maturity date. C129-11 was issued at a discount with proceeds of $22.2 million (net of commissions), a fixed rate coupon of 3.150%, and an all-in yield of 3.702%. The debt was issued to finance new borrowing requirements.

On June 10, 2014, Manitoba Hydro secured long term debt series **C129-12** for CAD $40 million and a September 5, 2052 maturity date. C129-12 was issued at a discount with proceeds of $35.5 million (net of commissions), a fixed rate coupon of 3.150%, and an all-in yield of 3.699%. The debt was issued to finance new borrowing requirements.

On June 24, 2014, Manitoba Hydro secured long term debt series **C139** for CAD $50 million and a September 5, 2054 maturity date. C139 was issued at a discount with proceeds of $49.8 million (net of commissions), a fixed rate coupon of 3.650%, and an all-in yield of 3.666%. The debt was issued to finance new borrowing requirements.

Quarter 2 On July 11, 2014, Manitoba Hydro secured long term debt series **C139-2** for CAD $25 million and a September 5, 2054 maturity date. C139-2 was issued at a premium with proceeds of $25.1 million (net of commissions), a fixed rate coupon of 3.650%, and an all-in yield of 3.625%. The debt was issued to refinance HydroBonds.

On September 3, 2014, Manitoba Hydro secured long term debt series **C140** for AUD $100 million and a March 3, 2025 maturity date. The issue was swapped to CAD $101.6 million and a fixed rate coupon of 2.916%. The debt was issued to refinance $101.6 million of maturing debt series FM (FM-1, FM-2, FM-3 and FM-4 totaling $250 million).

On September 5, 2014, Manitoba Hydro secured long term debt series **GH** for CAD $300 million and a June 2, 2024 maturity date. GH was issued at a premium with proceeds of $312.1 million (net of commissions), a fixed rate coupon of 3.300%, and an all-in yield of 2.825%. The debt was issued to refinance $148.4 million of debt series FM (FM-1, FM-2, FM-3 and FM-4 totaling $250 million), $68.1 million of HydroBonds, as well as to finance $83.5 million of new borrowing requirements.

On September 23, 2014, Manitoba Hydro secured long term debt series **GG-3** for CAD $300 million and a September 5, 2045 maturity date. GG-3 was issued at a premium with proceeds of $322.6 million (net of commissions), a fixed rate coupon of 4.050%, and an all-in yield of 3.642%. The debt was issued to finance new borrowing requirements.

Quarter 3 On November 20, 2014, Manitoba Hydro secured long term debt series **GG-4** for CAD $400 million and a September 5, 2045 maturity date. GG-4 was issued at a premium with proceeds of $434.2 million (net of commissions), a fixed rate coupon of 4.050%, and an all-in yield of 3.589%. The debt was issued to refinance maturing debt series FC-3 ($200 million) as well as to finance new borrowing requirements ($200 million).

On December 4, 2014, Manitoba Hydro secured long term debt series **C137-5** for CAD $50 million and a March 5, 2063 maturity date. C137-5 was issued at a premium with proceeds of $51.1 million (net of commissions), a fixed rate coupon of 3.450%, and an all-in yield of 3.354%. The debt was issued to finance new borrowing requirements.

On December 31, 2014, Manitoba Hydro secured mitigation bond **5C-1** for CAD $10 million and a December 31, 2024 maturity date. 5C-1 was issued at par, a fixed rate coupon, and all-in yield of 3.723%. The debt was issued to refinance $10 million of maturing mitigation bond 5A ($40 million).

On December 31, 2014, Manitoba Hydro secured mitigation bond **5C-2** for CAD $10 million and a December 31, 2029 maturity date. 5C-2 was issued at par, a fixed rate coupon, and all-in yield of 4.049%. The debt was issued to refinance $10 million of maturing mitigation bond 5A ($40 million).

On December 31, 2014, Manitoba Hydro secured mitigation bond **5C-3** for CAD $10 million and a December 31, 2034 maturity date. 5C-3 was issued at par, a fixed rate coupon, and all-in yield of 4.245%. The debt was issued to refinance $10 million of maturing mitigation bond 5A ($40 million).

On December 31, 2014, Manitoba Hydro secured mitigation bond **5C-4** for CAD $10 million and a December 31, 2039 maturity date. 5C-4 was issued at par, a fixed rate coupon, and all-in yield of 4.311%. The debt was issued to refinance $10 million of maturing mitigation bond 5A ($40 million).

Quarter 4 On January 14, 2015, Manitoba Hydro secured long term debt series **FR-3** for CAD $175 million and a March 5, 2041 maturity date. FR-3 was issued at a premium with proceeds of $202.2 million (net of commissions), a fixed rate coupon of 4.100%, and an all-in yield of 3.215%. The debt was issued to finance new borrowing requirements.

On March 2, 2015, Manitoba Hydro secured long term debt series **GK** for CAD $300 million and a September 5, 2046 maturity date. GK was issued at a discount with proceeds of $296.8 million (net of commissions), a fixed rate coupon of 2.850%, and an all-in yield of 2.902%. The debt was issued to finance new borrowing requirements.

2015/16 The long term financings for the year were CAD $2,208.2 million made up of:

- $2,092.8 million for new borrowing requirements.
- $115.4 million to refinance maturing long term debt.

The actual long term debt financings during this fiscal year, per quarter, were as follows:

Quarter 1 On April 15, 2015, Manitoba Hydro secured long term debt series **GK-2** for CAD $300 million and a September 5, 2046 maturity date. GK-2 was issued at a discount with proceeds of $297.0 million (net of commissions), a fixed rate coupon of 2.850%, and an all-in yield of 2.898%. The debt was issued to finance new borrowing requirements.

On June 11, 2015, Manitoba Hydro secured long term debt series **GJ-3** for CAD $150 million and a June 2, 2025 maturity date. GJ-3 was issued at a discount with proceeds of $148.7 million (net of commissions), a fixed rate coupon of 2.450%, and an all-in yield of 2.549%. The debt was issued to finance new borrowing requirements.

Quarter 2 On July 24, 2015, Manitoba Hydro secured long term debt series **GK-3** for CAD $150 million and a September 5, 2046 maturity date. GK-3 was issued at a discount with proceeds of $139.9 million (net of commissions), a fixed rate coupon of 2.85%, and an all-in yield of 3.227%. The debt was issued to finance new borrowing requirements.

On September 16, 2015, Manitoba Hydro secured long term debt series **GJ-4** for CAD $150 million and a June 2, 2025 maturity date. GJ-4 was issued at a discount with proceeds of $148.9 million (net of commissions), a fixed rate coupon of 2.450%, and an all-in yield of 2.539%. The debt was issued to refinance $49.5 million of HydroBonds, as well as to finance $100.5 million of new borrowing requirements.

On September 29, 2015, Manitoba Hydro secured long term debt series **C137-6** for CAD $62 million and a March 5, 2063 maturity date. C137-6 was issued at a premium with proceeds of $63.0 million (net of commissions), a fixed rate coupon of 3.450% and an all-in yield of 3.378%. The debt was issued to finance new borrowing requirements.

Quarter 3 On October 15, 2015, Manitoba Hydro secured long term debt series **GK-4** for CAD $300 million and a September 5, 2046 maturity date. GK-4 was issued at a discount with proceeds of $262.0 million (net of commissions), a fixed rate coupon of 2.85% and an all-in yield of 3.526%. The debt was issued to finance new borrowing requirements.

On November 10, 2015, Manitoba Hydro secured long term debt series **C109-5** for CAD $50 million and a March 5, 2063 maturity date. C109-5 was issued at a premium with proceeds of $61.6 million (net of commissions), a fixed rate coupon of 4.625% and an all-in yield of 3.597%. The debt was issued to finance new borrowing requirements.

On November 20, 2015, Manitoba Hydro secured long term debt series **C109-6** for CAD $50 million and a March 5, 2063 maturity date. C109-6 was issued at a premium with proceeds of $62.2 million (net of commissions), a fixed rate coupon of 4.625% and an all-in yield of 3.555%. The debt was issued to finance new borrowing requirements.

On November 30, 2015, Manitoba Hydro secured long term debt series **GM** for USD $300 million and a November 30, 2020 maturity date. The issue was swapped to CAD $400.4 million and a fixed rate coupon of 1.773%. The debt was issued to refinance $65.9 million of maturing debt series EY. The remaining $334.5 million of the debt was issued to finance new borrowing requirements.

On December 8, 2015, Manitoba Hydro secured long term debt series **C109-7** for CAD $50 million and a March 5, 2063 maturity date. C109-7 was issued at a premium with proceeds of $62.9 million (net of commissions), a fixed rate coupon of 4.625% and an all-in yield of 3.506%. The debt was issued to finance new borrowing requirements.

On December 8, 2015, Manitoba Hydro secured long term debt series **C137-7** for CAD $75 million and a March 5, 2063 maturity date. C137-7 was issued at a discount with proceeds of $74.1 million (net of commissions), a fixed rate coupon of 3.450% and an all-in yield of 3.502%. The debt was issued to finance new borrowing requirements.

Quarter 4 On January 28, 2016, Manitoba Hydro secured long term debt series **GK-5** for CAD $225 million and a September 5, 2046 maturity date. GK-5 was issued at a discount with proceeds of $200.0 million (net of commissions), a fixed rate coupon of 2.850% and an all-in yield of 3.440%. The debt was issued to finance new borrowing requirements.

On March 17, 2016, Manitoba Hydro secured long term debt series **GN** for CAD $150 million and a June 2, 2026 maturity date. GN was issued at a discount with proceeds of $148.8 million (net of commissions), a fixed rate coupon of 2.550% and an all-in yield of 2.643%. The debt was issued to finance new borrowing requirements.

On March 24, 2016, Manitoba Hydro secured long term debt series **C148** for EUR €65 million and a March 24, 2031 maturity date. The issue was swapped to

CAD $95.81 million and a fixed rate coupon of 2.966%. The debt was issued to finance new borrowing requirements.

2016/17 The long term financings for the year are CAD $2,838.6 million made up of:

- $1,988.7 million for new borrowing requirements.
- $174.1 million to refinance maturing long term debt.
- $675.8 million to refinance maturing underlying debt issues associated with ongoing interest rate swaps.

The actual long term debt financings during this fiscal year, per quarter, were as follows:

Quarter 1 On April 6, 2016, Manitoba Hydro secured long term debt series **GO-2** for CAD $250 million and a September 5, 2021 maturity date. GO-2 was issued at a discount with proceeds of $248.8 million (net of commissions), a fixed rate coupon of 1.55%, and an all-in yield of 1.644%. The debt was issued to finance new borrowing requirements.

On May 11, 2016, Manitoba Hydro secured long term debt series **GK-6** for CAD $150 million and a September 5, 2046 maturity date. GK-6 was issued at a discount with proceeds of $137.8 million (net of commissions), a fixed rate coupon of 2.85%, and an all-in yield of 3.275%. The debt was issued to refinance $100.0 million of maturing debt series C121-3. The remaining $50.0 million of the debt was issued to finance new borrowing requirements.

On May 31, 2016, Manitoba Hydro secured long term debt series **C137-8** for CAD $50 million and a March 5, 2063 maturity date. C137-8 was issued at a premium with proceeds of $52.6 million (net of commissions), a fixed rate coupon of 3.45%, and an all-in yield of 3.232%. The debt was issued to refinance $16.1 million of maturing HydroBonds Series 11 five year floating and fixed rate debt as well as $3.2 million of maturing HydroBonds Series 12 three year fixed rate debt. The remaining $30.7 million of the debt was issued to finance new borrowing requirements.

On June 22, 2016, Manitoba Hydro secured long term debt series **GP** for USD $200 million and a June 22, 2026 maturity date. The issue was swapped to CAD $257.1 million and a fixed rate coupon of 2.254%. The debt was issued to refinance $54.6 million (of total $200 million) of maturing debt series AZ (the remainder of series AZ was retired through a sinking fund withdrawal). The remaining $202.5 million of debt series GP was issued to finance new borrowing requirements.

Quarter 2 On August 8, 2016, Manitoba Hydro secured long term debt series **C152** for EUR €35 million and an August 8, 2046 maturity date. The issue was swapped to CAD $50.8 million and a fixed rate coupon of 2.778%. The debt was issued to refinance $0.2 million of HydroBonds Series 12 five year floating rate debt early redemptions. The remaining $50.6 million of the debt was issued to finance new borrowing requirements.

On August 12, 2016, Manitoba Hydro secured long term debt series **C145-4** for AUD $70 million and a June 9, 2026 maturity date. The issue was swapped to CAD $70.7 million and a fixed rate coupon of 1.918%. The debt was issued to finance new borrowing requirements.

On August 26, 2016, Manitoba Hydro secured long term debt series **C137-9** for CAD $25 million and a March 5, 2063 maturity date. C137-9 was issued at a premium with proceeds of $29.0 million (net of commissions), a fixed rate coupon of 3.45%, and an all-in yield of 2.835%. The debt was issued to finance new borrowing requirements.

On August 30, 2016, Manitoba Hydro secured long term debt series **C153** for JPY ¥6 billion and an August 30, 2046 maturity date. The issue was swapped to CAD $76.3 million and a fixed rate coupon of 2.801%. The debt was issued to finance new borrowing requirements.

On August 31, 2016, Manitoba Hydro secured long term debt series **C137-10** for CAD $100 million and a March 5, 2063 maturity date. C137-10 was issued at a premium with proceeds of $115.3 million (net of commissions), a fixed rate coupon of 3.45%, and an all-in yield of 2.854%. The debt was issued to finance new borrowing requirements.

On September 7, 2016, Manitoba Hydro secured long term debt series **C154** for EUR €40 million and a June 25, 2039 maturity date. The issue was swapped to CAD $58.6 million and a fixed rate coupon of 2.752%. The debt was issued to finance new borrowing requirements.

On September 27, 2016, Manitoba Hydro secured long term debt series **GN-3** for CAD $500 million and a June 2, 2026 maturity date. GN-3 was issued at a premium with proceeds of $514.9 million (net of commissions), a fixed rate coupon of 2.55%, and an all-in yield of 2.206%. The debt was issued to finance new borrowing requirements.

Quarter 3 On October 20, 2016, Manitoba Hydro secured long term debt series **C145-5** for AUD $50 million and a June 9, 2026 maturity date. The issue was swapped to CAD $50.1 million and a fixed rate coupon of 2.948%. The debt was issued to finance new borrowing requirements.

On November 21, 2016, Manitoba Hydro secured long term debt series GQ for CAD $700 million and a November 21, 2019 maturity date. The first CAD $474.5 million was swapped to USD $350 million floating rate debt to refinance debt series FH-1 (USD $250 million) and FH-2 (USD $100 million). Forward fixed interest rate swaps that were previously linked to debt series FH-1 and FH-2 were re-linked to the GQ underlying refinancing which amended the fixed rate debt stream to 6.484% (**GQ-1**). In addition, CAD $201.3 million was swapped to USD $150 million fixed rate debt to refinance debt series FH-3 (USD $150 million). Forward fixed interest rate swaps that were previously linked to debt series FH-3 were re-linked to the GQ underlying refinancing which converted the debt from floating rate debt to fixed rate debt at a rate of 2.012% (**GQ-2**). The residual CAD $24.2 million was swapped to CAD floating rate debt at 3 month BA + 0.130% (**GQ-3**) and was issued to finance new borrowing requirements.

Quarter 4 On January 16, 1017, Manitoba Hydro secured long term debt series **GN-4** for CAD $150 million and a June 2, 2026 maturity date. GN-4 was issued at a premium with proceeds of $149.6 million (net of commissions), a fixed rate coupon of 2.55%, and an all-in yield of 2.580%. The debt was issued to finance new borrowing requirements.

On February 8, 2017, Manitoba Hydro secured long term debt series **C137-11** for CAD $100 million and a March 5, 2063 maturity date. C137-11 was issued at a premium with proceeds of $99.8 million (net of commissions), a fixed rate coupon of 3.45%, and an all-in yield of 3.457%. The debt was issued to finance new borrowing requirements.

On February 14, 2017, Manitoba Hydro secured long term debt series **GS** for CAD $150 million and a June 2, 2027 maturity date. GS was issued at a discount with proceeds of $148.8 million (net of commissions), a fixed rate coupon of 2.60%, and an all-in yield of 2.687%. The debt was issued to finance new borrowing requirements.

On March 24, 2017, Manitoba Hydro secured long term debt series **C137-12** for CAD $100 million and a March 5, 2063 maturity date. C137-12 was issued at a premium with proceeds of $101 million (net of commissions), a fixed rate coupon of 3.45%, and an all-in yield of 3.404%. The debt was issued to finance new borrowing requirements.

2017/18 The long term financings for the year to date are CAD $1,783.4 million made up of:

- $1,781.2 million for new borrowing requirements.
- $2.2 million to refinance maturing long term debt.

The actual long term debt financings during this fiscal year, per quarter, were as follows:

Quarter 1 On April 3, 2017, Manitoba Hydro secured long term debt series **C137-13** for CAD $50 million and a March 5, 2063 maturity date. C137-13 was issued at a premium with proceeds of $51.3 million (net of commissions), a fixed rate coupon of 3.45%, and an all-in yield of 3.342%. The debt was issued to finance new borrowing requirements.

On May 4, 2017, Manitoba Hydro secured long term debt series **GT** for USD $500 million and a May 4, 2022 maturity date. The issue was swapped to CAD $683.4 million and a fixed rate coupon of 1.630%. The debt was issued to finance new borrowing requirements.

On May 5, 2017, Manitoba Hydro secured long term debt series **GO-3** for CAD $300 million and a September 5, 2021 maturity date. GO-3 was issued at a premium with proceeds of $299.9 million (net of commissions), a fixed rate coupon of 1.55%, and an all-in yield of 1.561%. The debt was issued to finance new borrowing requirements.

On June 11, 2017, Manitoba Hydro secured long term debt series **C137-16** for CAD $150 million and a March 5, 2063 maturity date. C137-16 was issued at a premium with proceeds of $160.4 million (net of commissions), a fixed rate coupon of 3.45%, and an all-in yield of 3.163%. The debt was issued to finance new borrowing requirements.

Quarter 2 On July 28, 2017, Manitoba Hydro secured long term debt series **GR-3** for CAD $300 million and a September 5, 2048 maturity date. GR-3 was issued at a premium with proceeds of $305.2 million (net of commissions), a fixed rate coupon of 3.40%, and an all-in yield of 3.310%. The debt was issued to refinance $2.2 million of HydroBonds Series 12 five year floating rate debt redemptions. The remaining $297.8 million of the debt was issued to finance new borrowing requirements.

On August 21, 2017, Manitoba Hydro secured long term debt series **GS-2** for CAD $300 million and a June 2, 2027 maturity date. GS-2 was issued at a discount with proceeds of $296.4 million (net of commissions), a fixed rate coupon of 2.60%, and an all-in yield of 2.741%. The debt was issued to finance new borrowing requirements.

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PUB MFR 52 (Updated)
Finance Expense-Debt Levels

Table(s) detailing the relied-upon interest forecasts by forecaster for both short term and long term interest rates indicating: the date of the forecast, whether the forecast represents end of period or average data, and if any adjustments were made to end of period data forecasts to average the results. [Attachment 21, 2016/17 Interim Application]

The response to PUB MFR 52 has been updated to reflect the July 2017 update to the financial forecast for electric operations (MH16 Update).

Table 1 on the following page depicts the sources used to derive the forecast of Canadian 3 month T-bill rates for each quarter of the 2017/18 to 2022/23 period (with end of period rates adjusted to a comparable average period basis), as utilized in the MH16 update.

Table 2 depicts the sources used to derive the forecast of Canadian 3 month T-bill rates for the 2023-2038 period, as utilized in the MH16 update.

Table 3 on the following page depicts the sources used to derive the forecast of Canadian bond yield 10 year+ rates for each quarter of the 2017/18 to 2022/23 period (with end of period rates adjusted to a comparable average period basis), as utilized in the MH16 update.

Table 4 depicts the sources used to derive the forecast of Canadian bond yield 10 year+ rates for the 2023-2038 period, as utilized in the MH16 update.

Table 5 on the following page depicts the sources used to derive the forecast of Canadian bond yield 5 year rates for each quarter of the 2017/18 to 2022/23 period (with end of period rates adjusted to a comparable average period basis), as utilized in the MH16 update.

Table 6 depicts the sources used to derive the forecast of Canadian bond yield 5 year rates for the 2023-2038 period, as utilized in the MH16 update.

Table 7 on the following page depicts the sources used to derive the forecast Canadian bond yield 10 year rates for each quarter of the 2017/18 to 2022/23 period (with end of period rates adjusted to a comparable average period basis), as utilized in the MH16 update.

Table 8 depicts the sources used to derive the forecast of Canadian bond yield 10 year rates for the 2023-2038 period, as utilized in the MH16 update.

Table 9 on the following page depicts the sources used to derive the forecast of Canadian bond yield 30 year rates for each quarter of the 2017/18 to 2022/23 period (with end of period rates adjusted to a comparable average period basis), as utilized in the MH16 update.

Table 10 depicts the sources used to derive the forecast of Canadian bond yield 30 year for the 2023-2038 period, as utilized in the MH16 update.

Copies of the publically available source forecasts utilized in the MH16 update are provided in Attachment 1.

For forecasters that provided end of period rates, the rates provided in Tables 1, 3, 5, 7 and 9 reflect rates adjusted to a comparable average period basis. For example, Desjardin's forecast provided end of period rates. Their forecast for 2018 Q1 end of period is 0.60% and 2018 Q2 end of period is 0.70% for Canada 3-month T-Bill. In order to place the forecast on an equivalent basis for a 2018 Q2 average period forecast, Desjardin's 2018 Q1 end of period forecast of 0.60% was averaged with their 2018 Q2 end of period forecast of 0.70% to approximate an average period 2017 Q2 forecast of 0.65%. This value is shown in Table 1. This process was followed for all subsequent quarters and for all forecasters that provided end of period rates.

Table 1 – Canadian 3-Month T-Bill Rate - %

			2017			2018				2019				2020				2021				2022				2023
Forecaster	Forecast Date	End of Period or Average	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
BMO Nesbitt Burns	21-Mar-17	Average	0.50	0.50	0.50	0.50	0.50	0.70	0.70	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
CIBC	23-Mar-17	End Period	0.50	0.45	0.45	0.48	0.63	0.78	0.90	1.45	1.45	1.45	1.45	2.00	2.00	2.00	2.00	2.55	2.55	2.55	2.55					
Desjardins	20-Mar-17	End Period	0.55	0.55	0.55	0.58	0.65	0.78	0.90	0.90	0.90	0.90	0.90	0.50	0.50	0.50	0.50	0.60	0.60	0.60	0.60					
National Bank	14-Mar-17	End Period	0.51	0.48	0.56	0.72	0.91	1.09	1.28																	
Royal Bank	14-Mar-17	End Period	0.52	0.53	0.58	0.63	0.75	1.00	1.28																	
Scotiabank	7-Mar-17	End Period	0.52	0.50	0.50	0.55	0.70	0.85	1.00																	
TD Bank	21-Mar-17	End Period	0.52	0.50	0.50	0.50	0.50	0.58	0.70	0.80	0.93	1.05	1.18	1.30	1.43	1.55	1.68									
IHS Global Insight	14-Mar-17	Average	0.51	0.51	0.52	0.52	0.76	1.09	1.59	2.02	2.43	2.77	3.02	3.02	3.02	3.02	3.02	3.02	3.02	3.02	3.02	3.02	3.02	3.02	3.02	3.02
Conference Board	16-Mar-17	Average	0.48	0.51	0.51	0.56	0.69	0.75	0.88	1.00	1.13	1.25	1.38	1.50	1.63	1.75	1.88	2.00	2.13	2.25	2.38	2.69	2.69	2.69	2.69	3.14
Spatial Economics	26-Jan-17	Average	0.50	0.50	0.50	0.80	0.80	0.80	0.80	1.60	1.60	1.60	1.60	2.40	2.40	2.40	2.40	2.90	2.90	2.90	2.90	3.20	3.20	3.20	3.20	3.50
			2017/18				2018/19				2019/20				2020/21				2021/22				2022/23 & on			
EO 2017 Spring - Fiscal			0.53				0.92				1.54				1.96				2.34				2.86			

Note: In the case where source forecasts are provided as end-of-period, the 2017 Q1 end-of-period actual rate of 0.54% was averaged with the source forecasters' end-of-period rate for 2017 Q2 in order to approximate an average period 2017 Q2 forecast rate.

Note: The extended forecast provided by BMO Nesbitt Burns for 2019+ is proprietary and cannot be disclosed.

Table 2 – Canadian 3-Month T-Bill Rate - %

Forecaster	Forecast Date	End of Period or Average	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
BMO Nesbitt Burns	10-Mar-17	Average	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
IHS Global Insight	9-Mar-17	Average	3.02	3.02	3.02	3.02	3.02	3.02	3.02	3.02	3.02	3.02	3.02	3.02	3.02	3.02	3.02	3.02
Conference Board	10-Nov-16	Average	3.14	3.21	3.21	3.21	3.21	3.21	3.21	3.21	3.21	3.21	3.21	3.21	3.21	3.21	3.21	3.21
Spatial Economics	27-Jan-17	Average	3.50	3.80	3.70	3.70	3.60	3.60	3.60	3.60	3.60	3.60	3.50	3.50	3.50	3.60	3.60	3.60
Average			3.00	3.09	3.07	3.07	3.04	3.04	3.04	3.04	3.04	3.04	3.02	3.02	3.02	3.04	3.04	3.04
EO 2017 Spring - Calender			3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04

	2023/24 & on
EO 2017 Spring - Fiscal	3.04

Note: The extended forecast provided by BMO Nesbitt Burns for 2019+ is proprietary and cannot be disclosed.

Table 3 – Canadian 10 Year+ Bond Yield Rate - %

	Forecast	End of Period or	2017			2018				2019				2020				2021				2022				2023
Forecaster	Date	Average	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
BMO Nesbitt Burns	21-Mar-17	Average	2.08	2.10	2.13	2.15	2.20	2.33	2.45	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
CIBC	23-Mar-17	End Period	2.05	2.06	2.10	2.18	2.25	2.33	2.40	2.48	2.48	2.48	2.48	2.70	2.70	2.70	2.70	3.05	3.05	3.05	3.05					
Desjardins	20-Mar-17	End Period	2.12	2.26	2.31	2.33	2.38	2.49	2.59	2.38	2.38	2.38	2.38	1.83	1.83	1.83	1.83	2.18	2.18	2.18	2.18					
National Bank	14-Mar-17	End Period	2.17	2.34	2.39	2.47	2.57	2.67	2.78																	
Royal Bank	14-Mar-17	End Period	2.10	2.30	2.56	2.76	2.91	3.06	3.20																	
Scotiabank	7-Mar-17	End Period	2.06	2.13	2.18	2.23	2.31	2.43	2.53																	
TD Bank	21-Mar-17	End Period	2.12	2.28	2.38	2.49	2.60	2.71	2.83																	
IHS Global Insight	14-Mar-17	Average	2.53	2.60	2.71	2.86	2.95	3.14	3.29	3.44	3.65	3.91	3.97	3.97	3.97	3.97	3.97	3.97	3.97	3.97	3.97	3.97	3.97	3.97	3.97	3.97
Conference Board	16-Mar-17	Average	2.12	2.24	2.39	2.56	2.73	2.89	3.09	3.25	3.36	3.49	3.56	3.66	3.70	3.80	3.88	3.97	4.05	4.10	4.15	3.95	3.95	3.95	3.95	4.23
Spatial Economics	26-Jan-17	Average	1.55	1.55	1.55	2.00	2.00	2.00	2.00	2.80	2.80	2.80	2.80	3.55	3.55	3.55	3.55	4.05	4.05	4.05	4.05	4.35	4.35	4.35	4.35	4.65
			2017/18				2018/19				2019/20				2020/21				2021/22				2022/23 & on			
EO 2017 Spring - Fiscal			2.24				2.65				3.01				3.23				3.50				3.92			

Note: In the case where source forecasts are provided as end-of-period, the 2017 Q1 end-of-period actual rate of 2.02% (average of 1.76% for Canada 10 year and 2.29% for Canada 30 year) was averaged with the source forecasters' end-of-period rate for 2017 Q2 in order to approximate an average period 2017 Q2 forecast rate.

Note: The extended forecast provided by BMO Nesbitt Burns for 2019+ is proprietary and cannot be disclosed.

Table 4 – Canadian 10 Year+ Bond Yield Rate - %

Forecaster	Forecast Date	End of Period or Average	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
BMO Nesbitt Burns	10-Mar-17	Average	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
IHS Global Insight	9-Mar-17	Average	3.97	3.97	3.97	3.97	3.97	3.98	3.98	3.98	3.98	3.98	3.98	3.98	3.98	3.98	3.98	3.98
Conference Board	10-Nov-16	Average	4.23	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25
Spatial Economics	27-Jan-17	Average	4.65	4.95	4.85	4.85	4.80	4.75	4.75	4.75	4.75	4.75	4.70	4.65	4.70	4.75	4.75	4.75
Average			4.02	4.10	4.08	4.08	4.07	4.06	4.06	4.06	4.06	4.06	4.05	4.03	4.05	4.06	4.06	4.06
EO 2017 Spring - Calender			4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06

	2023/24 & on
EO 2017 Spring - Fiscal	4.06

Note: The extended forecast provided by BMO Nesbitt Burns for 2019+ is proprietary and cannot be disclosed.

Table 5 – Canadian 5 Year Bond Yield Rate - %

	Forecast	End of Period or	2017			2018				2019				2020				2021				2022				2023
Forecaster	Date	Average	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
BMO Nesbitt Burns	21-Mar-17	Average	1.20	1.25	1.30	1.35	1.45	1.55	1.75	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
CIBC	23-Mar-17	End Period	1.19	1.25	1.30	1.40	1.50	1.58	1.70	2.10	2.10	2.10	2.10	2.45	2.45	2.45	2.45	2.90	2.90	2.90	2.90					
National Bank	14-Mar-17	End Period	1.27	1.46	1.54	1.67	1.86	2.04	2.23																	
RBC	14-Mar-17	End Period	1.21	1.43	1.70	1.95	2.18	2.38	2.53																	
TD	21-Mar-17	End Period	1.21	1.35	1.45	1.58	1.70	1.83	1.98	2.13	2.28	2.43	2.55	2.65	2.73	2.78	2.83	2.88	2.93	2.95	2.95					
Desjardins	20-Mar-17	End Period	1.21	1.38	1.48	1.50	1.63	1.85	2.03	1.85	1.85	1.85	1.85	1.15	1.15	1.15	1.15	1.55	1.55	1.55	1.55					
ScotiaBank	7-Mar-17	End Period	1.19	1.28	1.35	1.45	1.58	1.73	1.85																	
Global Insight	14-Mar-17	Average	1.08	1.10	1.14	1.20	1.39	1.67	2.05	2.39	2.73	3.04	3.23	3.22	3.22	3.22	3.22	3.22	3.22	3.22	3.22	3.22	3.22	3.22	3.22	3.22
Conference Board	16-Mar-17	Average	1.30	1.44	1.53	1.63	1.74	1.88	2.05	2.18	2.29	2.42	2.55	2.67	2.78	2.91	3.04	3.13	3.25	3.36	3.48	3.43	3.43	3.43	3.43	3.78
			2017/18				2018/19				2019/20				2020/21				2021/22				2022/23 & on			
EO 2017 Spring - Fiscal			**1.37**				**1.88**				**2.34**				**2.58**				**2.86**				**3.20**			

Note: In the case where source forecasts are provided as end-of-period, the 2017 Q1 end-of-period actual rate of 1.12% was averaged with the source forecasters' end-of-period rate for 2017 Q2 in order to approximate an average period 2017 Q2 forecast rate.

Note: The extended forecast provided by BMO Nesbitt Burns for 2019+ is proprietary and cannot be disclosed.

Table 6 – Canadian 5 Year Bond Yield Rate - %

Forecaster	Forecast Date	End of Period or Average	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
BMO Nesbitt Burns	10-Mar-17	Average	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
IHS Global Insight	9-Mar-17	Average	3.22	3.22	3.22	3.22	3.22	3.22	3.22	3.22	3.22	3.22	3.22	3.22	3.22	3.22	3.22	3.22
Conference Board	10-Nov-16	Average	3.78	3.81	3.81	3.81	3.81	3.81	3.81	3.81	3.81	3.81	3.81	3.81	3.81	3.81	3.81	3.81
Spatial Economics			3.29	3.30	3.30	3.30	3.30	3.30	3.30	3.30	3.30	3.30	3.30	3.30	3.30	3.30	3.30	3.30
EO 2017 Spring - Calender			3.29	3.29	3.29	3.29	3.29	3.29	3.29	3.29	3.29	3.29	3.29	3.29	3.29	3.29	3.29	3.29

	2023/24 & on
EO 2017 Spring - Fiscal	3.29

Note: The extended forecast provided by BMO Nesbitt Burns for 2019+ is proprietary and cannot be disclosed.

Table 7 – Canadian 10 Year Bond Yield Rate - %

	Forecast	End of Period or	2017			2018				2019				2020				2021				2022				2023
Forecaster	**Date**	**Average**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**
BMO Nesbitt Burns	21-Mar-17	Average	1.75	1.80	1.85	1.90	1.95	2.10	2.25	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
CIBC	23-Mar-17	End Period	1.75	1.73	1.78	1.88	1.95	2.03	2.10	2.30	2.30	2.30	2.30	2.60	2.60	2.60	2.60	3.00	3.00	3.00	3.00					
Desjardins	20-Mar-17	End Period	1.83	1.95	2.03	2.05	2.13	2.30	2.45	2.25	2.25	2.25	2.25	1.65	1.65	1.65	1.65	2.05	2.05	2.05	2.05					
National Bank	14-Mar-17	End Period	1.90	2.08	2.15	2.24	2.36	2.47	2.59																	
Royal Bank	14-Mar-17	End Period	1.83	2.03	2.30	2.53	2.70	2.88	3.03																	
Scotiabank	7-Mar-17	End Period	1.78	1.83	1.88	1.93	2.03	2.15	2.28																	
TD Bank	21-Mar-17	End Period	1.83	1.95	2.05	2.18	2.33	2.48	2.60	2.65	2.70	2.80	2.90	3.00	3.10	3.18	3.23	3.25	3.25	3.25	3.25					
IHS Global Insight	14-Mar-17	Average	2.21	2.27	2.38	2.52	2.61	2.81	2.95	3.10	3.31	3.57	3.64	3.63	3.63	3.63	3.63	3.63	3.63	3.63	3.63	3.63	3.63	3.63	3.63	3.63
Conference Board	16-Mar-17	Average	1.85	2.07	2.29	2.46	2.63	2.80	3.04	3.16	3.26	3.37	3.47	3.56	3.61	3.70	3.79	3.87	3.95	4.03	4.06	3.85	3.85	3.85	3.85	4.13
Spatial Economics	26-Jan-17	Average	1.30	1.30	1.30	1.80	1.80	1.80	1.80	2.60	2.60	2.60	2.60	3.40	3.40	3.40	3.40	3.90	3.90	3.90	3.90	4.20	4.20	4.20	4.20	4.50
			2017/18				**2018/19**				**2019/20**				**2020/21**				**2021/22**				**2022/23 & on**			
EO 2017 Spring - Fiscal			**1.96**				**2.43**				**2.81**				**3.08**				**3.35**				**3.75**			

Note: In the case where source forecasts are provided as end-of-period, the 2017 Q1 end-of-period actual rate of 1.76% was averaged with the source forecasters' end-of-period rate for 2017 Q2 in order to approximate an average period 2017 Q2 forecast rate.

Note: The extended forecast provided by BMO Nesbitt Burns for 2019+ is proprietary and cannot be disclosed.

Table 8 – Canadian 10 Year Bond Yield Rate - %

Forecaster	Forecast Date	End of Period or Average	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
BMO Nesbitt Burns	10-Mar-17	Average	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
IHS Global Insight	9-Mar-17	Average	3.63	3.63	3.63	3.63	3.63	3.65	3.65	3.65	3.65	3.65	3.65	3.65	3.65	3.65	3.65	3.65
Conference Board	10-Nov-16	Average	4.13	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15
Spatial Economics	27-Jan-17	Average	4.50	4.80	4.70	4.70	4.60	4.60	4.60	4.60	4.60	4.60	4.50	4.50	4.50	4.60	4.60	4.60
Average			3.85	3.93	3.91	3.91	3.88	3.89	3.89	3.89	3.89	3.89	3.86	3.86	3.86	3.89	3.89	3.89
EO 2017 Spring - Calender			3.89	3.89	3.89	3.89	3.89	3.89	3.89	3.89	3.89	3.89	3.89	3.89	3.89	3.89	3.89	3.89

	2023/24 & on
EO 2017 Spring - Fiscal	3.89

Note: The extended forecast provided by BMO Nesbitt Burns for 2019+ is proprietary and cannot be disclosed.

Table 9 – Canadian 30 Year Bond Yield Rate - %

			2017			2018				2019				2020				2021				2022				2023
Forecaster	Forecast Date	End of Period or Average	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
BMO Nesbitt Burns	21-Mar-17	Average	2.40	2.40	2.40	2.40	2.45	2.55	2.65	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
CIBC	23-Mar-17	End Period	2.35	2.40	2.43	2.48	2.55	2.63	2.70	2.65	2.65	2.65	2.65	2.80	2.80	2.80	2.80	3.10	3.10	3.10	3.10					
Desjardins	20-Mar-17	End Period	2.42	2.58	2.60	2.60	2.63	2.68	2.73	2.50	2.50	2.50	2.50	2.00	2.00	2.00	2.00	2.30	2.30	2.30	2.30					
National Bank	14-Mar-17	End Period	2.44	2.61	2.64	2.70	2.79	2.88	2.97																	
Royal Bank	14-Mar-17	End Period	2.37	2.58	2.83	3.00	3.13	3.25	3.38																	
Scotiabank	7-Mar-17	End Period	2.35	2.43	2.48	2.53	2.60	2.70	2.78																	
TD Bank	21-Mar-17	End Period	2.42	2.60	2.70	2.80	2.88	2.95	3.05	3.15	3.30	3.45	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50					
IHS Global Insight	14-Mar-17	Average	2.86	2.93	3.04	3.19	3.28	3.48	3.62	3.78	3.99	4.24	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31	4.31
Conference Board	16-Mar-17	Average	2.39	2.41	2.48	2.66	2.82	2.99	3.14	3.35	3.46	3.61	3.66	3.76	3.80	3.89	3.98	4.07	4.15	4.18	4.25	4.05	4.05	4.05	4.05	4.32
Spatial Economics	26-Jan-17	Average	1.80	1.80	1.80	2.20	2.20	2.20	2.20	3.00	3.00	3.00	3.00	3.70	3.70	3.70	3.70	4.20	4.20	4.20	4.20	4.50	4.50	4.50	4.50	4.80
			2017/18				2018/19				2019/20				2020/21				2021/22				2022/23 & on			
EO 2017 Spring - Fiscal			2.51				2.86				3.20				3.39				3.64				4.09			

Note: In the case where source forecasts are provided as end-of-period, the 2017 Q1 end-of-period actual rate of 2.29% was averaged with the source forecasters' end-of-period rate for 2017 Q2 in order to approximate an average period 2017 Q2 forecast rate.

Note: The extended forecast provided by BMO Nesbitt Burns for 2019+ is proprietary and cannot be disclosed.

Table 10 – Canadian 30 Year Bond Yield Rate - %

Forecaster	Forecast Date	End of Period or Average	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
BMO Nesbitt Burns	10-Mar-17	Average	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
IHS Global Insight	9-Mar-17	Average	4.31	4.31	4.31	4.31	4.31	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32
Conference Board	10-Nov-16	Average	4.32	4.34	4.34	4.34	4.34	4.34	4.34	4.34	4.34	4.34	4.34	4.34	4.34	4.34	4.34	4.34
Spatial Economics	27-Jan-17	Average	4.80	5.10	5.00	5.00	5.00	4.90	4.90	4.90	4.90	4.90	4.90	4.80	4.90	4.90	4.90	4.90
Spatial Economics			4.20	4.28	4.25	4.25	4.25	4.23	4.23	4.23	4.23	4.23	4.23	4.20	4.23	4.23	4.23	4.23
EO 2017 Spring - Calender			4.23	4.23	4.23	4.23	4.23	4.23	4.23	4.23	4.23	4.23	4.23	4.23	4.23	4.23	4.23	4.23

	2023/24 & on
EO 2017 Spring - Fiscal	4.23

Note: The extended forecast provided by BMO Nesbitt Burns for 2019+ is proprietary and cannot be disclosed.

The calculations for all of the interest rates for the 2017/18, 2018/19, 2019/20, 2020/21, 2021/22, and 2022/23 period are as follows:

- The 2017/18 forecast included the average of all data points within Q2, Q3, Q4 of 2017 and Q1 of 2018. The 2018/19 forecast included the average of all data points within Q2, Q3, Q4 of 2018 and Q1 of 2019. The 2019/20 forecast included the average of all data points within Q2, Q3, Q4 of 2019 and Q1 of 2020. The 2020/21 forecast included the average of all data points within Q2, Q3, Q4 of 2020 and Q1 of 2021. The 2021/22 forecast included the average of all data points within Q2, Q3, Q4 of 2021 and Q1 of 2022. The 2022/23 forecast included the average of all data points within Q2, Q3, Q4 of 2022 and Q1 of 2023. For example, the Canada 3-Month T-Bill rate for 2017/18 of 0.55% (rounded to the nearest 5 basis points) in Table 1 was calculated as the average of the following data points:

Table 11:

	2017 Q2	**2017 Q3**	**2017 Q4**	**2018 Q1**
BMO Nesbitt Burns	0.50%	0.50%	0.50%	0.50%
CIBC	0.50%	0.45%	0.45%	0.48%
Desjardins	0.55%	0.55%	0.55%	0.58%
National Bank	0.51%	0.48%	0.56%	0.72%
Royal Bank	0.52%	0.53%	0.58%	0.63%
Scotiabank	0.52%	0.50%	0.50%	0.55%
TD Bank	0.52%	0.50%	0.50%	0.50%
IHS Global Insight	0.51%	0.51%	0.52%	0.52%
Conference Board	0.48%	0.51%	0.51%	0.56%
Spatial Economics	0.50%	0.50%	0.50%	0.80%
Average	**0.55%**			

The calculations for all of the interest rates for the 2023-2038 calendar period as shown in Tables 2, 4, 6, 8 and 10 are derived from the average all of annual data points within that year. Fiscal data 2022/23 to 2037/38 are calculated by summing 75% of calendar Year1 data and 25% of calendar Year 2 data.

The Manitoba Hydro Canadian short-term interest rate was calculated by adding the guarantee fee of 1.00% to the 3-Month T-Bill rate as follows:

Table 12:

	Canada 3-Month T-Bill	Guarantee Fee	MH Cdn Short Term Rate
2017/18	0.55%	1.00%	1.55%
2018/19	0.90%	1.00%	1.90%
2019/20	1.55%	1.00%	2.55%
2020/21	1.95%	1.00%	2.95%
2021/22	2.35%	1.00%	3.35%
2022/23	2.85%	1.00%	3.85%
& on	3.05%	1.00%	4.05%

The Manitoba Hydro Canadian long-term interest rate was calculated by adding the appropriate credit spread to the Canada Bond Yield 10 Year+ rate and a provincial debt guarantee fee as follows:

Table 13:

	Canada Bond Yield 10 Yr+	Spread	Guarantee Fee	MH Cdn Long Term Rate
2017/18	2.25%	0.95%	1.00%	4.15%
2018/19	2.65%	0.90%	1.00%	4.55%
2019/20	3.00%	0.90%	1.00%	4.90%
2020/21	3.25%	0.90%	1.00%	5.15%
2021/22	3.50%	0.90%	1.00%	5.40%
2022/23	3.90%	0.90%	1.00%	5.85%
& on	4.05%	0.90%	1.00%	5.95%

Note: The rates presented in the table above may not add up due to rounding.

The Manitoba Hydro Canadian 5 year interest rate was calculated by adding the appropriate credit spread to the Canada Bond Yield 5 Year rate and a provincial debt guarantee fee as follows:

Table 14:

	Canada Bond Yield 5 Yr	Spread	Guarantee Fee	MH Cdn 5 Year Rate
2017/18	1.35%	0.60%	1.00%	2.95%
2018/19	1.90%	0.60%	1.00%	3.45%
2019/20	2.35%	0.60%	1.00%	3.95%
2020/21	2.60%	0.60%	1.00%	4.15%
2021/22	2.85%	0.60%	1.00%	4.45%
2022/23	3.20%	0.60%	1.00%	4.80%
& on	3.30%	0.60%	1.00%	4.90%

Note: The rates presented in the table above may not add up due to rounding.

The Manitoba Hydro Canadian 10 year interest rate was calculated by adding the appropriate credit spread to the Canada Bond Yield 10 Year rate and a provincial debt guarantee fee as follows:

Table 15:

	Canada Bond Yield 10 Yr	Spread	Guarantee Fee	MH Cdn 10 Year Rate
2017/18	1.95%	0.85%	1.00%	3.80%
2018/19	2.45%	0.85%	1.00%	4.30%
2019/20	2.80%	0.90%	1.00%	4.70%
2020/21	3.10%	0.90%	1.00%	4.95%
2021/22	3.35%	0.90%	1.00%	5.25%
2022/23	3.75%	0.90%	1.00%	5.65%
& on	3.90%	0.90%	1.00%	5.75%

Note: The rates presented in the table above may not add up due to rounding.

The Manitoba Hydro Canadian 30 year interest rate was calculated by adding the appropriate credit spread to the Canada Bond Yield 30 Year rate and a provincial debt guarantee fee as follows:

Table 16:

	Canada Bond Yield 30 Yr	Spread	Guarantee Fee	MH Cdn 30 Year Rate
2017/18	2.50%	1.00%	1.00%	4.55%
2018/19	2.85%	0.95%	1.00%	4.85%
2019/20	3.20%	0.95%	1.00%	5.15%
2020/21	3.40%	0.95%	1.00%	5.35%
2021/22	3.65%	0.95%	1.00%	5.60%
2022/23	4.10%	0.95%	1.00%	6.05%
& on	4.25%	0.95%	1.00%	6.20%

Note: The rates presented in the table above may not add up due to rounding.

REFERENCE:

Tab 2, Page 3, lines 9-12

PREAMBLE TO IR (IF ANY):

The Application states "Prolonged above average water flow and declining interest rates have helped mitigate some of Manitoba Hydro's financial deterioration but such conditions cannot be assumed to repeat."

QUESTION:

a) Please provide a schedule that sets out for the years 2015/16 through 2026/27 the forecast Canada long-term (i.e. 10 years and 30 years) and short-term interest rates underpinning IFF14, IFF15, IFF16 and IFF16-Updated.
b) For the years 2015/16 and 2016/17 please insert in the preceding schedule the actual interest rates in each year as appropriate.

RATIONALE FOR QUESTION:

To clarify Manitoba Hydro's stated reasons for needing successive annual rate increases of 7.9%.

RESPONSE:

Response to parts a) and b):

The following schedule sets out the forecast 10 Year+ long term rate for Canadian debt issuance (average of the 10 year and 30 year rates) and the short term rate for Canadian issuance for the requested forecasts. Actual rates for 2015/16 and 2016/17 are also provided. The interest rates do not include the provincial guarantee fee of 1%.

10 Year + Rate	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27
IFF14	4.10%	4.50%	4.80%	5.00%	5.20%	5.20%	5.20%	5.20%	5.20%	5.20%	5.20%	5.20%
IFF15	3.05%	3.35%	3.80%	4.40%	4.50%	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%
IFF16		2.80%	3.15%	3.50%	3.80%	4.00%	4.25%	4.55%	4.55%	4.55%	4.55%	4.55%
MH16 Update with Interim			3.15%	3.55%	3.90%	4.15%	4.40%	4.85%	4.95%	4.95%	4.95%	4.95%
Actual	2.88%	2.76%										

Short-Term Rate	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27
IFF14	1.30%	2.40%	3.10%	3.45%	3.90%	3.90%	3.90%	3.90%	3.90%	3.90%	3.90%	3.90%
IFF15	0.50%	0.55%	1.40%	2.40%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
IFF16		0.50%	0.50%	0.85%	1.40%	1.75%	2.15%	2.70%	2.70%	2.70%	2.70%	2.70%
MH16 Update with Interim			0.55%	0.90%	1.55%	1.95%	2.35%	2.85%	3.05%	3.05%	3.05%	3.05%
Actual	0.49%	0.49%										

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REFERENCE:

PUB MFR 56
Appendix 3.1, Pages 49 and 59
PUB MFR 55

PREAMBLE TO IR (IF ANY):

QUESTION:

a) The IFF16 Consolidated Balance Sheet reports both LT Debt and Net Debt values for each year (e.g., for 2016/17 the respective values are $15,965 M and $15,689 M). What do each represent and how are they related?

b) PUB MFR 56 reports LT Debt values for the Consolidated Manitoba Hydro that differ from those in Appendix 3.1 (e.g. the 2016/17 value is $16,295 M). What is the basis for the values reported in the MFR and why are they different from those shown in Appendix 3.1?

c) PUB MFR 55 reports Gross Interest Expense for Electric Operations. Is this Gross Interest Expense based on the LT Debt values set out in Appendix 3.1 (page 59)? If not, what is the basis for the Gross Interest Expense value?

d) Please provide versions of PUB MFR 55 and 56 based on IFF16-Updated.

RATIONALE FOR QUESTION:

To understand the various debt values reported by Manitoba Hydro and the basis for the Gross Interest costs used in the calculation of Finance Expense.

RESPONSE:

Response to parts a) and b):

The following reconciliation explains the differences among the debt figures in the IFF16 Consolidated Balance Sheet from Appendix 3.1 and PUB MFR 56.

Consolidated Long Term Debt Reconciliation
(millions of dollars)

	Fiscal 2017
MFR 56 Long Term Debt	**$ 16,295.00**
Less Current Portion	(330.00)
IFF16 Balance Sheet Long Term Debt	**$ 15,965.00**
Add Current Portion	330.00
Less Sinking Fund Assets	-
Add Short-Term Debt	-
Less Short-Term Investments	(606.00)
IFF16 Balance Sheet Net Debt	**$ 15,689.00**

c) Gross Interest for Electric Operations in PUB MFR 55 is based on Long Term Debt values set out in Appendix 3.1, page 58.

d) Please see the following tables for PUB MFR 55 and PUB MFR 56 based on MH16 Update with Interim.

PUB MFR 55

MANITOBA HYDRO
Summary of Total Finance Expense

Forecast as per MH16 Update with Interim
(in $ millions Canadian Dollars)

	Actual 2012	Actual 2013	Actual 2014	Actual 2015	Actual 2016	Actual 2017	Forecast 2018	Forecast 2019	Forecast 2020	Forecast 2021	Forecast 2022	Forecast 2023	Forecast 2024
Interest on Short & Long Term Debt													
Gross Interest	490	515	528	569	645	707	765	788	838	888	903	908	910
Provincial Guarantee Fee	82	90	96	105	118	132	154	186	212	230	239	238	239
Amortization of (Premiums), Discounts, and Transaction Costs	0	0	2	2	2	2	1	1	1	3	3	2	(0)
Intercompany Interest Receivable	(17)	(19)	(19)	(14)	(14)	(14)	(15)	(15)	(16)	(17)	(18)	(19)	(20)
Total Interest on Short & Long Term Debt	**555**	**587**	**608**	**663**	**751**	**827**	**906**	**960**	**1,035**	**1,104**	**1,126**	**1,129**	**1,129**
Interest Allocated to Construction	**(167)**	**(138)**	**(140)**	**(145)**	**(176)**	**(247)**	**(360)**	**(320)**	**(319)**	**(333)**	**(290)**	**(55)**	**(19)**
Interest Earned on Sinking Fund	(10)	(10)	(24)	0	(0)	(0)	(1)	(6)	(14)	(15)	(14)	(2)	(2)
Realized Foreign Exchange (Gains) or Losses on Debt in Cash Flow Hedges	(0)	2	(19)	(6)	(6)	15	27	28	28	29	29	9	-
Revaluation of Dual Currency Bonds	3	3	2	1	1	1	1	1	1	1	2	2	2
Corporate Allocation	(19)	(19)	(19)	(19)	(18)	(18)	(18)	(18)	(18)	(18)	(18)	(18)	(18)
Other Amortization	24	27	28	20	31	30	32	32	31	50	48	50	48
Total Finance Expense	**385**	**452**	**435**	**515**	**582**	**608**	**587**	**677**	**744**	**817**	**882**	**1,115**	**1,140**

	Forecast 2025	Forecast 2026	Forecast 2027	Forecast 2028	Forecast 2029	Forecast 2030	Forecast 2031	Forecast 2032	Forecast 2033	Forecast 2034	Forecast 2035	Forecast 2036
Interest on Short & Long Term Debt												
Gross Interest	900	875	852	848	846	821	756	699	669	631	583	542
Provincial Guarantee Fee	236	232	224	216	213	212	187	177	166	154	148	135
Amortization of (Premiums), Discounts, and Transaction Costs	1	1	2	2	2	3	3	3	4	4	4	4
Intercompany Interest Receivable	(20)	(21)	(22)	(22)	(23)	(23)	(24)	(24)	(25)	(25)	(26)	(27)
Total Interest on Short & Long Term Debt	**1,116**	**1,086**	**1,056**	**1,043**	**1,039**	**1,012**	**923**	**855**	**814**	**764**	**709**	**654**
Interest Allocated to Construction	**(19)**	**(18)**	**(20)**	**(20)**	**(24)**	**(22)**	**(23)**	**(19)**	**(18)**	**(19)**	**(21)**	**(24)**
Interest Earned on Sinking Fund	(4)	(3)	(5)	(9)	(18)	(20)	(15)	(10)	(17)	(24)	(31)	(31)
Realized Foreign Exchange (Gains) or Losses on Debt in Cash Flow Hedges	-	-	-	-	-	-	-	-	-	-	-	-
Revaluation of Dual Currency Bonds	2	1	-	-	-	-	-	-	-	-	-	-
Corporate Allocation	(18)	(18)	(18)	(18)	(18)	(16)	(14)	(14)	(14)	(14)	(14)	(14)
Other Amortization	46	44	43	42	40	39	38	37	35	34	33	32
Total Finance Expense	**1,123**	**1,092**	**1,056**	**1,037**	**1,020**	**994**	**909**	**850**	**800**	**742**	**675**	**618**

PUB MFR 56

MANITOBA HYDRO
Continunity Schedule
Consolidated Short and Long Term Debt

Forecast as per MH16 Update with Interim
(in $ millions Canadian Dollars)

Long Term Debt	**Actual 2004**	**Actual 2005**	**Actual 2006**	**Actual 2007**	**Actual 2008**	**Actual 2009**	**Actual 2010**	**Actual 2011**	**Actual 2012**	**Actual 2013**	**Actual 2014**	**Actual 2015**	**Actual 2016**	**Actual 2017**	**Forecast 2018**	**Forecast 2019**
Opening Balance	7,268	7,390	7,204	7,169	7,227	7,571	8,187	8,538	8,647	9,382	9,985	10,868	12,680	14,527	16,438	19,561
Long Term Debt Proceeds	1,013	300	180	173	981	423	1,425	915	698	807	1,320	2,210	2,165	2,163	3,433	3,600
Long Term Debt Matured	(473)	(241)	(111)	(80)	(311)	(366)	(452)	(723)	(25)	(242)	(613)	(654)	(362)	(320)	(330)	(1,002)
Carrying Value Adjustments*	(418)	(245)	(104)	(35)	(327)	559	(622)	(83)	62	38	176	256	44	68	20	(37)
Closing Balance	**7,390**	**7,204**	**7,169**	**7,227**	**7,571**	**8,187**	**8,538**	**8,647**	**9,382**	**9,985**	**10,868**	**12,680**	**14,527**	**16,438**	**19,561**	**22,123**

* Carrying Value Adjustments include changes in in the value of US dollar denominated debt upon conversion to CAD, as well as changes to the portfolio carrying value for transaction costs, premiums/ discounts, and dual currency bonds.

Short Term Debt	**Actual 2004**	**Actual 2005**	**Actual 2006**	**Actual 2007**	**Actual 2008**	**Actual 2009**	**Actual 2010**	**Actual 2011**	**Actual 2012**	**Actual 2013**	**Actual 2014**	**Actual 2015**	**Actual 2016**	**Forecast 2017**	**Forecast 2018**	**Forecast 2019**
Opening Balance	128	93	59	-	148	-	100	-	-	-	-	-	-	-	-	-
Increase (Decrease)	(35)	(34)	(59)	148	(148)	100	(100)	-	-	-	-	-	-	-	-	-
Closing Balance	**93**	**59**	**-**	**148**	**-**	**100**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

Total Debt	**Actual 2004**	**Actual 2005**	**Actual 2006**	**Actual 2007**	**Actual 2008**	**Actual 2009**	**Actual 2010**	**Actual 2011**	**Actual 2012**	**Actual 2013**	**Actual 2014**	**Actual 2015**	**Actual 2016**	**Forecast 2017**	**Forecast 2018**	**Forecast 2019**
Long Term Debt	7,390	7,204	7,169	7,227	7,571	8,187	8,538	8,647	9,382	9,985	10,868	12,680	14,527	16,438	19,561	22,123
Short Term Debt	93	59		148	-	100	-	-	-	-	-	-	-	-	-	-
Total Debt	**7,483**	**7,263**	**7,169**	**7,375**	**7,571**	**8,287**	**8,538**	**8,647**	**9,382**	**9,985**	**10,868**	**12,680**	**14,527**	**16,438**	**19,561**	**22,123**
Proportion of Short Term Debt to Total Debt	1%	1%	0%	2%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Consolidated Debt Ratio	87%	85%	81%	80%	73%	77%	73%	73%	74%	75%	76%	82%	83%	84%	85%	85%

MANITOBA HYDRO
Continunity Schedule
Consolidated Short and Long Term Debt

Forecast as per MH16 Update with Interim
(in $ millions Canadian Dollars)

Long Term Debt	**Forecast 2020**	**Forecast 2021**	**Forecast 2022**	**Forecast 2023**	**Forecast 2024**	**Forecast 2025**	**Forecast 2026**	**Forecast 2027**	**Forecast 2028**	**Forecast 2029**	**Forecast 2030**	**Forecast 2031**	**Forecast 2032**	**Forecast 2033**	**Forecast 2034**	**Forecast 2035**	**Forecast 2036**
Opening Balance	22,123	23,920	24,808	24,429	24,433	24,062	23,653	22,904	22,329	22,181	22,124	19,866	18,474	17,464	16,438	15,536	14,370
Long Term Debt Proceeds	2,200	2,200	1,000	1,200	-	-	-	600	-	-	250	3,000	1,200	1,200	-	-	-
Long Term Debt Matured	(369)	(1,293)	(1,366)	(1,161)	(300)	(412)	(750)	(1,178)	(150)	(60)	(2,510)	(4,396)	(2,213)	(2,230)	(906)	(1,170)	(275)
Carrying Value Adjustments*	(34)	(19)	(13)	(35)	(70)	2	2	2	2	3	3	3	3	4	4	4	4
Closing Balance	**23,920**	**24,808**	**24,429**	**24,433**	**24,062**	**23,653**	**22,904**	**22,329**	**22,181**	**22,124**	**19,866**	**18,474**	**17,464**	**16,438**	**15,536**	**14,370**	**14,099**

*

Short Term Debt	**Forecast 2020**	**Forecast 2021**	**Forecast 2022**	**Forecast 2023**	**Forecast 2024**	**Forecast 2025**	**Forecast 2026**	**Forecast 2027**	**Forecast 2028**	**Forecast 2029**	**Forecast 2030**	**Forecast 2031**	**Forecast 2032**	**Forecast 2033**	**Forecast 2034**	**Forecast 2035**	**Forecast 2036**
Opening Balance	-	-	-	-	-	-	-	-	-	-	-	-	59	82	-	-	-
Increase (Decrease)	-	-	-	-	-	-	-	-	-	-	-	59	22	(82)	-	-	-
Closing Balance	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**59**	**82**	**-**	**-**	**-**	**-**

Total Debt	**Forecast 2020**	**Forecast 2021**	**Forecast 2022**	**Forecast 2023**	**Forecast 2024**	**Forecast 2025**	**Forecast 2026**	**Forecast 2027**	**Forecast 2028**	**Forecast 2029**	**Forecast 2030**	**Forecast 2031**	**Forecast 2032**	**Forecast 2033**	**Forecast 2034**	**Forecast 2035**	**Forecast 2036**
Long Term Debt	23,920	24,808	24,429	24,433	24,062	23,653	22,904	22,329	22,181	22,124	19,866	18,474	17,464	16,438	15,536	14,370	14,099
Short Term Debt	-	-	-	-	-	-	-	-	-	-	-	59	82	-	-	-	-
Total Debt	**23,920**	**24,808**	**24,429**	**24,433**	**24,062**	**23,653**	**22,904**	**22,329**	**22,181**	**22,124**	**19,866**	**18,533**	**17,546**	**16,438**	**15,536**	**14,370**	**14,099**
Proportion of Short Term Debt to Total Debt	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Consolidated Debt Ratio	85%	84%	83%	83%	81%	79%	77%	75%	72%	69%	66%	62%	58%	53%	48%	42%	36%

PUB MFR 55
Finance Expense-Debt Levels

A schedule that details, for the last five fiscal years through the 20 year current forecast, a summary of total interest and finance cost incurred or forecasted by major category (debt charges, foreign currency gains/losses etc.) both capitalized and expensed. [Attachment 37, 2016/17 Interim Application]

Table 1 below for the fiscal years 2011/12 to 2035/36 conforms to the categorization of finance expense as shown in the Application in Schedule 6.2.4. This schedule groups the components of finance expense into three primary categories:

1. Total Interest on Short & Long Term Debt,
2. Interest Allocated to Construction, and
3. Sinking Fund and Other Adjustments.

The Corporation's net interest expense is the total interest on short & long term debt minus the interest allocated to construction.

For a fuller discussion of Finance Expense, please see Section 6.2.4 of Tab 6 of this Application.

Table 1. Finance Expense by Category

	Actual 2012	Actual 2013	Actual 2014	Actual 2015	Actual 2016	Outlook 2017	Forecast 2018	Forecast 2019	Forecast 2020	Forecast 2021	Forecast 2022	Forecast 2023	Forecast 2024
Interest on Short & Long Term Debt													
Gross Interest	490	515	528	569	645	709	758	781	828	856	872	859	850
Provincial Guarantee Fee	82	90	96	105	118	132	153	185	210	226	234	231	232
Amortization of (Premiums), Discounts, and Transaction Costs	0	0	2	2	2	2	1	1	1	3	3	2	(0)
Intercompany Interest Receivable	(17)	(19)	(19)	(14)	(14)	(14)	(15)	(16)	(16)	(17)	(18)	(18)	(19)
Total Interest on Short & Long Term Debt	**555**	**587**	**608**	**663**	**751**	**829**	**898**	**951**	**1,023**	**1,068**	**1,091**	**1,074**	**1,063**
Interest Allocated to Construction	**(167)**	**(138)**	**(140)**	**(145)**	**(176)**	**(245)**	**(353)**	**(313)**	**(315)**	**(329)**	**(289)**	**(55)**	**(19)**
Interest Earned on Sinking Fund	(10)	(10)	(24)	0	(0)	(0)	(1)	(7)	(13)	(13)	(12)	(2)	(2)
Realized Foreign Exchange (Gains) or Losses on Debt in Cash Flow Hedges	(0)	2	(19)	(6)	(6)	16	18	16	13	15	10	0	-
Revaluation of Dual Currency Bonds	3	3	2	1	1	1	1	1	1	1	2	2	2
Corporate Allocation	(19)	(19)	(19)	(19)	(18)	(18)	(18)	(18)	(18)	(18)	(18)	(18)	(18)
Other Amortization	24	27	28	20	31	30	30	31	31	50	46	48	47
Total Finance Expense	**385**	**452**	**435**	**515**	**582**	**613**	**574**	**662**	**721**	**774**	**829**	**1,049**	**1,072**

	Forecast 2025	Forecast 2026	Forecast 2027	Forecast 2028	Forecast 2029	Forecast 2030	Forecast 2031	Forecast 2032	Forecast 2033	Forecast 2034	Forecast 2035	Forecast 2036
Interest on Short & Long Term Debt												
Gross Interest	840	821	800	802	802	757	749	711	692	666	645	615
Provincial Guarantee Fee	229	225	217	211	209	206	190	184	175	166	160	155
Amortization of (Premiums), Discounts, and Transaction Costs	1	1	2	2	2	3	3	3	4	4	4	4
Intercompany Interest Receivable	(20)	(20)	(21)	(21)	(22)	(22)	(23)	(23)	(24)	(24)	(25)	(26)
Total Interest on Short & Long Term Debt	**1,050**	**1,027**	**998**	**994**	**991**	**944**	**919**	**875**	**847**	**812**	**784**	**748**
Interest Allocated to Construction	**(19)**	**(18)**	**(20)**	**(20)**	**(24)**	**(22)**	**(23)**	**(19)**	**(18)**	**(19)**	**(21)**	**(24)**
Interest Earned on Sinking Fund	(3)	(3)	(4)	(8)	(16)	(8)	(8)	(9)	(16)	(24)	(31)	(32)
Realized Foreign Exchange (Gains) or Losses on Debt in Cash Flow Hedges	-	-	-	-	-	-	-	-	-	-	-	-
Revaluation of Dual Currency Bonds	2	1	-	-	-	-	-	-	-	-	-	-
Corporate Allocation	(18)	(18)	(18)	(18)	(18)	(15)	(13)	(13)	(13)	(13)	(13)	(13)
Other Amortization	45	44	43	41	40	39	38	37	35	34	33	32
Total Finance Expense	**1,057**	**1,033**	**999**	**989**	**973**	**938**	**913**	**871**	**835**	**791**	**752**	**712**

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REFERENCE:

Tab 6, Page 16

PREAMBLE TO IR (IF ANY):

QUESTION:

a) Please provide a breakdown to explain the increase in finance expense between 2014/15 and 2016/17 separated each year into the following categories:
   i) Increases due to new projects coming in-service (and please provide references to the gross plant values underlying these changes);
   ii) Changes from maturities, refinancing and new debt issues (including impacts of increases/(decreases) in average interest rates);
   iii) Changes in capitalization policies and/or reporting method changes; and
   iv) Other impacts.

RATIONALE FOR QUESTION:

RESPONSE:

a) Please see Manitoba Hydro's response to Coalition/MH I-96d for an update to PUB MFR 55, which provides the increase in finance expense between 2014/15 and 2016/17 including actuals for 2016/17.

   i. With average annual spending on capital projects in excess of $2 billion over the past three years, the volume of capital activity at Manitoba Hydro is extremely large. As capital spending ends on one project, funds are redirected to other projects such that there is a continuous flow of both projects coming into service and projects starting up. For fiscal 2017, approximately 2,000 separate capital projects were placed into service. As presented in the notes to the financial statements for the past three years, Manitoba Hydro has placed the following property, plant and equipment balances into service:

	2015	2016	2017
Projects placed in service (in billions)	\$1.6	\$0.8	\$0.7

Given the large volume of capital projects, Manitoba Hydro has selected a sample of project costs placed in service over the past three years with significant in service amounts (i.e. > \$50 million). The table below identifies the sample of specific projects, the amounts placed in service, and the increase in finance expense for the year the project was placed in service as well as the impact to 2017. The sample of in service amounts identified may not necessarily represent the total costs for the respective project as a project can have multiple in service amounts over the time of its construction.

Impact on Finance Expense - PP&E projects placed in service (in millions)

Project	In Service Date Month-Year	In Service Amount	Increase in Finance Expense 2015	2016	2017
Pointe du Bois Spillway	Aug-14	294.0	10.1	16.5	15.9
	Sep-14	76.7	2.3	4.3	4.1
	Sep-15	93.6		2.4	5.1
Riel 230/500 kV Station	Aug-14	284.8	9.7	16.0	15.4
Great Falls Unit 4 Overhaul	Feb-16	49.6		0.2	2.7
Conawapa*	NA	379.3			5.1
Total			**22.1**	**39.4**	**48.2**

** Conawapa is a suspended project in CWIP, spending and interest capitalization ceased as of December 2016*

On an overall basis, capitalized interest year over year has increased by \$31 million from fiscal 2015 to 2016 and \$71 million from fiscal 2016 to 2017 as a result of increased Bipole III and Keeyask capital spending.

ii. Maturities, refinancing, and new debt issues are responsible for an increase to finance expense of \$52 million from fiscal 2015 to 2016 and \$57 million from fiscal 2016 to 2017, excluding foreign exchange impacts. These finance expense increases are comprised of volume increases of \$76 million from fiscal 2015 to 2016 and \$86 million from fiscal 2016 to 2017, which are due to increased borrowings to fund the increasing capital program. The volume increases are partially offset by interest rate decreases of $24 million from fiscal 2015 to 2016 and $29 million from fiscal 2016 to 2017 which are due to Manitoba Hydro issuing new debt and taking advantage of low interest rates (weighted average interest rate on new debt; 3.37% in 2014/15, 2.87% in 2015/16, and 2.45% in 2016/17), and thereby decreasing the weighted average interest rate of its debt portfolio.

iii. None of the increase in finance expense is due to changes in capitalization policies or reporting method changes.

iv. There are other items that were responsible for the change in finance expense.

The increased borrowings discussed in part ii) also increased provincial guarantee fees paid to the Province of Manitoba by $13 million from fiscal 2015 to 2016 and $14 million from fiscal 2016 to 2017.

Foreign exchange impacts increased finance expense by $24 million from fiscal 2015 to 2016 and $26 million from fiscal 2016 to 2017. Under the Foreign Currency Risk Management Program, these foreign exchange losses are offset with the recognition of U.S. revenues in cash flow hedges thus mitigating the net income impact to Manitoba Hydro.

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REFERENCE:

PUB-MFR-55, Page 2

PREAMBLE TO IR (IF ANY):

QUESTION:

b) Provide a version of PUB-MFR-55 Table 1. Finance Expense by Category that reconciles to Interest Paid from the Projected Cash Flow Statement for the 20 year financial forecast.

RATIONALE FOR QUESTION:

RESPONSE:

The following table reconciles gross interest from PUB MFR 55 Table 1. Finance Expense to Interest Paid from the Projected Cash Flow Statement for the 20 year financial forecast (IFF16).

IFF16	Forecast 2018	Forecast 2019	Forecast 2020	Forecast 2021	Forecast 2022	Forecast 2023	Forecast 2024	Forecast 2025	Forecast 2026	Forecast 2027	Forecast 2028	Forecast 2029	Forecast 2030	Forecast 2031	Forecast 2032	Forecast 2033	Forecast 2034	Forecast 2035	Forecast 2036
MFR55 - Gross Interest	758	781	828	856	872	859	850	840	821	800	802	802	757	749	711	692	666	645	615
Provincial Guarantee Fee	153	185	210	226	234	231	232	229	225	217	211	209	206	190	184	175	166	160	155
Intercompany Interest Receivable	(15)	(16)	(16)	(17)	(18)	(18)	(19)	(20)	(20)	(21)	(21)	(22)	(22)	(23)	(23)	(24)	(24)	(25)	(26)
Capitalized interest	(353)	(313)	(315)	(329)	(289)	(55)	(19)	(19)	(18)	(20)	(20)	(24)	(22)	(23)	(19)	(18)	(19)	(21)	(24)
Timing Difference	(14)	(9)	(12)	1	(2)	(4)	(2)	5	9	(2)	1	1	11	9	4	7	1	4	7
Cash Flow Stmt - Interest Paid	529	628	695	737	797	1,013	1,042	1,035	1,017	974	973	966	930	902	857	832	790	763	727

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REFERENCE:

Tab 2, Page 17, Fig. 2.13, Page 20, Fig. 2.16
PUB MFR 23, Figure 3
PUB MFR 55, Table 1

PREAMBLE TO IR (IF ANY):

The three references provide values for actual interest costs for 2014/15 and 2015/16.

QUESTION:

a) Please provide a schedule that sets out the values associated with the bar graphs in Tab 2, Figure 2.13 for all years.

RATIONALE FOR QUESTION:

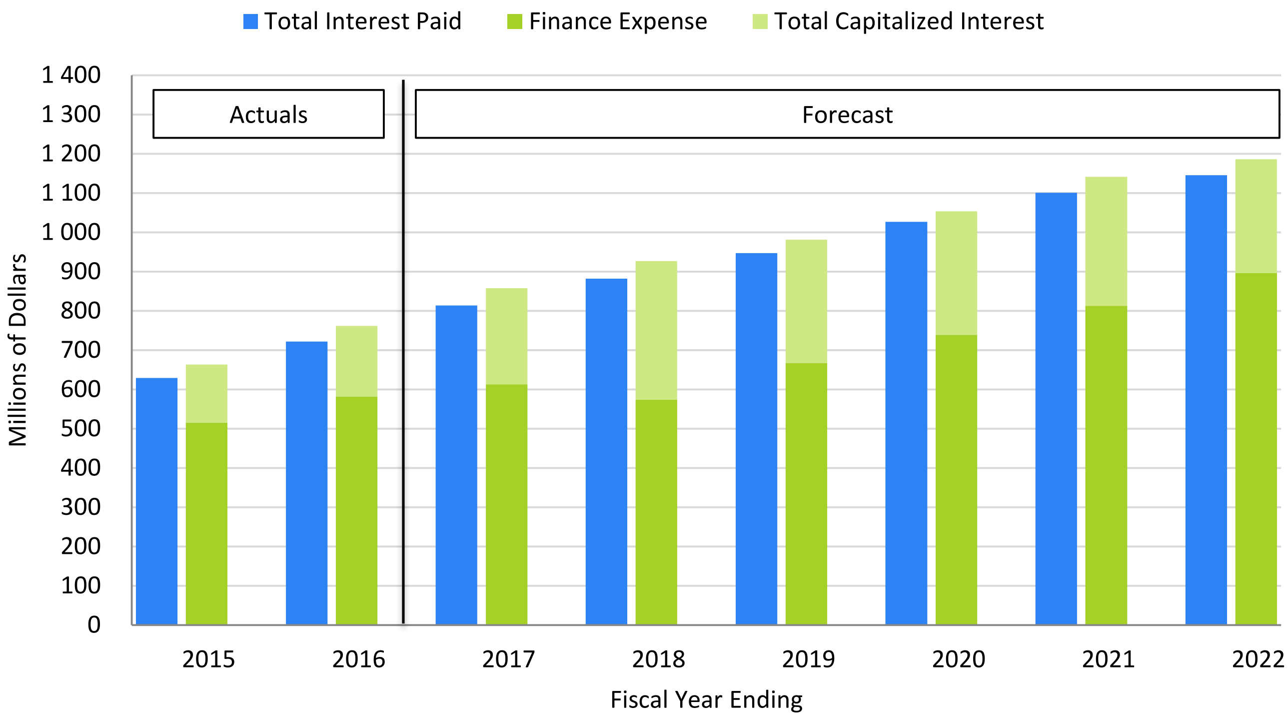
To clarify the values for interest costs used in the discussion regarding the reasons for a rate increase.

RESPONSE:

Please find below a revised Figure 2.13 (and data points) that reflects corrected actual 2015 and 2016 interest capitalized values to reconcile with actual results reported in PUB MFR 17. Figure 2.16 has also been revised and is provided below.

Note that the forecast values in Figure 2.13 and Figure 2.16 of Tab 2 filed on May 12, 2017 were based on an MH16 scenario under 0% annual rate increases which can be found in Manitoba Hydro's response to Coalition/MH I-69a-b.

Figure 2.13 Revised - Interest Paid Compared to Finance Expense



ELECTRIC OPERATIONS
MH16 – 0% Annual Rate Increases Scenario
(Millions of Dollars)

	Actual 2015	Actual 2016	Outlook 2017	Forecast 2018	Forecast 2019	Forecast 2020	Forecast 2021	Forecast 2022
Interest Paid	481	542	569	529	634	712	772	856
Add Back Total Capitalized Interest	148	180	245	353	313	315	329	289
Total Interest Paid	**629**	**722**	**814**	**882**	**947**	**1 027**	**1 101**	**1 145**
Finance Expense	**515**	**582**	**613**	**574**	**668**	**739**	**813**	**897**
Total Capitalized Interest	**148**	**180**	**245**	**353**	**313**	**315**	**329**	**289**

Figure 2.16 Revised - Cash Flow Deficiency (0% Annual Rate Increases Scenario)

Cash Flow from Operations to CapEx

	Actuals	**Forecast**					
For the year ended March 31	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Net Income Attributable to MH	37	34	29	(15)	(74)	(99)	(117)
Cash Receipts from Customers *	1 907	2 007	2 043	2 013	2 028	2 150	2 268
Cash Paid to Suppliers and Employees **	(736)	(876)	(917)	(881)	(880)	(903)	(908)
Interest Paid	(542)	(569)	(529)	(634)	(712)	(772)	(856)
Add: Total Capitalized Interest	(180)	(245)	(353)	(313)	(315)	(329)	(289)
Less: Capitalized Interest related to Keeyask, MMTP & GNTL	73	107	156	221	293	310	273
Interest Received	23	7	5	12	21	17	15
Adjusted Cash Flow from Operations * **	**545**	**431**	**404**	**417**	**435**	**473**	**503**
CEF16 Expenditures ******	**711**	**664**	**668**	**685**	**669**	**654**	**632**
Cash Flow Deficiency	**(167)**	**(232)**	**(264)**	**(268)**	**(234)**	**(181)**	**(128)**

* Per Cash Flow Statement restated for Bipole III deferred revenue reclassified from contributions which were net against PP&E (CEF16 Expenditures)

** Adjusted for payables associated with Bipole III and Keeyask

*** CFO - Internally generated funds less portion of capitalized interest related to (Keeyask, MMTP & GNTL)

**** Total gross capital and deferred expenditures excluding Keeyask, Bipole III, MMTP & GNTL; Bipole III deferred revenue reclassified from PP&E to Cash Flows from Operating Activities

REFERENCE:

Tab 2, Pages 17-20
PUB MFR 51, Page 1
Appendix 3.1, Page 59

PREAMBLE TO IR (IF ANY):

Manitoba Hydro uses an alternative cash flow calculation in discussion the reasons for a rate increase.

QUESTION:

a) Please explain what is included in "Gross Interest" as set out in Figure 2.16 and reported/found in the Cash Flow Statement as "Interest Paid".
b) Please demonstrate that that the Interest Paid values at set out in the Cash Flow Statement (Appendix 3.4, page 59) exclude interest capitalized (as suggested in PUB MFR 51) by showing the derivation of the values for 2016/17 to 2035/36 and reconciling them with the values set out in PUB MFR 55, Table 1.

RATIONALE FOR QUESTION:

To understand Manitoba Hydro's alternative cash flow calculation.

RESPONSE:

a) The label "Gross Interest" in Figure 2.16 is a misnomer as it is the same as "Interest Paid" in the projected cash flow statement under the MH16 0% annual rate increases scenario provided below.

   Note also that Interest paid in the MH16 0% annual rate increases scenario would not reconcile with Interest Paid in Appendix 3.1 (MH16), or PUB MFR 51 which is based on MH16, as MH16 reflects 7.9% annual rate increases 2018 to 2022.

ELECTRIC OPERATIONS (MH16)
PROJECTED OPERATING STATEMENT
MH16 with 0% Annual Rate Increases
(In Millions of Dollars)

For the year ended March 31	2017	2018	2019	2020	2021	2022
REVENUES						
Domestic Revenue						
at approved rates	1 517	1 569	1 561	1 552	1 551	1 552
additional*	-	-	-	-	-	-
BPIII Reserve Account	(96)	(113)	13	68	68	68
Extraprovincial	468	454	432	455	578	696
Other	27	30	31	31	33	33
	1 915	1 941	2 037	2 107	2 230	2 349
EXPENSES						
Operating and Administrative	535	518	501	511	513	524
Finance Expense	613	574	668	739	813	897
Finance Income	(18)	(16)	(20)	(27)	(27)	(30)
Depreciation and Amortization	384	396	471	515	554	597
Water Rentals and Assessments	131	124	112	113	114	117
Fuel and Power Purchased	130	135	166	146	162	149
Capital and Other Taxes	118	132	145	154	160	165
Other Expenses	60	115	109	481	94	92
Corporate Allocation	8	8	8	8	8	8
	1 962	1 987	2 159	2 641	2 393	2 519
Net Income before Net Movement in Reg. Deferral	(47)	(47)	(123)	(534)	(163)	(170)
Net Movement in Regulatory Deferral	69	68	106	462	69	61
Net Income	22	21	(16)	(72)	(94)	(108)
Net Income Attributable to:						
Manitoba Hydro	**34**	**29**	**(15)**	**(74)**	**(99)**	**(117)**
Non-controlling Interest	(12)	(9)	(1)	2	5	8
* Additional Domestic Revenue						
Percent Increase	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Cumulative Percent Increase	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Financial Ratios						
Equity	15%	14%	13%	12%	11%	10%
EBITDA Interest Coverage	1.50	1.48	1.49	1.46	1.45	1.46
Capital Coverage	1.08	1.14	0.99	0.88	0.96	1.04

ELECTRIC OPERATIONS (MH16)
PROJECTED BALANCE SHEET
MH16 with 0% Annual Rate Increases
(In Millions of Dollars)

For the year ended March 31	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
ASSETS						
Plant in Service	13 256	13 881	19 254	19 876	20 938	26 363
Accumulated Depreciation	(985)	(1 319)	(1 749)	(2 197)	(2 634)	(3 143)
Net Plant in Service	12 272	12 562	17 505	17 679	18 304	23 219
Construction in Progress	6 943	9 308	6 596	7 378	7 870	3 693
Current and Other Assets	1 721	2 021	2 327	2 487	2 090	1 789
Goodwill and Intangible Assets	270	485	725	869	1 271	1 225
Total Assets before Regulatory Deferral	21 206	24 376	27 153	28 413	29 535	29 927
Regulatory Deferral Balance	459	526	633	1 094	1 163	1 225
	21 665	24 902	27 786	29 508	30 698	31 152
LIABILITIES AND EQUITY						
Long-Term Debt	15 578	18 120	21 557	22 582	23 754	24 878
Current and Other Liabilities	3 415	3 905	3 304	4 068	4 215	3 681
Provisions	19	19	19	18	17	16
Deferred Revenue	444	460	486	515	537	546
BPIII Reserve Account	196	309	296	228	159	91
Retained Earnings	2 730	2 760	2 745	2 670	2 572	2 455
Accumulated Other Comprehensive Income	(761)	(714)	(665)	(616)	(600)	(559)
Total Liabilities and Equity before Regulatory Deferral	21 621	24 859	27 742	29 464	30 655	31 108
Regulatory Deferral Balance	44	44	44	44	44	44
	21 665	24 902	27 786	29 508	30 698	31 152
Net Debt	15 349	18 335	20 875	22 791	24 184	25 092
Total Equity	2 778	3 017	3 116	3 098	3 008	2 909
Equity Ratio	15%	14%	13%	12%	11%	10%

ELECTRIC OPERATIONS (MH16)
PROJECTED CASH FLOW STATEMENT
MH16 with 0% Annual Rate Increases
(In Millions of Dollars)

For the year ended March 31	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
OPERATING ACTIVITIES						
Cash Receipts from Customers	2 007	2 043	2 013	2 028	2 150	2 268
Cash Paid to Suppliers and Employees	(876)	(917)	(881)	(880)	(903)	(908)
Interest Paid	(569)	(529)	(634)	(712)	(772)	(856)
Interest Received	7	5	12	21	17	15
	569	601	510	456	492	519
FINANCING ACTIVITIES						
Proceeds from Long-Term Debt	2 743	3 570	3 790	2 370	2 190	1 590
Sinking Fund Withdrawals	146	0	0	182	303	767
Retirement of Long-Term Debt	(1 030)	(330)	(1 002)	(336)	(1 278)	(1 020)
Other	10	(10)	(10)	(11)	(11)	(11)
	1 868	3 229	2 778	2 205	1 204	1 325
INVESTING ACTIVITIES						
Property, Plant and Equipment, net of contributions	(2 609)	(3 553)	(3 015)	(2 351)	(1 742)	(1 352)
Sinking Fund Payment	(146)	(246)	(210)	(244)	(282)	(334)
Other	(68)	(51)	(55)	(44)	(128)	(91)
	(2 822)	(3 850)	(3 280)	(2 639)	(2 152)	(1 777)
Net Increase (Decrease) in Cash	(384)	(19)	8	22	(457)	68
Cash at Beginning of Year	944	559	540	548	570	113
Cash at End of Year	559	540	548	570	113	181

b) The following schedule provides a reconciliation of Interest Paid in MH16 (Appendix 3.1) to Finance Expense as set out in PUB MFR 55, Table 1. Interest Paid as presented in the cash flow statements do not include Interest Capitalized, and therefore, does not need to be deducted from Interest Paid to derive Finance Expense.

ELECTRIC OPERATIONS
MH16
(Millions of Dollars)

	Outlook 2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Interest Paid	**569**	**529**	**628**	**695**	**737**	**797**	**1,013**	**1,042**	**1,035**	**1,017**	**974**	**973**	**966**	**930**	**902**	**857**	**832**	**790**	**763**	**727**
Finance Expense Timing Differences[1]	13	14	9	12	(1)	3	4	1	(4)	(9)	3	(2)	(1)	(10)	(9)	(4)	(8)	(0)	(4)	(6)
Amortization of (Premiums), Discounts, and Transaction Costs[2]	2	1	1	1	3	3	2	(0)	1	1	2	2	2	3	3	3	4	4	4	4
Realized Foreign Exchange (Gains) or Losses on Debt in Cash Flow Hedges[2]	16	18	16	13	15	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Revaluation of Dual Currency Bonds[2]	1	1	1	1	1	2	2	2	2	1	0	0	0	0	0	0	0	0	0	0
Corporate Allocation[2]	(18)	(18)	(18)	(18)	(18)	(18)	(18)	(18)	(18)	(18)	(18)	(18)	(18)	(15)	(13)	(13)	(13)	(13)	(13)	(13)
Present Value Accretions associated with the Winnipeg Hydro Obligation and Mitigation Settlements[2]	30	30	31	31	50	46	48	47	45	44	43	41	40	39	38	37	35	34	33	32
Interest Earned on Sinking Fund[3]	(0)	(1)	(7)	(13)	(13)	(12)	(2)	(2)	(3)	(3)	(4)	(8)	(16)	(8)	(8)	(9)	(16)	(24)	(31)	(32)
Finance Expense	**613**	**574**	**662**	**721**	**774**	**829**	**1,049**	**1,072**	**1,057**	**1,033**	**999**	**989**	**973**	**938**	**913**	**871**	**835**	**791**	**752**	**712**

Note 1: Timing differences associated with monthly interest accruals on an accounting basis and semi-annual coupon payments on a cash basis by the end of the fiscal year
Note 2: Non-cash Finance Expense items.
Note 3: Interest Earned on Sinking Fund reported in Interest Received on the projected cash flow statement but included in Finance Expense

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REFERENCE:

PUB-MFR-55, Page 2

PREAMBLE TO IR (IF ANY):

QUESTION:

a) Please show the calculations for 'Interest Allocated to Construction' by year (calculation of average rate, determination of balance of CWIP, etc).

RATIONALE FOR QUESTION:

RESPONSE:

Interest during construction is calculated on a project-by-project basis by applying the interest capitalization rate to the actual or forecasted previous month-end construction in progress balance of each project, until the corresponding asset becomes available for use, at which time the transfer to in-service property plant and equipment is made, interest expense allocated to construction ceases, and depreciation and finance expense charged to operations commences. Interest capitalized for each project is aggregated to form to total interest allocated to construction as shown in PUB MFR 55.

It is not practical to show the Interest Allocated to Construction calculations for the hundreds of projects that comprise the total shown in PUB MFR 55. However, Manitoba Hydro has provided a sample project to show the mechanics of the calculation in the following table.

Manitoba Saskatchewan Transmission Project (CEF16)
(In thousands of $)

Date	a Construction in Progress OB	b Expenditures	c = a x f Interest Capitalized	d Plant In-Service	e = (a+b+c-d) Construction in Progress CB	f Nominal Monthly Interest Capitalized Rate
Mar-2016					**45**	
Apr-2016	45	249	0	-	295	0.44%
May-2016	295	263	1	-	559	0.46%
Jun-2016	559	263	2	-	824	0.44%
Jul-2016	824	250	4	-	1 077	0.46%
Aug-2016	1 077	276	5	-	1 358	0.46%
Sep-2016	1 358	250	6	-	1 614	0.44%
Oct-2016	1 614	250	7	-	1 871	0.46%
Nov-2016	1 871	263	8	-	2 142	0.44%
Dec-2016	2 142	237	10	-	2 388	0.46%
Jan-2017	2 388	250	11	-	2 649	0.46%
Feb-2017	2 649	237	11	-	2 896	0.41%
Mar-2017	2 896	276	13	-	3 185	0.46%
2016/17	**45**	**3 061**	**80**	**-**	**3 185**	**5.40%**
Apr-2017	3 185	276	14	-	3 475	0.43%
May-2017	3 475	322	15	-	3 812	0.44%
Jun-2017	3 812	307	16	-	4 136	0.43%
Jul-2017	4 136	292	18	-	4 446	0.44%
Aug-2017	4 446	324	20	-	4 790	0.44%
Sep-2017	4 790	278	20	-	5 088	0.43%
Oct-2017	5 088	309	22	-	5 420	0.44%
Nov-2017	5 420	325	23	-	5 768	0.43%
Dec-2017	5 768	264	25	-	6 057	0.44%
Jan-2018	6 057	311	27	-	6 395	0.44%
Feb-2018	6 395	280	25	-	6 700	0.40%
Mar-2018	6 700	312	29	-	7 042	0.44%
2017/18	**3 185**	**3 601**	**256**	**-**	**7 042**	**5.18%**
Apr-2018	7 042	147	29	-	7 218	0.41%
May-2018	7 218	171	31	-	7 420	0.43%
Jun-2018	7 420	155	31	-	7 606	0.41%
Jul-2018	7 606	164	32	-	7 803	0.43%
Aug-2018	7 803	172	33	-	8 008	0.43%
Sep-2018	8 008	140	33	-	8 181	0.41%
Oct-2018	8 181	173	35	-	8 389	0.43%
Nov-2018	8 389	173	35	-	8 597	0.41%
Dec-2018	8 597	140	37	-	8 774	0.43%
Jan-2019	8 774	165	37	-	8 976	0.43%
Feb-2019	8 976	149	35	-	9 160	0.39%
Mar-2019	9 160	158	39	-	9 357	0.43%
2018/19	**7 042**	**1 908**	**407**	**-**	**9 357**	**5.03%**

Manitoba Saskatchewan Transmission Project (CEF16)
(In thousands of $)

Date	Construction in Progress OB	Expenditures	Interest Capitalized	Plant In-Service	Construction in Progress CB	Nominal Monthly Interest Capitalized Rate
Apr-2019	9 357	1 502	39	-	10 897	0.41%
May-2019	10 897	1 579	46	-	12 522	0.43%
Jun-2019	12 522	1 356	52	-	13 930	0.41%
Jul-2019	13 930	1 584	59	-	15 573	0.43%
Aug-2019	15 573	1 511	66	-	17 150	0.43%
Sep-2019	17 150	1 362	71	-	18 583	0.41%
Oct-2019	18 583	1 592	79	-	20 254	0.43%
Nov-2019	20 254	1 442	83	-	21 779	0.41%
Dec-2019	21 779	1 369	93	-	23 241	0.43%
Jan-2020	23 241	1 523	99	-	24 862	0.43%
Feb-2020	24 862	1 373	99	-	26 334	0.40%
Mar-2020	26 334	1 528	112	-	27 974	0.43%
2019/20	**9 357**	**17 720**	**897**	**-**	**27 974**	**5.02%**
Apr-2020	27 974	1 355	116	-	29 445	0.41%
May-2020	29 445	1 289	126	-	30 860	0.43%
Jun-2020	30 860	1 359	128	-	32 347	0.41%
Jul-2020	32 347	1 429	138	-	33 915	0.43%
Aug-2020	33 915	1 227	145	-	35 287	0.43%
Sep-2020	35 287	1 366	146	-	36 799	0.41%
Oct-2020	36 799	1 368	158	-	38 325	0.43%
Nov-2020	38 325	1 233	159	-	39 716	0.41%
Dec-2020	39 716	1 304	170	-	41 190	0.43%
Jan-2021	41 190	1 237	176	-	42 603	0.43%
Feb-2021	42 603	1 239	165	-	44 007	0.39%
Mar-2021	44 007	1 448	188	-	45 643	0.43%
2020/21	**27 974**	**15 853**	**1 815**	**-**	**45 643**	**5.04%**
Apr-2021	45 643	611	189	-	46 443	0.42%
May-2021	46 443	550	199	-	47 192	0.43%
Jun-2021	47 192	9 075	196	56 463	0	0.42%
Grand Total	**45**	**52 379**	**4 039**	**56 463**	**0**	

The CEF16 interest capitalization rate for 2016/17 is calculated based upon the estimated principal days outstanding and gross interest expense for the debt issues projected to be outstanding and issued in 2016/17. Thereafter, the interest capitalization is calculated based on the average debt balance and gross interest expense in each fiscal year of the previously approved forecast (IFF15) updated for the revised interest rates.

The calculation of the Interest Capitalization rate is shown below:

				A	B = (1+A/2)2-1	C =[(B+1)1/12-1]*12
For the year ended March 31	**Adjusted Gross Finance Expense**	**Total Debt for WACD ***	**Average Debt ****	**WACD - Semi Annual**	**Effective Annual**	**Nominal Annual in SAP (Capital Est.)**
2017	877	17 922	16 041	5.47%	5.54%	5.40%
2018	1 005	20 453	19 188	5.24%	5.31%	5.18%
2019	1 078	21 941	21 197	5.09%	5.15%	5.03%
2020	1 143	23 128	22 535	5.07%	5.14%	5.02%
2021	1 180	23 191	23 160	5.09%	5.16%	5.04%

* Used to calculate Average Debt for years 2018 on
** The debt volumes averaged over the period outstanding by issue for 2017.

REFERENCE:

Coalition/MH I-16e; PUB MFR 20

PREAMBLE TO IR (IF ANY):

QUESTION:

a) Please provide a schedule detailing the determination of Finance Expense for each of the projects.

b) Please provide an alternative MFR 20 assuming a 32-month delay in Keeyask and based on the P90 Keeyask cost estimate.

RATIONALE FOR QUESTION:

RESPONSE:

Public disclosure of the response to this IR (or portions thereof) would result in the release of information considered to be confidential and commercially sensitive. As directed by the PUB, Manitoba Hydro will be filing a motion seeking confidential treatment of the redacted information contained in this response pursuant to Rule 13.

a) Please see the attached schedules that contain the calculation of Finance Expense for each of the projects set out in PUB MFR 20. As noted in PUB MFR 20, Manitoba Hydro issues debt based on the consolidated cash requirements of the Corporation and does not assign specific debt issues on a project-by-project basis. As such, finance expense attributable to a specific project is estimated for the purposes of this analysis by applying Manitoba Hydro's average cost of debt to the asset's net book value (projected in-service cost net of accumulated depreciation). The calculation of the estimated finance expense is the average between the opening and closing net book value, multiplied by the long-term debt rate including the 1% PGF fee.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Long Term Interest Rate including PGF	5.31%	5.04%	4.58%	4.43%	4.53%	4.63%	4.58%	4.54%	4.52%	4.54%

	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Long Term Interest Rate including PGF	4.53%	4.50%	4.40%	4.40%	4.65%	4.60%	4.60%	4.43%	4.19%	3.88%

KEEYASK (ISD 2021/22)
(in Millions of Dollars)

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Opening Balance	-	-	-	-	-	-	4 914	8 596	8 475	8 354
In-Service Amount	-	-	-	-	-	4 937	3 789	-	-	-
Depreciation	-	-	-	-	-	(23)	(107)	(121)	(121)	(121)
Closting Balance	-	-	-	-	-	4 914	8 596	8 475	8 354	8 233
Interest Expense on Capital	-	-	-	-	-	114	310	387	380	377

MANITOBA-MINNESOTA TRANSMISSION PROJECT
(in Millions of Dollars)

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Opening Balance	-	0	8	8	8	447	440	433	426	419
In-Service Amount	0	7	-	-	445	-	-	-	-	-
Depreciation	-	(0)	(0)	(0)	(6)	(7)	(7)	(7)	(7)	(7)
Closting Balance	0	8	8	8	447	440	433	426	419	412
Interest Exp on Capital	-	0	0	0	10	21	20	19	19	19

KEEYASK (ISD 2021/22)
(in Millions of Dollars)

	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Opening Balance	8 233	8 112	7 991	7 870	7 749	7 629	7 511	7 390	7 269	7 148
In-Service Amount	-	-	-	-	-	4	-	-	-	-
Depreciation	(121)	(121)	(121)	(121)	(121)	(121)	(121)	(121)	(121)	(121)
Closting Balance	8 112	7 991	7 870	7 749	7 629	7 511	7 390	7 269	7 148	7 027
Interest Expense on Capital	370	362	349	344	358	348	343	325	302	275

MANITOBA-MINNESOTA TRANSMISSION PROJECT
(in Millions of Dollars)

	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Opening Balance	412	405	398	391	384	377	370	363	356	349
In-Service Amount	-	-	-	-	-	-	-	-	-	-
Depreciation	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)
Closting Balance	405	398	391	384	377	370	363	356	349	342
Interest Exp on Capital	18	18	17	17	18	17	17	16	15	13

GREAT NORTHERN TRANSMISSION LINE
(in Millions of Dollars)

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Opening Balance	[redacted]									
In-Service Amount										
Depreciation										
Closting Balance										
Interest Exp on Capital										

WUSKWATIM
(in Millions of Dollars)

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Opening Balance	1 599	1 574	1 559	1 533	1 507	1 481	1 455	1 433	1 407	1 380
In-Service Amount	1	11	-	-	-	-	3	-	-	-
Depreciation	(26)	(26)	(26)	(26)	(26)	(26)	(26)	(26)	(26)	(26)
Closting Balance	1 574	1 559	1 533	1 507	1 481	1 455	1 433	1 407	1 380	1 354
Interest Exp on Capital	84	79	71	67	68	68	66	64	63	62

GREAT NORTHERN TRANSMISSION LINE
(in Millions of Dollars)

	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Opening Balance	[redacted]									
In-Service Amount										
Depreciation										
Closting Balance										
Interest Exp on Capital										

WUSKWATIM
(in Millions of Dollars)

	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Opening Balance	1 354	1 328	1 302	1 276	1 250	1 224	1 198	1 176	1 150	1 123
In-Service Amount	-	-	-	-	-	-	4	-	-	-
Depreciation	(26)	(26)	(26)	(26)	(26)	(26)	(26)	(26)	(26)	(26)
Closting Balance	1 328	1 302	1 276	1 250	1 224	1 198	1 176	1 150	1 123	1 097
Interest Exp on Capital	61	59	57	56	58	56	55	51	48	43

BIPOLE III & RIEL STATION
(in Millions of Dollars)

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Opening Balance	302	218	120	4 856	4 838	4 804	4 768	4 732	4 649	4 542
In-Service Amount	(75)	(87)	4 762	17	2	-	-	-	-	-
Depreciation	(9)	(10)	(26)	(36)	(36)	(36)	(36)	(83)	(107)	(107)
Closting Balance	218	120	4 856	4 838	4 804	4 768	4 732	4 649	4 542	4 436
In-service Indicator	1	1	1	1	1	1	1	1	1	1
Interest Exp on Capital	14	9	114	215	218	222	218	213	208	204
Accretion on BPIII CDI	-	-	1	2	2	1	1	1	1	1
Total Finance Expense	14	9	115	217	220	223	219	214	208	205

FINANCING IMPACTS OF THE SUNK COSTS RELATING TO CONAWAPA
(in Millions of Dollars)

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Opening Balance	-	-	-	-	368	355	343	330	318	305
In-Service Amount				380						
Depreciation				(12)	(13)	(13)	(13)	(13)	(13)	(13)
Closting Balance	-	-	-	368	355	343	330	318	305	292
Interest Exp on Capital	-	-	-	8	16	16	15	15	14	14

BIPOLE III & RIEL STATION
(in Millions of Dollars)

	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Opening Balance	4 436	4 329	4 222	4 116	4 010	3 904	3 798	3 692	3 586	3 480
In-Service Amount	-	-	-	-	-	-	-	-	-	-
Depreciation	(107)	(107)	(106)	(106)	(106)	(106)	(106)	(106)	(106)	(106)
Closting Balance	4 329	4 222	4 116	4 010	3 904	3 798	3 692	3 586	3 480	3 374
In-service Indicator	1	1	1	1	1	1	1	1	1	1
Interest Exp on Capital	198	192	184	179	184	177	172	161	148	133
Accretion on BPIII CDI	1	1	1	1	1	1	1	1	1	1
Total Finance Expense	199	193	184	180	185	178	173	162	149	134

FINANCING IMPACTS OF THE SUNK COSTS RELATING TO CONAWAPA
(in Millions of Dollars)

	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Opening Balance	292	280	267	254	242	229	216	204	191	178
In-Service Amount										
Depreciation	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)
Closting Balance	280	267	254	242	229	216	204	191	178	166
Interest Exp on Capital	13	12	11	11	11	10	10	9	8	7

POINTE DU BOIS SPILLWAY
(in Millions of Dollars)

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Opening Balance	541	551	542	534	525	517	508	500	492	483
In-Service Amount	17	-	-	-	-	-	-	-	-	-
Depreciation	(8)	(8)	(8)	(8)	(8)	(8)	(8)	(8)	(8)	(8)
Closting Balance	551	542	534	525	517	508	500	492	483	475
Interest Exp on Capital	29	28	25	23	24	24	23	22	22	22

DSM
(in Millions of Dollars)

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Opening Balance		50	101	190	263	322	370	389	395	398
In-Service Amount	50	56	99	94	89	87	67	60	62	67
Depreciation	-	(5)	(11)	(21)	(30)	(39)	(48)	(54)	(60)	(66)
Closting Balance	50	101	190	263	322	370	389	395	398	398
Interest Exp on Capital	3	4	7	10	13	16	17	18	18	18

BUSINESS OPERATIONS CAPITAL
(in Millions of Dollars)

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Opening Balance	-	287	530	795	1 018	1 113	1 277	1 433	1 598	1 711
In-Service Amount	297	272	310	284	175	258	264	285	248	249
Depreciation	(9)	(29)	(45)	(61)	(79)	(95)	(107)	(120)	(136)	(153)
Closting Balance	287	530	795	1 018	1 113	1 277	1 433	1 598	1 711	1 807
Interest Exp on Capital	8	21	30	40	48	55	62	69	75	80

POINTE DU BOIS SPILLWAY
(in Millions of Dollars)

	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Opening Balance	475	466	458	449	441	433	424	416	408	399
In-Service Amount	-	-	-	-	-	-	-	-	-	-
Depreciation	(8)	(8)	(8)	(8)	(8)	(8)	(8)	(8)	(8)	(8)
Closting Balance	466	458	449	441	433	424	416	408	399	391
Interest Exp on Capital	21	21	20	20	20	20	19	18	17	15

DSM
(in Millions of Dollars)

	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Opening Balance	398	395	395	397	405	413	424	436	449	461
In-Service Amount	71	75	79	83	82	84	86	87	89	91
Depreciation	(73)	(75)	(77)	(75)	(74)	(73)	(73)	(75)	(78)	(80)
Closting Balance	395	395	397	405	413	424	436	449	461	471
Interest Exp on Capital	18	18	17	18	19	19	20	20	19	18

BUSINESS OPERATIONS CAPITAL
(in Millions of Dollars)

	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Opening Balance	1 807	1 884	2 027	2 116	2 223	2 223	2 177	2 103	2 050	2 034
In-Service Amount	246	327	289	324	234	208	200	240	294	89
Depreciation	(169)	(185)	(199)	(217)	(234)	(254)	(274)	(292)	(310)	(328)
Closting Balance	1 884	2 027	2 116	2 223	2 223	2 177	2 103	2 050	2 034	1 795
Interest Exp on Capital	84	88	91	96	103	101	98	92	86	74

b) Please see the table below updated to reflect the forecast of revenue requirements including cost components for Keeyask as an alternative to PUB MFR 20 assuming a P90 32-month delay in Keeyask based on MH16 Update with Interim as outlined in Manitoba Hydro's response to PUB/MH II-25b.

KEEYASK (ISD 2022/23)
(In Millions of Dollars)

For the year ended March 31

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Finance Expense	-	-	-	-	-	163	389	448	439	433
OM&A Costs	-	-	-	-	-	10	16	16	16	17
Depreciation	-	-	-	-	-	32	126	137	137	137
Capital Tax	23	29	34	39	43	47	48	48	47	47
Water Rentals	-	-	-	-	-	4	14	15	18	17
	23	29	34	39	43	257	593	664	657	650

KEEYASK (ISD 2022/23)
(In Millions of Dollars)

For the year ended March 31

	2028	2029	2030	2031	2032	2033	2034	2035	2036
Finance Expense	422	403	412	420	410	400	372	343	308
OM&A Costs	17	16	17	17	17	16	16	17	17
Depreciation	137	137	137	137	137	137	137	137	137
Capital Tax	46	45	45	44	43	42	42	41	40
Water Rentals	17	17	17	18	18	18	18	18	19
	638	619	628	636	625	614	586	556	521

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REFERENCE:

Tab 2, Pages 24-25
PUB MFR 20, Page 5

PREAMBLE TO IR (IF ANY):

The Application discusses the impact of Keeyask's In-service on cash flow and net income.

QUESTION:

a) Please clarify what the values for the "Annual Net Cash Flow Position" in Figure 2.21 represent and how they are related to the Keeyask Revenue Requirement impact values set out in PUB MFR 20.
b) At page 25 (lines 4-6) the Application appears to suggest that rates must be at a sufficiently high level when Keeyask comes into service that the costs of Keeyask can be absorbed with rate increases at inflationary levels. Please confirm whether this is a correct interpretation. If not, what is Application suggesting?
c) If yes, is this consistent with Manitoba Hydro's past practice for managing rate increases at times when major new capital projects are coming into service?

RATIONALE FOR QUESTION:

To better understand Manitoba Hydro's reasons for a rate increase.

RESPONSE:

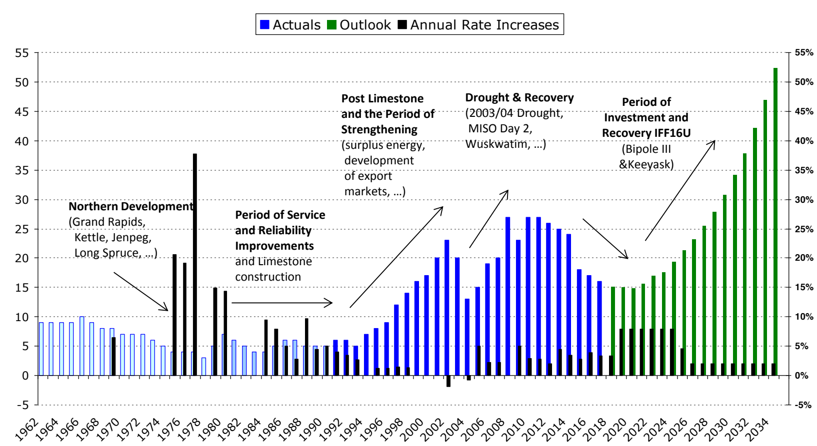
a) The Annual Net Cash Flow Position depicted in Figure 2.21 in Tab 2 of the Application is derived by taking the KHLP PPA Net Revenue (PUB MFR 7) and deducting the cash expenses (Finance Expense, OM&A, Capital Tax and Water Rentals) attributed to Keeyask as set out in PUB MFR 20.

b) The Application represents an acceleration of rate increases rather than fundamentally higher rates in the long term (compared to MH15) which is aligned with the urgency underlying Manitoba Hydro's aggressive cost management program. The proposed rate increases for the revenue requirement pressure from placing into service of major new assets as the Corporation completes an unprecedented period of capital investment and enhances the effort to rebuild the Corporation's financial strength in a reasonable period of time. The rate increases also position Manitoba Hydro to meet the additional financial burdens of Keeyask as highlighted in Figure 2.21 without impairing the financial strength of the Corporation. This plan will allow future rate increases to return to stable, inflationary levels earlier than compared to MH15.

c) The current period of capital investment is unprecedented and is incomparable even with the development of the Nelson River in the 60s and 70s. The following graph shows Manitoba Hydro's equity ratios since 1962 to 2034 along with rate increases implemented, proposed or forecast over the same period (adapted from MIPUG/MH I-2k).

Manitoba Hydro's Equity Ratio

from 1962 – 2034 – Updated for MH16 Update with Interim



During this Nelson River development, the six rate increases below, implemented between 1974 and 1980 (with two occurring in fiscal 1977), increased rates on average by 17% per year through that time period (7.8% on a real basis net of inflation).

Effective Date	Rate Increase
April 1, 1974	20.6%
April 15, 1975	19.2%
April 1, 1976	19.8%
March 17, 1977	15.0%
February 1, 1978	14.9%
February 1, 1979	14.4%

Bipole III and Keeyask are adding approximately $500 million in net additional carrying and operating costs. Rates and domestic revenues must increase to recover the costs associated with these projects. While Manitoba Hydro has accelerated the proposed and indicative rate increases relative to previous plans, Manitoba Hydro continues to defer a portion of the additional annual carrying and operating costs of Bipole III and Keeyask by virtue of the fact that MH is not fully recovering its annual costs in the year they are incurred. If Manitoba Hydro were to fully recover its costs in each and every year, the one-time rate increase necessary would be in excess of 20% and necessary rate adjustments thereafter would be volatile. Even with 7.9% rate increases, Manitoba Hydro continues to smooth rates for customers in order to absorb the shock of rates that would otherwise be required to cover all of its costs in each year.

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PUB MFR 58
Finance Expense-Debt Levels

A schedule detailing the maturities of MH's current long-term debt issues. [Attachment 40, 2016/17 Interim Application]

Please see **Table 1** below for the following long term debt maturity schedule as at March 31, 2017 for each debt series, identifying the currency for both interest and principal payments. This schedule excludes short term debt, which by definition have a term to maturity at issuance of less than one year.

The Maturity Dates in the third column from the left conform to the Corporation's financial statement presentation, which in accordance with accounting standards specify the most outward obligation dates on any debt series (the latter of physical debt or forward interest rate swap maturity dates).

The Action Dates in the fourth column from the left identify the maturities of the physical debt. Therefore, in cases where the maturity of underlying physical debt is before the linked forward interest rate swap for a debt series, a refinancing of the underlying physical debt will be required on the date highlighted in brown on the schedule.

The coupon rates (rounded to three decimal places for this schedule) identify the gross interest rates for each debt issue in its specified currency. The yield rates (rounded to three decimal places) conform to the Corporation's financial statement presentation, which in accordance with accounting standards show the effective all-in interest rate over the entire term of the debt issue (each debt issue in its specified currency). As floating rate debt will be subject to periodic interest rate resetting, the yield rate calculation for floating rate debt combines actual interest rates to the balance sheet date plus forecasted interest rates for the reminder of the time to the maturity date (utilizing the Corporation's forecasted interest rates for the variable component of the coupon payments).

The principal amounts are shown at par, with US dollar debt principal translated to CAD using the USD/CAD exchange rate on the balance sheet date.

Table 1. Long-Term Debt Maturity Schedule

MANITOBA HYDRO
Long Term Debt Maturity Schedule with Action and Swap Dates
At Mar 31, 2017
(in millions $; with USD/ CAD of 1.3322 at March 31, 2017)

Underlying physical debt matures before linked swap

Debt Series	Currency (Int/ Princ)	Maturity Date	Action Date	Coupon Rate	Yield Rate	Principal (CAD)	Principal (USD)	Total Principal (CAD)
C-011	CAD/ CAD	09/22/17	09/22/17	7.525 %	7.490 %	55.5		55.5
4L	CAD/ CAD	11/17/17	11/17/17	6.250 %	6.250 %	20.0		20.0
BM	CAD/ CAD	01/15/18	01/15/18	3 BA + 3.290 %	6.543 %	255.0		255.0
C132	CAD/ CAD	04/02/18	04/02/18	7.515 %	6.670 %	200.0		200.0
HB12-5FX	CAD/ CAD	06/15/18	06/15/18	1.750 %	1.940 %	0.7		0.7
HB12-5FL	CAD/ CAD	06/15/18	06/15/18	1.100 %	1.583 %	6.0		6.0
GD	CAD/ CAD	09/05/18	09/05/18	1.850 %	1.954 %	100.0		100.0
GD-1	CAD/ CAD	09/05/18	09/05/18	3 BA + 0.253 %	1.722 %	100.0		100.0
GD-2	CAD/ CAD	09/05/18	09/05/18	3 BA + 0.253 %	1.726 %	100.0		100.0
EE	USD/ CAD	09/14/18	09/14/18	9.500 %	10.092 %	228.4		228.4
BU-1	USD/ CAD	12/03/18	12/03/18	9.625 %	10.540 %	87.1		87.1
BU-2	USD/ CAD	12/03/18	12/03/18	9.625 %	10.540 %	43.5		43.5
BU-3	USD/ CAD	12/03/18	12/03/18	9.625 %	10.538 %	43.4		43.4
BU-4	USD/ CAD	12/03/18	12/03/18	9.625 %	10.527 %	28.4		28.4
BU-5	USD/ CAD	12/03/18	12/03/18	9.625 %	10.532 %	59.8		59.8
3V	CAD/ CAD	12/30/18	12/30/18	10.000 %	10.000 %	3.5		3.5
3W	CAD/ CAD	12/30/18	12/30/18	10.000 %	10.000 %	1.0		1.0
GQ-3	CAD/ CAD	11/21/19	11/21/19	3BA + 0.130%	1.392 %	24.2		24.2
CO77-2	CAD/ CAD	02/11/20	02/11/20	6.927 %	4.569 %	100.0		100.0
CO77-3	CAD/ CAD	02/11/20	02/11/20	6.927 %	2.984 %	50.0		50.0
GE-1	USD/ USD	03/15/20	06/01/18	5.853 %	5.853 %		150.0	199.8
C138-A	CAD/ CAD	05/15/20	05/15/20	7.312 %	4.548 %	100.0		100.0
C138-B	CAD/ CAD	05/15/20	05/15/20	7.443 %	4.628 %	100.0		100.0
FP-2	CAD/ CAD	06/03/20	06/03/20	4.150 %	4.244 %	125.0		125.0
FP-3	CAD/ CAD	06/03/20	06/03/20	4.150 %	3.469 %	250.0		250.0
GE-2	USD/ USD	10/02/20	06/01/18	6.901 %	6.901 %		203.1	270.5
GE-3	USD/ USD	10/02/20	06/01/18	6.901 %	6.901 %		47.0	62.5
GM	CAD/ CAD	11/30/20	11/30/20	1.773 %	1.773 %	400.4		400.4
GO-2	CAD/ CAD	09/05/21	09/05/21	1.550 %	1.644 %	250.0		250.0
CO	USD/ USD	09/15/21	09/15/21	8.875 %	8.996 %		300.0	399.7
4A	CAD/ CAD	12/31/21	12/31/21	9.100 %	9.100 %	3.5		3.5
GQ-1	USD/ USD	02/01/22	11/21/19	6.484 %	6.484 %		350.0	466.3
GP	CAD/ CAD	06/22/26	06/22/26	2.254 %	2.254 %	257.1		257.1
GC	CAD/ CAD	09/06/22	09/06/22	3 BA + 0.499 %	1.950 %	296.4		296.4
GQ-2	USD/ USD	09/16/22	11/21/19	2.012 %	2.012 %		150.0	199.8
GF	CAD/ CAD	06/02/23	06/02/23	2.550 %	3.398 %	300.0		300.0
GH	CAD/ CAD	06/02/24	06/02/24	3.300 %	2.825 %	300.0		300.0
5C-1	CAD/ CAD	12/31/24	12/31/24	3.723 %	3.723 %	10.0		10.0
C140	CAD/ CAD	03/03/25	03/03/25	2.916 %	2.916 %	101.6		101.6
GJ-3	CAD/ CAD	06/02/25	06/02/25	2.450 %	2.549 %	150.0		150.0
GJ-4	CAD/ CAD	06/02/25	06/02/25	2.450 %	2.539 %	150.0		150.0
C119-2	CAD/ CAD	09/05/25	09/05/25	3 BA + 0.425 %	2.077 %	150.0		150.0
DT	CAD/ CAD	12/22/25	12/22/25	7.750 %	7.952 %	170.0		170.0
DT-2	USD/ CAD	12/22/25	12/22/25	7.750 %	7.287 %	130.0		130.0
GN	CAD/ CAD	06/02/26	06/02/26	2.550 %	2.643 %	150.0		150.0
GN-3	CAD/ CAD	06/02/26	06/02/26	2.550 %	2.206 %	500.0		500.0
GN-4	CAD/ CAD	06/02/26	06/02/26	2.550 %	2.580 %	150.0		150.0
C145-4	CAD/ CAD	06/09/26	06/09/26	1.918 %	1.918 %	70.7		70.7
C145-5	CAD/ CAD	06/09/26	06/09/26	2.014 %	2.014 %	50.1		50.1
GS	CAD/ CAD	06/02/27	06/02/27	2.600 %	2.687 %	150.0		150.0
4N	CAD/ CAD	02/02/29	02/02/29	5.900 %	5.900 %	30.0		30.0
4M	CAD/ CAD	02/02/29	02/02/29	5.900 %	5.900 %	30.0		30.0
C119-1	CAD/ CAD	09/01/29	09/05/25	6.575 %	6.575 %	100.0		100.0
5C-2	CAD/ CAD	12/31/29	12/31/29	4.049 %	4.049 %	10.0		10.0
CL	CAD/ CAD	03/05/31	03/05/31	10.500 %	10.796 %	300.0		300.0
CLW	CAD/ CAD	03/05/31	03/05/31	10.500 %	10.581 %	299.9		299.9
C116	CAD/ CAD	03/05/31	03/05/31	6.300 %	4.650 %	100.0		100.0
C148	CAD/ CAD	03/24/31	03/24/31	2.966 %	2.966 %	95.8		95.8
4B	CAD/ CAD	04/01/31	04/01/31	5.840 %	7.585 %	3.9		3.9
4C	CAD/ CAD	04/01/31	04/01/31	5.840 %	5.840 %	1.4		1.4
4Y	CAD/ CAD	05/01/31	05/01/31	5.650 %	7.401 %	4.7		4.7
CO52	CAD/ CAD	10/29/32	10/29/32	6.300 %	5.730 %	30.0		30.0
5C-3	CAD/ CAD	12/31/34	12/31/34	4.245 %	4.245 %	10.0		10.0
FP-1	CAD/ CAD	04/12/35	06/03/20	5.754 %	5.196 %	175.0		175.0
C135	CAD/ CAD	12/03/35	04/02/19	4.801 %	4.801 %	100.0		100.0
FA-1	CAD/ CAD	03/05/37	03/05/37	6.211 %	5.054 %	25.0		25.0
FA-2	CAD/ CAD	03/05/37	03/05/37	6.311 %	5.092 %	75.0		75.0
FA-3	CAD/ CAD	03/05/37	03/05/37	6.266 %	5.075 %	50.0		50.0
FA-4	CAD/ CAD	03/05/37	03/05/37	4.505 %	4.505 %	50.0		50.0

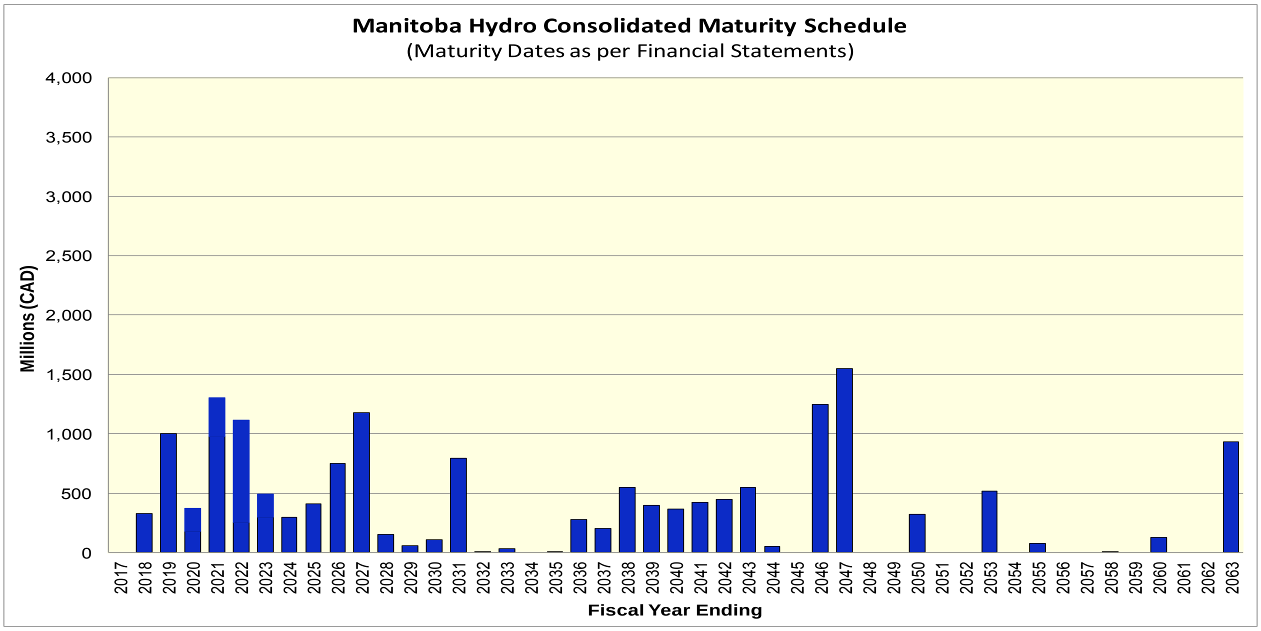
MANITOBA HYDRO
Long Term Debt Maturity Schedule with Action and Swap Dates
At Mar 31, 2017
(in millions $; with USD/ CAD of 1.3322 at March 31, 2017)

Underlying physical debt matures before linked swap

Debt Series	Currency (Int/ Princ)	Maturity Date	Action Date	Coupon Rate	Yield Rate	Principal (CAD)	Principal (USD)	Total Principal (CAD)
FJ	CAD/ CAD	09/12/37	09/22/17	5.104 %	5.104 %	250.0		250.0
PB-2	CAD/ CAD	03/05/38	03/05/38	4.600 %	4.759 %	300.0		300.0
C132-2A	CAD/ CAD	11/01/38	04/02/18	4.997 %	4.997 %	85.0		85.0
C132-2B	CAD/ CAD	11/01/38	04/02/18	4.927 %	4.927 %	19.0		19.0
C136-3	CAD/ CAD	11/01/38	09/05/29	5.058 %	5.058 %	31.0		31.0
C138-2	CAD/ CAD	11/01/38	05/15/20	4.897 %	4.897 %	50.0		50.0
C119-3C	CAD/ CAD	12/01/38	09/05/25	5.245 %	5.245 %	15.0		15.0
C119-3A	CAD/ CAD	12/01/38	09/05/25	5.245 %	5.245 %	50.0		50.0
C119-3B	CAD/ CAD	12/01/38	09/05/25	5.232 %	5.232 %	50.0		50.0
C136	CAD/ CAD	03/01/39	09/05/29	5.020 %	5.020 %	50.0		50.0
C136-2	CAD/ CAD	03/01/39	09/05/29	4.882 %	4.882 %	50.0		50.0
C154	CAD/ CAD	06/25/39	06/25/39	2.752 %	2.752 %	58.6		58.6
5C-4	CAD/ CAD	12/31/39	12/31/39	4.311 %	4.311 %	10.0		10.0
FK-2	CAD/ CAD	03/05/40	03/05/40	4.650 %	5.174 %	300.0		300.0
FR-2	CAD/ CAD	03/05/41	03/05/41	4.100 %	4.599 %	250.0		250.0
FR-3	CAD/ CAD	03/05/41	03/05/41	4.100 %	3.215 %	175.0		175.0
CO40	CAD/ CAD	03/05/42	03/05/42	3 BA + 0.179 %	2.927 %	50.0		50.0
FT	CAD/ CAD	03/05/42	03/05/42	4.492 %	4.492 %	400.0		400.0
GA	CAD/ CAD	03/05/43	03/05/43	3.350 %	3.413 %	300.0		300.0
GA-2	CAD/ CAD	03/05/43	03/05/43	3.350 %	4.311 %	250.0		250.0
CO68	CAD/ CAD	03/05/44	03/05/44	7.037 %	3.923 %	50.0		50.0
GG	CAD/ CAD	09/05/45	09/05/45	4.050 %	4.096 %	300.0		300.0
GG-2	CAD/ CAD	09/05/45	09/05/45	4.050 %	3.819 %	250.0		250.0
GG-3	CAD/ CAD	09/05/45	09/05/45	4.050 %	3.642 %	300.0		300.0
GG-4	CAD/ CAD	09/05/45	09/05/45	4.050 %	3.589 %	400.0		400.0
C152	CAD/ CAD	08/08/46	08/08/46	2.778 %	2.778 %	50.8		50.8
C153	CAD/ CAD	08/30/46	08/30/46	2.801 %	2.801 %	76.3		76.3
GK	CAD/ CAD	09/05/46	09/05/46	2.850 %	2.902 %	300.0		300.0
GK-2	CAD/ CAD	09/05/46	09/05/46	2.850 %	2.898 %	300.0		300.0
GK-3	CAD/ CAD	09/05/46	09/05/46	2.850 %	3.227 %	150.0		150.0
GK-4	CAD/ CAD	09/05/46	09/05/46	2.850 %	3.526 %	300.0		300.0
GK-5	CAD/ CAD	09/05/46	09/05/46	2.850 %	3.440 %	225.0		225.0
GK-6	CAD/ CAD	09/05/46	09/05/46	2.850 %	3.275 %	150.0		150.0
FN	CAD/ CAD	03/05/50	03/05/50	4.700 %	4.726 %	200.0		200.0
FN-2	CAD/ CAD	03/05/50	03/05/50	4.700 %	3.629 %	75.0		75.0
FN-3	CAD/ CAD	03/05/50	03/05/50	4.700 %	3.281 %	50.0		50.0
C129	CAD/ CAD	09/05/52	09/05/52	3.150 %	3.178 %	50.0		50.0
C129-2	CAD/ CAD	09/05/52	09/05/52	3.150 %	3.918 %	55.0		55.0
C129-3	CAD/ CAD	09/05/52	09/05/52	3.150 %	4.065 %	50.0		50.0
C129-4	CAD/ CAD	09/05/52	09/05/52	3.150 %	4.099 %	50.0		50.0
C129-5	CAD/ CAD	09/05/52	09/05/52	3.150 %	4.087 %	50.0		50.0
C129-6	CAD/ CAD	09/05/52	09/05/52	3.150 %	3.906 %	50.0		50.0
C129-7	CAD/ CAD	09/05/52	09/05/52	3.150 %	3.915 %	20.0		20.0
C129-8	CAD/ CAD	09/05/52	09/05/52	3.150 %	3.895 %	20.0		20.0
C129-9	CAD/ CAD	09/05/52	09/05/52	3.150 %	3.858 %	60.0		60.0
C129-10	CAD/ CAD	09/05/52	09/05/52	3.150 %	3.786 %	50.0		50.0
C129-11	CAD/ CAD	09/05/52	09/05/52	3.150 %	3.702 %	25.0		25.0
C129-12	CAD/ CAD	09/05/52	09/05/52	3.150 %	3.699 %	40.0		40.0
C139	CAD/ CAD	09/05/54	09/05/54	3.650 %	3.666 %	50.0		50.0
C139-2	CAD/ CAD	09/05/54	09/05/54	3.650 %	3.625 %	25.0		25.0
4Z	CAD/ CAD	06/09/57	06/09/57	7.100 %	7.100 %	7.0		7.0
C110	CAD/ CAD	03/05/60	03/05/60	5.200 %	4.629 %	125.0		125.0
C109	CAD/ CAD	03/05/63	03/05/63	4.625 %	4.638 %	50.0		50.0
C109-5	CAD/ CAD	03/05/63	03/05/63	4.625 %	3.597 %	50.0		50.0
C109-6	CAD/ CAD	03/05/63	03/05/63	4.625 %	3.555 %	50.0		50.0
C109-7	CAD/ CAD	03/05/63	03/05/63	4.625 %	3.506 %	50.0		50.0
C137	CAD/ CAD	03/05/63	03/05/63	3.450 %	3.496 %	50.0		50.0
C137-2	CAD/ CAD	03/05/63	03/05/63	3.450 %	3.887 %	25.0		25.0
C137-3	CAD/ CAD	03/05/63	03/05/63	3.450 %	4.019 %	37.0		37.0
C137-4	CAD/ CAD	03/05/63	03/05/63	3.450 %	3.868 %	60.0		60.0
C137-5	CAD/ CAD	03/05/63	03/05/63	3.450 %	3.354 %	50.0		50.0
C137-6	CAD/ CAD	03/05/63	03/05/63	3.450 %	3.378 %	62.0		62.0
C137-7	CAD/ CAD	03/05/63	03/05/63	3.450 %	3.502 %	75.0		75.0
C137-8	CAD/ CAD	03/05/63	03/05/63	3.450 %	3.232 %	50.0		50.0
C137-9	CAD/ CAD	03/05/63	03/05/63	3.450 %	2.835 %	25.0		25.0
C137-10	CAD/ CAD	03/05/63	03/05/63	3.450 %	2.854 %	100.0		100.0
C137-11	CAD/ CAD	03/05/63	03/05/63	3.450 %	3.457 %	100.0		100.0
C137-12	CAD/ CAD	03/05/63	03/05/63	3.450 %	3.404 %	100.0		100.0
Total Long Term Debt						**14,893.6**	**1,200.0**	**16,492.3**

Note that some of the long term debt issues may be retired at their maturity. Manitoba Hydro will consider the availability of sinking fund withdrawals and surplus cash to reduce the required refinancing of maturing debt.

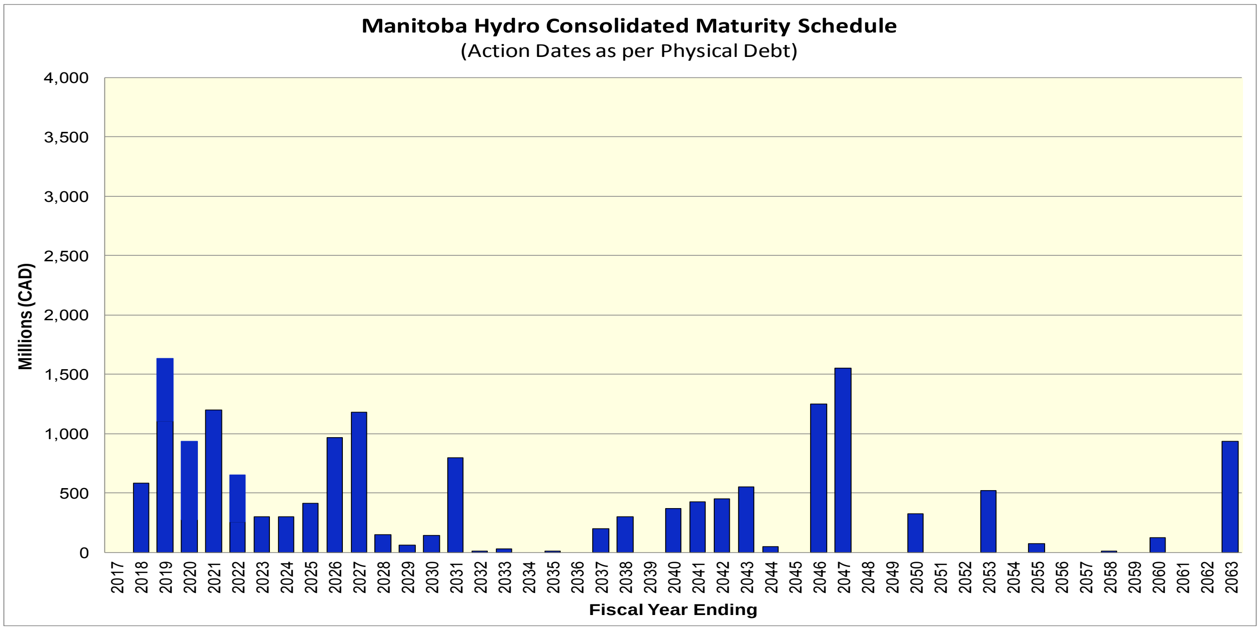
Figure 1. Consolidated Maturity Schedule – Maturity Dates



The Corporation's interest rate risk policy and guidelines consider debt maturities on a 12 month forward basis. For ease of comparison, **Figure 1** above depicts the volume of financial statement debt maturities ("Maturity Dates") within each fiscal year.

Figure 2 depicts the volume of physical debt maturities ("Action Dates") within each fiscal year.

Figure 2 Consolidated Maturity Schedule – Action Dates



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345

REFERENCE:

Coalition/MH I-96(d)

PREAMBLE TO IR (IF ANY):

QUESTION:

Please provide versions of PUB MFR 55 & 56 based on Appendix 3.4 and Appendix 3.7 scenario 3 and provide commentary on changes in finance expense and assumed debt retirements with that provided in response to Coalition/MH I-96 (d).

RATIONALE FOR QUESTION:

RESPONSE:

As noted in the response to PUB/MH II-21, Manitoba Hydro's financial plan reflects a goal to return to its target 25% equity to capitalization ratio in 10 years. The focus of the Corporation's application is on the next 10 years of forecast financial results through 2026/27. 20 year financial forecasts have been provided in response to Minimum Filing Requirements and Information Requests such as herein. The 20 year forecasts provided to date have essentially reflected a simplifying assumption that domestic rates and operating costs increase at 2% per annum as a proxy for inflation. Manitoba Hydro believes limited value should be ascribed to forecasts a decade or more in the future. The potential for volatility in key assumptions, many of which are beyond Manitoba Hydro's ability to control, reduces the second half of a 20 year forecast to little more than a hypothetical modeling exercise. Manitoba Hydro spoke to the issues of such long-range forecasting in its response to Coalition/MH I-15. Moreover, as noted in PUB/MH II-21 and Coalition/MH II-6, proposed rate trajectories more than a decade from today will be a function of the then existent conditions and outlook for the Corporation and could be materially different than the inflationary rate increases assumed in the latter half of MH16 Update with Interim. The value of addressing Manitoba Hydro's unsustainable debt load proactively is the flexibility to provide more stable and, on a relative basis, lower rates in the long term regardless of unknowable future circumstances up to 20 years from now.

The scenario comparisons requested rely on debt levels and interest expense driven by a modeling exercise that sees Manitoba Hydro's equity ratio reaching 64% by 2036. The value of this analysis is limited given, as noted in PUB/MH I-42; Manitoba Hydro does not hold such equity levels as goals. The analysis does underscore the quantum of benefit from having taken steps to restore financial health over the next 10 years but Manitoba Hydro is not advocating using such forecast flexibility, should it come to pass, to over-capitalize its balance sheet. As Manitoba Hydro begins making progress toward its 10 year goal of a 25% equity level and its outlook for the years beyond 2026/27 clarifies, it will turn its attention to the appropriate rate strategy for the 2030s.

The following is a table comparing the change in long term debt levels in the period of 2024 to 2036 between Appendix 3.4 (IFF16 with IFF15 level rate increases) and MH16 Update with Interim (provided in Coalition/MH I-96 (d)).

Long Term Debt Comparison
Period 2024-2036
(in $ millions Canadian Dollars)

	2024 Opening LTD Balance	LTD Proceeds	LTD Maturities	2036 Closing LTD Balance	Debt Retirement
Appendix 3.4	25,049	14,450	17,622	21,914	3,135
IFF16 Update with Interim	24,433	6,250	16,549	14,099	10,334
Increase/ (Decrease)	616	8,200	1,073	7,815	(7,199)

At the beginning of fiscal year 2024, the long term debt balances in both scenarios are quite similar with the benefit of higher rate increases under MH16 Update with Interim reducing forecast debt in 2024 as compared to Appendix 3.4. Cash flow from higher rates more than offsets debt growth that is a consequence of a deteriorated outlook for load growth and export price appreciation under MH16 Update with Interim as compared to the assumptions in the Appendix 3.4 scenario. However, the lower rate increases in the Appendix 3.4 scenario generate a cash requirement to borrow an additional $8.2 billion of long term debt after 2024 to refinance maturing long term debt (Increase in LTD Proceeds). The compounding effect of higher rate increases in MH16 Update with Interim results in additional cash that can be made available for debt retirement. Assuming this cash is used for debt retirement, MH16 Update with Interim will retire approximately $10.3 billion of long term debt during the period of 2024 to 2036 (2024 Opening LTD Balance - 2036 Closing

LTD Balance). The Appendix 3.4 scenario will retire only $3.1 billion of debt during this period. IFF15 level rate increases result in a significant decrease in the amount of debt retirement as compared to MH16 Update with Interim (approximately $7.2 billion less).

The following is a table comparing the change in long term debt levels in the period of 2024 to 2036 between Appendix 3.7 (MH16 Update with Interim with 7.90% for 2019-2022 and 2% thereafter) and MH16 Update with Interim.

Long Term Debt Comparison
Period 2024-2036
(in $ millions Canadian Dollars)

	2024 Opening LTD Balance	LTD Proceeds	LTD Maturities	2036 Closing LTD Balance	Debt Retirement
Appendix 3.7 Scenario 3	24,628	12,650	16,767	20,466	4,162
IFF16 Update with Interim	24,433	6,250	16,549	14,099	10,334
Increase/ (Decrease)	195	6,400	218	6,367	(6,172)

At the beginning of fiscal year 2024, the long term debt balances in both scenarios are quite similar due to the limited differences in rate increase profile between 2018 and 2024. However, the compounding effect of lower rate increases in the Appendix 3.7 scenario 3 in the 2023-2025 time frame generate a cash requirement to borrow an additional $6.4 billion of long term debt to refinance maturing long term debt (Increase in LTD Proceeds). The compounding effect of higher rate increases in MH16 Update with Interim results in additional cash that can be made available for debt retirement. Assuming this cash is used for debt retirement, MH16 Update with Interim will retire approximately $10.3 billion of long term debt during the period of 2024 to 2036 (2024 Opening LTD Balance - 2036 Closing LTD Balance). The Appendix 3.7 scenario 3 will retire only $4.1 billion of debt during this period. In order to meet the debt/equity target in a 10 year timeframe, MH16 Update with Interim required additional rate increases of 7.90% in 2023 and 2024 and a 4.54% rate increase in 2025 to make up for the loss of compounding resulting from the lower interim rate increase granted of 3.36% versus the requested 7.90% in 2018. The loss of rate increase compounding in the Appendix 3.7 scenario 3 results in a significant decrease in the amount of debt retirement as compared to MH16 Update with Interim (approximately $6.2 billion less). The impact of the lower interim rate increase of 3.36% is quite significant and highlights the importance of Manitoba Hydro securing its requested rate increases in this GRA.

Following is a table comparing the change in finance expense in the period of 2024 to 2036 between Appendix 3.4 and MH16 Update with Interim.

Finance Expense Comparison
Period 2024-2036
(in $ millions Canadian Dollars)

	Cumulative Gross Interest	Cumulative PGF
Appendix 3.4	11,617	3,004
Interest Rate for New LTD - 4.10%		
IFF16 Update with Interim	9,931	2,540
Interest Rate for New LTD - 4.45%		
Difference	1,686	464

In the period of 2024 to 2036 there are significant increases in both the cumulative gross interest and PGF amounts in Appendix 3.4 as compared to MH16 Update with Interim. This is due to the fact that in Appendix 3.4, Manitoba Hydro has higher long term debt balances resulting from the need to refinance more long term debt maturities during this period. Less cash is available to for debt retirement in Appendix 3.4 as this scenario has lower rate increases as compared to MH16 Update with Interim. The increase in cumulative gross interest due to lower rate increases is actually higher than shown in the above table as this volume variance is offset by lower forecast interest rates for new long term debt issuance. Appendix 3.4 assumed new Canadian long term debt was issued at 4.10% versus 4.45% in MH16 Update with Interim.

Following is a table comparing the change in finance expense in the period of 2024 to 2036 between Appendix 3.7 scenario 3 and MH16 Update with Interim.

Finance Expense Comparison
Period 2024-2036
(in $ millions Canadian Dollars)

	Cumulative Gross Interest	Cumulative PGF
Appendix 3.7 Scenario 3 Interest Rate for New LTD - 4.45%	11,422	2,859
IFF16 Update with Interim Interest Rate for New LTD - 4.45%	9,931	2,540
Difference	1,491	319

In the period of 2024 to 2036 there are significant increases in both the cumulative gross interest and PGF amounts in Appendix 3.7 scenario 3 as compared to MH16 Update with Interim. This is due to the fact that in Appendix 3.4 Manitoba Hydro has higher long term debt balances resulting from the need to refinance more long term debt maturities during this period. Less cash is available to for debt retirement in Appendix 3.7 scenario 3 as there are lower rate increases as compared to MH16 Update with Interim.

Following are versions of PUB MFR 56 and PUB MFR 55 based on Appendix 3.4 and Appendix 3.7 scenario 3.

Finance Expense - Debt Levels MFR56

MANITOBA HYDRO
Continunity Schedule
Consolidated Short and Long Term Debt

Forecast as per IFF16 with IFF15 Level Rate Increases (Appendix 3.4)
(in $ millions Canadian Dollars)

Long Term Debt	**Actual 2004**	**Actual 2005**	**Actual 2006**	**Actual 2007**	**Actual 2008**	**Actual 2009**	**Actual 2010**	**Actual 2011**	**Actual 2012**	**Actual 2013**	**Actual 2014**	**Actual 2015**	**Actual 2016**	**Actual 2017**	**Forecast 2018**	**Forecast 2019**
Opening Balance	7,268	7,390	7,204	7,169	7,227	7,571	8,187	8,538	8,647	9,382	9,985	10,868	12,680	14,527	16,438	19,539
Long Term Debt Proceeds	1,013	300	180	173	981	423	1,425	915	698	807	1,320	2,210	2,165	2,163	3,500	3,600
Long Term Debt Matured	(473)	(241)	(111)	(80)	(311)	(366)	(452)	(723)	(25)	(242)	(613)	(654)	(362)	(320)	(330)	(1,002)
Carrying Value Adjustments*	(418)	(245)	(104)	(35)	(327)	559	(622)	(83)	62	38	176	256	44	68	(68)	(36)
Closing Balance	**7,390**	**7,204**	**7,169**	**7,227**	**7,571**	**8,187**	**8,538**	**8,647**	**9,382**	**9,985**	**10,868**	**12,680**	**14,527**	**16,438**	**19,539**	**22,101**

* Carrying Value Adjustments include changes in in the value of US dollar denominated debt upon conversion to CAD, as well as changes to the portfolio carrying value for transaction costs, premiums/ discounts, and dual currency bonds.

Short Term Debt	**Actual 2004**	**Actual 2005**	**Actual 2006**	**Actual 2007**	**Actual 2008**	**Actual 2009**	**Actual 2010**	**Actual 2011**	**Actual 2012**	**Actual 2013**	**Actual 2014**	**Actual 2015**	**Actual 2016**	**Forecast 2017**	**Forecast 2018**	**Forecast 2019**
Opening Balance	128	93	59	-	148	-	100	-	-	-	-	-	-	-	-	-
Increase (Decrease)	(35)	(34)	(59)	148	(148)	100	(100)	-	-	-	-	-	-	-	-	-
Closing Balance	**93**	**59**	**-**	**148**	**-**	**100**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

Total Debt	**Actual 2004**	**Actual 2005**	**Actual 2006**	**Actual 2007**	**Actual 2008**	**Actual 2009**	**Actual 2010**	**Actual 2011**	**Actual 2012**	**Actual 2013**	**Actual 2014**	**Actual 2015**	**Actual 2016**	**Forecast 2017**	**Forecast 2018**	**Forecast 2019**
Long Term Debt	7,390	7,204	7,169	7,227	7,571	8,187	8,538	8,647	9,382	9,985	10,868	12,680	14,527	16,438	19,539	22,101
Short Term Debt	93	59		148	-	100	-	-	-	-	-	-	-	-	-	-
Total Debt	**7,483**	**7,263**	**7,169**	**7,375**	**7,571**	**8,287**	**8,538**	**8,647**	**9,382**	**9,985**	**10,868**	**12,680**	**14,527**	**16,438**	**19,539**	**22,101**
Proportion of Short Term Debt to Total Debt	1%	1%	0%	2%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Consolidated Debt Ratio	87%	85%	81%	80%	73%	77%	73%	73%	74%	75%	76%	82%	83%	84%	85%	86%

Finance Expense - Debt Levels MFR56

MANITOBA HYDRO
Continunity Schedule
Consolidated Short and Long Term Debt

Forecast as per IFF16 with IFF15 Level Rate Increases (Appendix 3.4)
(in $ millions Canadian Dollars)

Long Term Debt	**Forecast 2020**	**Forecast 2021**	**Forecast 2022**	**Forecast 2023**	**Forecast 2024**	**Forecast 2025**	**Forecast 2026**	**Forecast 2027**	**Forecast 2028**	**Forecast 2029**	**Forecast 2030**	**Forecast 2031**	**Forecast 2032**	**Forecast 2033**	**Forecast 2034**	**Forecast 2035**	**Forecast 2036**
Opening Balance	22,101	23,897	24,623	24,766	25,049	24,951	24,941	24,793	24,617	24,669	24,612	23,955	23,362	23,153	22,357	21,991	21,985
Long Term Debt Proceeds	2,200	2,000	1,200	800	200	400	600	1,000	200	-	3,050	3,800	2,000	1,200	800	800	400
Long Term Debt Matured	(356)	(1,278)	(1,020)	(469)	(300)	(412)	(750)	(1,178)	(150)	(60)	(3,710)	(4,396)	(2,212)	(2,000)	(1,169)	(810)	(475)
Carrying Value Adjustments*	(48)	3	(36)	(48)	1	2	2	2	2	3	3	3	3	4	4	4	4
Closing Balance	**23,897**	**24,623**	**24,766**	**25,049**	**24,951**	**24,941**	**24,793**	**24,617**	**24,669**	**24,612**	**23,955**	**23,362**	**23,153**	**22,357**	**21,991**	**21,985**	**21,914**

* Carrying Value Adjustments include changes in in the value of US dollar denominated debt upon conversion to CAD, as well as changes to the portfolio carrying value for transaction costs, premiums/ discounts, and dual currency bonds.

Short Term Debt	**Forecast 2020**	**Forecast 2021**	**Forecast 2022**	**Forecast 2023**	**Forecast 2024**	**Forecast 2025**	**Forecast 2026**	**Forecast 2027**	**Forecast 2028**	**Forecast 2029**	**Forecast 2030**	**Forecast 2031**	**Forecast 2032**	**Forecast 2033**	**Forecast 2034**	**Forecast 2035**	**Forecast 2036**
Opening Balance	-	-	-	-	-	-	-	58	49	-	-	62	56	13	192	113	-
Increase (Decrease)	-	-	-	-	-	-	58	(9)	(49)	-	62	(7)	(43)	179	(78)	(113)	-
Closing Balance	**-**	**-**	**-**	**-**	**-**	**-**	**58**	**49**	**-**	**-**	**62**	**56**	**13**	**192**	**113**	**-**	**-**

Total Debt	**Forecast 2020**	**Forecast 2021**	**Forecast 2022**	**Forecast 2023**	**Forecast 2024**	**Forecast 2025**	**Forecast 2026**	**Forecast 2027**	**Forecast 2028**	**Forecast 2029**	**Forecast 2030**	**Forecast 2031**	**Forecast 2032**	**Forecast 2033**	**Forecast 2034**	**Forecast 2035**	**Forecast 2036**
Long Term Debt	23,897	24,623	24,766	25,049	24,951	24,941	24,793	24,617	24,669	24,612	23,955	23,362	23,153	22,357	21,991	21,985	21,914
Short Term Debt	-	-	-	-	-	-	58	49	-	-	62	56	13	192	113	-	-
Total Debt	**23,897**	**24,623**	**24,766**	**25,049**	**24,951**	**24,941**	**24,850**	**24,666**	**24,669**	**24,612**	**24,017**	**23,417**	**23,166**	**22,548**	**22,104**	**21,985**	**21,914**
Proportion of Short Term Debt to Total Debt	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	1%	0%	0%
Consolidated Debt Ratio	86%	86%	86%	86%	86%	86%	86%	85%	85%	84%	82%	81%	79%	77%	74%	71%	68%

Finance Expense - Debt Levels MFR56

MANITOBA HYDRO
Continunity Schedule
Consolidated Short and Long Term Debt

Forecast as per MH16 Update Scenario 3 (Appendix 3.7)
(in $ millions Canadian Dollars)

Long Term Debt	**Actual 2004**	**Actual 2005**	**Actual 2006**	**Actual 2007**	**Actual 2008**	**Actual 2009**	**Actual 2010**	**Actual 2011**	**Actual 2012**	**Actual 2013**	**Actual 2014**	**Actual 2015**	**Actual 2016**	**Actual 2017**	**Forecast 2018**	**Forecast 2019**
Opening Balance	7,268	7,390	7,204	7,169	7,227	7,571	8,187	8,538	8,647	9,382	9,985	10,868	12,680	14,527	16,438	19,561
Long Term Debt Proceeds	1,013	300	180	173	981	423	1,425	915	698	807	1,320	2,210	2,165	2,163	3,433	3,600
Long Term Debt Matured	(473)	(241)	(111)	(80)	(311)	(366)	(452)	(723)	(25)	(242)	(613)	(654)	(362)	(320)	(330)	(1,002)
Carrying Value Adjustments*	(418)	(245)	(104)	(35)	(327)	559	(622)	(83)	62	38	176	256	44	68	20	(37)
Closing Balance	**7,390**	**7,204**	**7,169**	**7,227**	**7,571**	**8,187**	**8,538**	**8,647**	**9,382**	**9,985**	**10,868**	**12,680**	**14,527**	**16,438**	**19,561**	**22,123**

* Carrying Value Adjustments include changes in in the value of US dollar denominated debt upon conversion to CAD, as well as changes to the portfolio carrying value for transaction costs, premiums/ discounts, and dual currency bonds.

Short Term Debt	**Actual 2004**	**Actual 2005**	**Actual 2006**	**Actual 2007**	**Actual 2008**	**Actual 2009**	**Actual 2010**	**Actual 2011**	**Actual 2012**	**Actual 2013**	**Actual 2014**	**Actual 2015**	**Actual 2016**	**Forecast 2017**	**Forecast 2018**	**Forecast 2019**
Opening Balance	128	93	59	-	148	-	100	-	-	-	-	-	-	-	-	-
Increase (Decrease)	(35)	(34)	(59)	148	(148)	100	(100)	-	-	-	-	-	-	-	-	-
Closing Balance	**93**	**59**	**-**	**148**	**-**	**100**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

Total Debt	**Actual 2004**	**Actual 2005**	**Actual 2006**	**Actual 2007**	**Actual 2008**	**Actual 2009**	**Actual 2010**	**Actual 2011**	**Actual 2012**	**Actual 2013**	**Actual 2014**	**Actual 2015**	**Actual 2016**	**Forecast 2017**	**Forecast 2018**	**Forecast 2019**
Long Term Debt	7,390	7,204	7,169	7,227	7,571	8,187	8,538	8,647	9,382	9,985	10,868	12,680	14,527	16,438	19,561	22,123
Short Term Debt	93	59		148	-	100	-	-	-	-	-	-	-	-	-	-
Total Debt	**7,483**	**7,263**	**7,169**	**7,375**	**7,571**	**8,287**	**8,538**	**8,647**	**9,382**	**9,985**	**10,868**	**12,680**	**14,527**	**16,438**	**19,561**	**22,123**
Proportion of Short Term Debt to Total Debt	1%	1%	0%	2%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Consolidated Debt Ratio	87%	85%	81%	80%	73%	77%	73%	73%	74%	75%	76%	82%	83%	84%	85%	85%

Finance Expense - Debt Levels MFR56

MANITOBA HYDRO
Continunity Schedule
Consolidated Short and Long Term Debt

Forecast as per MH16 Update Scenario 3 (Appendix 3.7)
(in $ millions Canadian Dollars)

Long Term Debt	Forecast 2020	Forecast 2021	Forecast 2022	Forecast 2023	Forecast 2024	Forecast 2025	Forecast 2026	Forecast 2027	Forecast 2028	Forecast 2029	Forecast 2030	Forecast 2031	Forecast 2032	Forecast 2033	Forecast 2034	Forecast 2035	Forecast 2036
Opening Balance	22,123	23,920	24,808	24,428	24,628	24,248	23,838	23,690	23,514	23,567	23,509	22,852	22,059	21,850	21,029	21,097	20,537
Long Term Debt Proceeds	2,200	2,200	1,000	1,400	-	-	600	1,000	200	-	1,850	3,600	2,000	1,400	1,000	800	200
Long Term Debt Matured	(369)	(1,293)	(1,366)	(1,161)	(300)	(412)	(750)	(1,178)	(150)	(60)	(2,510)	(4,396)	(2,213)	(2,225)	(936)	(1,364)	(275)
Carrying Value Adjustments*	(34)	(19)	(15)	(38)	(80)	2	2	2	2	3	3	3	3	4	4	4	4
Closing Balance	**23,920**	**24,808**	**24,428**	**24,628**	**24,248**	**23,838**	**23,690**	**23,514**	**23,567**	**23,509**	**22,852**	**22,059**	**21,850**	**21,029**	**21,097**	**20,537**	**20,466**

* Carrying Value Adjustments include changes in in the value of US dollar denominated debt upon conversion to CAD, as well as changes to the portfolio carrying value for transaction costs, premiums/ discounts, and dual currency bonds.

Short Term Debt	Forecast 2020	Forecast 2021	Forecast 2022	Forecast 2023	Forecast 2024	Forecast 2025	Forecast 2026	Forecast 2027	Forecast 2028	Forecast 2029	Forecast 2030	Forecast 2031	Forecast 2032	Forecast 2033	Forecast 2034	Forecast 2035	Forecast 2036
Opening Balance	-	-	-	-	-	12	42	-	-	-	-	-	27	-	105	-	-
Increase (Decrease)	-	-	-	-	12	30	(42)	-	-	-	-	27	(27)	105	(105)	-	-
Closing Balance	**-**	**-**	**-**	**-**	**12**	**42**	**-**	**-**	**-**	**-**	**-**	**27**	**-**	**105**	**-**	**-**	**-**

Total Debt	Forecast 2020	Forecast 2021	Forecast 2022	Forecast 2023	Forecast 2024	Forecast 2025	Forecast 2026	Forecast 2027	Forecast 2028	Forecast 2029	Forecast 2030	Forecast 2031	Forecast 2032	Forecast 2033	Forecast 2034	Forecast 2035	Forecast 2036
Long Term Debt	23,920	24,808	24,428	24,628	24,248	23,838	23,690	23,514	23,567	23,509	22,852	22,059	21,850	21,029	21,097	20,537	20,466
Short Term Debt	-	-	-	-	12	42	-	-	-	-	-	27	-	105	-	-	-
Total Debt	**23,920**	**24,808**	**24,428**	**24,628**	**24,260**	**23,880**	**23,690**	**23,514**	**23,567**	**23,509**	**22,852**	**22,087**	**21,850**	**21,134**	**21,097**	**20,537**	**20,466**
Proportion of Short Term Debt to Total Debt	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Consolidated Debt Ratio	85%	84%	83%	83%	82%	81%	81%	80%	79%	78%	77%	75%	73%	71%	68%	65%	62%

Finance Expense - MFR55

MANITOBA HYDRO
Summary of Total Finance Expense

Forecast as per IFF16 with IFF15 Level Rate Increases (Appendix 3.4)
(in $ millions Canadian Dollars)

	Actual 2012	Actual 2013	Actual 2014	Actual 2015	Actual 2016	Actual 2017	Forecast 2018	Forecast 2019	Forecast 2020	Forecast 2021	Forecast 2022	Forecast 2023	Forecast 2024
Interest on Short & Long Term Debt													
Gross Interest	490	515	528	569	645	707	758	782	835	872	900	905	908
Provincial Guarantee Fee	82	90	96	105	118	132	153	185	212	230	241	242	246
Amortization of (Premiums), Discounts, and Transaction Costs	0	0	2	2	2	2	1	1	1	3	3	2	(0)
Intercompany Interest Receivable	(17)	(19)	(19)	(14)	(14)	(14)	(15)	(16)	(16)	(17)	(18)	(18)	(19)
Total Interest on Short & Long Term Debt	**555**	**587**	**608**	**663**	**751**	**827**	**898**	**953**	**1,032**	**1,088**	**1,126**	**1,131**	**1,135**
Interest Allocated to Construction	**(167)**	**(138)**	**(140)**	**(145)**	**(176)**	**(247)**	**(353)**	**(313)**	**(315)**	**(329)**	**(289)**	**(55)**	**(19)**
Interest Earned on Sinking Fund	(10)	(10)	(24)	0	(0)	(0)	(1)	(7)	(13)	(13)	(12)	(2)	(2)
Realized Foreign Exchange (Gains) or Losses on Debt in Cash Flow Hedges	(0)	2	(19)	(6)	(6)	15	18	16	13	15	10	0	-
Revaluation of Dual Currency Bonds	3	3	2	1	1	1	1	1	1	1	2	2	2
Corporate Allocation	(19)	(19)	(19)	(19)	(18)	(18)	(18)	(18)	(18)	(18)	(18)	(18)	(18)
Other Amortization	24	27	28	20	31	30	30	31	31	50	46	48	47
Total Finance Expense	**385**	**452**	**435**	**515**	**582**	**608**	**574**	**664**	**731**	**794**	**864**	**1,105**	**1,144**

	Forecast 2025	Forecast 2026	Forecast 2027	Forecast 2028	Forecast 2029	Forecast 2030	Forecast 2031	Forecast 2032	Forecast 2033	Forecast 2034	Forecast 2035	Forecast 2036
Interest on Short & Long Term Debt												
Gross Interest	915	904	908	918	918	895	918	890	887	872	854	829
Provincial Guarantee Fee	246	244	243	239	238	235	229	226	222	217	211	208
Amortization of (Premiums), Discounts, and Transaction Costs	1	1	2	2	2	3	3	3	4	4	4	4
Intercompany Interest Receivable	(20)	(20)	(21)	(21)	(22)	(22)	(23)	(23)	(24)	(24)	(25)	(26)
Total Interest on Short & Long Term Debt	**1,142**	**1,129**	**1,132**	**1,138**	**1,136**	**1,111**	**1,127**	**1,097**	**1,089**	**1,069**	**1,044**	**1,016**
Interest Allocated to Construction	**(19)**	**(18)**	**(20)**	**(20)**	**(24)**	**(22)**	**(23)**	**(19)**	**(18)**	**(19)**	**(21)**	**(24)**
Interest Earned on Sinking Fund	(3)	(3)	(4)	(9)	(18)	(10)	(10)	(9)	(13)	(16)	(26)	(28)
Realized Foreign Exchange (Gains) or Losses on Debt in Cash Flow Hedges	-	-	-	-	-	-	-	-	-	-	-	-
Revaluation of Dual Currency Bonds	2	1	-	-	-	-	-	-	-	-	-	-
Corporate Allocation	(18)	(18)	(18)	(18)	(18)	(15)	(13)	(13)	(13)	(13)	(13)	(13)
Other Amortization	45	44	43	41	40	39	38	37	35	34	33	32
Total Finance Expense	**1,149**	**1,135**	**1,133**	**1,131**	**1,116**	**1,103**	**1,120**	**1,093**	**1,080**	**1,055**	**1,017**	**983**

Finance Expense - MFR55

MANITOBA HYDRO
Summary of Total Finance Expense

Forecast as per MH16 Update Scenario 3 (Appendix 3.7)
(in $ millions Canadian Dollars)

	Actual 2012	Actual 2013	Actual 2014	Actual 2015	Actual 2016	Actual 2017	Forecast 2018	Forecast 2019	Forecast 2020	Forecast 2021	Forecast 2022	Forecast 2023	Forecast 2024
Interest on Short & Long Term Debt													
Gross Interest	490	515	528	569	645	707	765	787	838	888	903	913	918
Provincial Guarantee Fee	82	90	96	105	118	132	154	186	212	230	239	238	241
Amortization of (Premiums), Discounts, and Transaction Costs	0	0	2	2	2	2	1	1	1	3	3	2	(0)
Intercompany Interest Receivable	(17)	(19)	(19)	(14)	(14)	(14)	(15)	(15)	(16)	(17)	(18)	(19)	(19)
Total Interest on Short & Long Term Debt	**555**	**587**	**608**	**663**	**751**	**827**	**906**	**960**	**1,035**	**1,104**	**1,127**	**1,134**	**1,140**
Interest Allocated to Construction	**(167)**	**(138)**	**(140)**	**(145)**	**(176)**	**(247)**	**(360)**	**(320)**	**(319)**	**(333)**	**(290)**	**(55)**	**(19)**
Interest Earned on Sinking Fund	(10)	(10)	(24)	0	(0)	(0)	(1)	(6)	(14)	(15)	(14)	(2)	(2)
Realized Foreign Exchange (Gains) or Losses on Debt in Cash Flow Hedges	(0)	2	(19)	(6)	(6)	15	27	28	28	29	29	9	-
Revaluation of Dual Currency Bonds	3	3	2	1	1	1	1	1	1	1	2	2	2
Corporate Allocation	(19)	(19)	(19)	(19)	(18)	(18)	(18)	(18)	(18)	(18)	(18)	(18)	(18)
Other Amortization	24	27	28	20	31	30	32	32	31	50	48	50	48
Total Finance Expense	**385**	**452**	**435**	**515**	**582**	**608**	**587**	**676**	**744**	**817**	**882**	**1,119**	**1,150**

	Forecast 2025	Forecast 2026	Forecast 2027	Forecast 2028	Forecast 2029	Forecast 2030	Forecast 2031	Forecast 2032	Forecast 2033	Forecast 2034	Forecast 2035	Forecast 2036
Interest on Short & Long Term Debt												
Gross Interest	909	893	900	907	906	888	899	862	863	849	827	801
Provincial Guarantee Fee	238	234	232	228	227	225	217	213	209	202	200	193
Amortization of (Premiums), Discounts, and Transaction Costs	1	1	2	2	2	3	3	3	4	4	4	4
Intercompany Interest Receivable	(20)	(21)	(22)	(22)	(23)	(23)	(24)	(24)	(25)	(25)	(26)	(27)
Total Interest on Short & Long Term Debt	**1,128**	**1,107**	**1,112**	**1,115**	**1,113**	**1,093**	**1,095**	**1,054**	**1,050**	**1,030**	**1,005**	**971**
Interest Allocated to Construction	**(19)**	**(18)**	**(20)**	**(20)**	**(24)**	**(22)**	**(23)**	**(19)**	**(18)**	**(19)**	**(21)**	**(24)**
Interest Earned on Sinking Fund	(4)	(3)	(5)	(9)	(18)	(21)	(20)	(10)	(19)	(20)	(30)	(32)
Realized Foreign Exchange (Gains) or Losses on Debt in Cash Flow Hedges	-	-	-	-	-	-	-	-	-	-	-	-
Revaluation of Dual Currency Bonds	2	1	-	-	-	-	-	-	-	-	-	-
Corporate Allocation	(18)	(18)	(18)	(18)	(18)	(16)	(14)	(14)	(14)	(14)	(14)	(14)
Other Amortization	46	44	43	42	40	39	38	37	35	34	33	32
Total Finance Expense	**1,135**	**1,113**	**1,112**	**1,108**	**1,093**	**1,073**	**1,077**	**1,049**	**1,035**	**1,012**	**973**	**934**