

Manitoba Hydro

2017/18 & 2018/19

Electric General Rate Application

December 4, 2017

Kelvin Shepherd, P.Eng

President & Chief Executive Officer

Jamie McCallum

Chief Finance & Strategy Officer

Agenda

- I. Overview of Manitoba Hydro
- II. Highlights of Manitoba Hydro's Financial Plan
- III. Manitoba Hydro Faces Large Risks
- IV. Facts of this Rate Case
- V. How Did We Get Here?
- VI. Addressing Key Concerns
- VII. Summary

Today's Presenters

■ Kelvin Shepherd, P. Eng.

- Appointed President and CEO December 2015
- 36 years of progressive technical and management experience in large telecommunications companies
- 9 years as President of MTS
- Prior to that was Chief Operating Officer and Chief Technology Officer
- Bachelor of Science, Electrical Engineering, University of Saskatchewan (1981)

■ Jamie McCallum

- Appointed Chief Finance and Strategy Officer February 2017
- 22 years of experience in strategic and financial planning, corporate stewardship, capital management and capital markets
- 2004 to 2016: Managing Director of Richardson Capital Limited
- 1995 to 2004: Investment Banker at several leading global firms
- Bachelor of Commerce (Hons), University of Manitoba (1995)
- Former director of six corporations

A New Financial Plan for Hydro

- Old plans were not adequate and far too risky
- MH business outlook has deteriorated significantly
- MH will soon have an unsustainable level of debt
 - Not supportable with rate increases of old plan
- Current rates are not funding the ongoing costs of the current system
- Old financial plan has now **failed**

A New Financial Plan for Hydro

- A new plan is required to continue to keep providing safe, reliable and competitively priced power to Manitobans
 - MH has taken action to increase and accelerate internal cost reductions
 - Streamlined organization, reduced senior management and targeted 15% staff reduction
 - Rates need to be increased more in near term to help mitigate increase in debt levels
 - 10-year plan provides capacity to manage operational/business risks and keep rates lower over long term
- Appreciate the challenges associated with higher rates
 - But it will be worse not to act

I. Overview of Manitoba Hydro

Corporate Profile

<p>Electric Residential Customers</p> <p>503,000</p>	<p>Electric Commercial /Industrial Customers</p> <p>70,000</p>	<p>Consolidated Assets⁽¹⁾</p> <p>\$23.7 Billion</p>	<p>Consolidated Debt⁽¹⁾</p> <p>\$17.9 Billion</p>
<p>2016/17 Consolidated Revenue</p> <p>\$2.3 Billion</p>	<p>2016/17 Electric Segment Domestic Revenue</p> <p>\$1.4 Billion</p>	<p>2016/17 Electric Export Revenue</p> <p>\$0.5 Billion</p>	<p>2016/17 Natural Gas Revenue</p> <p>\$0.3 Billion</p>
<p>2016/17 Consolidated Net Income⁽²⁾</p> <p>\$51 Million</p>	<p>2016/17 Electric Segment Net Income⁽²⁾</p> <p>\$33 Million</p>	<p>Leader in Indigenous Employment</p> <p>≈1 in 5 Employees</p>	<p>Equivalent Full Time Employees⁽³⁾</p> <p>5,990</p>

(1) As of September 30, 2017

(2) Excludes \$20 million non-recurring gain

(3) As of October 2017 excluding subsidiaries

System Overview

Total Customers

573,000

Hydro Generating Stations

15

Electricity Generating Capability

5,679 MW

Distribution Lines

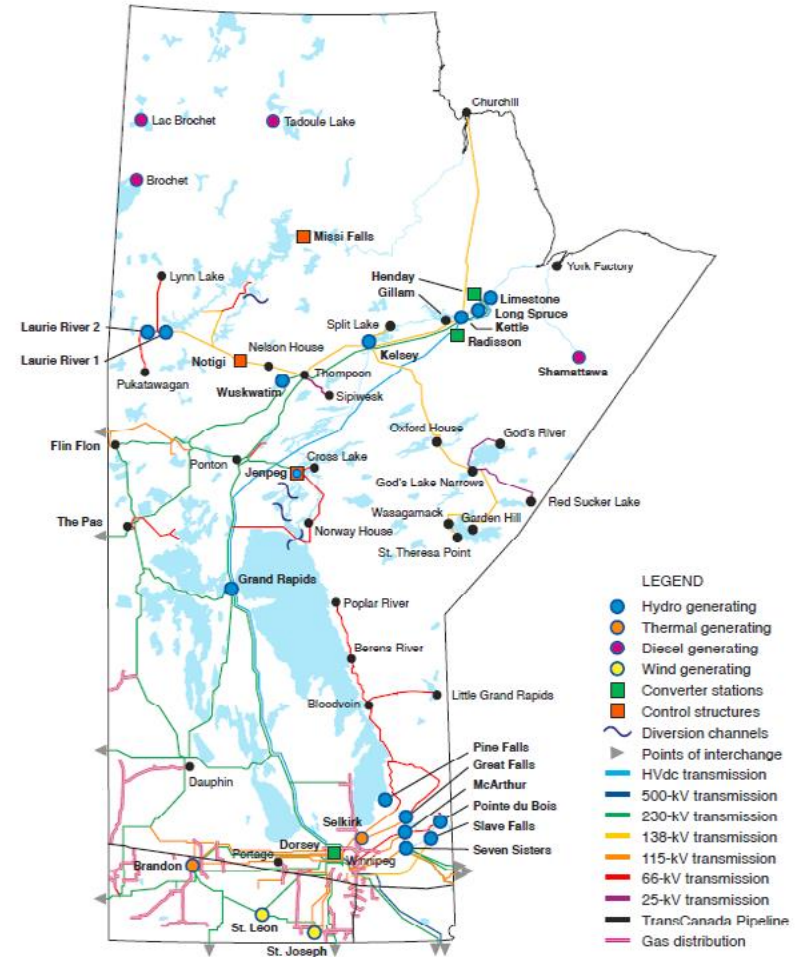
68,100 KM

Transmission Lines

18,500 KM

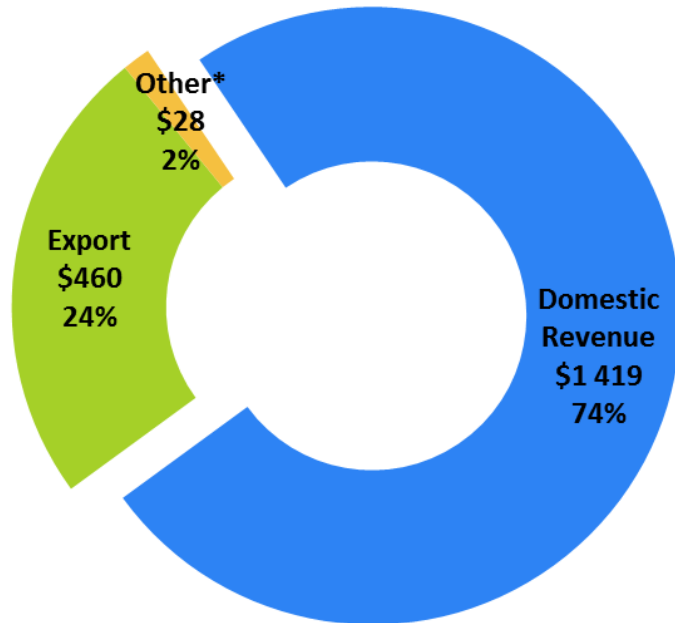
2016/17 Total Energy Supplied

36.4 TWh

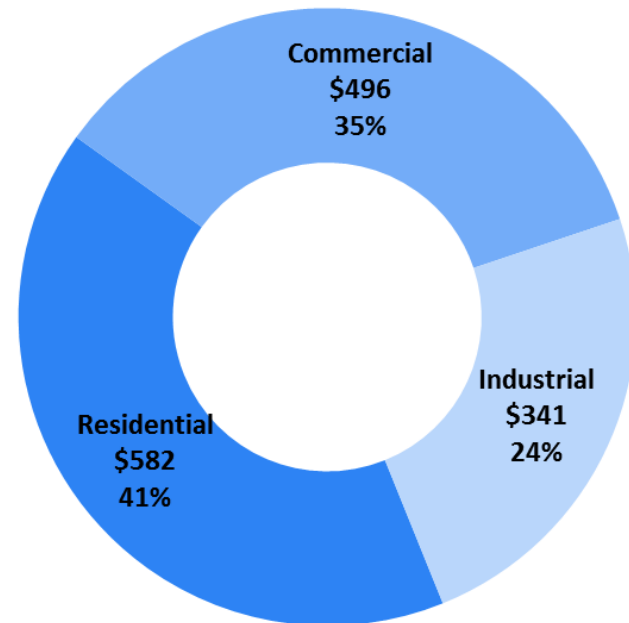


Revenue - Electric

Electric Segment Revenue (\$ Millions)



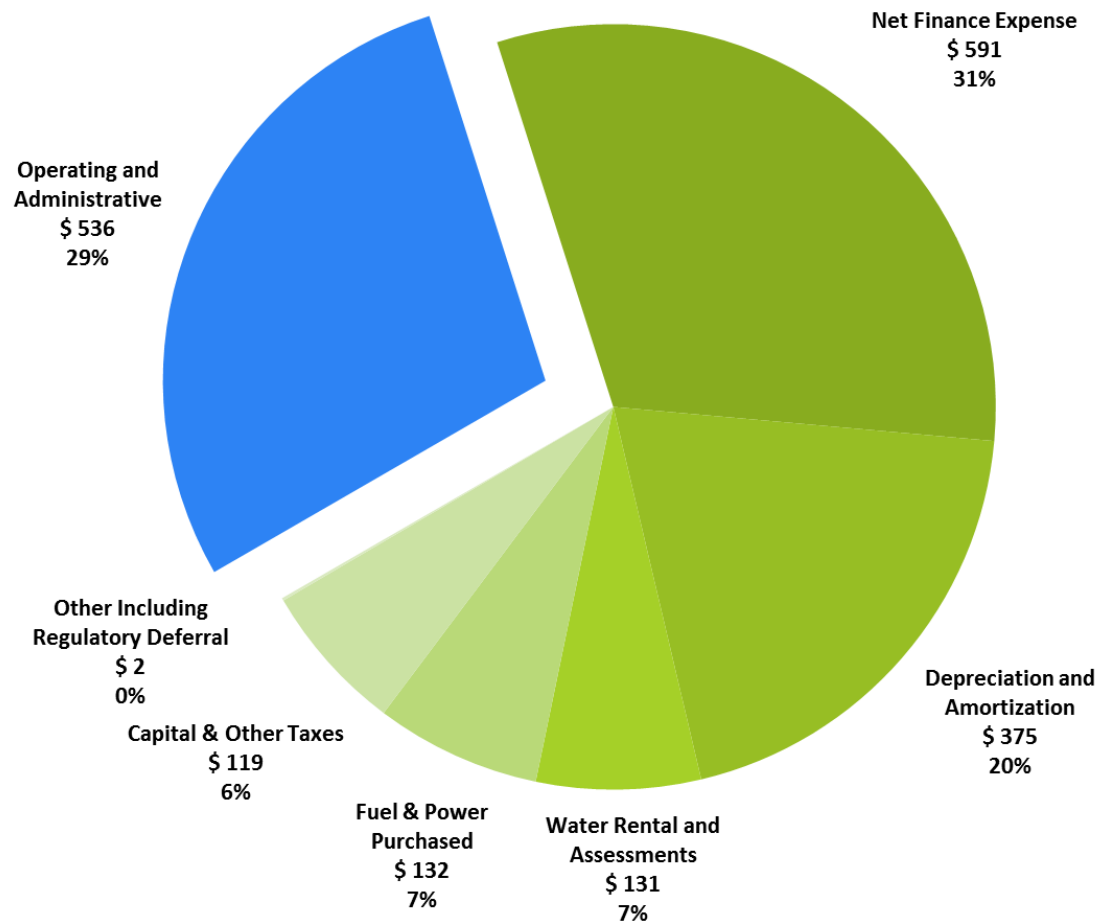
Domestic Revenue (\$ Millions)



*Excludes \$20 million non-recurring gain

Cost Structure – Electric (2016/17)

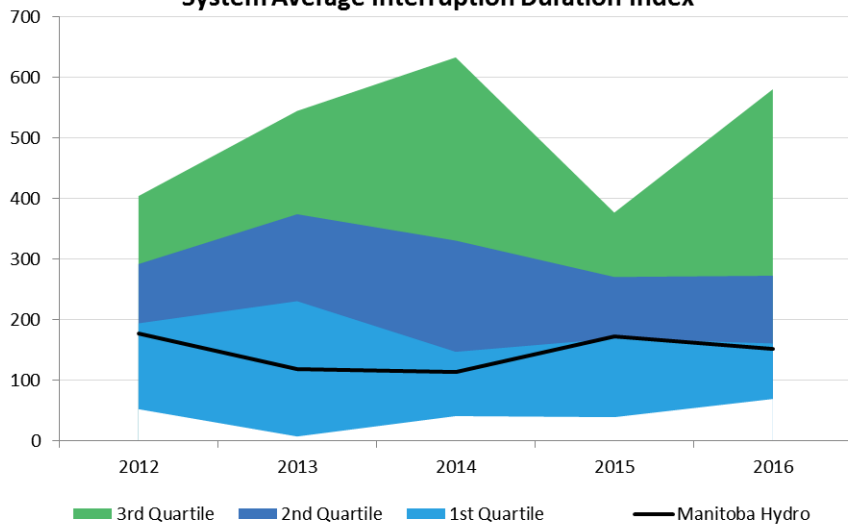
(\$ Millions)



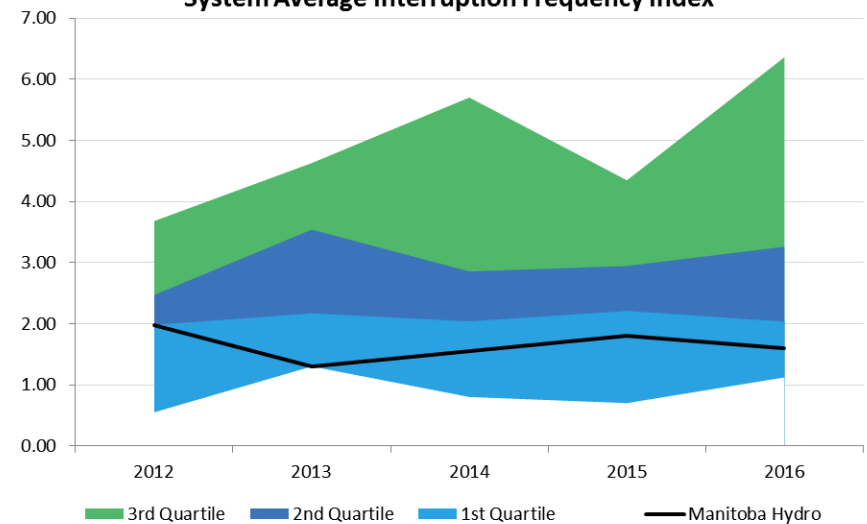
Reliability

- Manitoba Hydro strives to maintain its reliability performance and looks to the performance of its peer group as one measure of its success

**Manitoba Hydro vs Canadian Electricity Association
(Urban & Rural Combined)
System Average Interruption Duration Index**

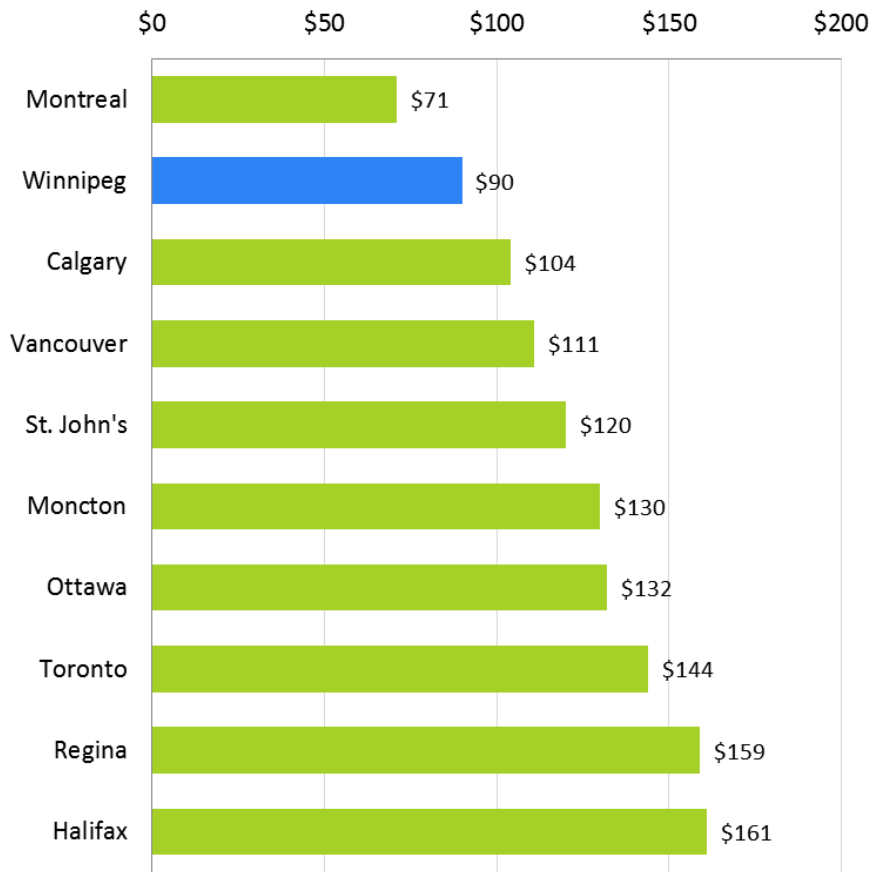


**Manitoba Hydro vs Canadian Electricity Association
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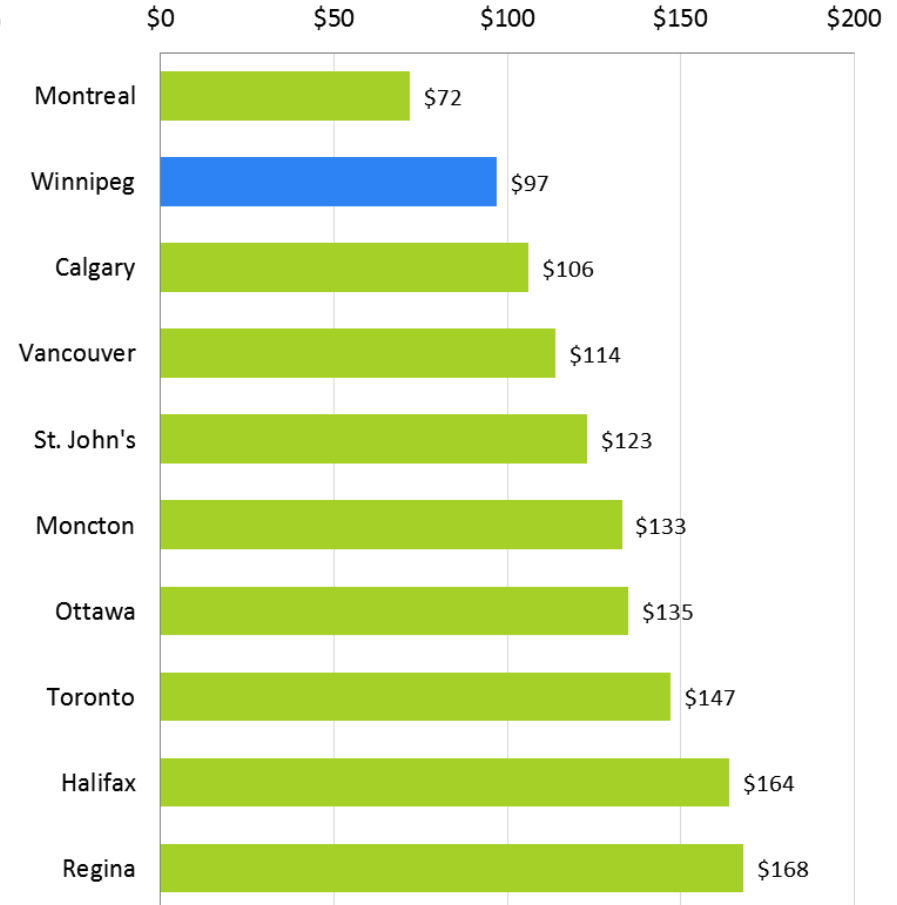


Rate Comparisons - Residential

Monthly Bill Comparison in 2017/18 at Current Rates Residential *



Monthly Bill Comparison in 2018/19 at Proposed 7.9% Rates Residential *

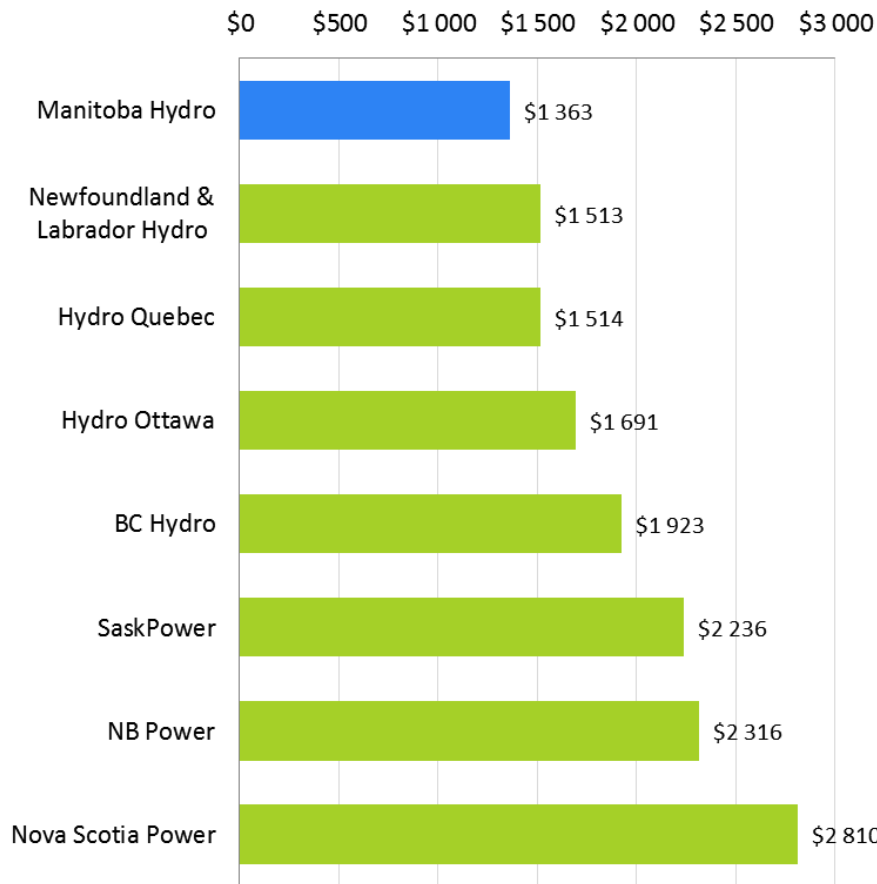


*Consumption: 1,000 kWh/Month

Rate Comparisons - Industrial

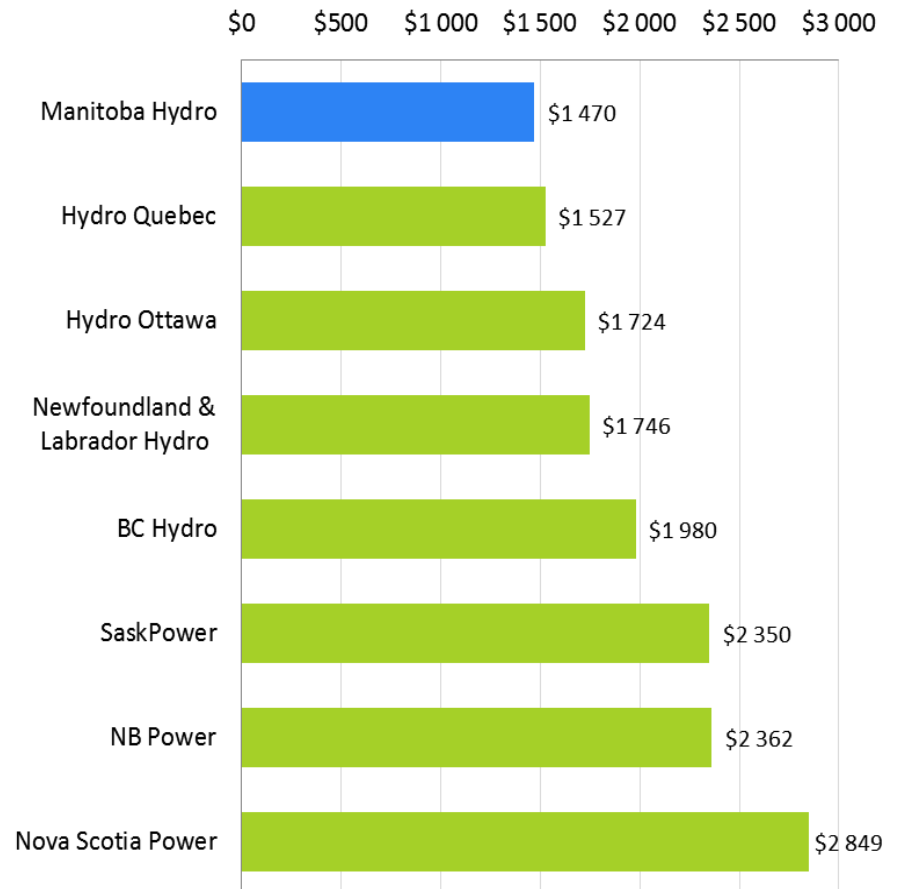
Monthly Bill Comparison in 2017/18 at Current Rates

General Service Large > 100 kV *



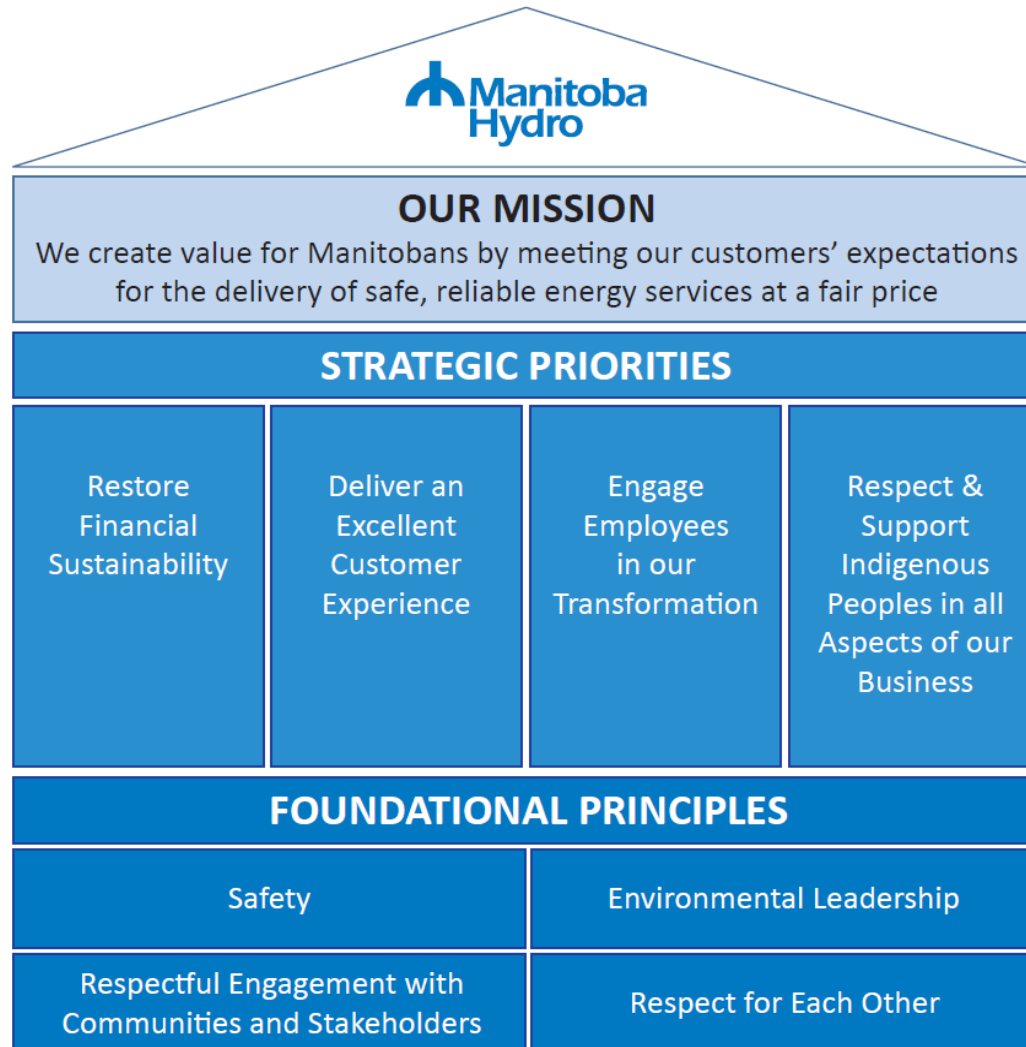
Monthly Bill Comparison in 2018/2019 at Proposed 7.9% Rates

General Service Large > 100 kV *



Consumption: 31,000 MWh and 50 MW/Month; \$ in 000's

Strategic Imperatives



II. Manitoba Hydro's New Financial Plan

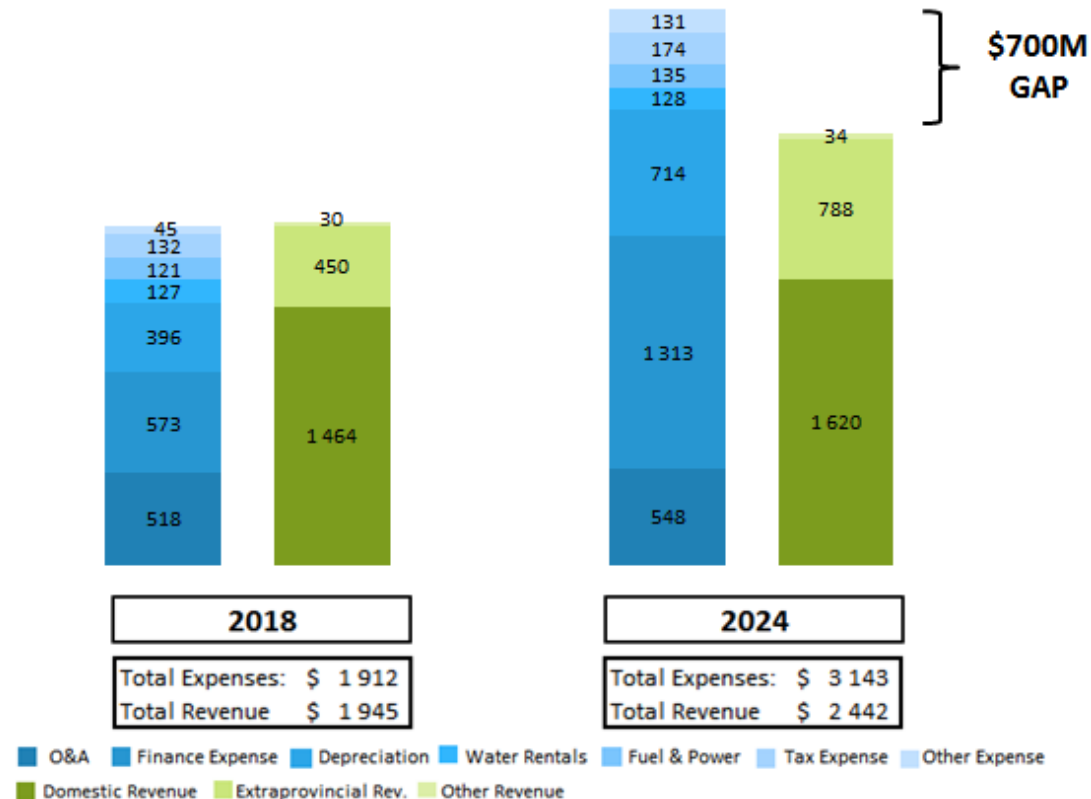
What Our Plan Had to Address

- Substantial deterioration in business outlook and growth expectations since last GRA/NFAT
- Current and future rate insufficiency
 - Negative net income: no cushion for scale of business and inherent risks
 - Borrowing money to fund core, continuing operations
- Growth in debt not sustainable
 - Not supported by 3.95% rate plan
- Risk of unpredictable and higher long term rate increases
- Inadequate financial strength for Manitoba Hydro to continue to meet its mandate
 - Need to invest in aging infrastructure
 - Potential industry and technology change threatening traditional utility model

Near-Term Income Shortfall

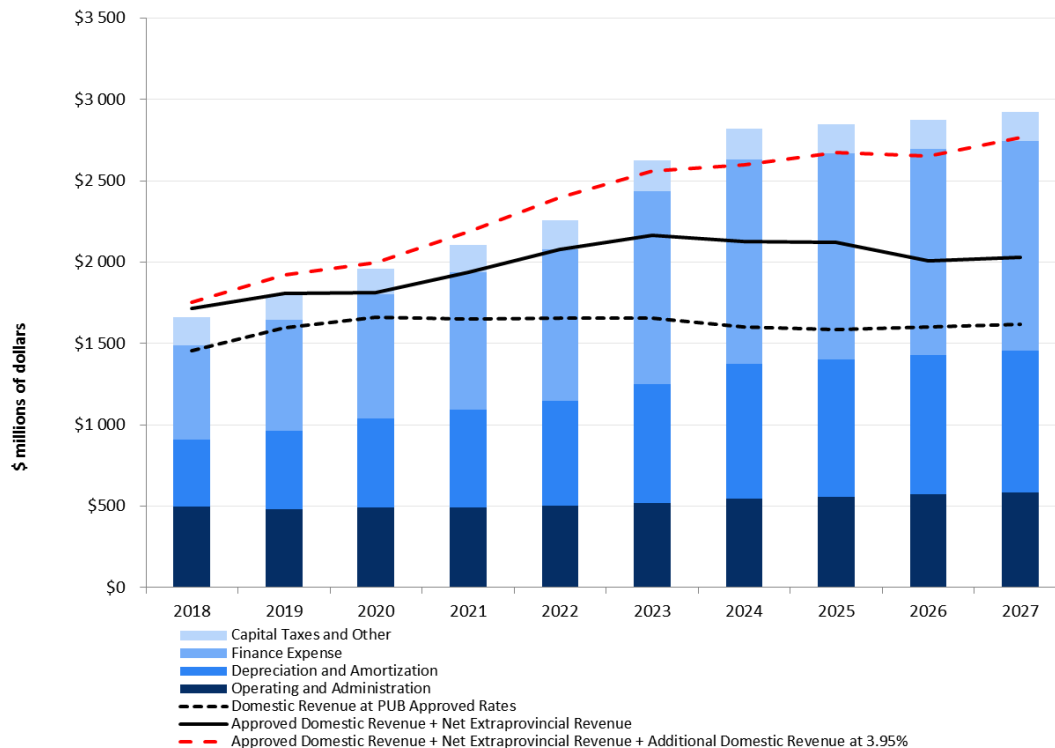
- Without rate increases, Manitoba Hydro will have a \$700 million per year revenue shortfall in the first year Keeyask is fully in service
 - \$700 million gap represents a 43% increase over 2017/18 domestic revenues
 - 3.95% rate increase would only address \$480 million leaving a \$220 million gap

- Breakeven income on \$30 billion in assets cannot be the goal in any event



Old Financial Plan Does Not Work

- MH15 rate path (3.95% until 2029) fails to generate sufficient revenue to address inescapable growth in carrying costs
 - Cumulative net loss until 2031/32 (15 years); Debt >\$25 billion



Cash Deficit on Current Operations

(In Millions of Dollars)	2015/16 Actual	2016/17 Actual	2017/18 Forecast ⁽¹⁾
Receipts from Customers	1 907	1 997	2 152
Payments to Suppliers and Employees	(736)	(933)	(892)
Interest Paid ⁽²⁾	(575)	(580)	(550)
Business Operations Capital Expenditures	(616)	(578)	(586)
Demand Side Management	(54)	(50)	(55)
Mitigation and Other Deferred Expenditures	(22)	(5)	(27)
Ineligible Overhead	(20)	(20)	(20)
Cash From Operations Less Capex ⁽²⁾	(116)	(169)	22
Mitigation, Major Development & Other Liability Payments	(26)	(13)	(59)
City of Winnipeg Payments	(16)	(16)	(16)
Adjusted Cash Deficit	(158)	(198)	(53)
Interest on Bipole III Reliability Project ⁽²⁾	(52)	(98)	(174)
Contribution from Water Conditions ⁽³⁾	(62)	(87)	(91)
Cash Flow (Deficiency)/Surplus	(272)	(383)	(318)
Shortfall vs. Domestic Revenue (Gross of BPIII Deferral)	19%	25%	20%

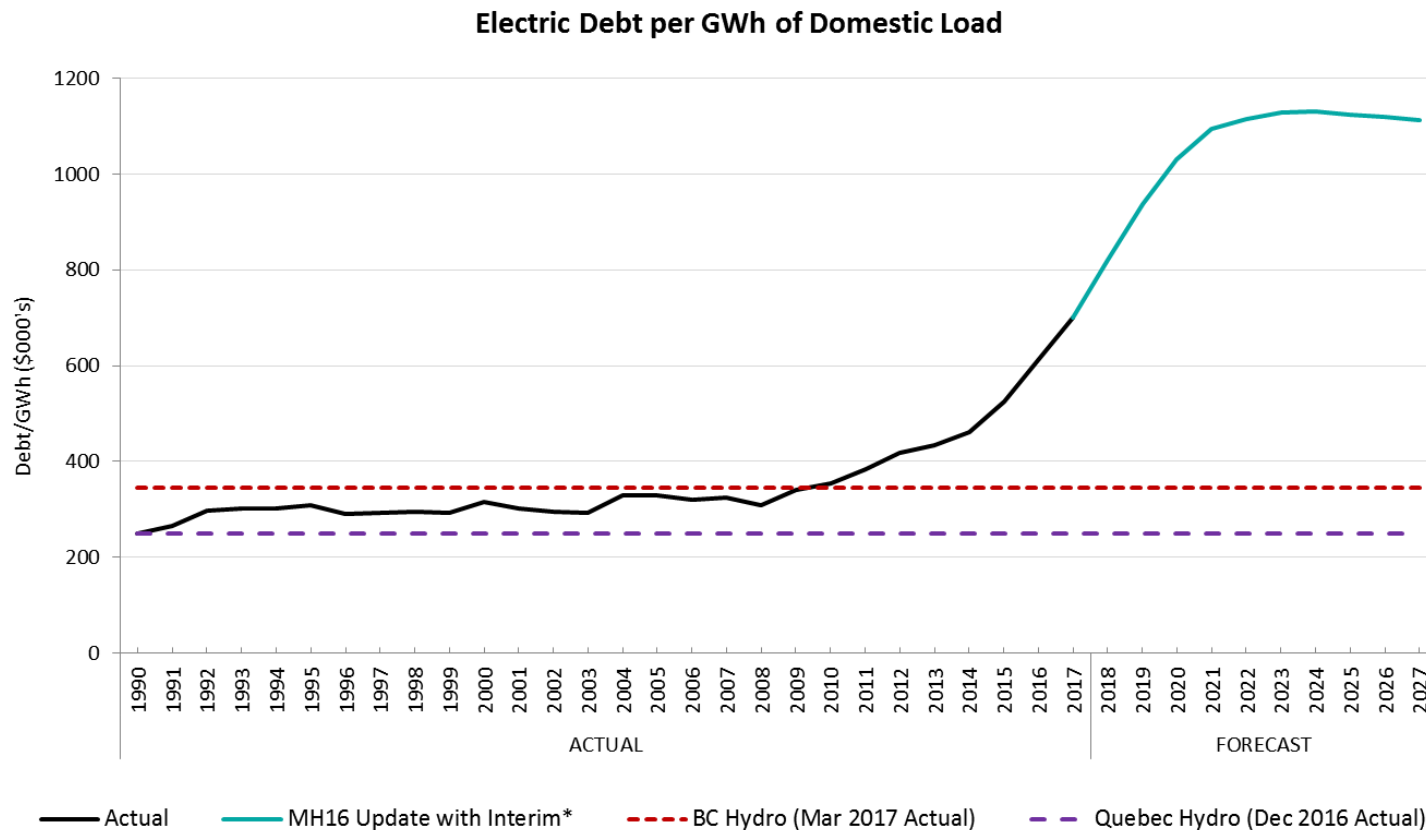
(1) MH16 Update with Interim not adjusted downward for revised outlook for 2017/18 per the MHEB Quarterly Report ended September 30, 2017

(2) For presentation purposes above, MH has separated out interest paid and capitalized to the Bipole III for further clarity

(3) From Figure 15 of Supplement to Tab 3

The Debt Problem

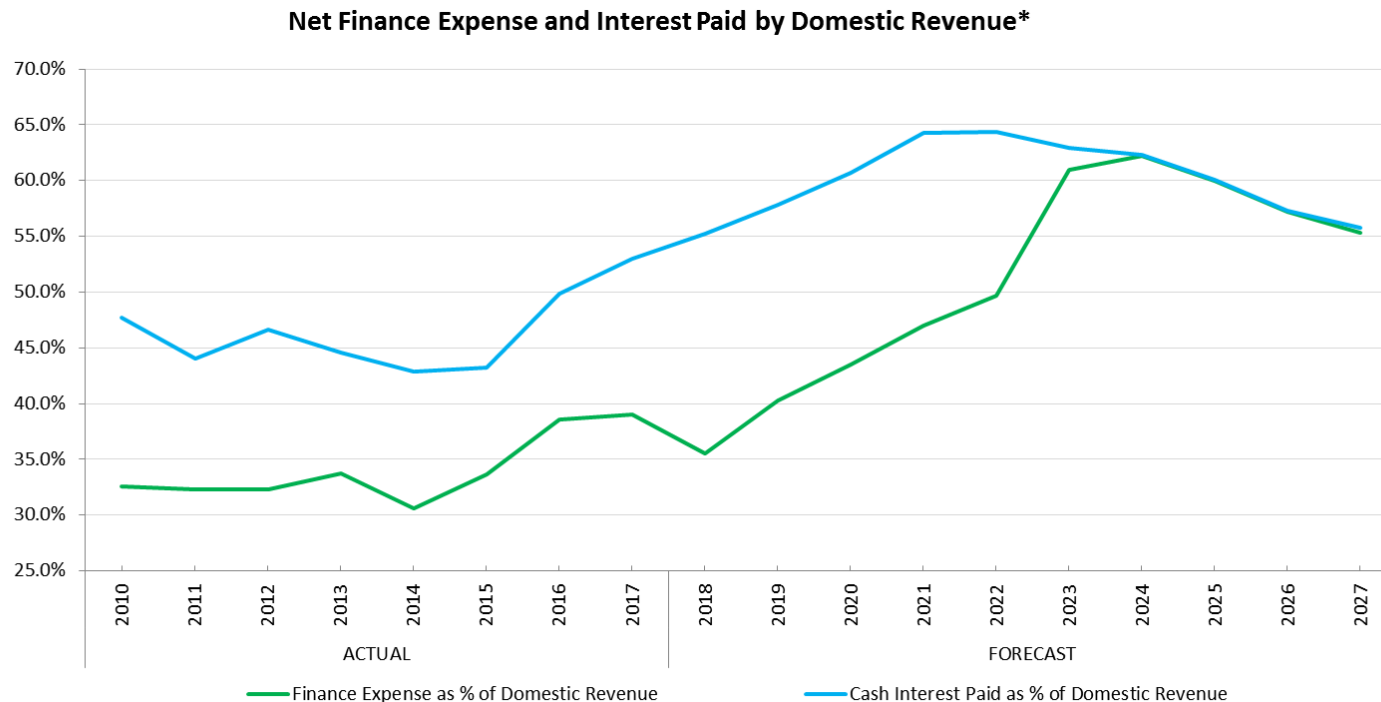
- Rates are insufficient – while debt is growing out of all historical proportion



* 20 Year WATM at MH15 Rates

The Debt Problem

- Without stronger rate action, interest costs will consume an ever larger share of domestic revenue
 - Fewer dollars left over to manage interest rate (or any other) volatility – which is entirely on the shoulders of domestic ratepayer



*20 Year WATM at MH15 Rates

Interest Paid is presented gross of capitalized interest

MH16 – A New Plan

- A 10-year plan to restore Manitoba Hydro to a minimum level of financial health
- Substantially accelerated operating cost reductions
- Acceleration of rate increases
 - Enabling lower and more stable rates in the long run vs. 3.95% plan
- Positive cash flow after Keeyask comes into service
 - Enabling more aggressive debt management strategy
 - Save interest costs and mitigate rate increases

Cost Reductions

- **\$0.8 billion improvement in Operating & Administrative costs in 2017/18 - 2026/27 period as compared to MH15**
- New financial plan includes 900 person headcount reduction (15%)
 - On top of 429 operational position reduction from 2013/14 to 2016/17
 - 30% reduction in executive and 25% reduction in management
 - Voluntary Departure Program has identified 821 individuals to leave with the majority by February 1, 2018
 - Approximate savings of \$90 million annually inclusive of salaries and benefits
 - It is estimated \$70 million will come from O&A
- New initiatives expected to yield Supply Chain / Purchasing efficiencies of approximately \$50 million per year by 2020/21
 - Approximately 30% of savings come from O&A

Rate Increase Profile

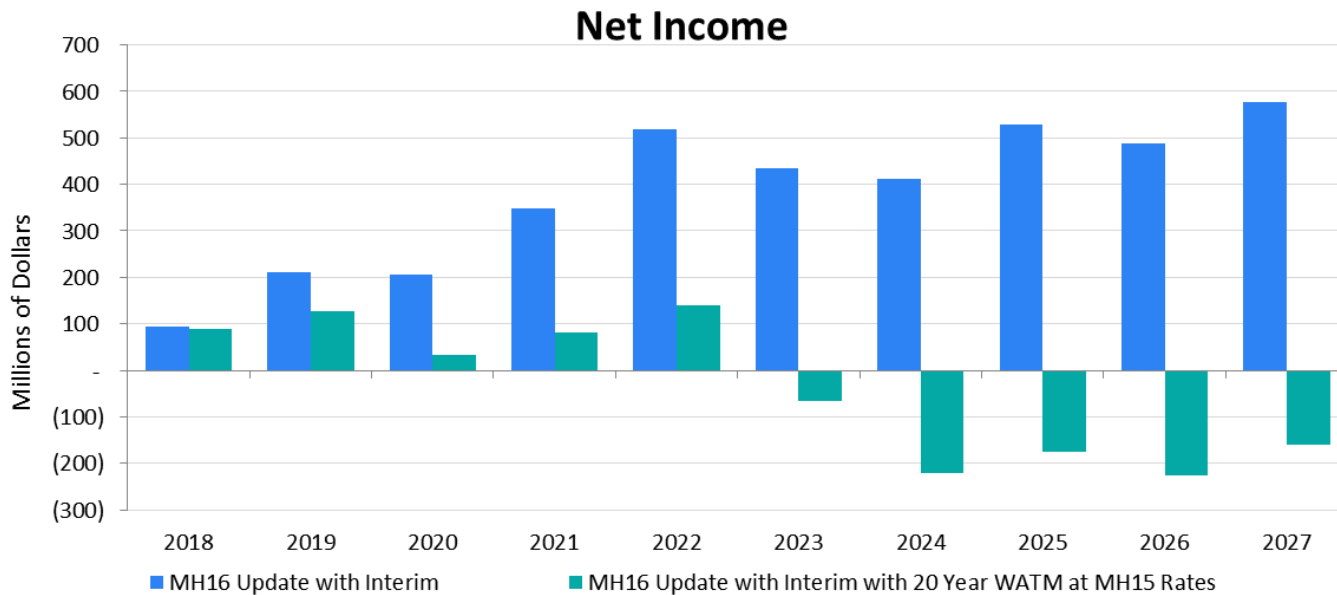
Year	Effective Date	“Old” Plans (3.95% Rate Increases)	MH16 (As Filed)	MH16 Update with Interim
2016/17	August 1, 2016	3.36%	3.36%	3.36%
2017/18	August 1, 2017	3.36%	7.90%	3.36%
2018/19	April 1, 2018	3.95%	7.90%	7.90%
2019/20	April 1, 2019	3.95%	7.90%	7.90%
2020/21	April 1, 2020	3.95%	7.90%	7.90%
2021/22	April 1, 2021	3.95%	7.90%	7.90%
2022/23	April 1, 2022	3.95%	2.00%	7.90%
2023/24	April 1, 2023	3.95%	2.00%	7.90%
2024/25	April 1, 2024	3.95%	2.00%	4.54%
2025/26	April 1, 2025	3.95%	2.00%	2.00%
2026/27	April 1, 2026	3.95%	2.00%	2.00%
	After 2027	3.95% for 9 more years to reach 25% equity by 2035/36	TBD	TBD

Debt Terming Strategy

- \$500 million **potential** savings opportunity over 10 years is a benefit enabled by taking necessary rate action to address unsustainable debt
- Without expectation of any free cash flow – which is only possible through enhanced rate action – Manitoba Hydro’s customers would be exacerbating near-term refinancing risk
- **Not a “no risk” strategy** – insofar as cash flows don’t materialize for whatever reason, refinancing risk remains
- Even under past practice, MH will have substantial (\$6 billion) refinancing risk in the 2022/23 - 2026/27 time period

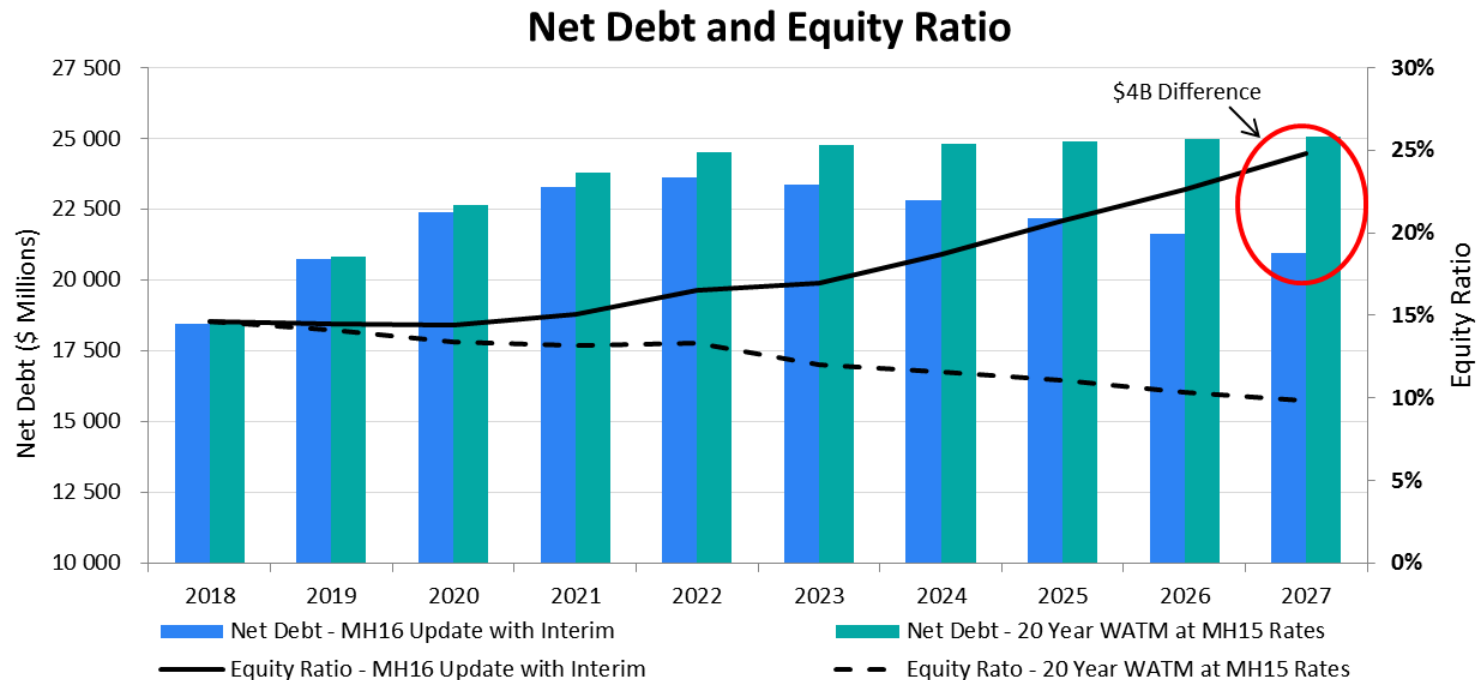
Net Income Comparison

- 3.95% rate strategy leads to \$850 million of net losses over the next 10 years to 2026/27
- Net income levels under the MH Plan are essential:
 - “Shock absorber” in **plan** to absorb forecast variability and adverse events
 - Creates cash flow needed to bring debt down to sustainable level



Debt Levels and Equity Ratios

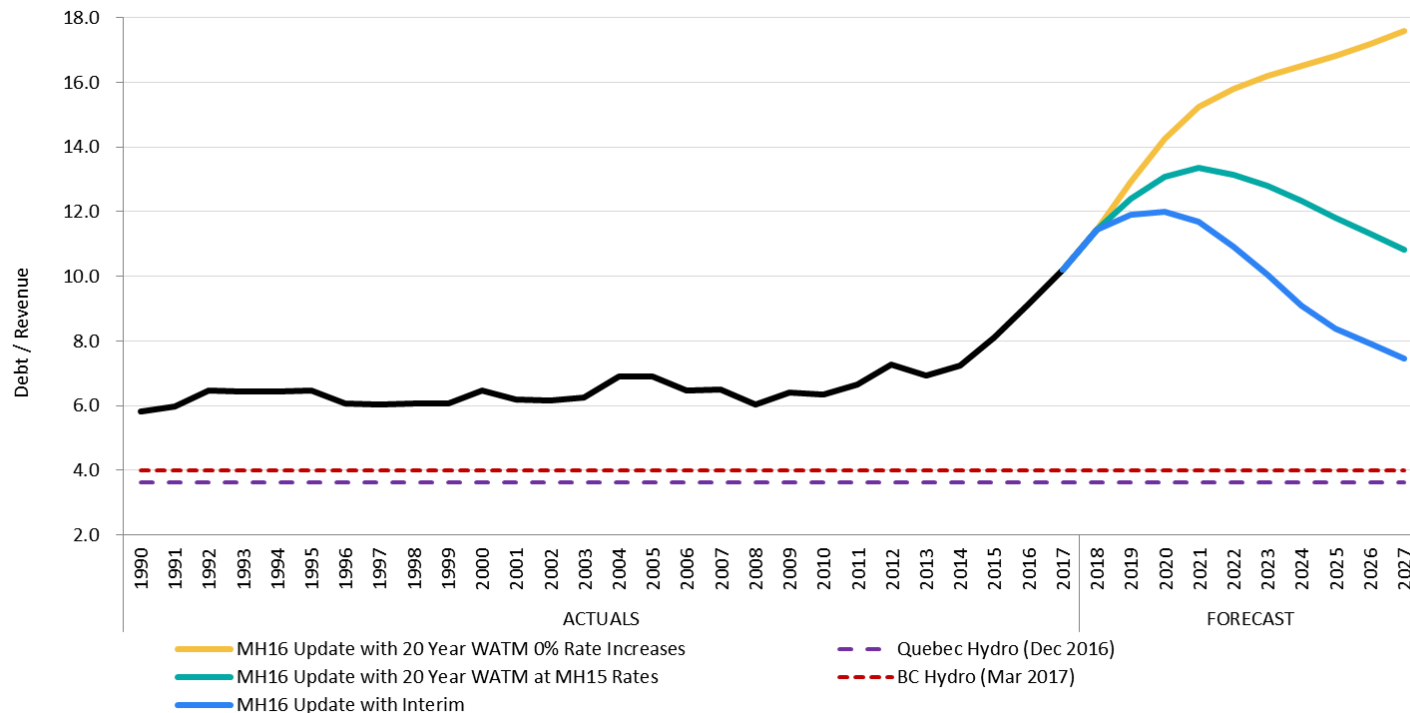
- Higher net income is essential to creating cash flow
 - In short term rate increases are necessary just to ensure ratepayers are funding full current and future cost of operating the business
 - Important to maintain income at sufficient level to bring debt down to a sustainable level to achieve rate impact benefits for long term



Bringing Debt Partly Back to Scale

- The rate increases proposed reduce Manitoba Hydro to historical debt still 30% above relative levels before the major projects began
- And still well in excess of peers

Debt to Domestic Revenue



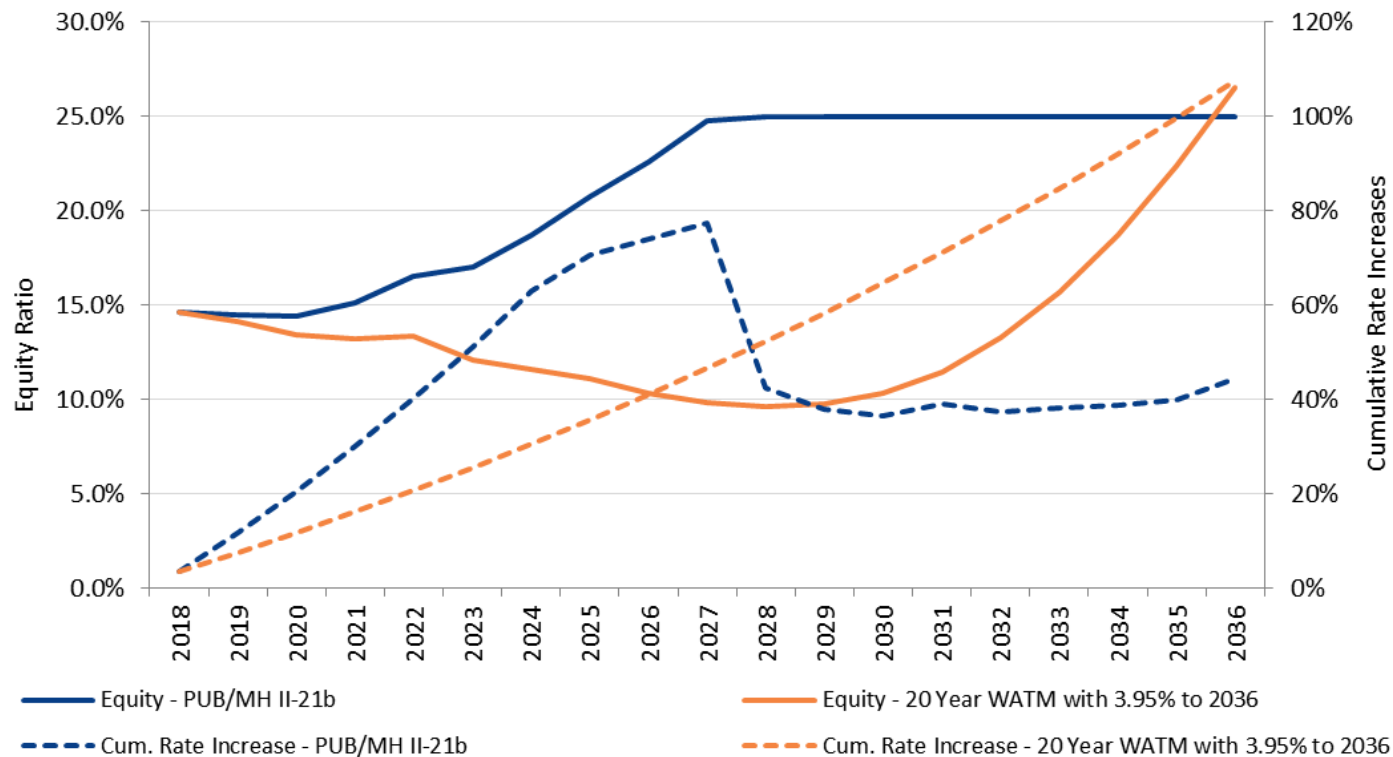
Note: excludes non-cash amortization of Bipole III Reserve Account

What Does MH16 Achieve?

- Proactive action to bring debt, while **still very high vs. relative historical levels**, to more sustainable levels
- Path of rate changes beyond 2026/27 can not be easily forecast today
- What is assured?
 - Interest rate exposure (and therefore rate volatility) lessened by removing \$4 billion of debt
 - Regardless of future conditions, addressing debt problem enables lower cumulative rate increases over long term
- Near term potential economic impacts far outweighed by longer term benefit of lower cumulative rate increases and sharply reduced likelihood of contagion impacts on Province of Manitoba

Why Are We Doing This?

- Ensuring service, reliability, preparedness
- Managing risk
- Rate stability with potential for lower rates and bills in the long run



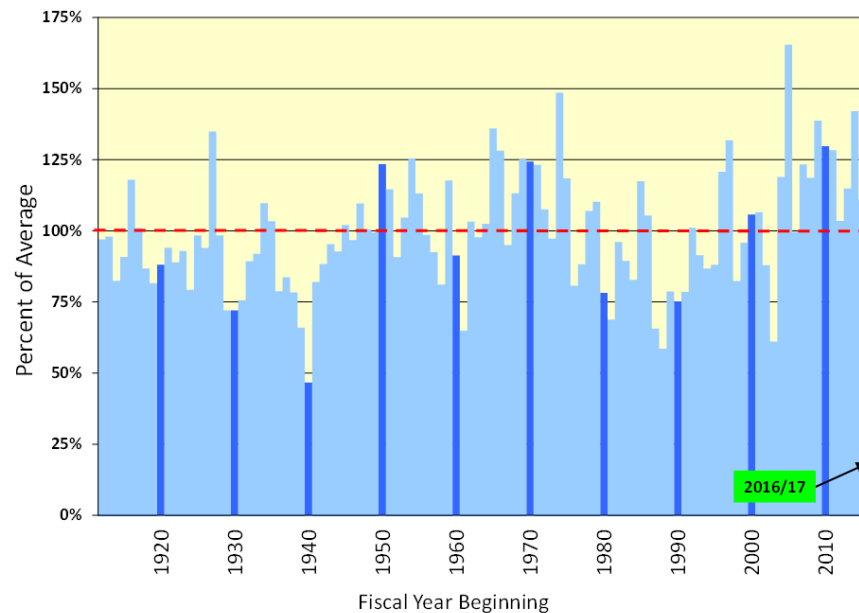
III. Manitoba Hydro Faces Large Risks

Manitoba Hydro Risks

- Manitoba Hydro presents a unique set of risks that together reinforce importance of adequate reserves:
 - **Hydrology** – no hydro-based utility has the volatility in water conditions and relative small reservoir size Manitoba Hydro must manage
 - **Debt** – Manitoba Hydro debt is, and will continue to be, more leveraged relative to the size of its operations than it has ever been creating far more exposure to interest rate volatility
 - **Export Revenue** – export sales represent a much larger share of total revenue (particularly after Keeyask) than peers creating more exposure to fluctuating export prices
 - **Major Projects** – each \$500 million increase in capital costs is a \$30 to \$35 million annual addition to revenue requirement

Hydrologic Risk

- Manitoba Hydro’s water conditions are subject to a great deal of volatility
- **Manitoba Hydro has enjoyed 14 consecutive years of greater than average system inflows**
 - Previous “wet” record was 5 years
 - Above average water has contributed \$215 million to equity (or approximately 8%) since NFAT (2014/15 - 2016/17) representing virtually all of retained earnings growth in that time frame

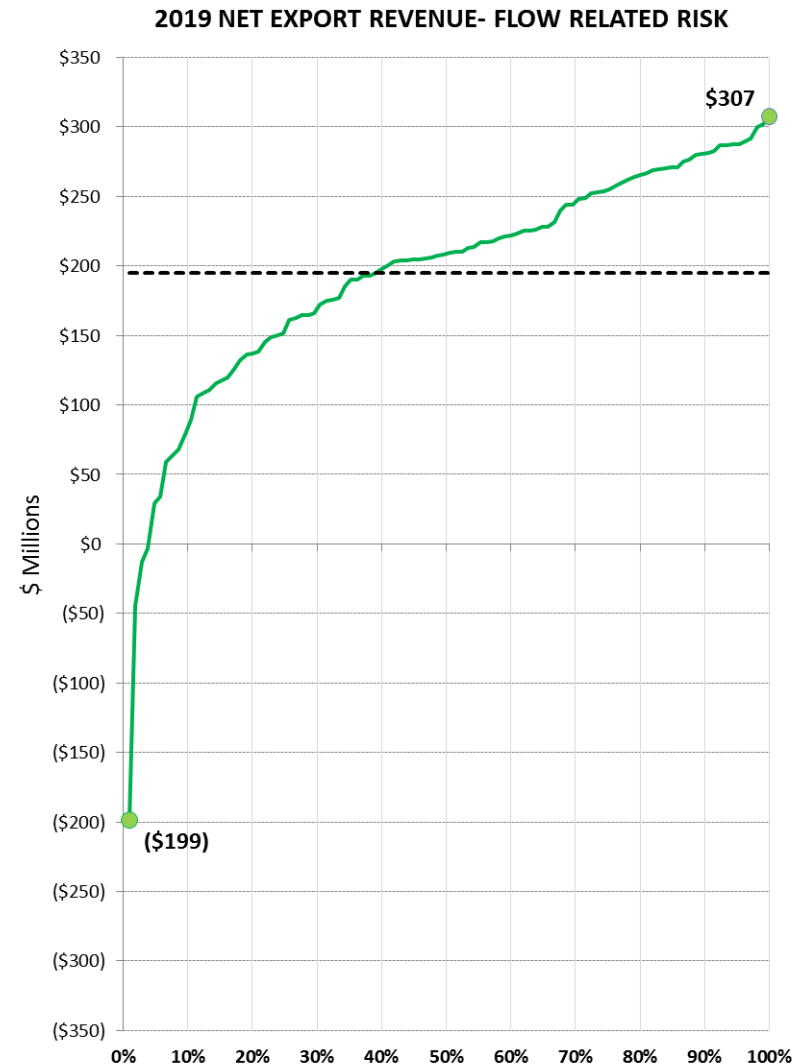


Hydrologic & Export Risk

- \$58 million or 22% drop in net export revenue in 2017/18 between MH16 Update (prepared in May/June) and outlook in September
 - 68% decrease to 2017/18 forecast net income
- \$20 million decrease to 2018/19 outlook
- Charts to follow highlight the potential variability in net export revenue due to water conditions for 2018/19 (which begins in four months)

Hydrologic & Export Risk

- While drought can impair next year's net income by up to \$400 million, even below average (1 in 5 to 10 year) water conditions can compromise \$60 to \$120 million of earnings
- While tempered from past export price forecasts, Manitoba Hydro is still projecting appreciating opportunity export prices over the next 10 years
 - Opportunity price appreciation is contributing \$45 million to 2022/23 net income and \$90 million to 2026/27 net income
 - Combined with hydrologic risk, net export revenue is subject to **significant and asymmetrical** volatility in potential outcomes each year



No Room for Interest Rate Increases

- Manitoba Hydro’s forecast assumes rates stay near all-time lows
 - Historical experience shows rates can often move up or down +/- 5% in a decade
- A comparison of borrowing requirements:

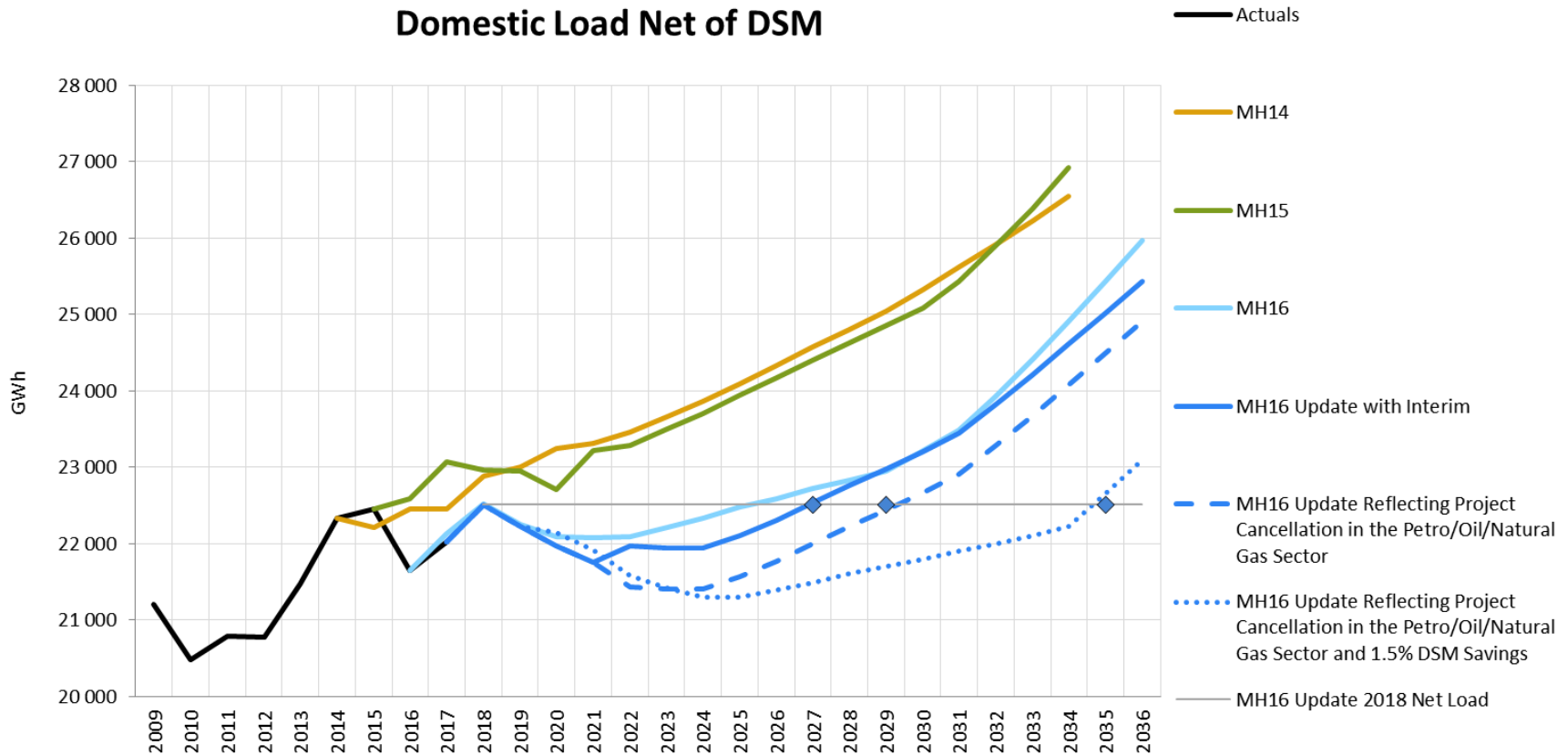
In Billions of Dollars	MH Plan	3.95% / 12 Year WATM
2017/18 - 2021/22 Borrowing	\$13.5	\$14.1
2022/23 - 2026/27 Borrowing	\$8.8	\$9.7
2022/23 - 2026/27 Cash Flow	<u>(\$3.1)</u>	<u>(\$0.4)</u>
Total 10-Year Borrowing	\$19.2	\$23.4

- Each 1% move upward in interest rates, depending on timing, could cost Manitoba Hydro upwards of \$200 million **per year** by the end of the forecast period

IV. Key Facts of This Rate Case

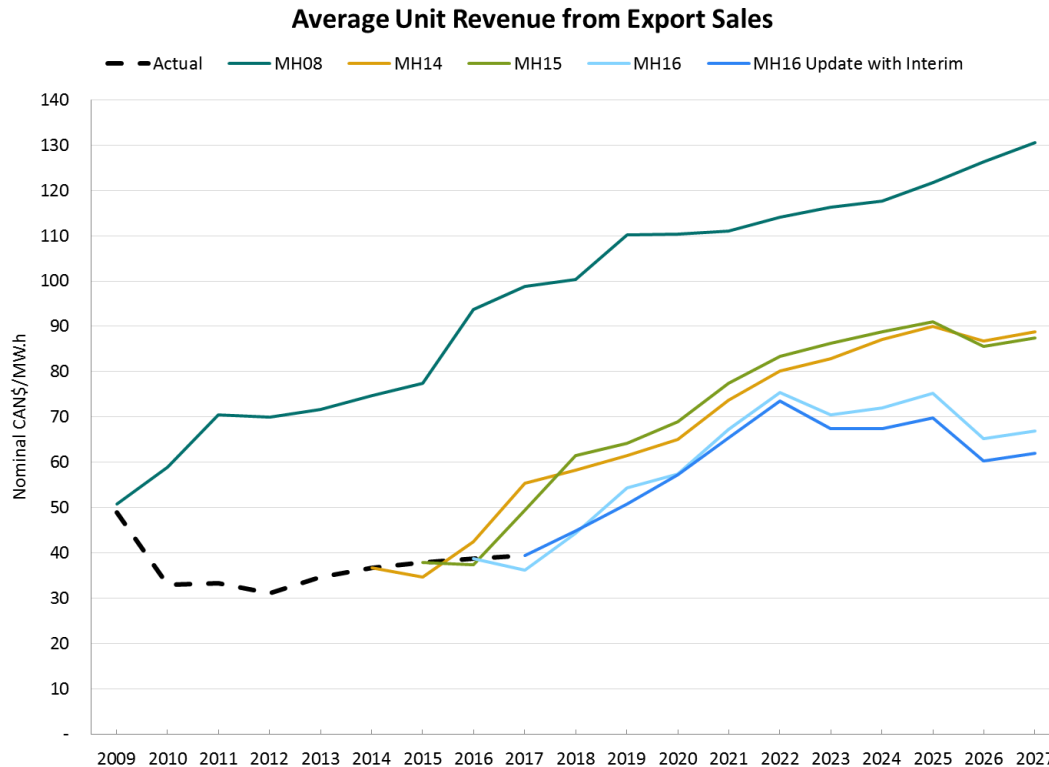
MH Outlook Has Deteriorated

- Now facing 10 years or more of **no net load growth**
- Loss of unit volume amplifies the rate increase needed to maintain the same revenue dollars – the 3.95% plan assumed far more load



MH Outlook Has Deteriorated

- Export price outlook continues downward trend – decline in outlook for spot prices since MH15 impacting post-Keeyask revenue by ~\$170 million
- Approximately \$90 million/year in opportunity revenues at risk by 2026/27 if prices do not rebound



MH Outlook Has Deteriorated

- Keyask Generating Station “P50” control budget has increased \$2.2 billion to \$8.7 billion and in-service date has been delayed 21 months to August 2021



MH Outlook Has Deteriorated

- Bipole III Reliability Project control budget has increased \$0.4 billion to \$5.0 billion



MH Outlook Has Deteriorated

- Revenue down \$3 billion
- Net income down \$1 billion
- Debt increased \$3.2 billion

	2017-2027		
	Increase/(Decrease) In Millions of Dollars		
NET INCOME	MH16 Update*	MH15	Variance
Domestic Revenues (at MH15 Rate Increases)	20 865	22 265	(1 400)
Extraprovincial & Other	7 193	8 746	(1 554)
Total Revenues	28 058	31 011	(2 954)
Total Expenses including Net Movement	28 378	30 407	(2 028)
Non-Recurring Gain	20	-	20
Net Revenue Lost due to Current Water Flow Projections	(78)	-	(78)
Net Income	(379)	604	(983)
Net Income (at MH15 Rate Increases) Attributable to: Manitoba Hydro	(403)	607	(1 010)
Non-controlling Interest	25	(2)	27
	(379)	604	(983)
Equity Ratio in 2027	10%	14%	
Net Debt in 2027	25 060	21 838	3 221

*MH16 Update with Interim with 20 Year WATM at MH15 Rates

MH Outlook Has Deteriorated

- Comparison understates the forecast erosion
 - Keeyask 21 month delay **adds** \$750 million to MH16 Update with Interim net income in form of net cost avoidance
 - 2016/17 under MH16 includes \$87 million of additional net income from high water conditions
 - MH16 Update with Interim overstates current expectations by \$78 million in test years due to dry 2017 summer and persistently low opportunity export prices
- **There is no basis whatsoever for intervener evidence of no deterioration**
- Very limited ability for interest rate reductions and O&A cuts to offset foregone revenue outlook
- **Manitoba Hydro is not going to grow its way into managing its debt – debt load needs to be reduced**

Net Income Is Not Full Picture

- On a normalized basis, Manitoba Hydro has had *minimal to negative* net income for each of the last three years and is forecast to again in 2017/18

(In Millions of Dollars)	2014/15	2015/16	2016/17	2017/18
Net Income Attributable to MH	111	37	53	93*
Non-Recurring Gain	-	-	(20)	-
Income Impact of Bipole III Capitalization	(8)	(15)	(32)	(54)
Above Average Water	(70)	(62)	(87)	(35)
Adjustment to Current Outlook	-	-	-	(63)
Restructuring Expenses	-	-	4	50
Adjusted Net Income/(Loss)	33	(40)	(82)	(9)

*MH16 Update with Interim

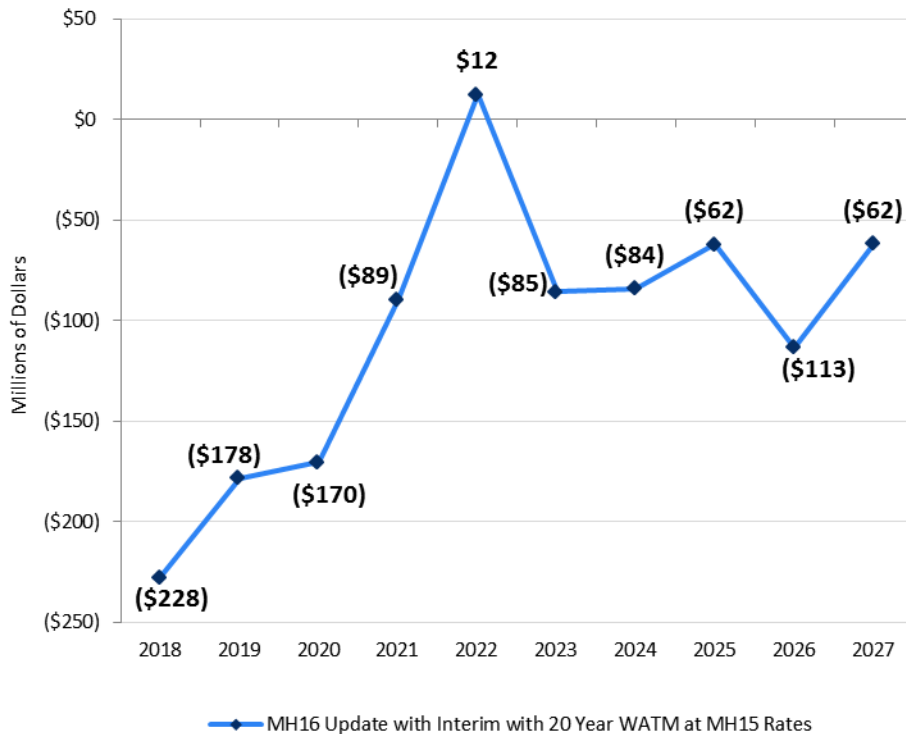
Net Income Is Not Full Picture

- Net income, even if positive, gives an incomplete picture of financial health
- Depreciation determines revenue requirement but is based on **historical cost**
 - Large part of the system was built more than 25-30 years ago
 - Costing significantly more to sustain
 - Business Operations Capital is \$150-200 million more than amount being recovered through depreciation
- MH has significant other ongoing cash expenditures which only minimally impact revenue requirement / net income
 - Annual payments to City of Winnipeg
 - Payment commitments on mitigation and past development liabilities
 - Demand Side Management
- Must now take into account the current cash burden and imminent expense burden from Bipole III

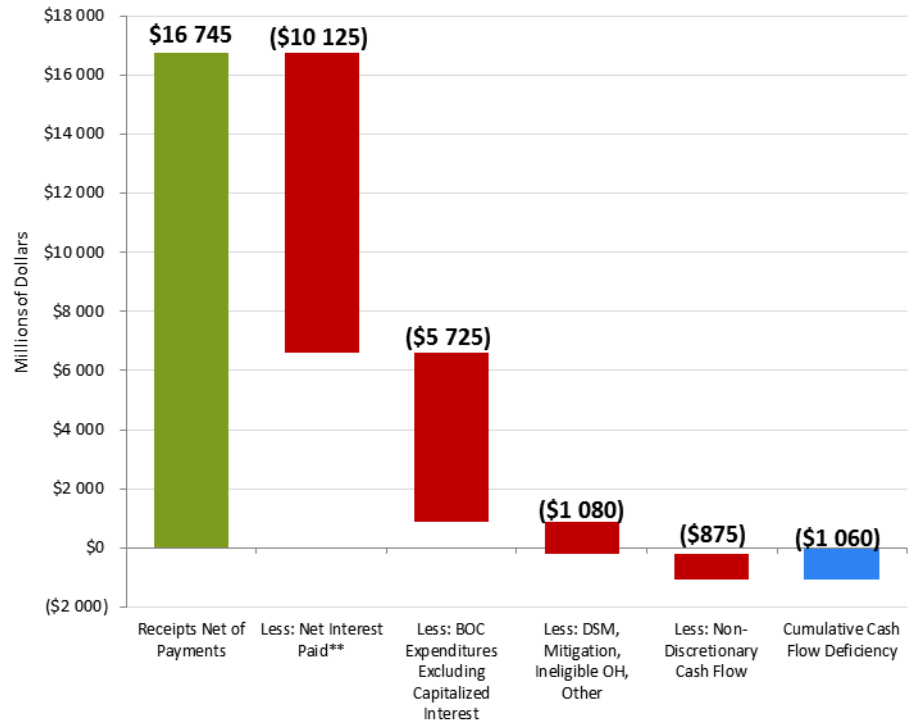
MH Has a Cash Flow Problem

- The 3.95% rate path generates an annual cash flow deficiency in all years but one (2021/22) and a \$1 billion cumulative deficit by 2026/27

Annual Cash Flow Deficiency



2018-2027 Cumulative Cash Flow Deficiency*



*20 Year WATM at MH15 Rates

**Interest Paid net of Interest Received and gross of capitalized interest excluding Keyeyask, MMTP & GNTL

Equity Ratio Is Important

- Equity ratio is the best of Manitoba Hydro's traditional financial targets
- Capital Coverage and Interest Coverage are incomplete
 - Do not capture all of the recurring, non-discretionary cash demands on Manitoba Hydro
 - Therefore provide no picture of whether MH is increasing or decreasing reserves and/or debt
- Equity ratio should also be thought of in inverse: Debt Ratio
 - **Equity is not a cash reserve – on its own, and without income, does nothing for MH when adverse events occur**
 - For MH, equity represents **debt avoided**
 - Focus of MH16 Financial Plan is to curb unsustainable growth in debt

Equity Ratio Is Important

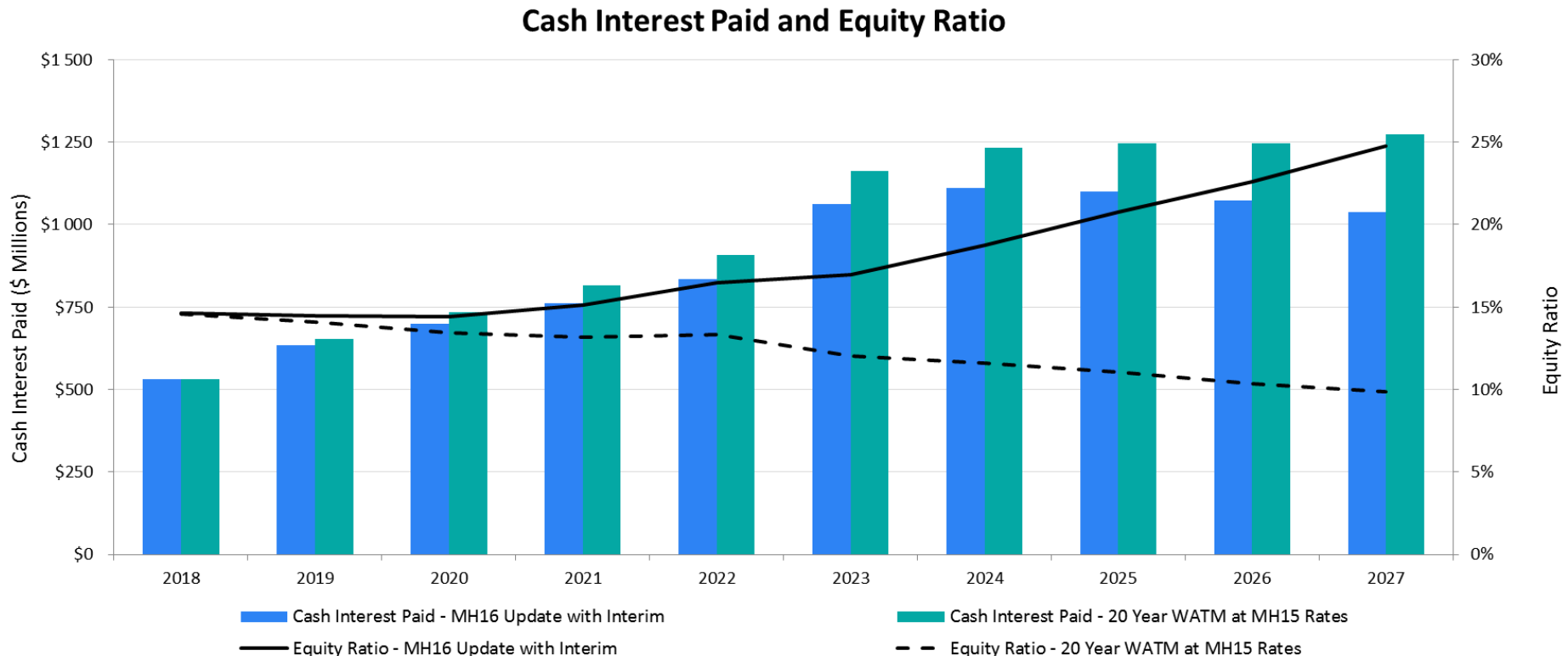
- Debt level is inextricably linked to the cash flow of any business
- For MH, interest expense will be, by far, the largest cost/cash flow burden on revenues
- Targeting equity can and does achieve **forecast** income and cash flow adequacy that leads to:
 - Reserves or “cushion” against the unforeseen **and forecast variability**
 - Debt reduction
 - Predictable rates which are lower in long run
- Achievement of equity ratio is perfectly aligned with meeting minimum cash flow based metrics advocated by intervener experts

Equity Ratio Is Important

- Numerous rating agency reports on Province of Manitoba cite rising debt levels at MH as a significant concern
- Debt:Equity is a proxy for overall debt levels which debt markets care about very much
- Regardless of the capital markets or credit rating agencies, Manitoba Hydro, its customers and the PUB should focus on and be concerned with debt levels
- Credit ratios are inextricably linked: Debt determines interest payments; interest payments determine cash flow and therefore cash flow adequacy

Equity Ratio is Important

- Interest will be **by far** the largest cash burden on Manitoba Hydro
- Therefore amount of debt is the most significant driver of the cash flow and financial condition of the Corporation



Other Ratios Have Shortcomings

- **Capital Coverage Ratio** has important weaknesses
- Numerator (Cash from Operations) **omits all capitalized interest** which can understate the current and pending burden on the company for **non-revenue generating** in flight projects (e.g. Bipole III)
- Denominator (Business Operations Capital) has numerous weaknesses which understate the annual cash burdens on Manitoba Hydro:
 - Business Operations Capital arbitrarily excludes large sustainment projects
 - DSM, City of Winnipeg, Mitigation and Past Development liability payments are entirely excluded **but are real costs**

Other Ratios Have Shortcomings

- **Interest Coverage** (EBITDA to Interest) Ratio provides no indication of whether cash flow is sufficient to meet interest obligations **and** the ongoing reinvestment and other commitments of the utility
 - For a utility, ongoing capital expenditures are, generally, not discretionary – investments are required to maintain system, meet mandate **and enable the revenue which the EBITDA forecast assumes**
 - Other payments (Mitigation, Winnipeg Hydro) represent contractual commitments

Other Ratios Have Shortcomings

- 3.95% rate path does not come close to meeting targets in any event

Financial Ratios:	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27
Equity Ratio (Target > 25%)										
MH16 Update with Interim	15%	14%	14%	15%	17%	17%	19%	21%	23%	25%
MH15 Rates	15%	14%	13%	13%	13%	12%	12%	11%	10%	10%
Capital Coverage Ratio (Target > 1.20x)										
MH16 Update with Interim	1.40 x	1.48 x	1.47 x	1.88 x	2.34 x	2.25 x	2.37 x	2.34 x	2.20 x	2.29 x
MH15 Rates	1.39 x	1.33 x	1.15 x	1.36 x	1.59 x	1.30 x	1.21 x	1.20 x	1.10 x	1.18 x
EBITDA Interest Coverage Ratio (Target > 1.80x)										
MH16 Update with Interim	1.54 x	1.71 x	1.72 x	1.84 x	2.01 x	2.03 x	2.08 x	2.22 x	2.24 x	2.36 x
MH15 Rates	1.53 x	1.61 x	1.54 x	1.58 x	1.64 x	1.54 x	1.47 x	1.52 x	1.49 x	1.54 x

Other Metrics:	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27
EBIT Interest Coverage Ratio (Target > 1.20x)										
MH16 Update with Interim	1.10 x	1.21 x	1.20 x	1.31 x	1.45 x	1.38 x	1.36 x	1.47 x	1.45 x	1.54 x
MH15 Rates	1.10 x	1.13 x	1.03 x	1.07 x	1.12 x	0.95 x	0.83 x	0.86 x	0.82 x	0.88 x
Net Debt										
MH16 Update with Interim	\$ 18 473	\$ 20 743	\$ 22 407	\$ 23 296	\$ 23 609	\$ 23 388	\$ 22 831	\$ 22 201	\$ 21 613	\$ 20 947
MH15 Rates	\$ 18 474	\$ 20 825	\$ 22 657	\$ 23 809	\$ 24 496	\$ 24 761	\$ 24 811	\$ 24 877	\$ 24 994	\$ 25 060

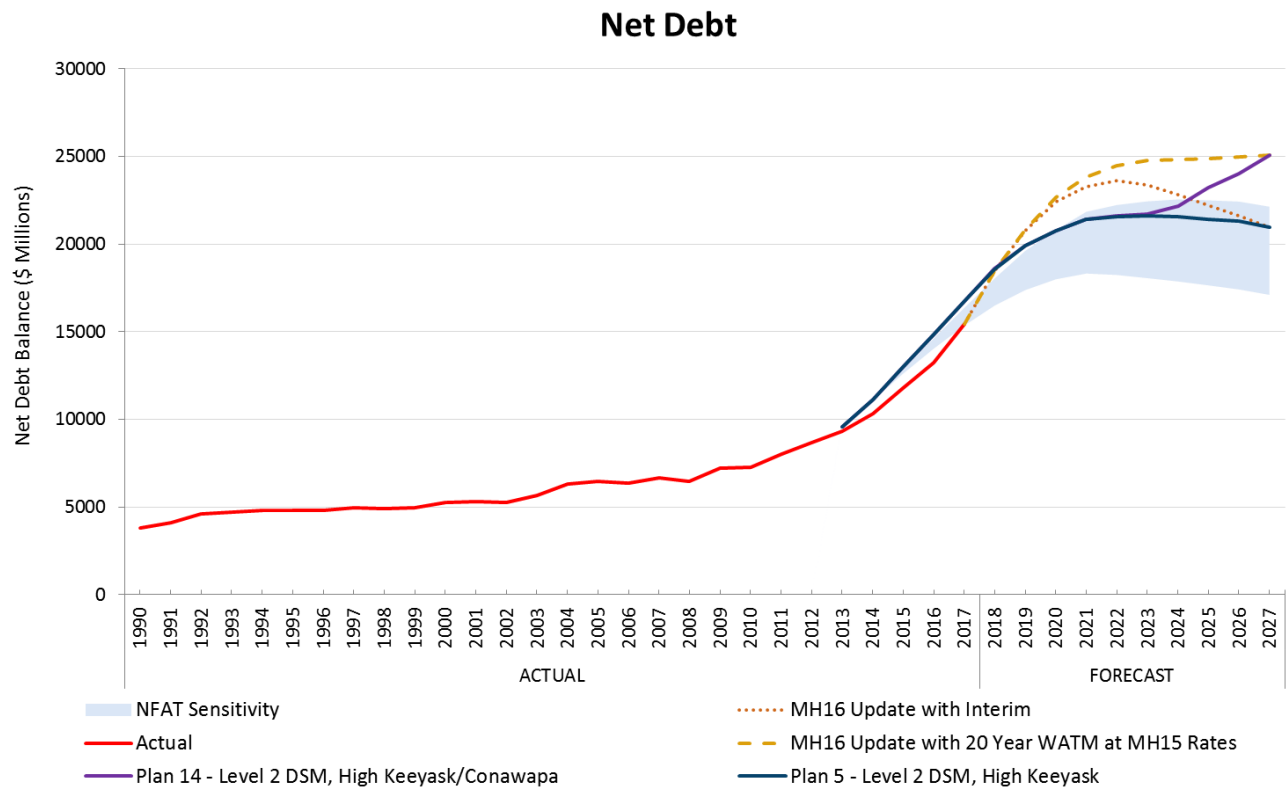
Other Ratios Have Shortcomings

- Adding other ongoing annual cash charges of Manitoba Hydro makes clear the alignment of equity ratio targets and that the proposed rate plan is minimally sufficient

(In Millions of Dollars)	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27
MH16 Update with Interim:										
EBITDA (Numerator)	1439	1676	1795	2068	2307	2308	2384	2495	2435	2508
Interest	936	982	1041	1121	1145	1138	1148	1125	1089	1060
Capital and Other Cash Needs	763	772	740	769	766	742	723	783	799	822
Cash Burdens (Denominator)	1700	1754	1782	1890	1911	1880	1871	1908	1888	1882
EBITDA / Ongoing Cash Burdens Equity Ratio	0.85 x 15%	0.96 x 14%	1.01 x 14%	1.09 x 15%	1.21 x 17%	1.23 x 17%	1.27 x 19%	1.31 x 21%	1.29 x 23%	1.33 x 25%
At MH15 Rates:										
EBITDA / Ongoing Cash Burdens Equity Ratio	0.85 x 15%	0.91 x 14%	0.91 x 13%	0.95 x 13%	1.01 x 13%	0.96 x 12%	0.94 x 12%	0.94 x 11%	0.92 x 10%	0.95 x 10%

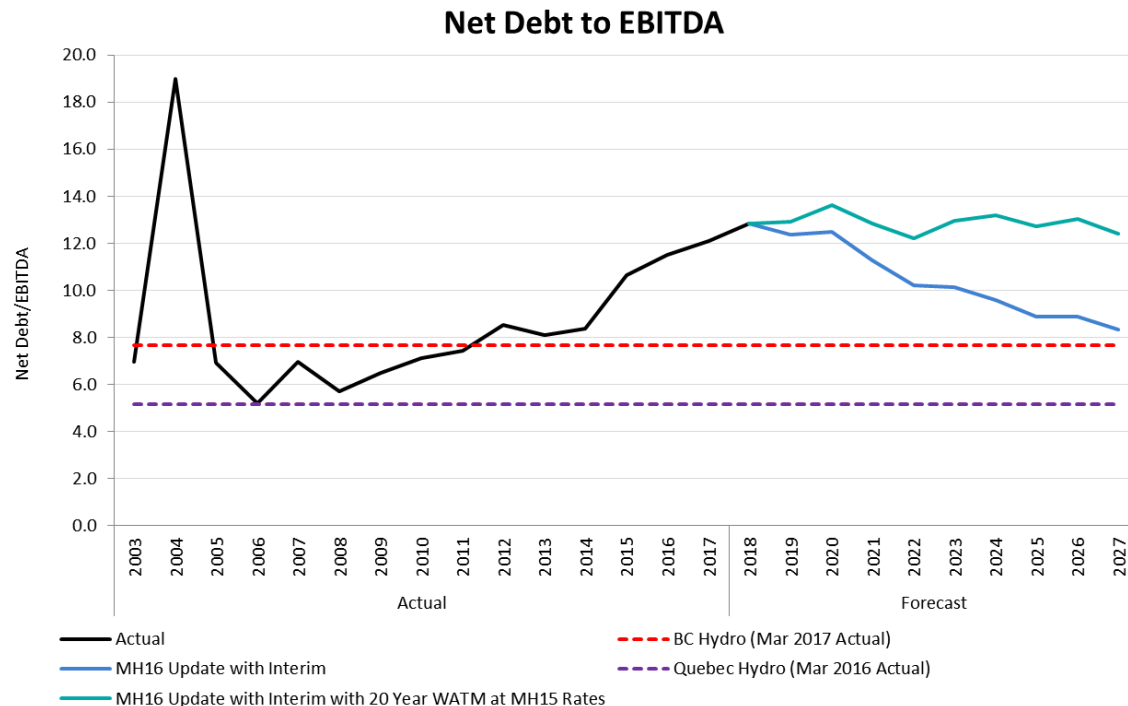
Debt Continues to Escalate

- Figure 5-3 from Mr. Bowman’s evidence shows forecast net debt levels now substantially **exceed** high end of sensitivity range of NFAT
 - On a smaller than anticipated domestic business due to lower load growth outlook
 - Notwithstanding high water contributions of 2014/15, 2015/16, 2016/17, 2017/18 and 2018/19...
 - ...and in spite of now lower interest rate forecast



EBITDA and Leverage

- Debt / EBITDA is a common measure of relative debt level
- Manitoba Hydro's leverage ratio has steadily increased
 - Forecast to peak at nearly 14x and, without more aggressive rate action, not abate
 - Comparable leverage level to 2003/04 drought when MH lost >\$400 million



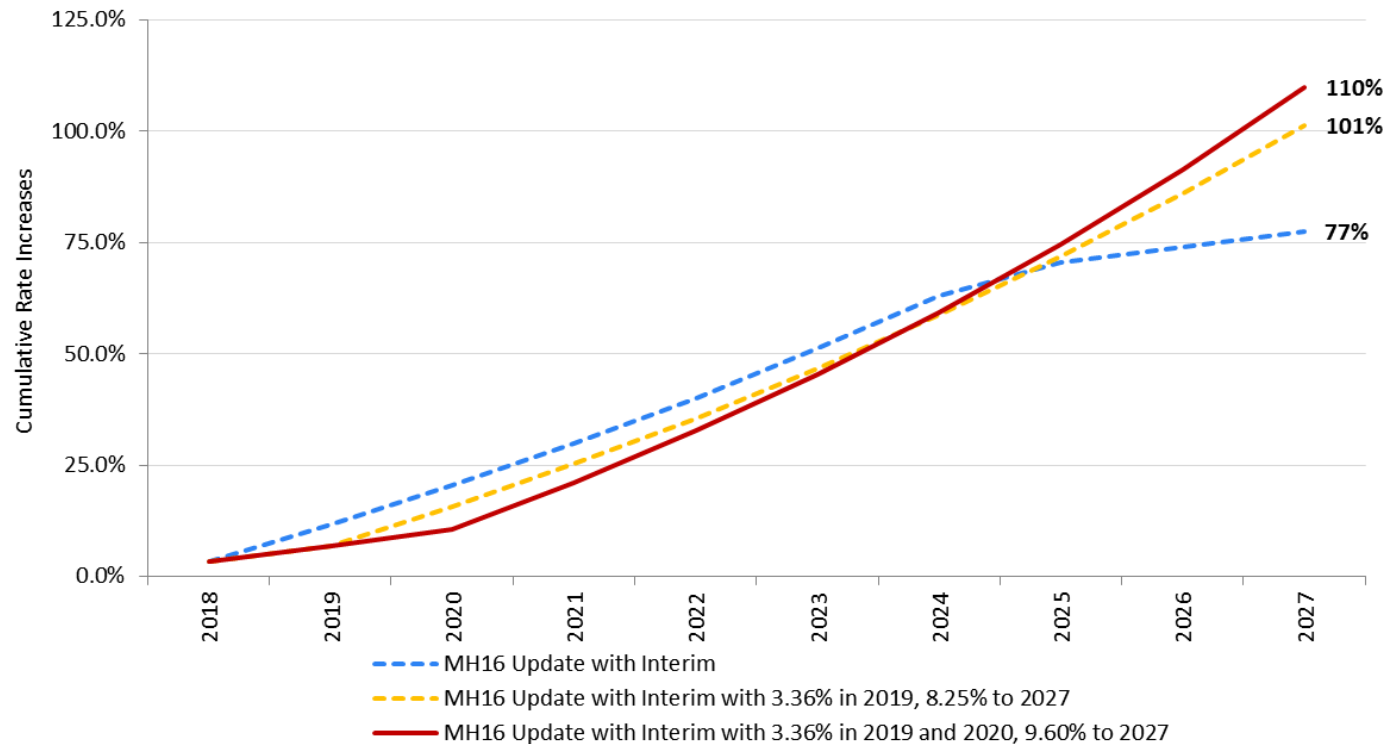
Province of MB is a Stakeholder

- Manitoba Hydro customers bear the **full cost** of operating the system
- MH should not be permitted to threaten or impair the credit standing of the Province of Manitoba
- Manitoba Hydro customers also have vested interest – Provincial borrowing cost is passed on to MH
- Not appropriate to inflate debt until **inevitable** corrective rate action is too politically or economically infeasible therefore forcing taxpayers to fund relief
- Provincial Guarantee Fee is **not** compensation for increasing Province's borrowing costs

Important to Act Now

- Multi-year and compounding impacts of first year(s) rate increases are essential
- Must get on right trajectory - very difficult to “catch up”

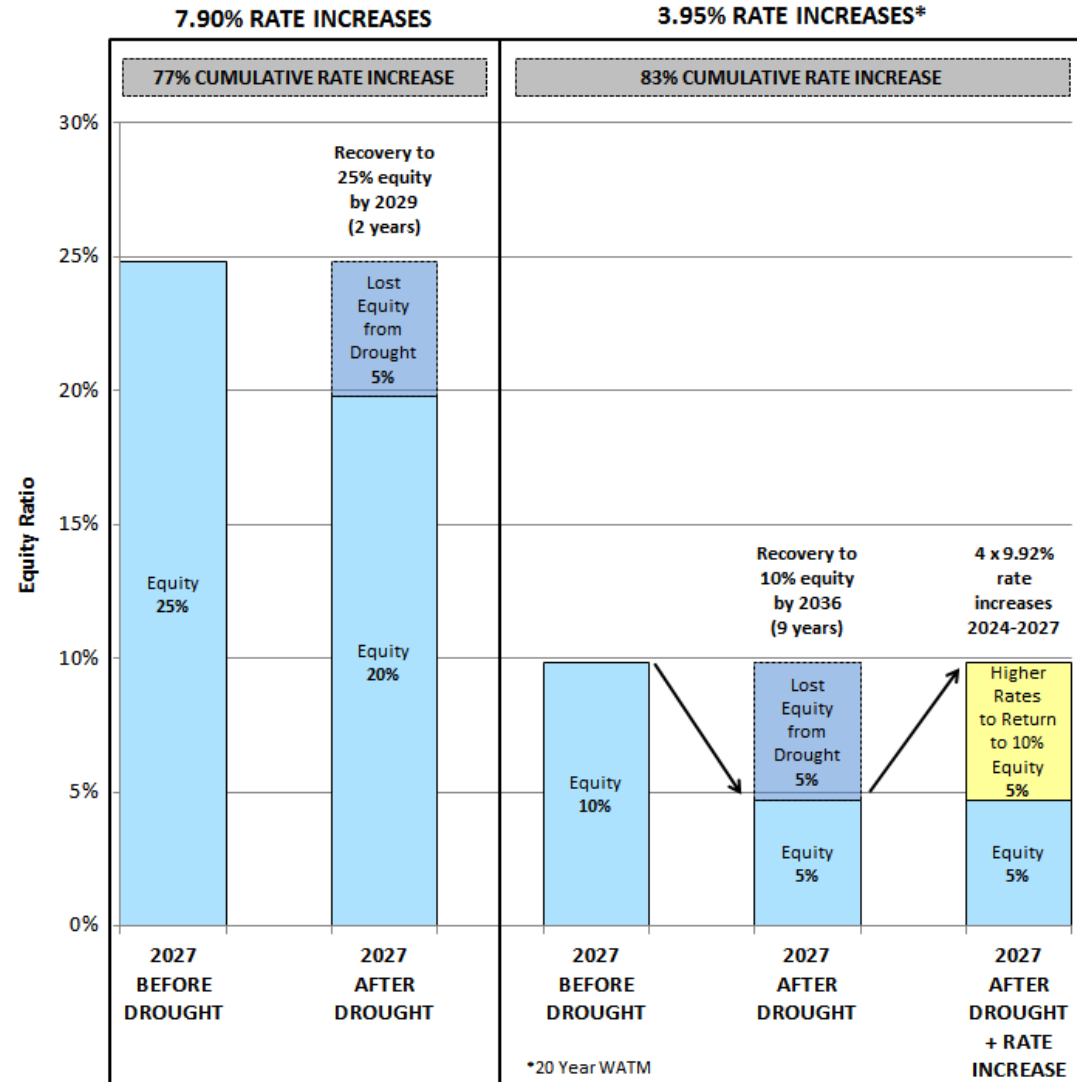
Rate Increases Required to Reach 25% Equity in 2027



Important to Act Now

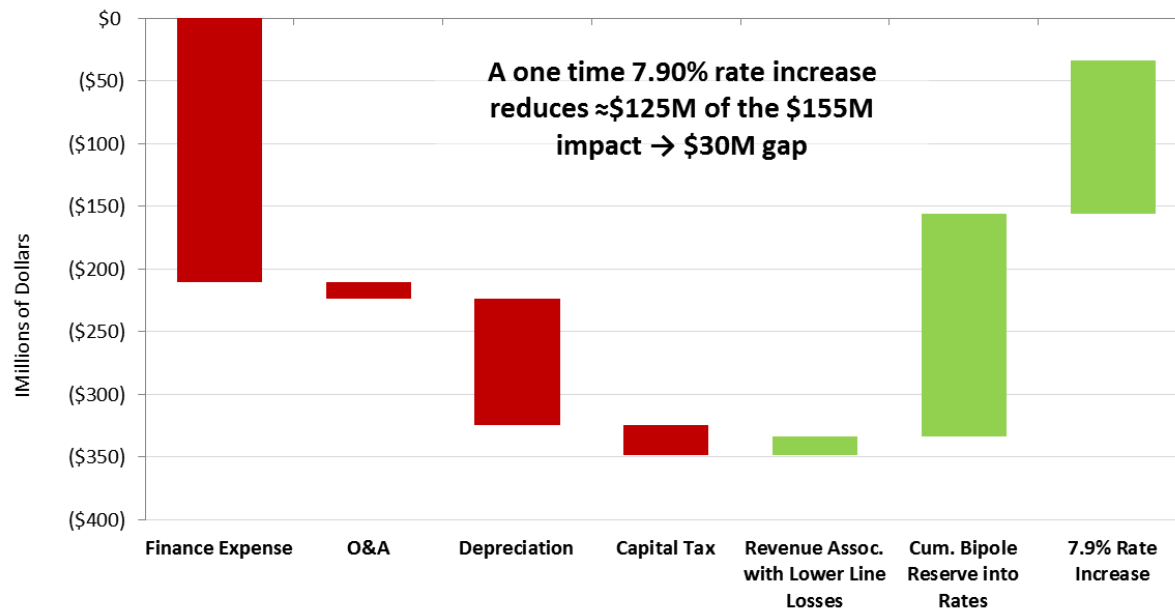
MH16 UPDATE WITH INTERIM AND 2023-2027 DROUGHT

- In the event of a five-year drought from 2022/23 - 2026/27:
 - Under the proposed plan, no significant rate action is required. Attainment of the 25% equity ratio is delayed by **two years**
 - Under 3.95% rate increases, recovery to pre-drought equity of **only 10%** is delayed by **nine years to 2035/36**
 - Or requires four 9.92% rate increases just to maintain **10% equity**
 - Which would leave rates in 2027 **6% higher** than under MH plan



Important to Act Now

- April 1, 2018 (proposed) is the last rate increase before Bipole III comes in service in **less than 9 months**
- Current rates are not adequate
 - Already not funding full costs of operating the business
 - Bipole III is significantly underfunded through rates



April 1, 2018 Rate

- Rate request is 7.9% for April 1, 2018
- Comfortably supported by:
 - Will address only 60% of 2019 cash flow deficiency
 - Current rates too low by up to 20%
 - Still insufficient to address imminent revenue requirement of Bipole III
- Essential and necessary first step in proactively addressing
 - Lack of contribution to reserves in current rates
 - Debt continuing to grow to unsustainable levels
 - Need to ensure Manitoba Hydro is financially positioned to address aging infrastructure and a changing utility model

Reserves are Essential

- Equity – in and of itself – does not create the buffer that cushions rate impacts when things go wrong
 - It is not a cash “rainy day fund”
 - Accumulated net profit of years ago is of no use during adverse events with no current income / cash flow
- Instead, for Manitoba Hydro, equity (or reserves) represents **debt not borrowed**
- Only path available to MH to create useful reserves is to build a financial plan and rate strategy that has positive net income and positive cash flow
 - 3.95% does not come close to achieving

Reserves Must Be Funded In Rates

- Positive net income and cash flow represents a **planned** contribution to reserves each year through rates
- Value is the ability to manage and absorb **foreseeable** risks (e.g. below average water conditions, rising interest rates), without necessitating immediate rate action
- Insofar as risks don't present, income and cash flow will build reserves through the reduction of debt
 - Contribute to returning Manitoba Hydro debt to a sustainable level for the size of its operation
 - Increase probability of lower, more stable rates

V. How Did We Get Here?

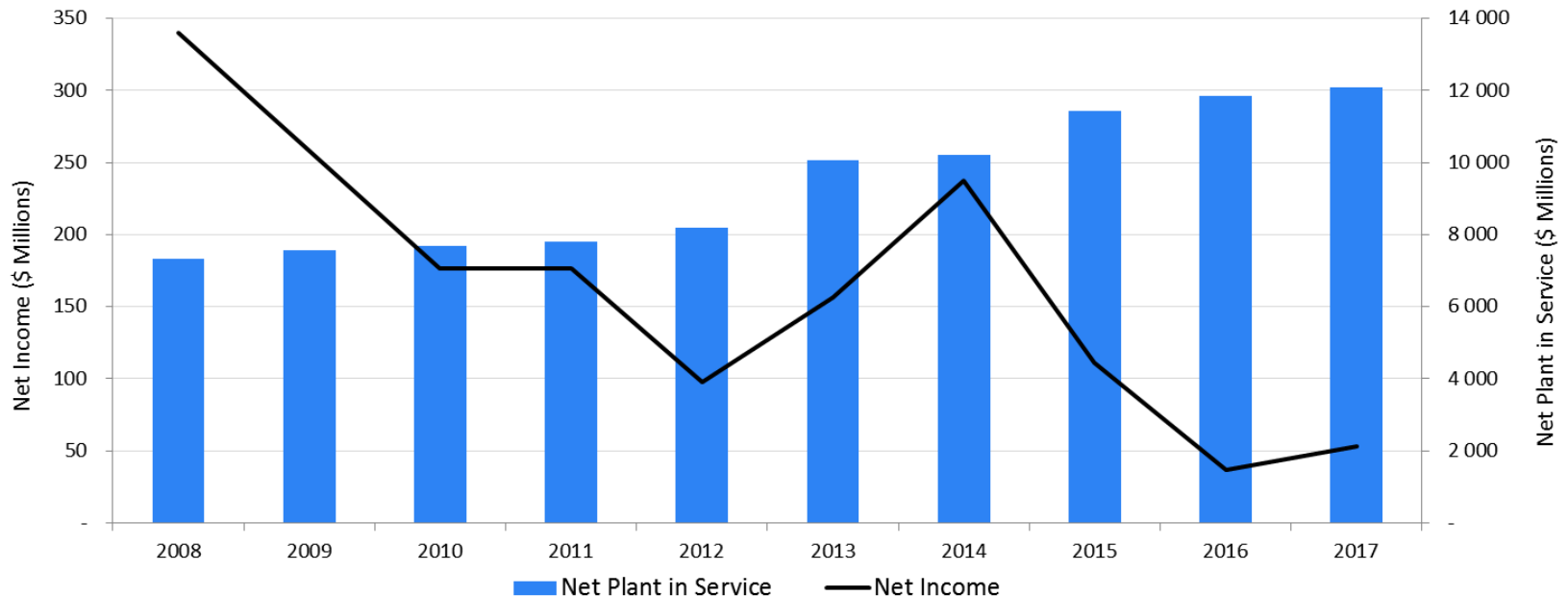
What Happened?

- Export prices collapsed, without domestic rates compensating
- Domestic load growth has slowed – substantially
- Costs of being in the electricity business have been rising faster than inflation
- Did not take advantage of high water conditions by making contributions to reserves – in fact, the opposite
- Keeyask business case has eroded
- Bipole III, while necessary, compounded the challenges
- Undertook what has become almost \$14 billion of capital projects with too risky a plan to pay for them

Rates Are Too Low

- Manitoba Hydro has not been asking for the right rates
 - As the business has grown, net income has been systemically falling
 - In spite of 14 years of above average water conditions
 - In spite of declining to multi-generational low interest rates
 - Inadequate or no contribution to reserves being made for size of this business

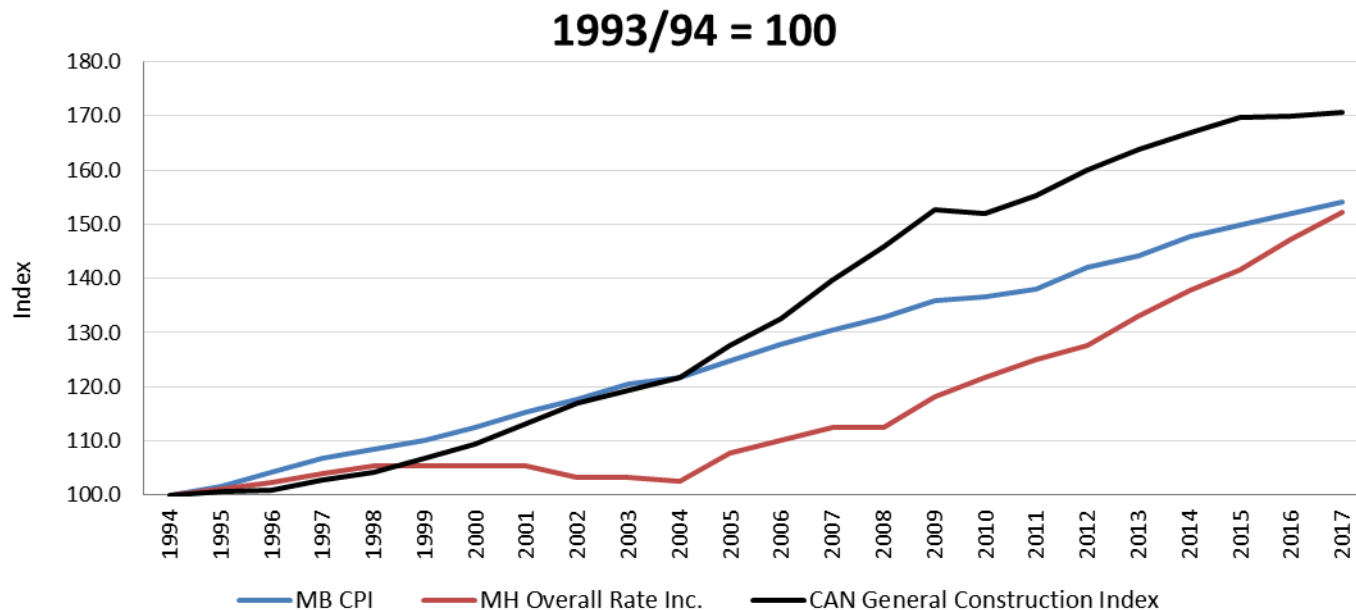
Net Income* and Net Plant in Service Comparison



*2010-2014 net income adjusted to add back accounting changes from Figure 2.3 of Rebuttal Evidence

Rates vs. Inflation

- Until recently, rate increases have stayed well beneath inflation on a cumulative basis
- Meanwhile, construction costs – an important factor for Manitoba Hydro – have significantly outpaced inflation



Interest Rates Have Cooperated

- Without declining interest rates this would have been a financial / rate catastrophe

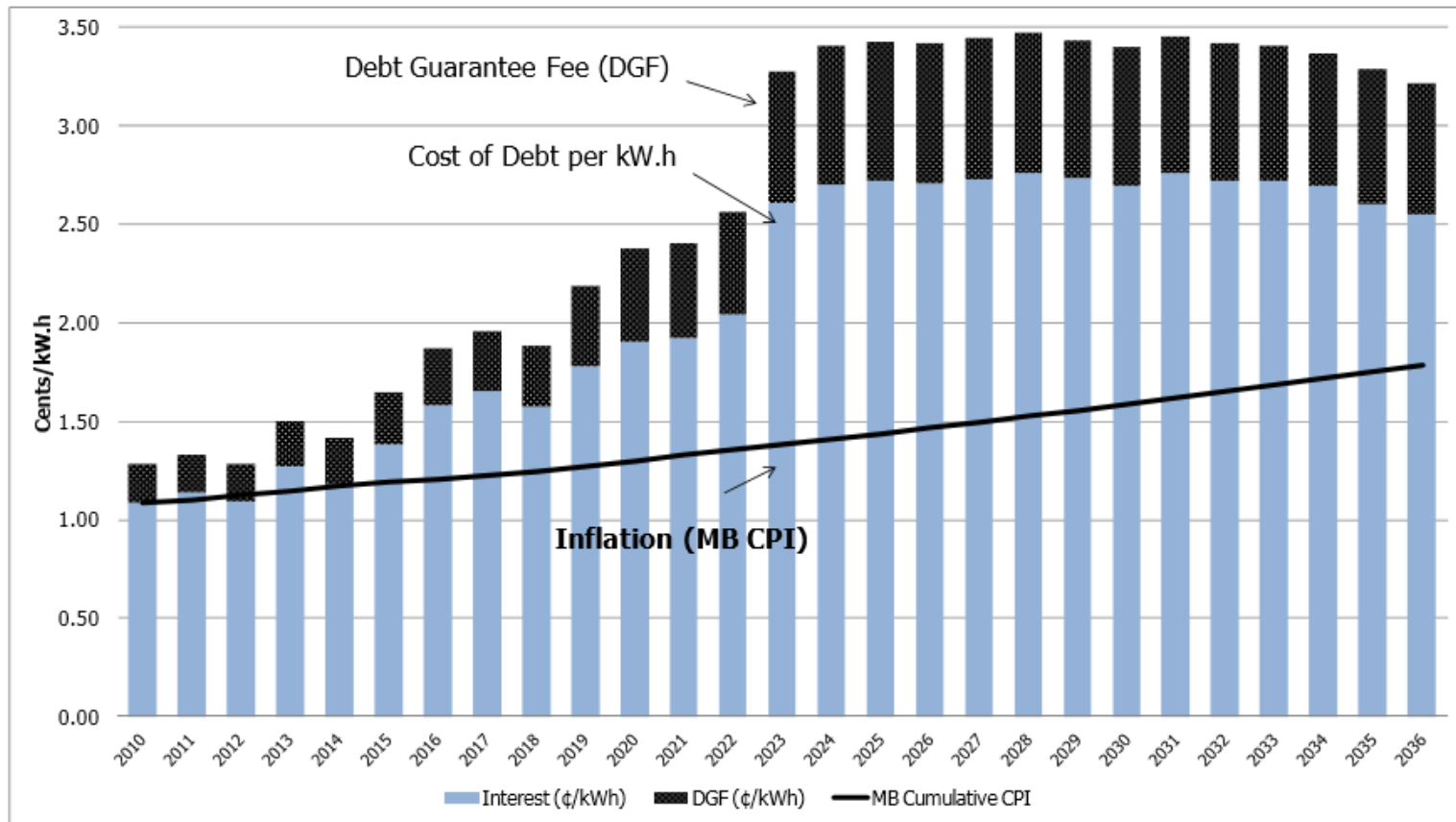
Government of Canada Historical Interest Rates*



* Reflects data at calendar year end

But Interest Burden Growing Rapidly

- Per MH-MIPUG (Bowman)-23, Figure 2*:

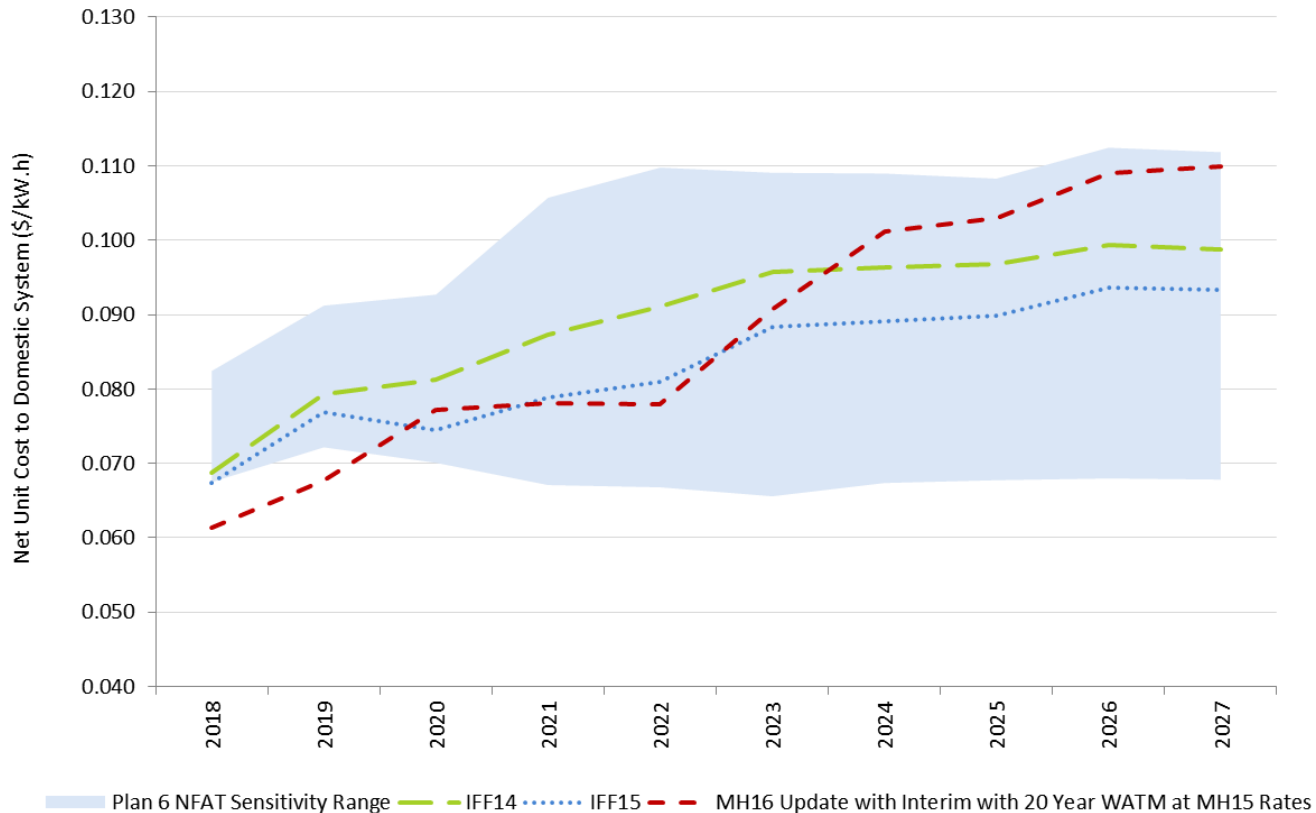


*based on MH16 Update with Interim at MH15 Rates from PUB/MH I-34 (Updated Appendix 3.4)

Net Costs vs. NFAT

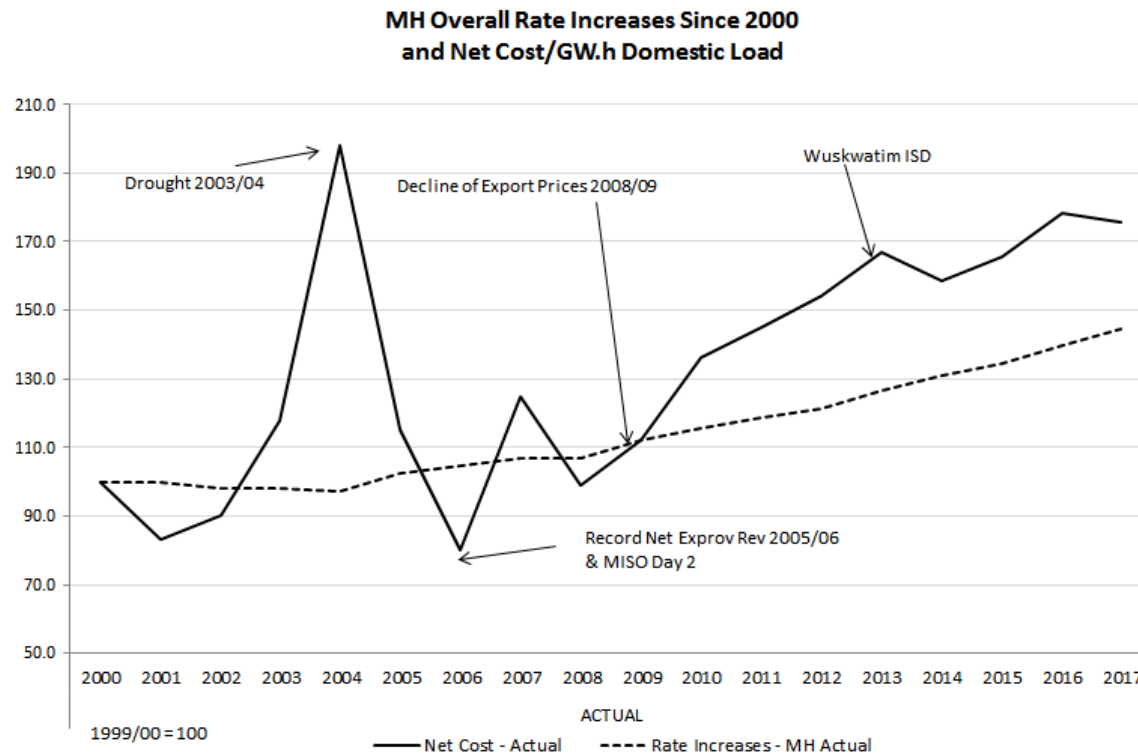
- Net costs are now forecast to be at the high end of the NFAT sensitivity range (in spite of lower interest rates)

Average Net Cost to Ratepayers



Net Costs vs. Rates

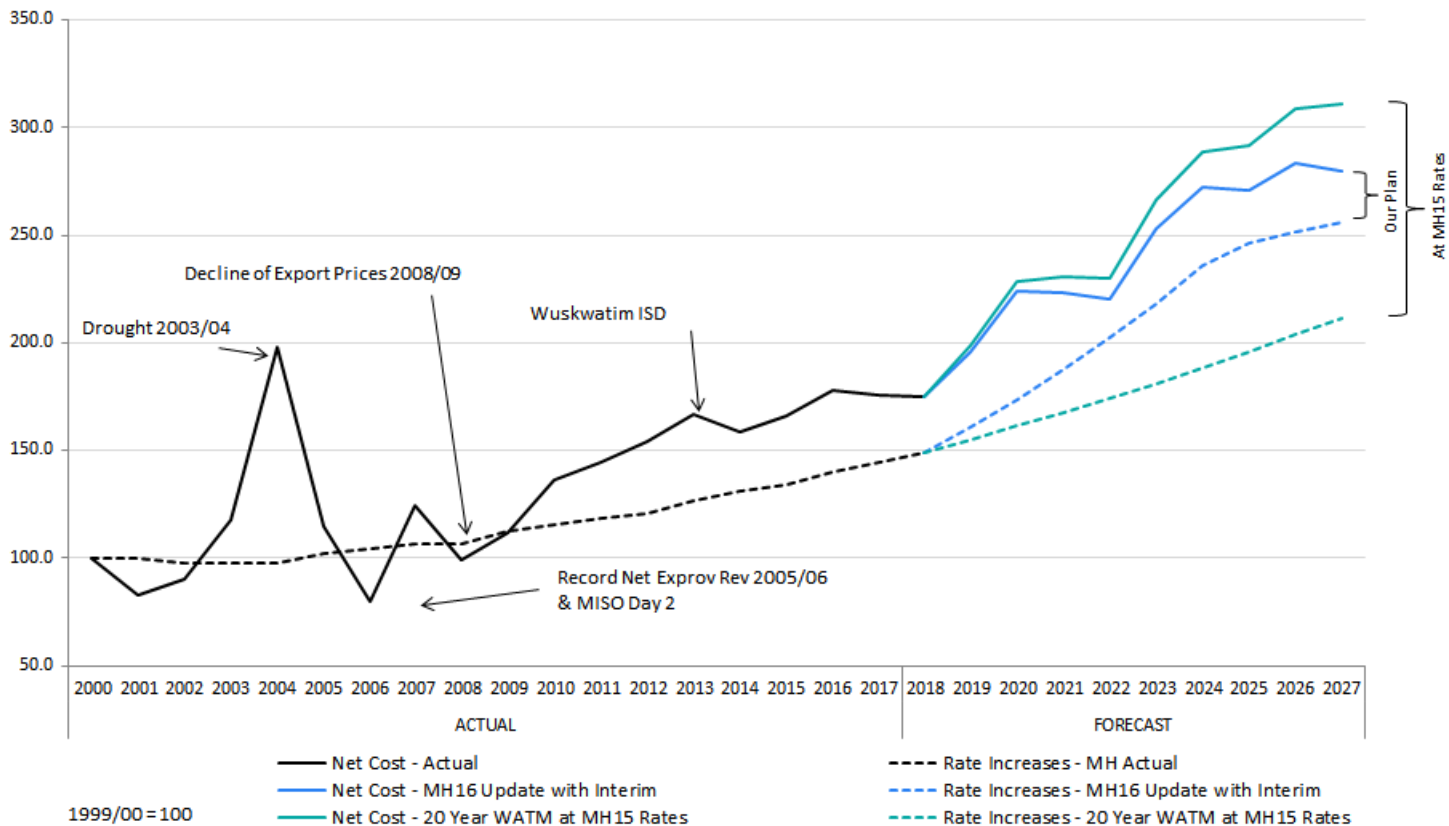
- After 2008, opportunity export prices collapsed
- Coupled with escalating costs and below CPI rate increases have led to net costs increasing substantially faster than rates



3.95% Path Does Not Work

- A 65% increase in net cost per unit between now and 2023/24 cannot be met with a 30% increase in rates

MH16 Update with Interim Rate Increases and Net Cost/GW.h Domestic Load



VI. Addressing Key Concerns

What You May Hear

Argument	Reality
MH has net income – things are fine	<ul style="list-style-type: none">• Net income and cash flow are different and we are in a cash deficit• Today’s rate levels aren’t sufficient to absorb Bipole III and then Keeyask• \$30 million of net income (with exceptional water conditions) is not adequate
These rate increases will damage the economy / industrial customers will leave	<ul style="list-style-type: none">• 3.95% plan amounts to a doubling of rates over 18 years• Unplanned “rate shock” is worse• In longer term, competitiveness is enhanced through lower, more stable rates having lowered our debt
Stop Bipole III and Keeyask	<ul style="list-style-type: none">• Far more damaging to customer rates – upwards of \$450 million of annual interest cost without a functioning asset or any revenue to show for it

What You May Hear

Argument	Reality
Hydro should just cut more costs instead of raising rates	<ul style="list-style-type: none">• O&A is <20% of costs post Keeyask; issue cannot be addressed without rate action• To plug gap in 2018/19 revenues from Order 80/17 (3.36%) vs. 7.9% would require reduction of ≈700 operational employees excluding restructuring costs beyond the 700 underway
Spread the rate increases over 20 years	<ul style="list-style-type: none">• First 10+ years remain highly susceptible to risk• Greater potential for long term rate escalation...even if our forecasts are right and interest rates stay low• Continuing to build debt vs. make contributions to reserves for 6 years after Keeyask is in service
Low income customers can't afford this	<ul style="list-style-type: none">• Important issue that MH does not have the tools/mandate to address• Relates directly to customers' ability to pay; issue requires many parties/organizations working together

What You May Hear

Argument	Reality
<p>Change the Projections to Justify Lower Rate Increases</p>	<ul style="list-style-type: none"> • Hope is not a plan • Depreciation and regulatory accounting policies make no material difference • Less risky to adjust rates later for good news
<p>Markets are unperturbed and there is no threat to the Province of Manitoba credit rating or MH's borrowing costs</p>	<ul style="list-style-type: none"> • Taking pressure off the Manitoba credit rating is a collateral benefit • The issue is that Manitoba Hydro has an unsustainable level of debt and therefore too much vulnerability to overall interest rate increases regardless of cause
<p>Cut maintenance capital expenditures</p>	<ul style="list-style-type: none"> • Short-term perspective; aging infrastructure needs to be addressed • Makes negligible difference to revenue needs in any event
<p>Punish Manitoba Hydro by Withholding Rate Increases</p>	<ul style="list-style-type: none"> • To what end? • Will only exacerbate the issue for our customers

What You May Hear

Argument	Reality
<p>Take on shorter term debt to save on interest costs and keep rates lower</p>	<ul style="list-style-type: none"> • Enormous risk to rate stability in next 10 years • Would leave almost the entirety of Hydro's projected peak debt subject to interest rate risk between now and 2026/27
<p>Our forecasts are too conservative and overstate need for rate increases</p>	<ul style="list-style-type: none"> • Load forecast is already looking too optimistic • Efficiency Manitoba is a wildcard • Export prices thus far in 2017 tracking well below projections • Short-term interest rates already \geq 2018 forecast • Hope is not a plan – rates can be adjusted if things go better; much harder the other way
<p>Not Fair to Current Ratepayers</p>	<ul style="list-style-type: none"> • Rates have not kept up with costs of the system and are too low today • Rates have not made a contribution to reserves in almost 10 years • Not fair to park unsustainable debt burden on the next generation

VII. Summary

Key Messages

- Manitoba Hydro's business outlook has deteriorated significantly since the last GRA
- Financial condition is not sustainable
 - Debt levels are far too high and are growing massively out of proportion to the scale of MH business
 - Cash flow negative
- 3.95% rate plan is grossly insufficient and puts MH and its customers at far too much risk
- Taking strong action now is essential
 - April 1/18 rate request does not fully address Bipole III and current cash deficiency
 - Enables much higher likelihood of stable and overall lower rates in the long run