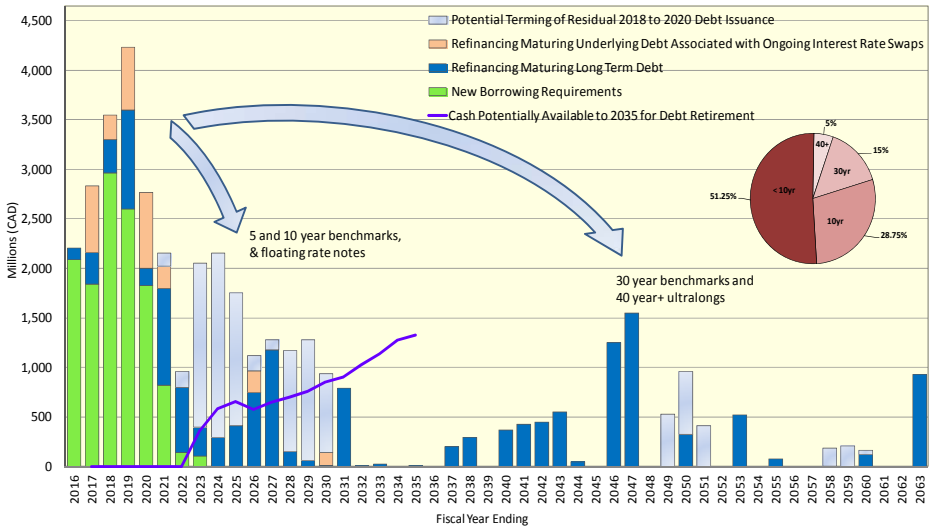
Manitoba Hydro 2017 Debt Management Strategy:
The Path Toward Debt Retirement

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.

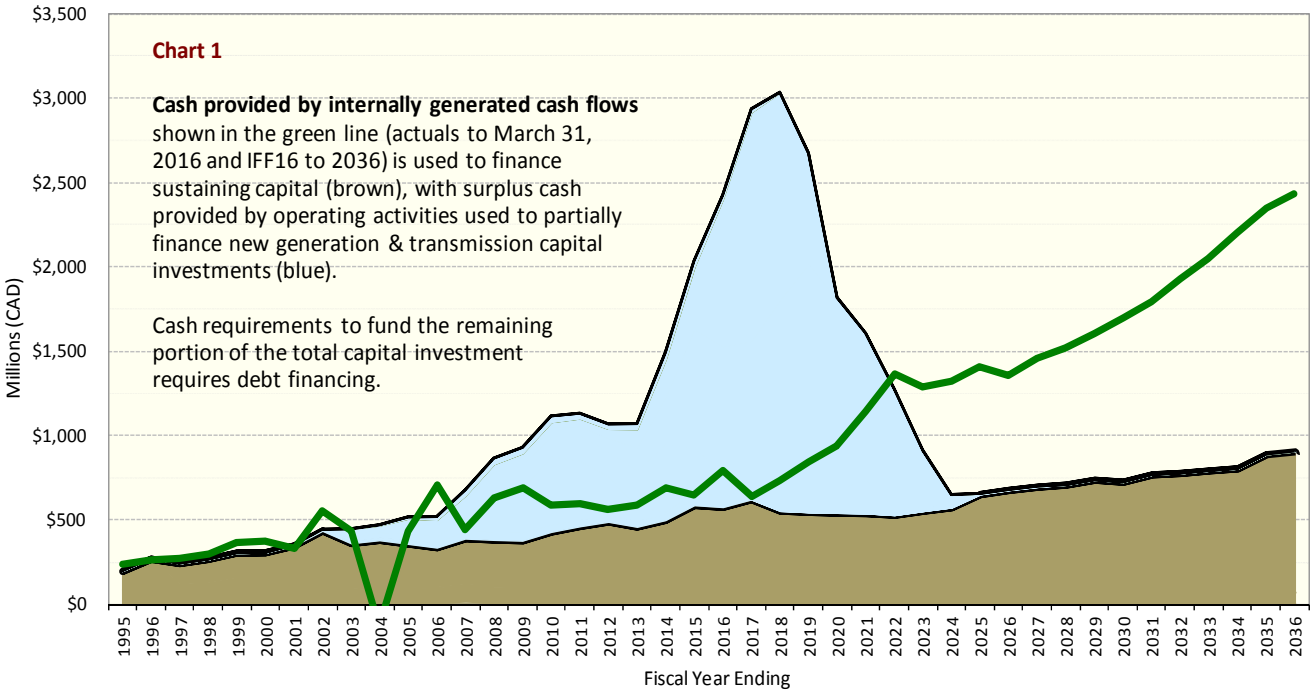
The following chart depicts Manitoba Hydro's actual capital expenditures from 1995 to 2016, along with projected capital expenditures to 2036. This chart illustrates the growth in Manitoba Hydro's sustaining capital (brown), as well as the additional level of capital investments for new generation &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



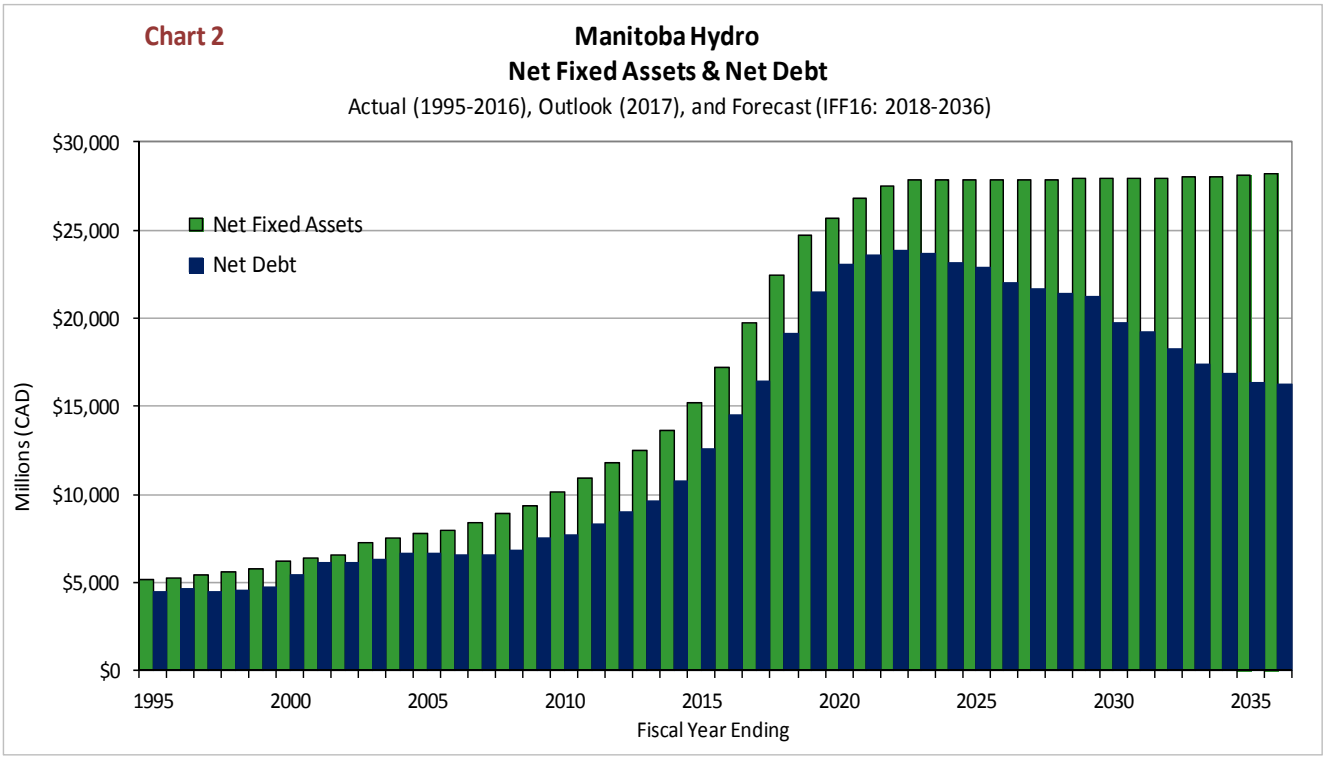
Manitoba Hydro's authority to issue debt is provided through *The Loan Act*, *The Financial Administration Act*, and *The Manitoba Hydro Act*. *The Loan Act* is approved each year and grants Manitoba Hydro borrowing authority to meet the Corporation's projected new debt financing requirements. Refunding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

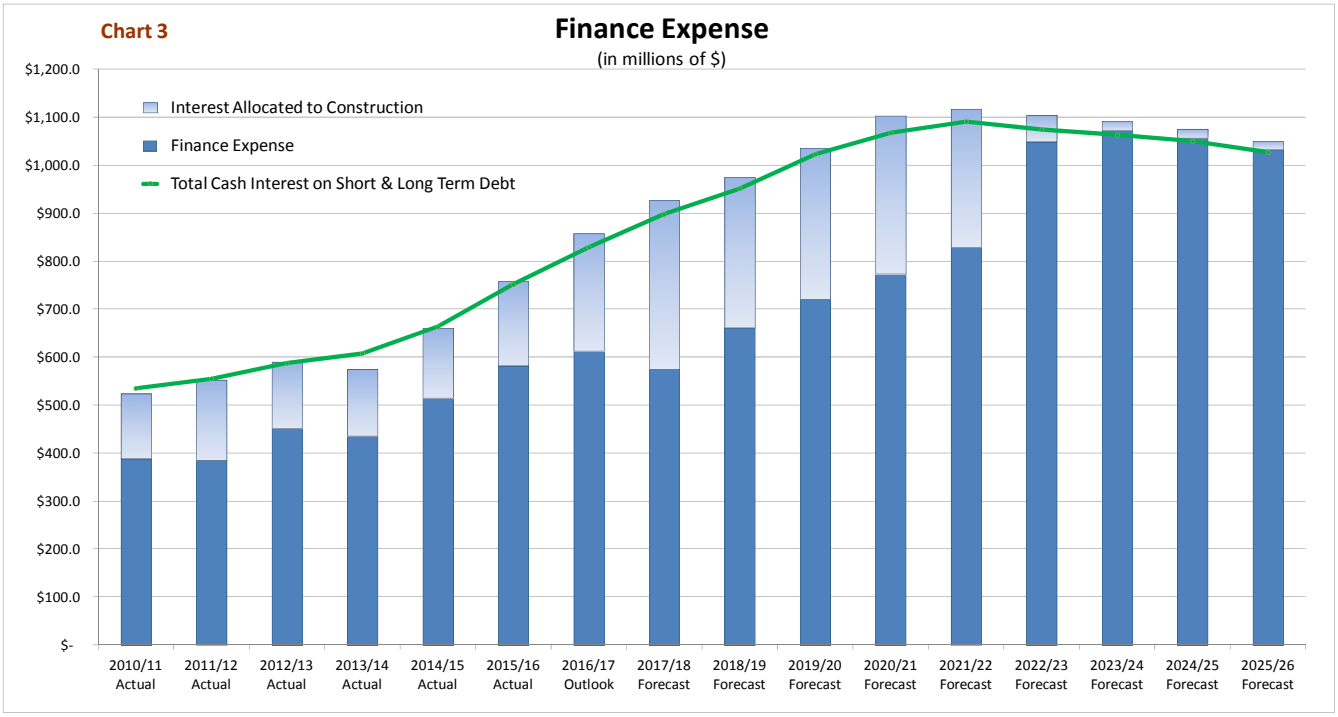
The interest allocated to construction (lightly shaded blue bars) is the interest capitalized during the construction of a project, which is a reduction to finance expense and a charge to the capital project. The interest associated with a capital project is not included in finance expense until the 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.

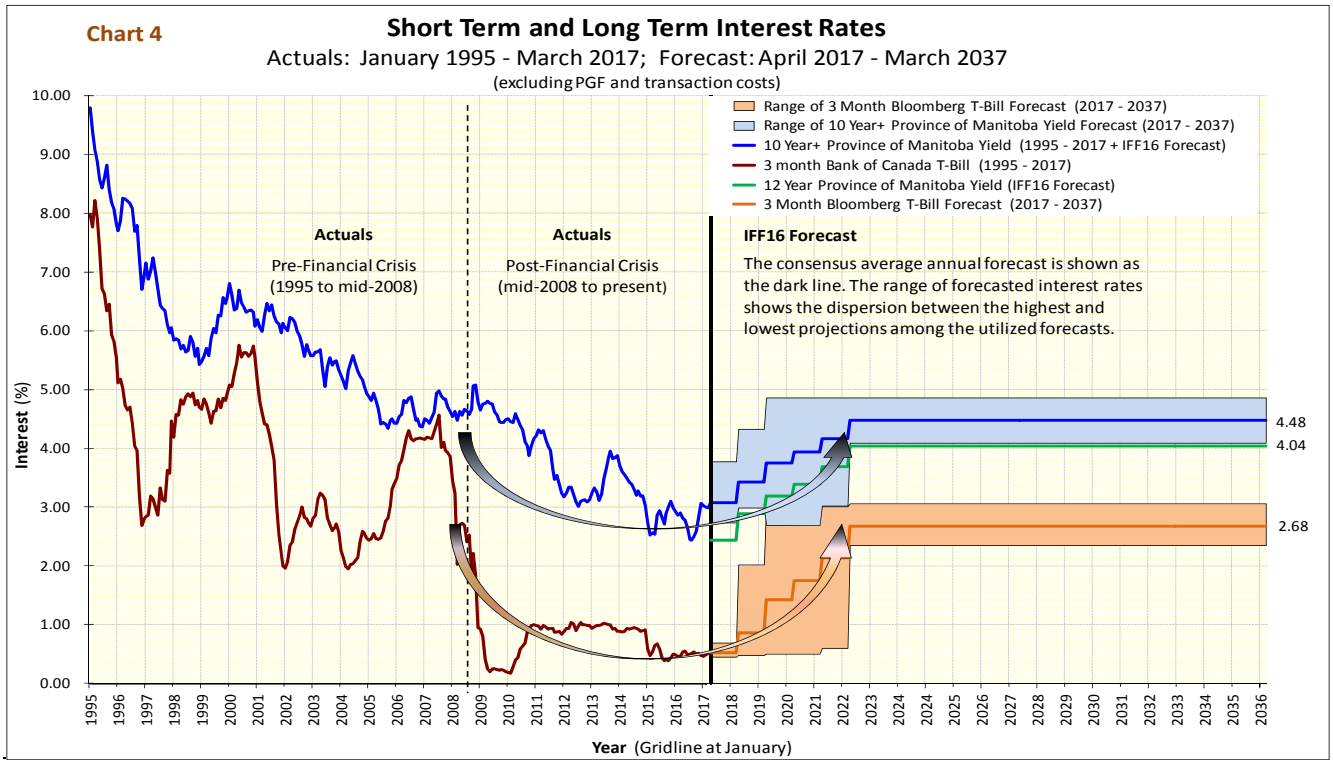
Although economic forecasts during the last few years have generally called for a quicker economic recovery and correspondingly higher interest rates, on an actual basis, the strength and pace of a recovery has been subdued. As a result, monetary policy interventions have continued to anchor interest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



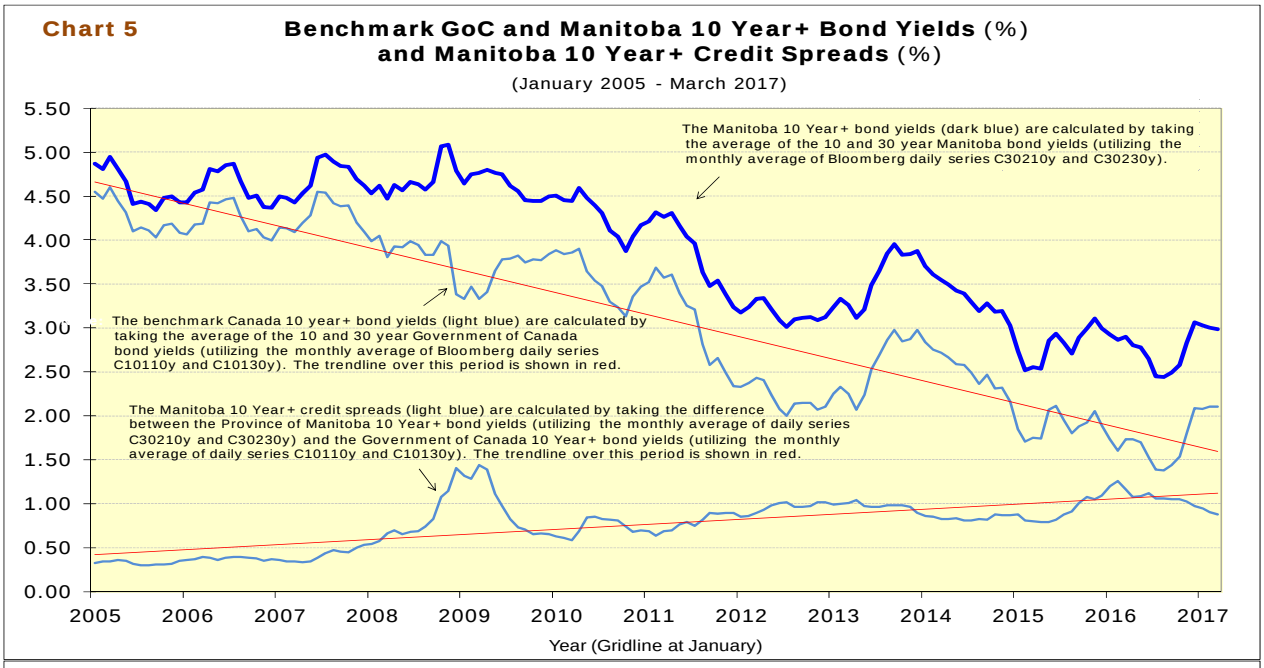
[3] The 10 Year+ Province of Manitoba bond yields (blue line) are calculated by taking the average of the 10 and 30 year Province of Manitoba bond yields. Actual 10 Year+ yields utilize the monthly average of Bloomberg daily series C30210y and C30230y. Forecast 10 Year+ yields are derived from a consensus 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%).

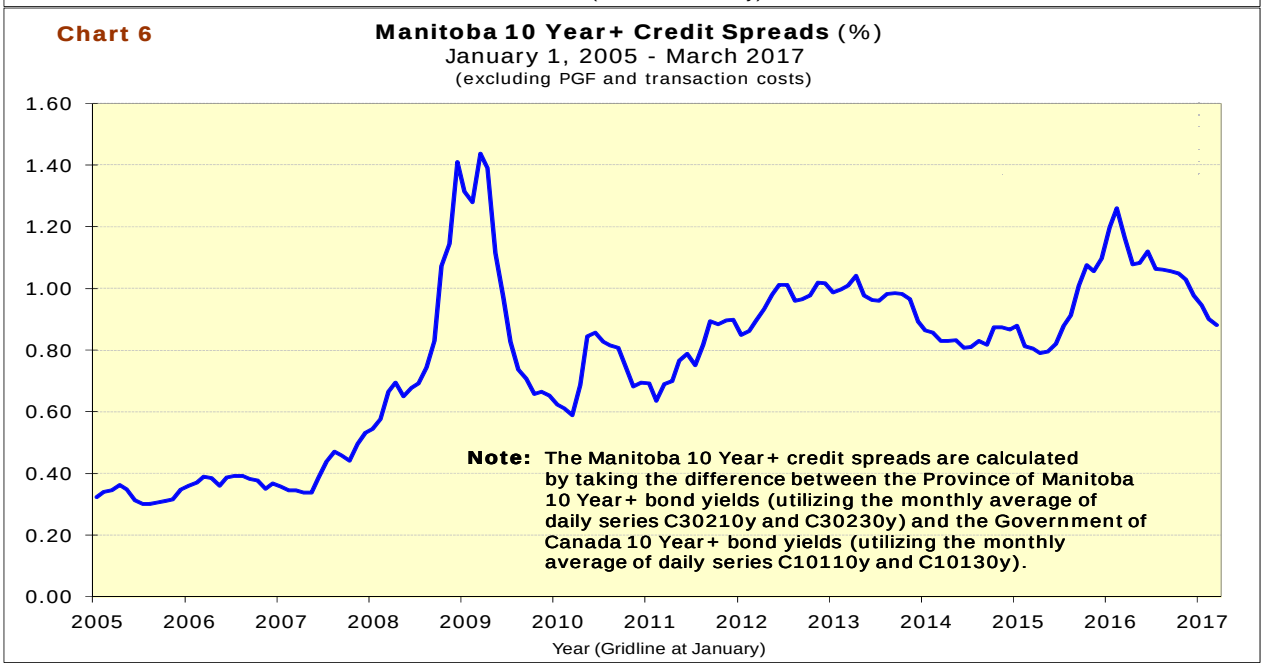
As shown in Chart 5, the Province of Manitoba 10 Year+ bond yields (dark blue line) are comprised of two primary components (shown in the light blue lines): 1) the benchmark Government of Canada (GoC) 10 Year+ bond yields; and 2) the Province of Manitoba 10 Year+ credit spreads.

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%.

Chart 7 **Weighted Average Term to Maturity of Market Debt** (Years)
(For the Fiscal Year Ended March 31)

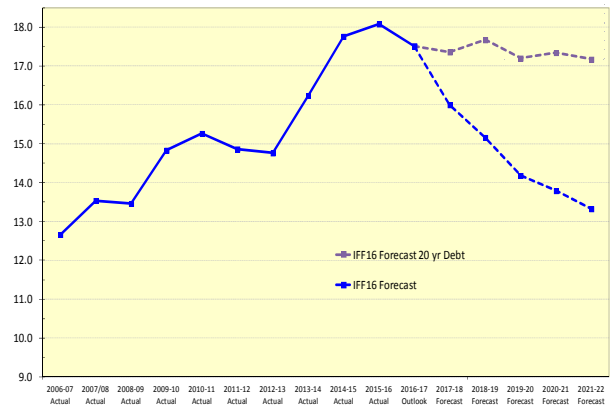
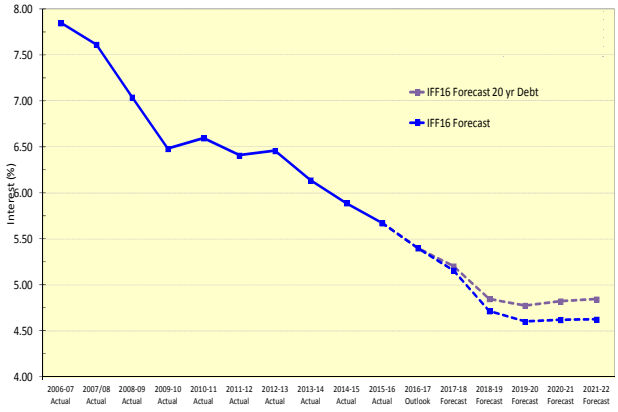


Chart 8 **Weighted Average Interest Rate**
For the Fiscal Year Ended March 31
(Including PGF)



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)

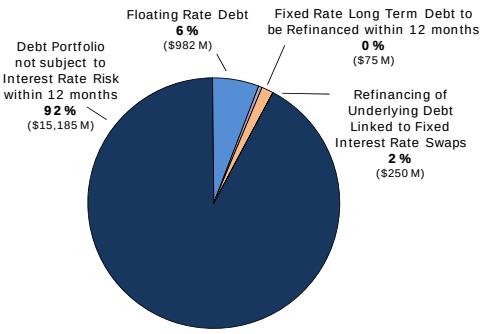
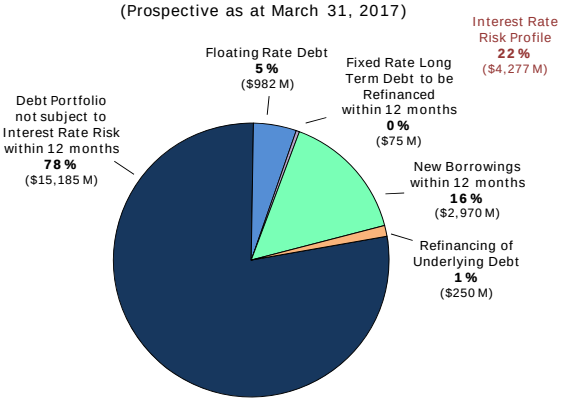


Chart 10, which includes new borrowings and refinancing of underlying debt within the next 12 months, shows that approximately 22% (or $4.3 billion) of the prospective debt portfolio will be subject to interest rate risk over the next 12 months.

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]

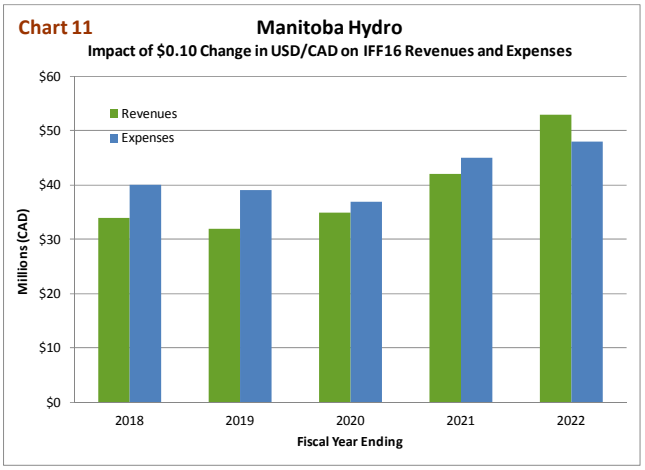
The Corporation's foreign currency exchange risk tolerances are described in the following guidelines:

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:

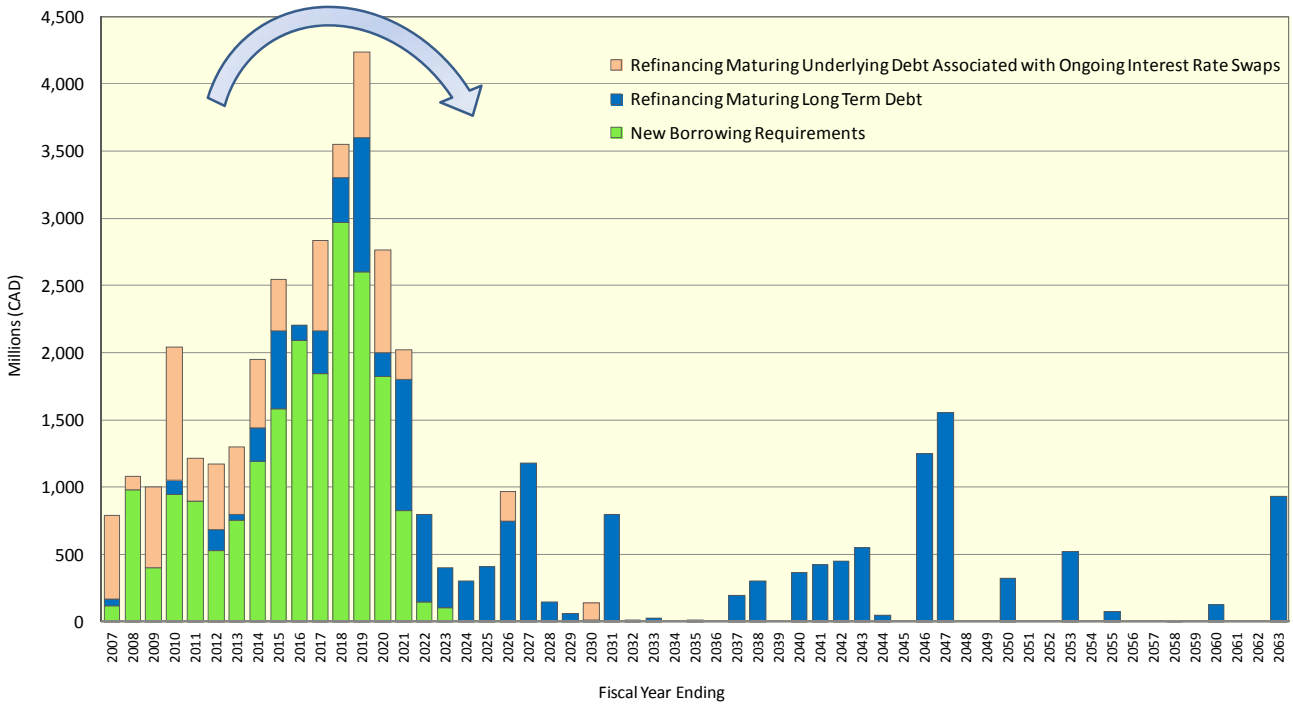
Phase 1 (2007 – 2015): Financial Crisis Response and Leapfrogging
Phase 2 (2016 – 2020): Peak Shaving and Debt Smoothing
Phase 3 (2021 – 2035): Off-Ramping and Debt Retirements

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.

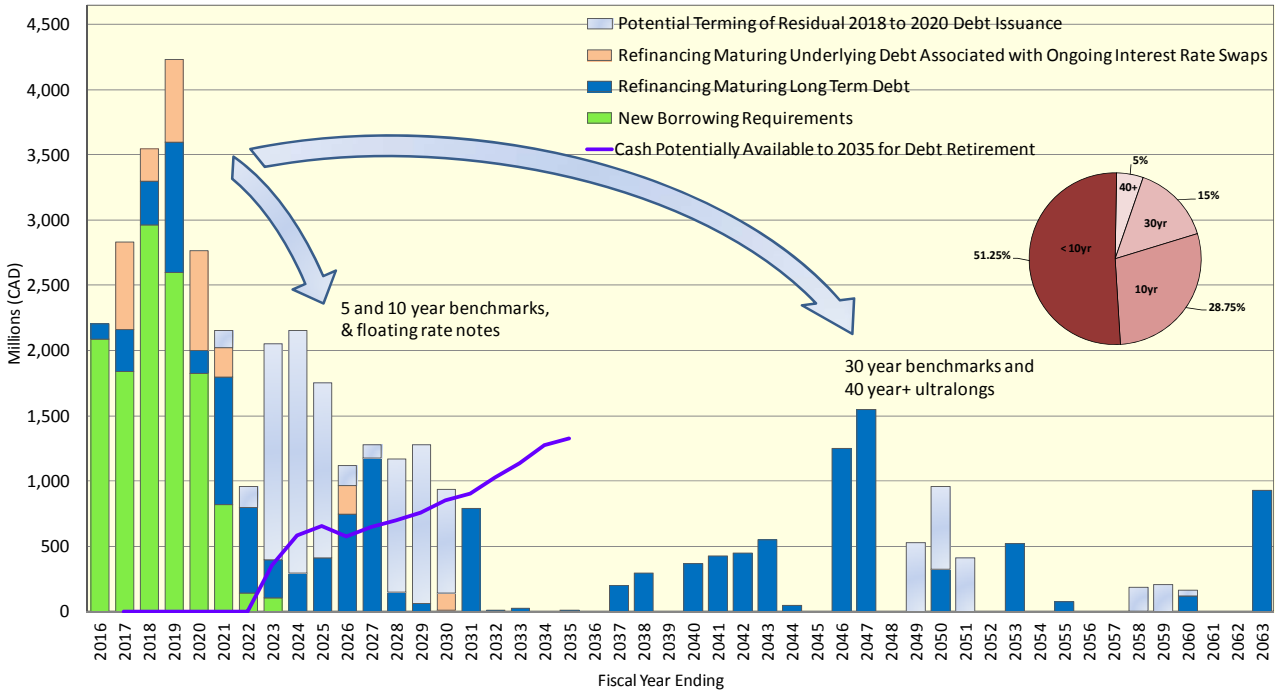
Manitoba Hydro's debt management strategies and activities during this phase were significantly impacted by the global financial crisis and associated financial market conditions, as well as the impending unprecedented levels of debt financing requirements that were forecasted to occur in Phase 2. The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

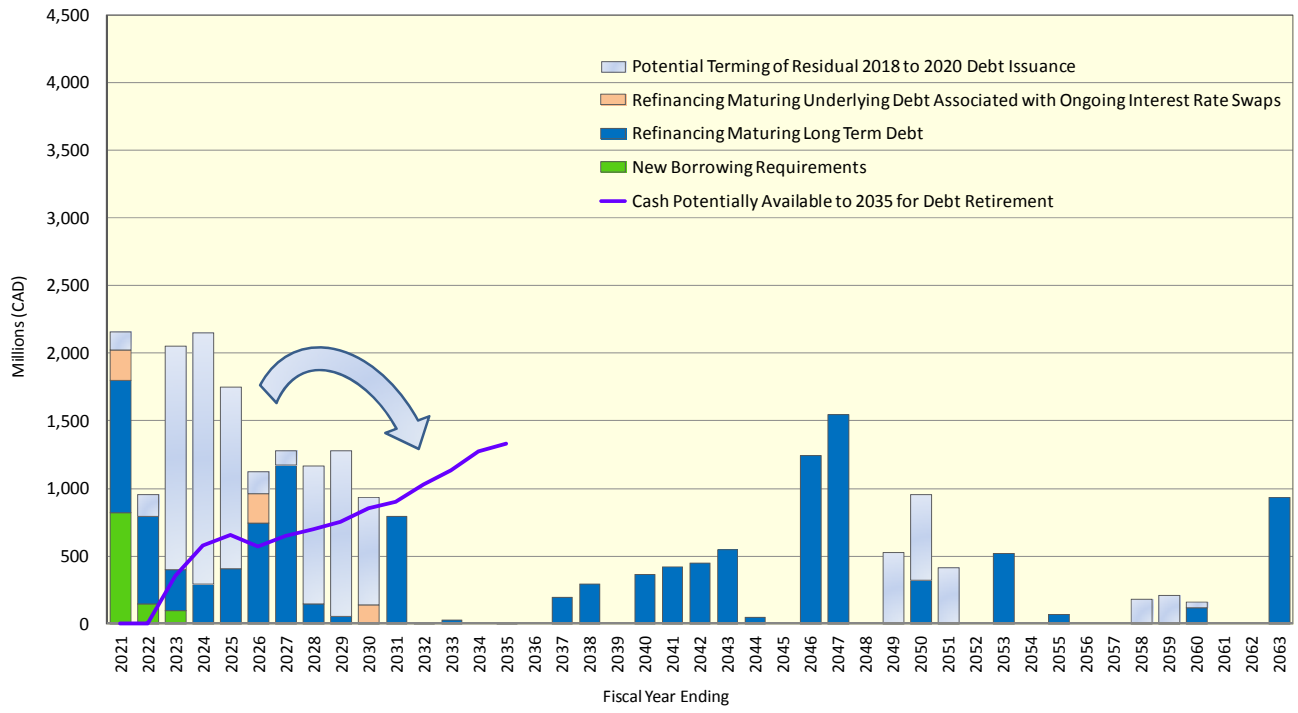
- **Debt Smoothing and Terms to Maturity**. Whereas Phase 1 had leapfrogging terms to maturity for forecasted new debt issuance of 20 years, in Phase 2, commencing in 2017/18, the term to maturity for forecasted new debt issuance will be reduced to 12 years in order to further reduce the weighted average 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.