Manitoba Hydro

2017/18 & 2018/19
Electric General Rate Application
Oral Argument

February 5, 2018

Requested Approvals

- MH is seeking final approval of:
  - 3.36% interim effective August 1, 2016;
  - 3.36% interim effective August 1, 2017; and
  - 7.9% effective April 1, 2018.

- MH is not seeking to adjust interim rates granted

7.9% Can’t Be Wrong

- Bipole III Reliability Project Entering Service
- Cash is insufficient
- Net income doesn’t tell the full picture
- Keeyask in-service is in the not too distant future
- No rate increases after 2018 until next application

Bipole III Coming Into Service

A 10% rate increase in excess of the 11% embedded in current rates is necessary.

$Millions		**MH/MIPUG-6**	**Restated PUB MFR 20**
		2022	**2022**
Finance Expense		223	223
OM&A Costs		13	13
Depreciation		107	107
Amortization of BPIII Reserve		(71)	(80)
Capital Tax		24	24
		296	287
Add: Amort of Bipole III Deferral		71	80
		367	367
Less: Revenue assoc. with lower line losses		(15)	(15)
Less: Costs assoc. with Riel Stn.		(40)	(20)
Less: Amort of Bipole III Deferral		(71)	-
Annual Bipole III Revenue Requirement		241	332
Bipole III Total Rate Impact	1,595	**15.1%**	**20.8%**
Annual Bipole III Revenue Requirement in Current I	**11.12%**	(177)	(177)
Annual Bipole III Revenue Requirement Shortfall		64	155
Bipole III Revenue Requirement Shortfall to be Recovered in Rates		**4.0%**	**9.7%**

Source: Exhibit MH-52

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

Net Income Is Not Full Picture

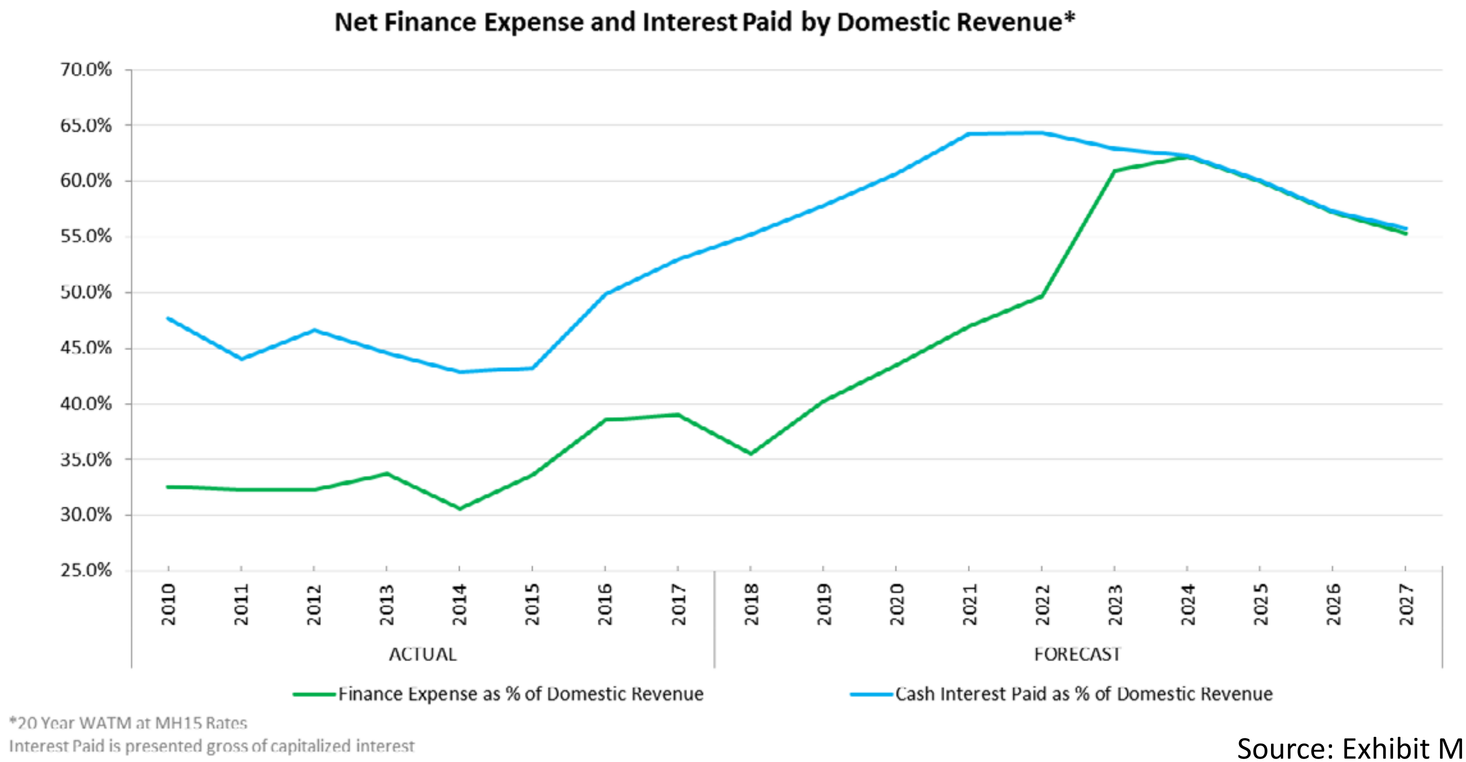
- On a normalized basis, Manitoba Hydro has had *minimal to negative* net income for each of the last three years and is forecast to again in 2017/18

(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

Debt Costs Post-Keeyask

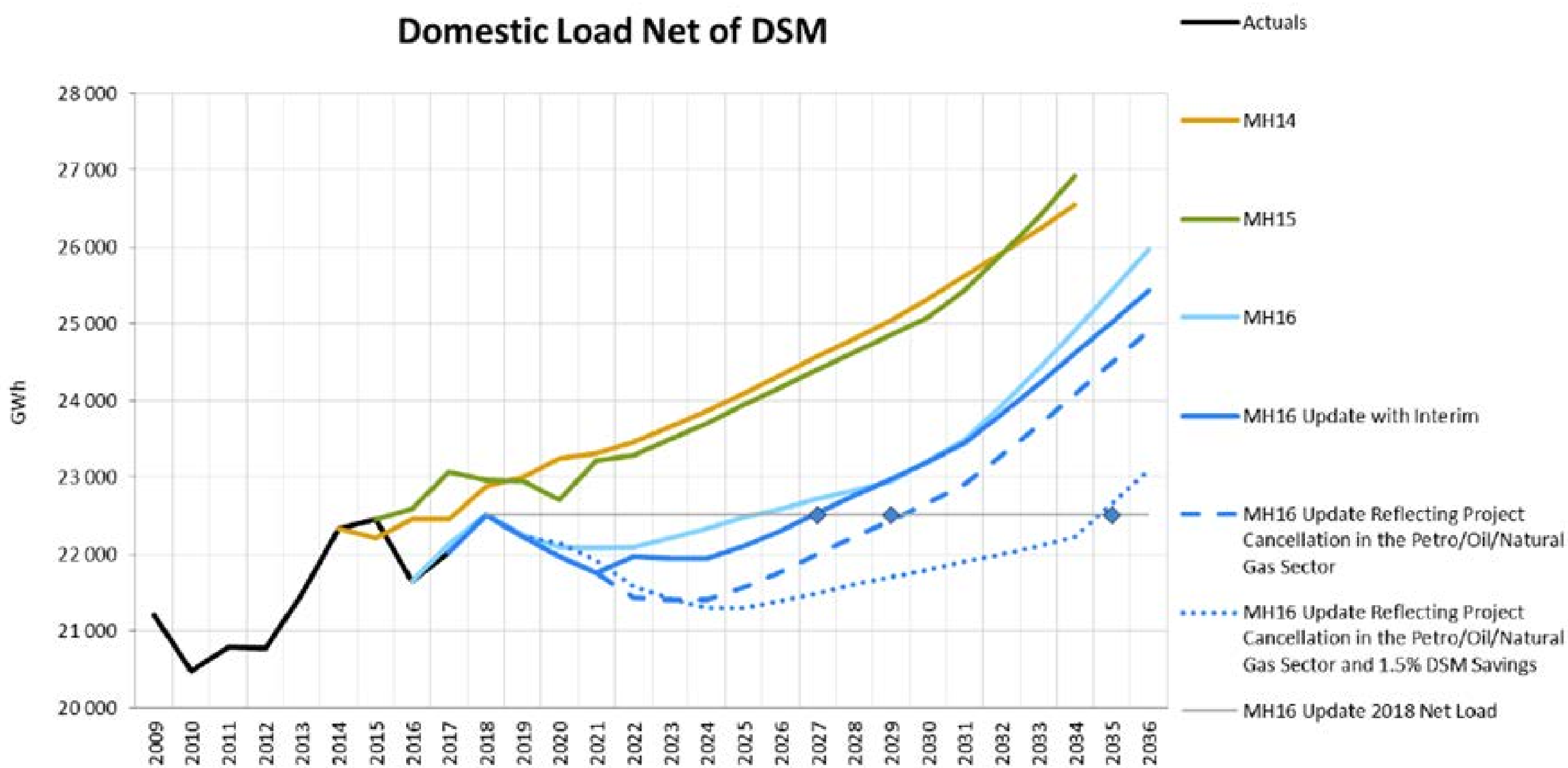
- Without stronger rate action, interest costs will consume an ever larger share of domestic revenue
  - Fewer dollars left over to manage interest rate (or any other) volatility – which is entirely on the shoulders of domestic ratepayer



Source: Exhibit MH-64 Slide 21

MH Can’t Grow Its Way Out

10+ years of no net load growth



Load Forecast Is Reasonable

- Daymark Energy Advisors review findings:

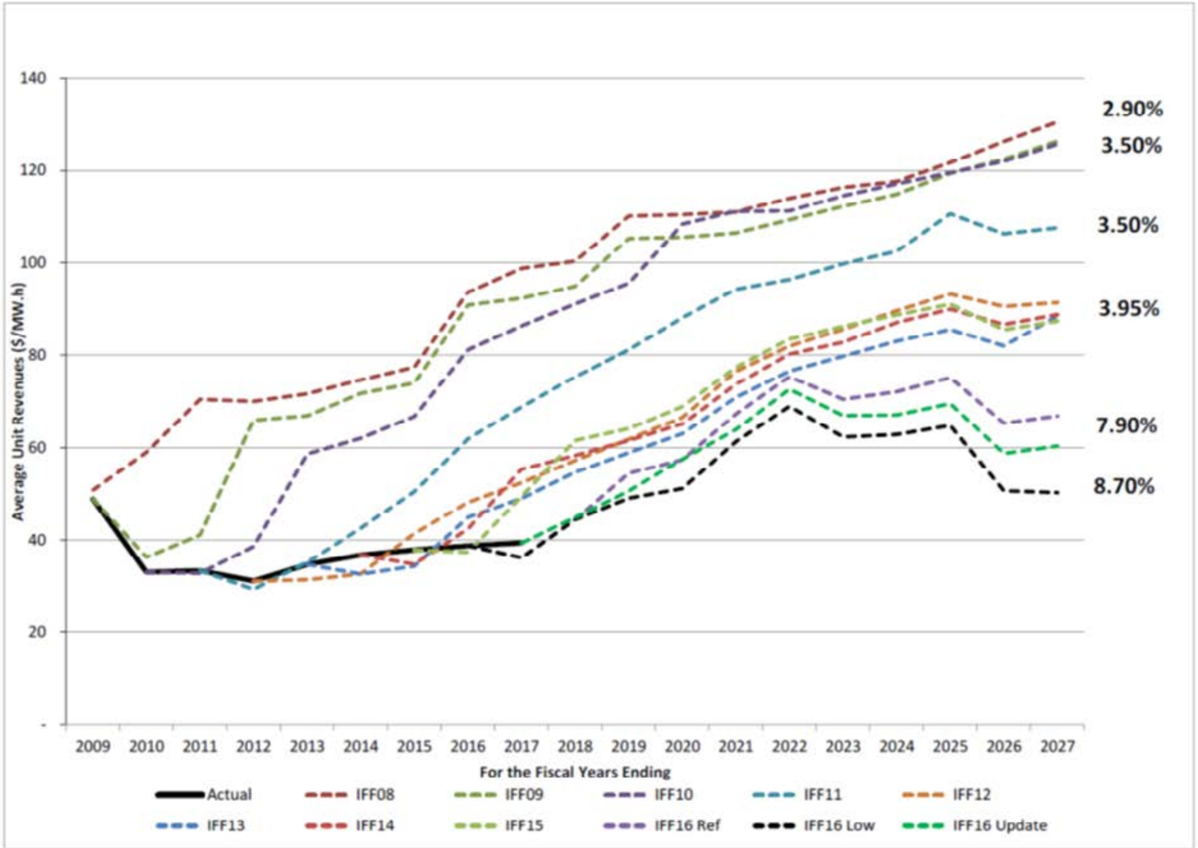
  MS. KATHLEEN KELLY: Manitoba Hydro's forecast methodologies are reflective -- fully reflective of industry practice. I've seen exactly what they're doing in other places before, and other - - most utilities are relying on similar tools and technologies to do their forecasts (Transcript Page 3895)

- Top Consumer or Potential Large Industrial Load is more conservative as directed by PUB:

  The Board sees Manitoba Hydro's PLIL as an in appropriate upward adjustment that does not reflect the recent Top Consumers load growth history. The Board recommends that Manitoba Hydro take a more rigorous approach to forecasting the Top Consumers load." (Page 78 of PUB Order 73/15)

- At 1.2% of savings DSM is in the range of Efficiency Manitoba's 1.5% legislated target and not benchmarked too high as alleged by MIPUG

Average Unit Export Revenues Have Dropped 50% since MH08



Source: PUB/MH I-153(b)

Export Revenue Forecasts Are Reasonable

- Daymark Energy Advisors review findings:
  - *"Manitoba Hydro's revenues forecast from existing export contracts is reasonable" (Page 35 of Exhibit DEA-7)*
  - *"The treatment of the new contracts is consistent and the resultant revenues forecast is reasonable" (Page 35 of Exhibit DEA-7)*
  - *"…it is likely that MISO will be short capacity within the next ten years, possibly as soon as 2025". (page 72 of Exhibit DEA-1)*

Export Revenue Forecasts Are Reasonable Capacity Value

- If MISO load forecast are correct, potential for a need for new capacity after 2023
- Daymark Energy Advisors review finding:
  - *"…it is likely that MISO will be short capacity within the next ten years, possibly as soon as 2025". (page 72 of Exhibit DEA-1)*
- MH will factor in any <u>signed</u> dependable energy sales in future forecasts
- Likely to be at least 2 hearings prior to 2023 rate request
- PUB has CSI scenarios to assess materiality

Export Revenue Forecasts Are Reasonable Long Term Dependable Product Premium

- MH energy was unique fixed price carbon free product in the past
- No potential return of premium in foreseeable future given competition from abundant renewables south of the border
- Daymark (then LaCapra) at NFAT stated:

  “MH provides little justification for the amount of the premium” (Page 6-61 of Appendix 6 in Manitoba Hydro’s NFAT Submission)

- June 2014 PUB NFAT report:

  “The Panel is concerned with the risk that future export contracts may not attract the premium pricing that Manitoba Hydro assumes” (Page 115).

Major Capital Projects

Bipole III


DANGER
CONFINED
SPACE


Transmission line construction


Major Capital Projects

Manitoba-Minnesota Transmission Project (MMTP)

Major Capital Projects

Great Northern Transmission Line (GNTL)

Major Capital Projects

Keeyask Project

Actions for Positive Change

- Manitoba Hydro is working in close collaboration with BBE to improve performance.
- Some initiatives include:
  - Improve contractor’s management of the trades
  - Travel logistics for the contractor’s workforce
  - Site wide respectful workplace campaign

Actions for Positive Change

- Contractor's revised organizational structure and increased supervision capacity and experience
- The development of an effective monitoring and control system to provide daily feedback to contractor workforce
- Establishment of single mission and team ethics for the Manitoba Hydro and BBE teams

Spillway Concrete Complete and on Schedule

October 2017

Powerhouse Crane Installation Complete and on Schedule

Units 1-3 Enclosed Ahead of Schedule

Unit 1 Draft Tube Liner Installation by Voith Commenced on Schedule

January 24, 2018

Handoff of Spillway to Gates, Guides & Hoists Contractor on Schedule

January 11, 2018

Earthworks on Track for River Diversion in August 2018

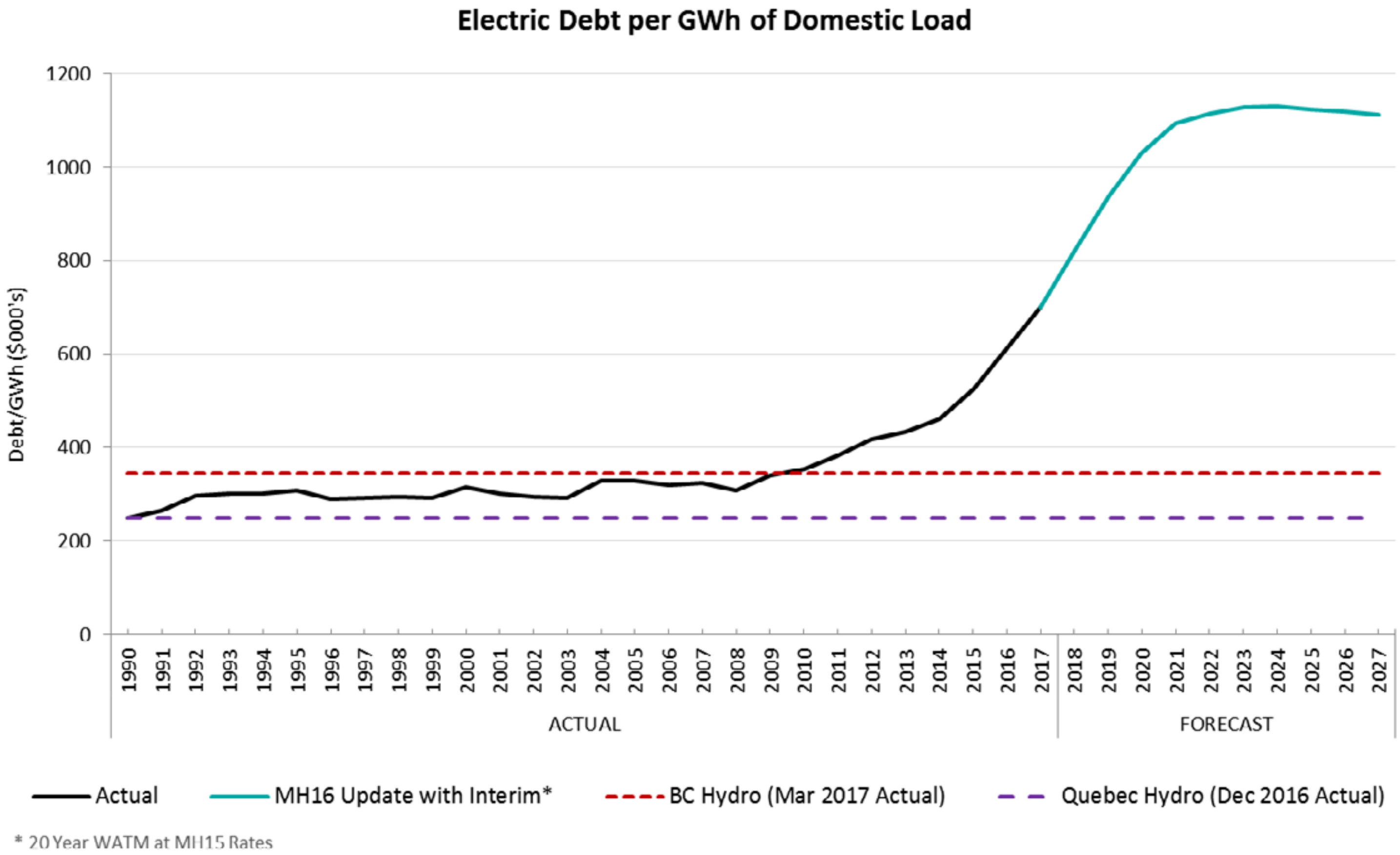
Business Operations Capital

Business Operations Capital

- MH Business Operations Capital is reasonably required for the continued supply of safe and reliable electrical service

MH's Debt Problem

-
- Under the 3.95% debt per GWh will have increased four-fold to debt be $1.13M



A New Financial Plan for Hydro

- A new plan is required to ensure financial sustainability
- Customers benefit from more rate certainty, less rate volatility; and overall lower rates

– Need stronger rate action now because we can’t go back but we can adjust going forward

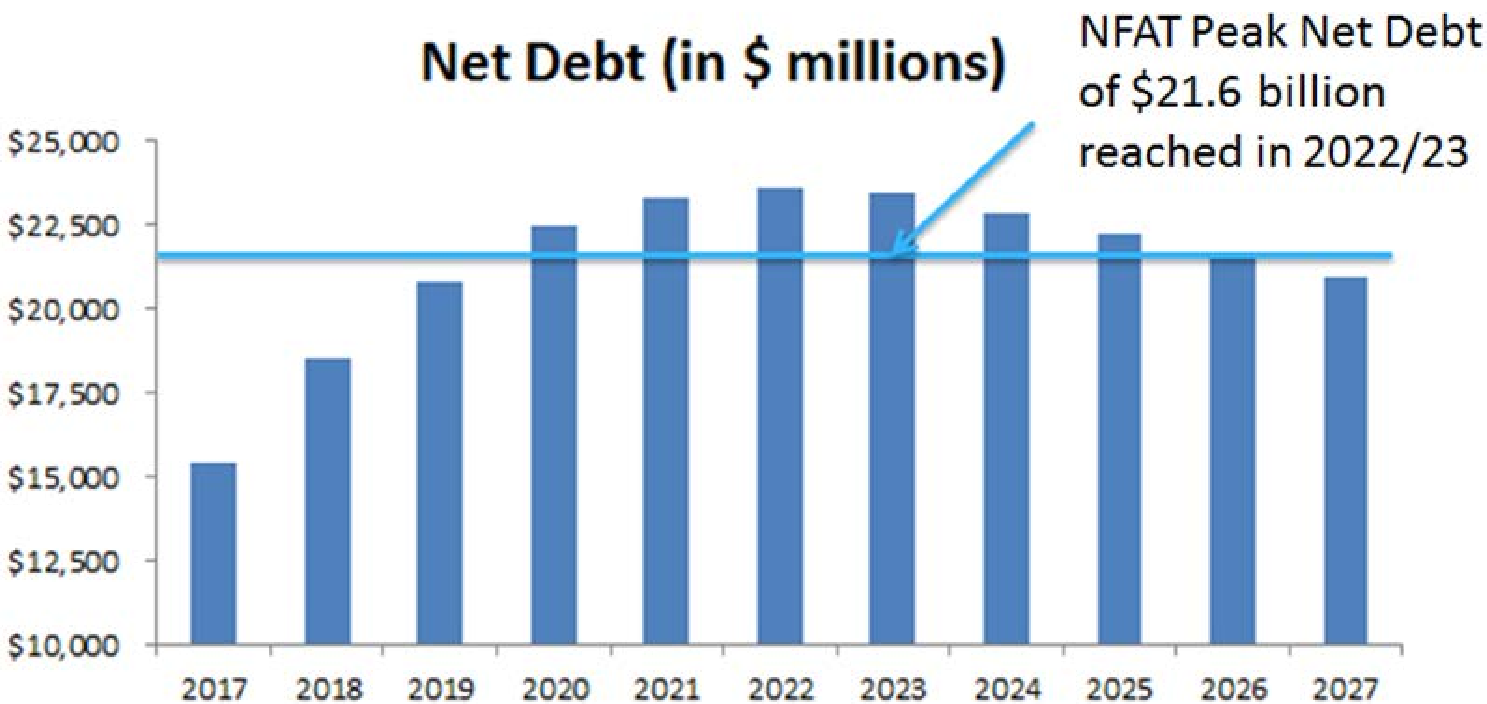
– Building balance sheet resilience in the face of uncertainty

  - More hydrology and export risk than other utilities
  - Rising interest rates, softening export prices, slower or no load growth and lower water conditions are real risks and have been experienced before

– Meaningful levels of net income provide financial flexibility

Net Debt Projected to Exceed NFAT Levels

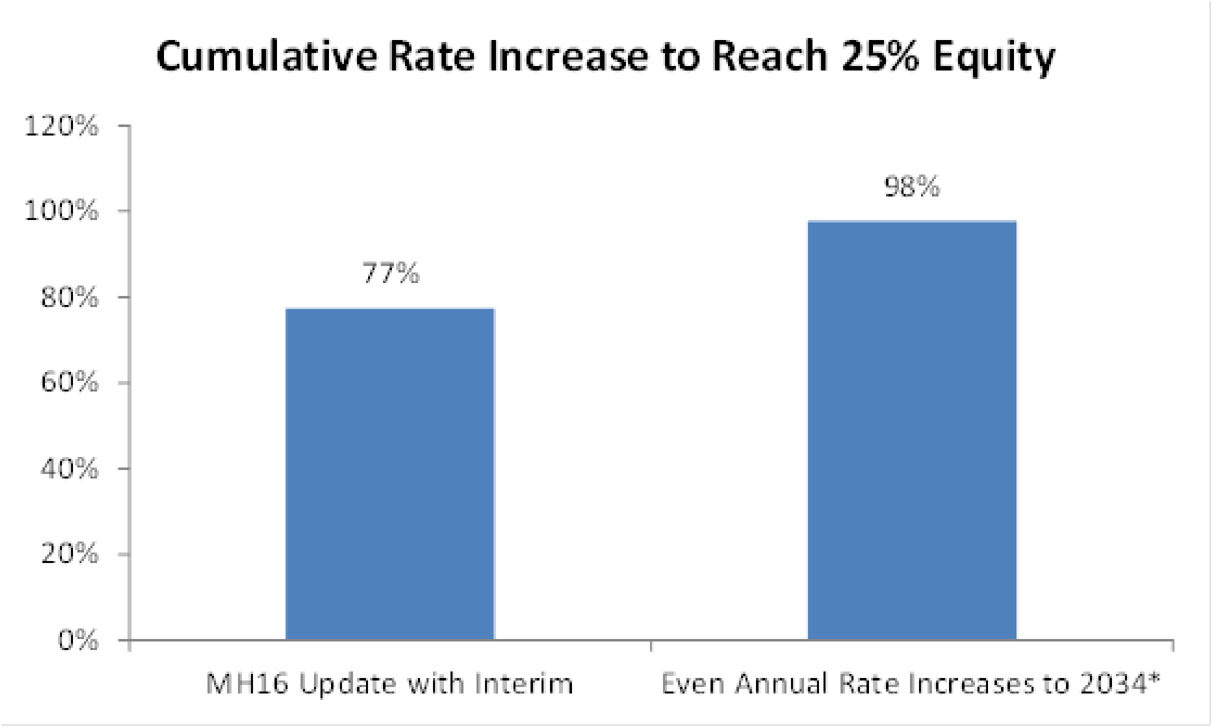
- Net debt is 9% higher than NFAT supported by domestic load that is 7% lower than NFAT



Source: Appendix 3.8 and Exhibit MH-93

Cumulative Rate Increases Are Lower in the Long Run

- Rate increases are accelerated for 5 years but cumulative rate increases are lower overall



Importance of Reserves

- MPA's evidence doesn't make sense
  - Reserves should only be maintained for hydrology risk
  - NFAT PUB/MPA 1-030(a) (Exhibit MH-116-1):

    "…cash flows fluctuate dramatically with hydrology and export prices, and Manitoba Hydro's target equity ratio is a comparatively thin 25%, the use of an equity risk premium as low as 4.5% is notable."

  And

    "In reality, however, rates do not rise and fall annually, but are smoothed over time. This suggests that equity returns should be built into rate structures to provide a cushion for inevitable swings in cash flow that derive from non-controllable events, such as hydrology <u>and export prices</u>. Moreover, the possibility of prolonged financial distress also suggests that equity premiums (and a healthy equity ratio target) are required."

Role of Equity

- MPA and Bowman misunderstand the role of equity
  - Only need to be scaled to the projected cost of a 5 to 7 year drought in the order of $1.2B to $1.5B
  - Consequences of drought are finite
  - Equity of $7B is excessive
  - Equity is not cash

MH Drought Risk Exacerbated by Interest Rate Risk

- When MH had less debt and export prices were higher drought risk was substantial
- Now, absent the 7.9% rate plan, drought risk will be entirely debt funded
- A $1.2B 5 year drought added to $25B debt is a bad outcome
- If faced by interest rates rising higher than today, it could cost ratepayers hundreds of millions in debt costs with no near term abatement

Equity Is Not Cash

- *MR. KELVIN SHEPHERD: Equity is not cash. This is essential to understand. Equity is not a store of cash that we can use to mitigate rate increases when bad things happen. The only cushion to absorb unforeseen events and risk without having to raise rates even more and/or borrow yet more money is having rates at sufficient levels where your generating income and cash flow. And as we make clear, the old plan with its 3.95 percent rate path comes nowhere near close to doing this for us. Without this cushion when adverse events occur, the only choices available are to increase rates, potentially a lot, or borrow more money. We should not and cannot as a planning matter knowingly put ourselves in that position. (transcript page 240)*

Reserves Have Been Depleting Over the Last 5 Years

- Exhibit MH-135 MH rebuttal to MPA new evidence
- Approximately $450 million more rate revenue (roughly 6.5% per year) between 2012-17 would have been required to keep equity levels at 2012 levels

	Net Equity	Net Debt	Equity Ratio	Debt Ratio	Accounting Standard
2017 Capital Structure per MPA Adjusted Analysis	$3,289	$8,961	26.8%	73.2%	Adjusted
Conawapa Construction Work in Progress	$0	($379)			
Bipole III Deferred Revenues [1]	($196)	$196			
Wind Farm Loan Repayment [2]	$0	$250			
Bipole III Interest Capitalized [3]	($55)	$55			
Export Revenues Attributable to Above Average Water [3]	($219)	$219			
Non-Recurring Gain [4]	($20)	$20			
Adjustments	**($490)**	**$361**			
2017 Capital Strucutre per MPA Adjusted for Above (A)	**$2,799**	**$9,322**	23.1%	76.9%	Adjusted
2012 Capital Structure - excluding Bipole III, Conawapa and Keeyask (B)	$3,102	$7,788	28.5%	71.5%	CGAAP
Deterioration in Capital Structure (A - B)	**($303)**	**$1,535**	**-5.4%**	**5.4%**	
Change from 2012	**-10%**	**20%**			

[1] The Manitoba Hydro-Electric Board 65th Annual Report, Note 26, p.84

[2] Appendix 6.1, The Manitoba Hydro-Electric Board 64th Annual Report, Note 21, p.83

[3] Manitoba Hydro Exhibit #64, slide 44

[4] The Manitoba Hydro-Electric Board 65th Annual Report, Note 26, p.84

Magnitude of Debt is Critical

- MPA disagreed with MH's view that the magnitude of debt is critical, not the size of the retained earnings

  MR. PELINO COLAIACOVO: I don't think I would necessarily agree with you. ***I don't think magnitude of debt in isolation has any relevance.*** *Debt in relation to assets so, you know, if your assets are highly leveraged it wouldn't matter but if you have $50 billion of assets and $25 billion of debt is 25 billion an important number? I don't actually think so. So the magnitude of the debt in isolation is just a fact. (Transcript page 4991 – emphasis added)*

- NFAT CAC/MPA-13 (Exhibit MH-116-1)

  MR. PELINO COLAIACOVO: ***The critical issue is the magnitude of outstanding debt on the balance sheet, not the size of the retained earnings.*** *In the event of a persistent revenue shortfall caused by prolonged drought, for example, interest charges related to a large outstanding debt represent a real call on cash flow. A large pool of retained earnings in this environment would be beneficial in that the company balance sheet potentially could sustain a series of annual losses, but balance sheet retained earnings bear little relationship to the availability of cash resources. (emphasis added)*

Set Rates Inclusive of Reserve Contributions

- Ensure ability to generate positive cash flow
- 7.9% is the rate path expected to generate net income in normal water flow years
- 7.9% April 1 2018 is the beginning
- Reserves don’t leak out of MH through dividends to shareholders
- If results turn out more favourable than forecast, PUB can adjust future rates accordingly under cost of service regulation

A 20 Year 3.95% Rate Path Is Not A Plan

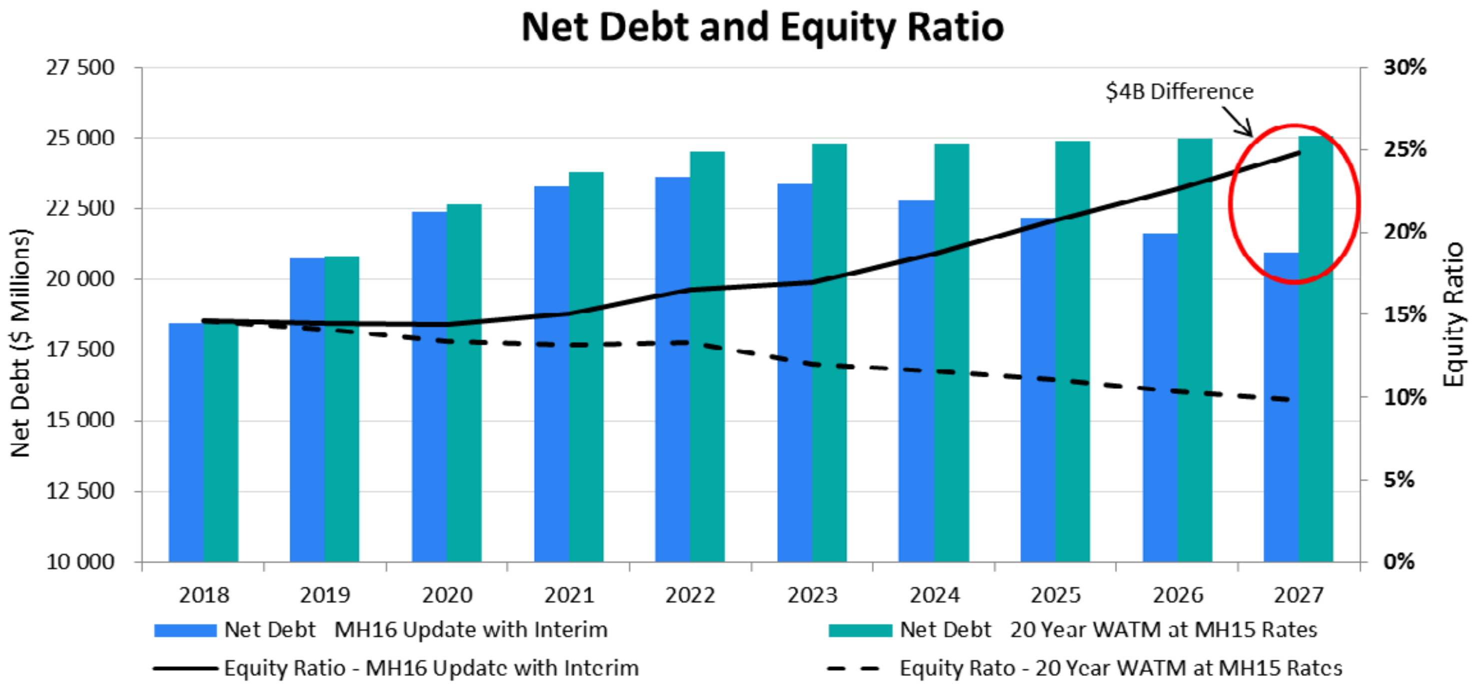
- As a prudent planning matter MH should not forecast breakeven or negative income
- MPA agrees at transcript page 4941 :

  "you would also ask yourself, if water was at more typical levels over that period, over that five (5) or seven (7) year period, what would be the effect? Would it be -- would we be making progress on our financial targets more broadly? Would be -- we be repaying capital? Right?.... So, you know, **you always want to make sure that in a challenging scenario, you have enough reserves, but you also want to pay attention to what happens when water is at typical levels and -- and -- and that -- that kind of an analysis, I think, would guide you to making a rate decision**." (emphasis added)

- MH15 rate path results in substantial, sustained net losses after Keeyask

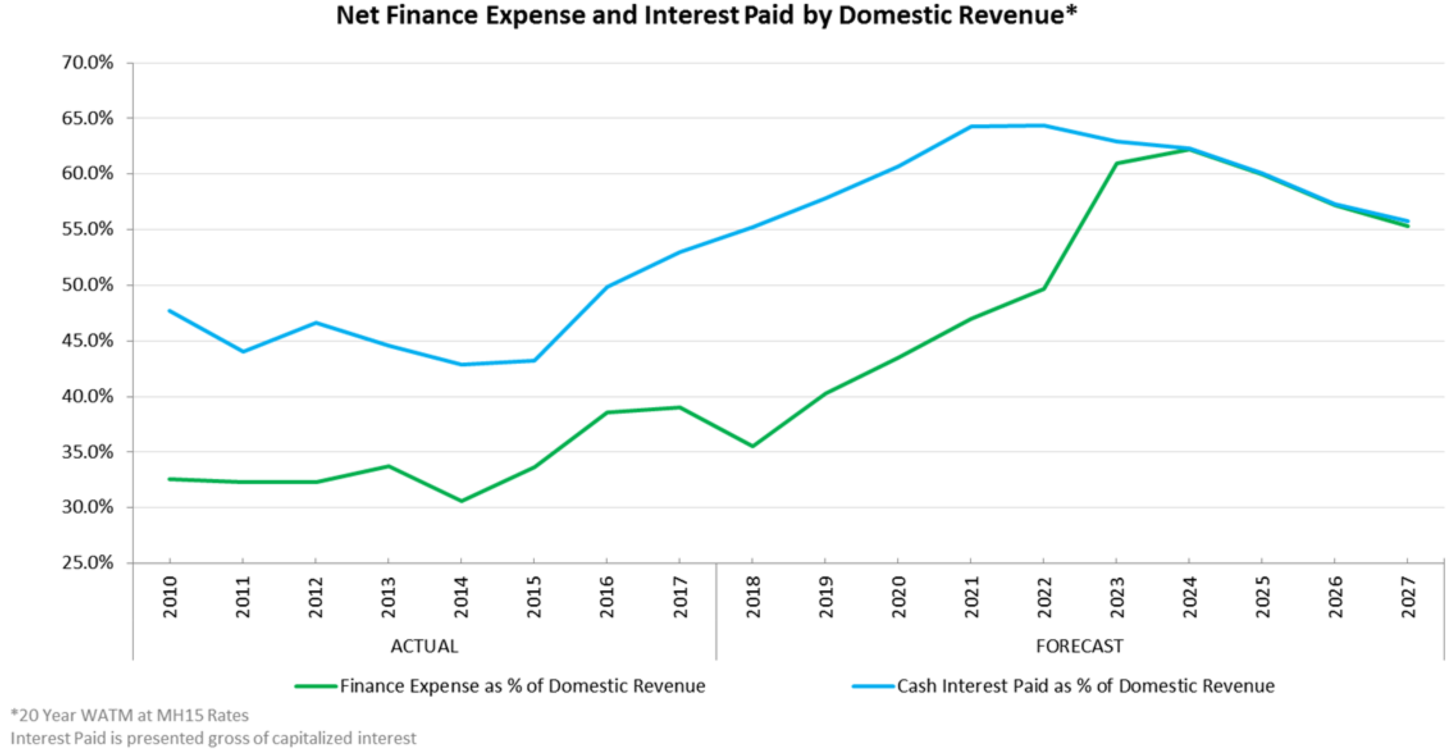
A 20 Year 3.95% Rate Path Is Too Long

- 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



A 20 Year 3.95% Rate Path Is Too Long

- After Keeyask in 2024 $1.25B in debt cost is supported by $2B in domestic revenue
- 63 cents of every ratepayer dollar goes towards paying debt service costs
- Even a modest 1% increase in interest rates will have a significant impact



Source: Exhibit MH-64 Slide 21

Net Income Is Essential to Prudent Financial Planning

- 3.95% rate strategy leads to $850 million of net losses over the next 10 years to 2026/27

> "It is prudent that known risks are addressed now, in part through the provision of additional revenue, so as to best ensure adequate financial reserves ahead of uncertain times." (PUB Order 90/08 Page 7)

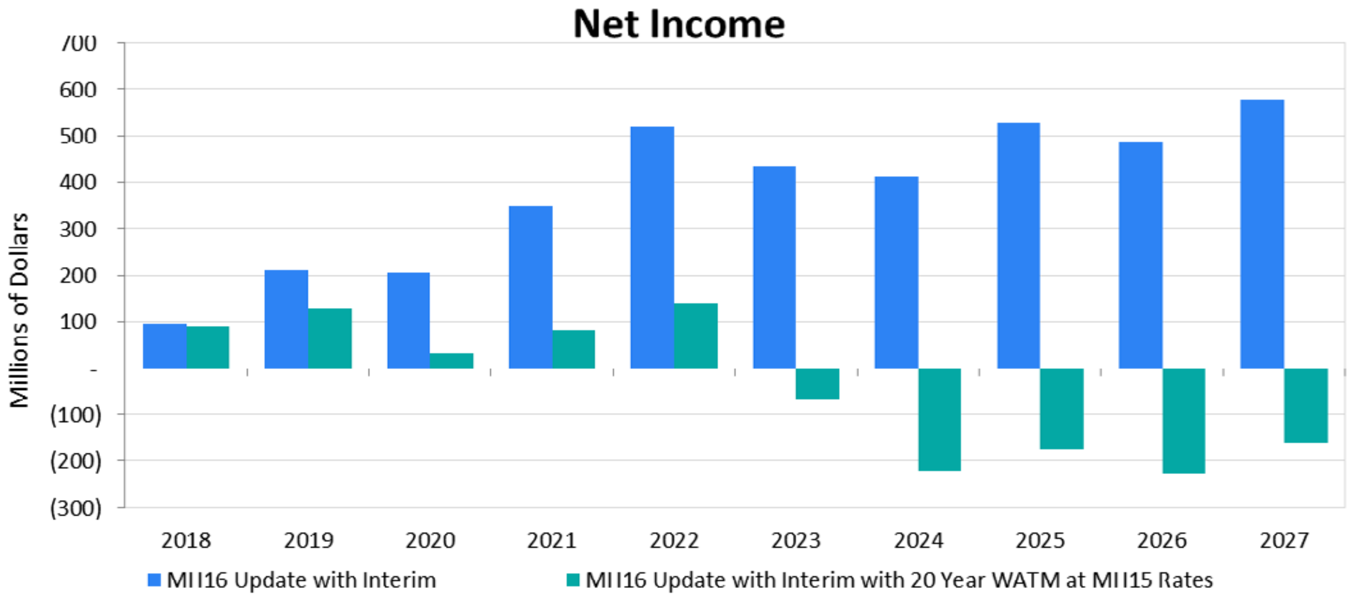


Exhibit MH-64 Slide 26

Prudent Financial Plans Do Not Depend on the Back-End of a 20 Year Forecast

- Limited value should be ascribed to forecasts a decade or more in the future
- Mr. Shepherd noted:

  "A decade is a long time. In any business I've been around, forecasting ten (10) years in the future, let alone fifteen (15) or twenty (20), is very difficult, perhaps nearly impossible. So a plan that has you walking down a tightrope of essentially no net income until the early 2030s is begging for trouble, especially when your outlook for growth is as weak as ours has become." (Transcript page 163)

- Mr. Bowman's 3.57% plan, as well as 3.95% plans, take 2 to 5 years longer to achieve the 25% target equity ratio.

MH Financial Targets

- Maintain a minimum equity ratio of 25%
- Maintain a minimum EBITDA to interest coverage ratio of 1.80 times
- Maintain a minimum capital coverage ratio of 1.20 times

MH Financial Targets

- 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

Capital Markets Are Growing Concerned

- In Moody’s November 28, 2017 Report on the Manitoba Hydro Electric Board filed as Exhibit MH-61 in confidence, the rating agency states:

  “While rates increases are nominally set on a cost-of service basis rate increases in recent years have clearly not kept up with costs as evidenced by ongoing weak financial metrics.”

- Additionally:

  “As part of its debt management strategy, Manitoba Hydro targets certain financial metrics such as an interest coverage ratio greater than 1.8x and equity-to-capitalization greater than 25%. However, both targets are not expected to be met for an extended period of time due to the large generation and transmission projects currently underway such as Keeyask and Bipole III and limited rate increases. For example on a last twelve month basis Moody's adjusted EBITDA to interest expense was 1.3x and debt to book capitalization was 88%. These financial metrics are among the weakest, if not the weakest, of any of Manitoba Hydro's peers, including vertically integrated provincially owned crown corporations in Canada.”

Operating & Administrative Costs

- Implemented effective cost reduction measures
  - Elimination of 400~ operating positions (2014/15 – 2016/17)
  - Eliminating 900 staff of which 700~ are operational primarily through Voluntary Departure Program
  - 30% reduction in Executive, 40% reduction in senior management
- These reductions achieve a 1.8% annual decrease (2014/15 to 2018/19) compared to a 1.7% annual increase in MB CPI over the same period
- Additional supply chain management annual savings estimated at $20 to $50 million through to 2021/22

Operating & Administrative Costs

- Metrics presented by London Economics does not provide conclusive evidence to justify abeyance of rate increase
- Metrics measure output per employee – no information as to whether utilities employee bases are comparable
- Comparison of KPI's amongst utilities often limited due to complexities & underlying factors that influence operations of a utility – supported by Mr. Yatchew comments (transcript pg.4475 & 4476)

Myth of the 3.95% Rate Promise

- Exhibit MH-68 Ms. Carriere addressed the myth of the NFAT or 2015 GRA rate promise:

    "With respect to the rate projections for each of the development plans, Manitoba Hydro was explicit in stating that the rate plans presented were developed for the purposes of comparing development plans" (Transcript Page 714);

    "Manitoba Hydro emphatically stated that minimum rate increases were necessary under all plans…" (Transcript Page 715); and

    "Importantly, Manitoba Hydro cautioned the NFAT panel that the rate projections set forth for each of the development plans were not applicable for rate-setting purposes" (Transcript Page 716).

Myth of the 3.95% Rate Promise

- MH careful to distinguish between proposed and indicative
- Daymark confirms:

  "…the use of [a forecast] is really in -- in understanding and preparing yourself for change. Forecasts are inherently wrong" (Transcript Page 3879).

- PUB past orders have acknowledged and accepted that there is risk of forecast uncertainty and no "promise" in the rate increases
  - Rate asks for 2.25% have been modified by the PUB to 5%
  - A 4 % conditionally approved rate increase was lowered to 2.9%

Bill Affordability &
Cost of Service

Bill Affordability

"You'll hear of Intervenors, individual customers and other organizations that low income customers cannot afford the proposed rate increase, and I empathize with these customers and groups. I know from personal experience there are many families who live with less than adequate resources, many individual groups and communities that suffer from poverty. I've been to many First Nations communities. I've met with the leaders and community members. I've listened to Elders. I know there is a real problem, a real issue and all of us should be embarrassed and perhaps even ashamed at the living conditions that some Manitobans are in."

- Kelvin Shepherd, President & CEO, Manitoba Hydro *(Transcript Pages 253-254)*

Bill Affordability

"Manitoba Hydro does many things to help people in these situations, however, fundamentally, I believe the root cause of this problem is social policy and inadequate income. It's not directly electricity rates. Under the legislation governing Manitoba Hydro, we're not allowed to set rates that differentiate by geography or density of population. This insures that a residential customer in Brandon pays the same cost per kilowatt hour as one in Winnipeg, one in a rural residence or one living in Thompson. I understand that a customer pays bills, not rates and the electricity bill for each customer is affected by whether they have access to lower cost gas heat, a home with better insulation, and whether there are 2 people living in the home or three generations.

Manitoba Hydro has engaged with stakeholders and bill affordability studies and will continue to work with customers, organizations and governments. However, the issue of low income, and customer's ability to pay is not something that I think can be fully resolved during the rate setting process."

- Kelvin Shepherd, President & CEO, Manitoba Hydro *(Transcript Pages 253-254)*

Bill Management

- Equal Payment Plan
  - Valuable tool for customers to manage their bills through cold winters and hot summers
  - Divides customers' forecast annual bills into equal monthly payments
  - Used by 25% of Manitoba Hydro's electric customers
- Energy Affordability Installment Plan (new in 2018)
  - Designed to make arrears balances more affordable by spreading payments over a longer period of up to 3 years , interest free
  - Integrated into a single payment amount for the customer
- Customized Due Dates

Neighbours Helping Neighbours

Funding & Donations to Sep 30, 2017	Customer Donations	Manitoba Hydro Funding of Donations	Grant ($) Awarded	Manitoba Hydro Funding of Salvation Army Administrative Expenses	Total Expenses
Program Totals	$465,360	$2,200,017	$2,665,377	$1,064,692	$3,730,070

- 88% of total expenses funded by Manitoba Hydro
- Manitoba Hydro administrative costs are not tracked

Affordable Energy Program Multi-Pronged Approach

Key Strengths of the Affordable Energy Program

- **Participation and savings** - 21,000 lower income customers assisted as of October 31, 2017
- **Accessibility** - addressing unique barriers by minimizing financial burdens associated with upgrades
- **Eligibility** - targeting gas and electric savings measures to low-income customers in single, multi-family homes, rental properties, First Nation Communities
- **Savings** - demonstrating estimated annual bill reductions per customer of anywhere between $37 and $556

-Bill Affordability Working Group Report, Page 23

Indigenous and First Nations Communities

- Indigenous Power Smart Program customized to meet unique needs of communities
- No income qualification – all homes eligible
- Dedicated Indigenous Energy Advisor

Indigenous Power Smart Program

Insulation

- Significant achievements
- All 63 First Nation Communities contacted
- 40 First Nation Communities completed
- 86% of estimated insulation market has been completed

Direct Install Initiative

- Proactively launched December 2014
- All 63 First Nation Communities contacted
- 12 First Nation Communities completed
- One third of estimate market completed

MKO Communities

- **Insulation Efforts**
  - 1,320 Completed Homes of Estimated 1,468 (90%)
  - 20 Communities Insulation Complete
  - 6 Communities Insulation Underway, 148 Homes
  - 1 Community No Insulation Needed

- **Direct Install Efforts**
  - 1,790 Completed Homes* of Estimated 7,375 (24%)
  - 3 Communities Direct Install Complete
  - 24 Communities With Measures Underway
  - Pace determined by each community

*Some homes received basic measures with their insulation prior to December 2014

Customized Indigenous DSM Initiatives

- Additional Initiatives Supporting DSM in First Nation Communities

  - Community Geothermal Program
    - 340 installations completed as of July 2017
    - Technical guidance and training local members
    - Financing through PAYS Program to cover up front costs
    - 45 band members trained and 9 accredited installers

- Community Energy Profiles & Expanded Power Smart Shops Pilot
    - Completed for 2 communities
    - Band-owned buildings audited; direct install and deeper lighting retrofits

Bill Affordability

- Bill Affordability Working Group definition of energy poverty:

Energy poverty refers to circumstances in which a household is, or would be, required to make sacrifices or trade-offs that would be considered unacceptable by most Manitobans in order to procure sufficient energy from Manitoba Hydro.

- Many options exist to measure energy poverty

- Many difficulties arise

Bill Affordability

"…a surprising number of people who are eligible do not apply. And a tremendous amount of work has to go into encouraging people to apply. And the other thing that occurs is that people have to reapply every year because they have to refresh their income tax form."

- Dr. Mason, Transcript Page 2332

"So just the whole area of poverty has had tremendous difficulty in grappling, in coming up with absolute measures. And this continues to be an ongoing debate. It's a debate within Stats Canada. It's a debate within academic literature. How do we measure poverty? Do we measure it relatively using something like a LICO or do we measure it absolutely using something such as a standard of minimum basket of goods ."

- Dr. Mason, Transcript Page 2320

Bill Affordability - Chernick Rate Design

- Compounds the problem
  - LICO-125 rate
  - Non-LICO Electric Space Heat Rate
  - LICO-125 Electric Space Heat Rate
- Lost revenue would need to be recovered from non-LICO residential customers or other non-residential customer classes
- No Proof of Revenue

Bill Affordability Summary

"The Working Group findings further illustrate the deeply complex, multi-faceted nature of energy poverty. Energy poverty spans issues of income, geography, cultural identity, family size, awareness of available support programs and more. The Working Groups findings make it clear that no single initiative or program will solve the issue of energy poverty."

- Bill Affordability Collaborative Process Summary Report and Recommendations, Page 33

"…running an income assistance program is extremely complicated and it's high cost and it requires a whole range of expertise that is typically not embedded within Hydro. It's typically embedded within the income assistance programs of the province, which have better access to information."

"Manitoba Hydro does not have nor is it likely to obtain critical information that will allow it to target rate support programs accurately. Manitoba Hydro is not currently equipped and is unlikely to run income tested program effectively."

- Dr. Mason, Transcript Pages 2335 & 2336

Bill Affordability Summary

"Manitoba Hydro has engaged with stakeholders and bill affordability studies and will continue to work with customers, organizations and governments.

- Kelvin Shepherd, President & CEO, Manitoba Hydro, Transcript Page 254

Revenue to Cost Coverage Ratios

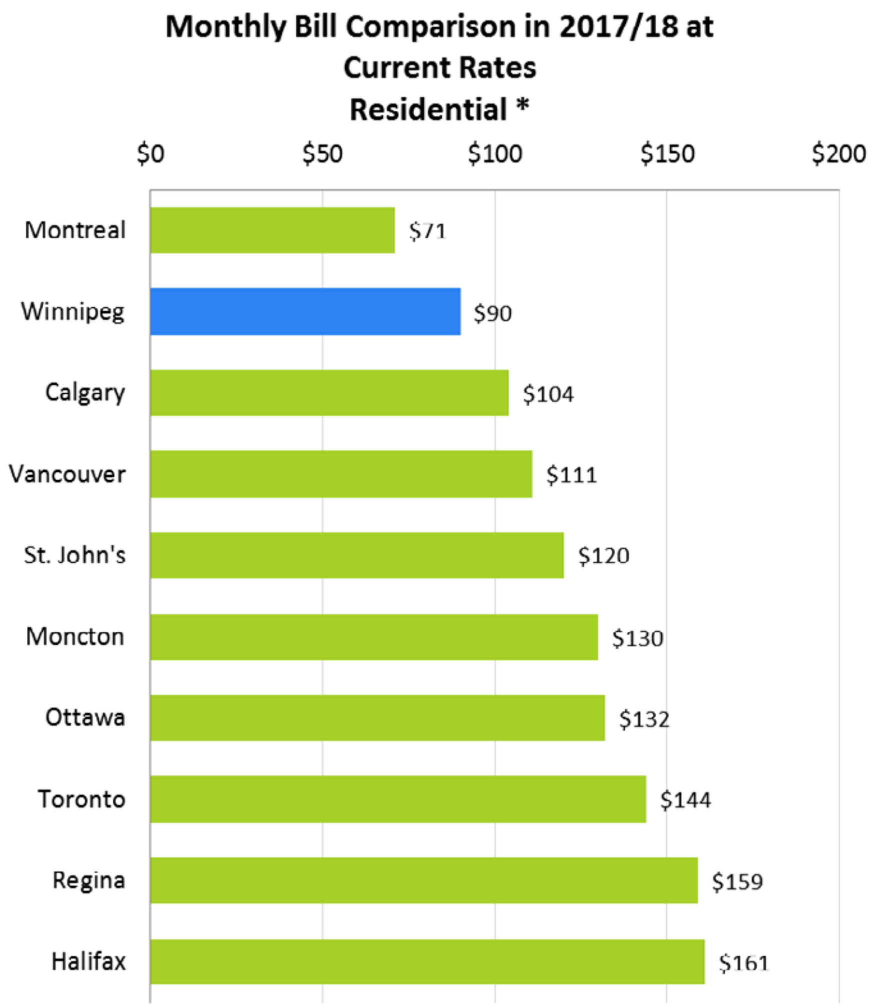
Customer Class	PCOSS18 (as filed)	Estimated Revenue Cost Coverage in 2020 with BPIII In Service	
Residential	94.8%	96.7%	Increase
GSS Non Demand	112.5%	115.3%	Increase
GSS Demand	101.0%	101.3%	Neutral
GSM	98.3%	97.4%	Decrease
GSL 0-30 kV	99.1%	96.5%	Decrease
GSL 30-100 kV	109.3%	103.5%	Decrease
GSL >100 kV	108.6%	101.5%	Decrease
A&RL	100.3%	118.2%	Increase

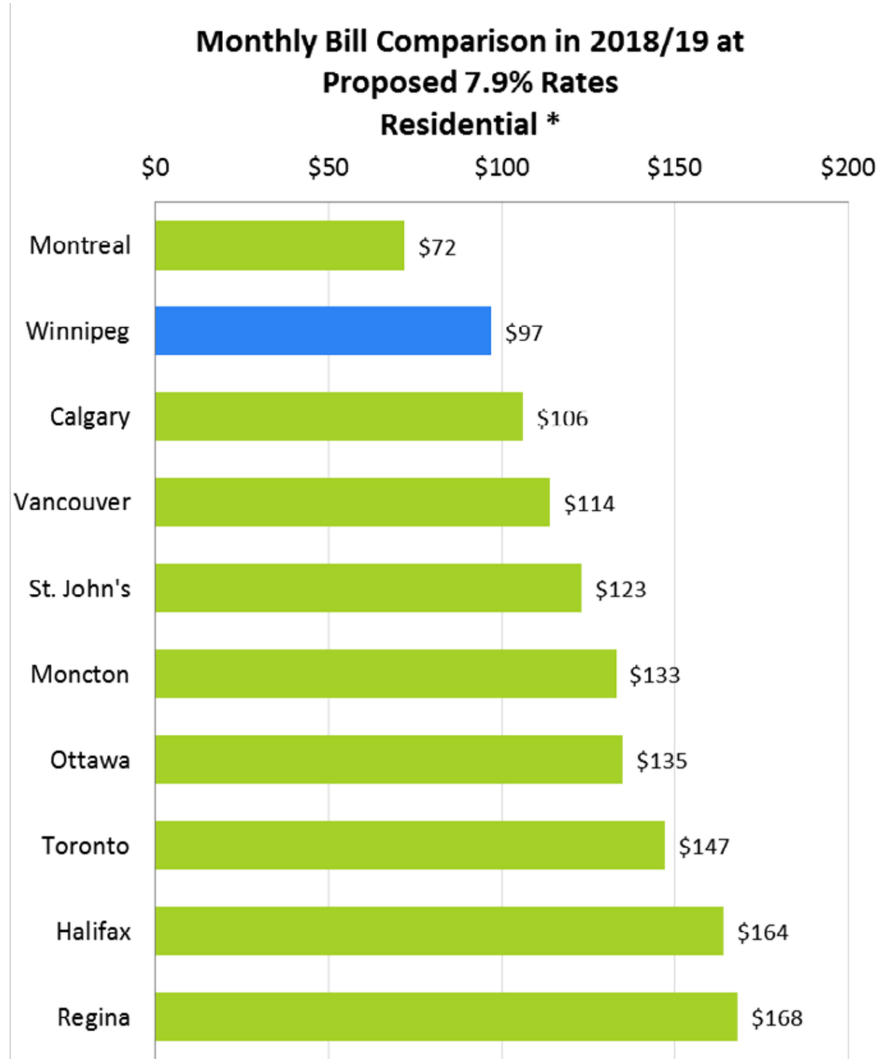
Impacts on Manitoba's Economy

Simpson/Compton Evidence

- Precise impact on job creation is debatable
- Initial work ignored impact of savings and did not capture labour market adjustments
- Initial work compared impacts of 7.9% to 2% inflation
- Updated analysis estimated < 80 jobs will not materialize
- Ontario electricity price increases did not result in a decline in that province’s economy

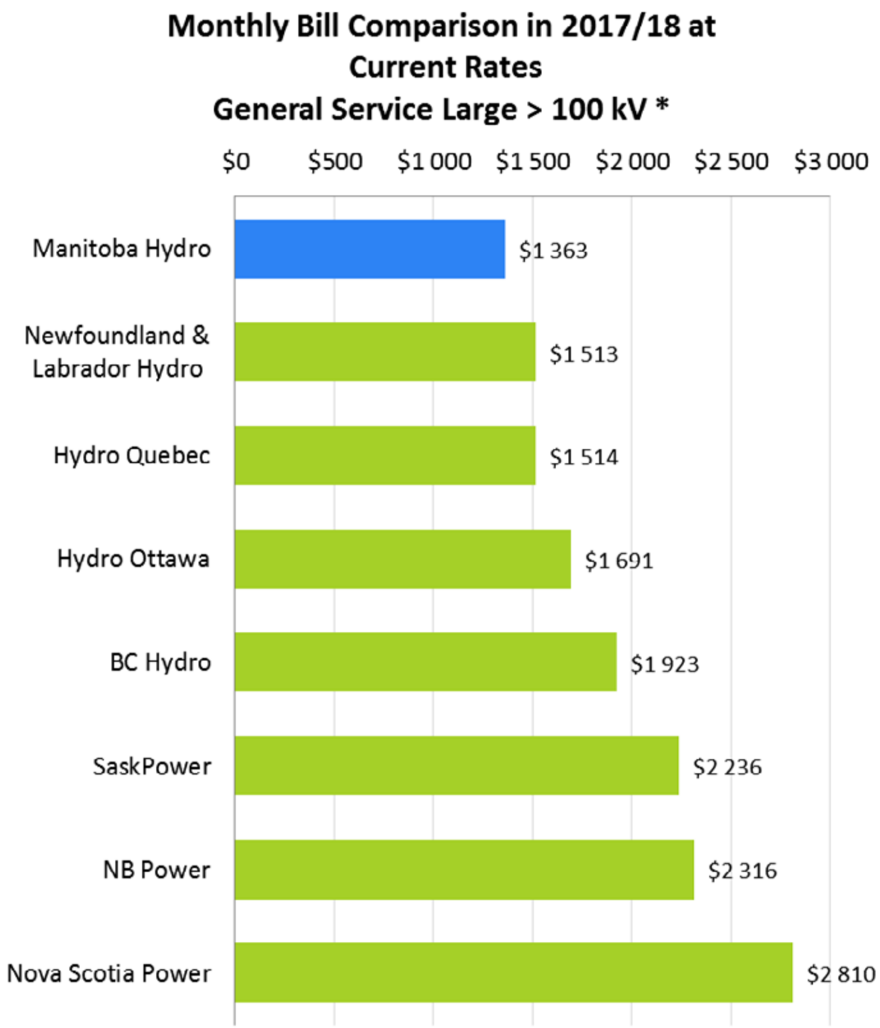
Rate Comparisons - Residential

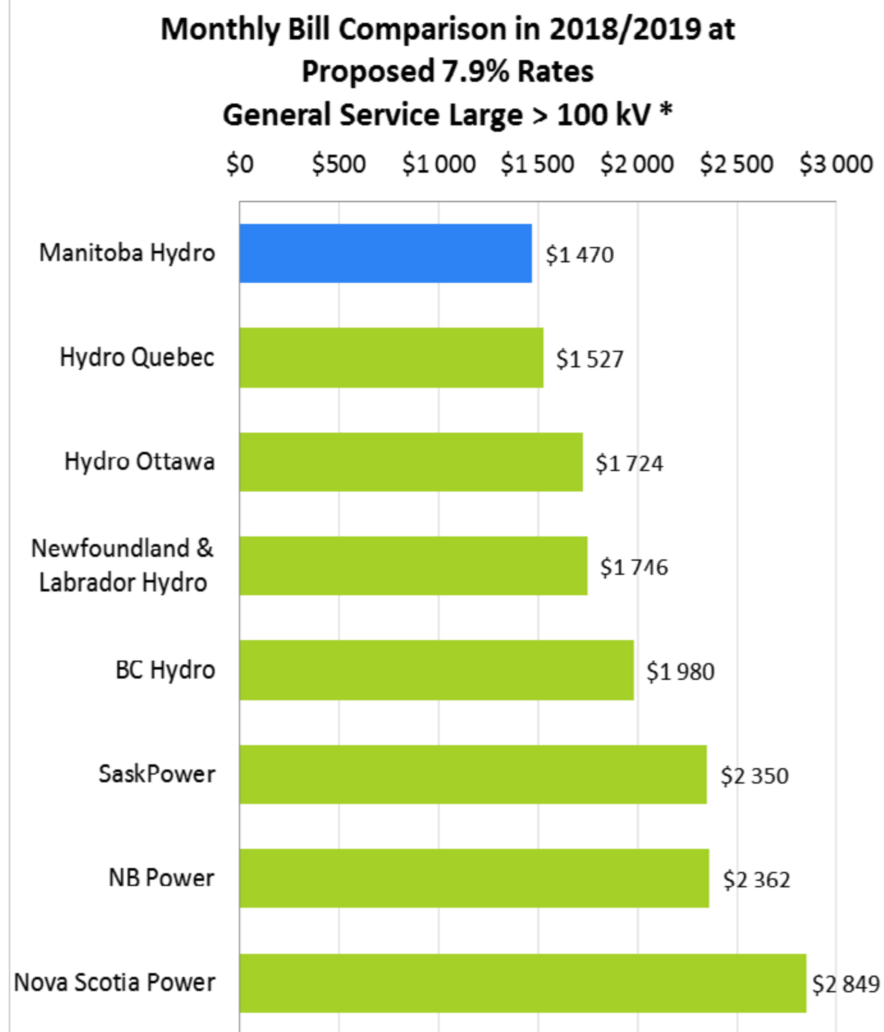




***Consumption: 1,000 kWh/Month**

Rate Comparisons - Industrial





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

Role of Regulator in Accounting Matters

- Under IFRS, financial statements must reflect regulatory decisions to recognize revenue/expenses over a period different than required by IFRS (e.g. $20 million of overhead expensed for financial reporting and deferred for rate setting)
- Regulator must stipulate the period for recovery of the differences in net income (e.g. amortize the ineligible overhead over 20 years)
- Auditors must ensure decisions of the regulator are properly reflected in the corporation's financial statements

Conawapa Generating Station

- Conawapa (approximately $380 million) no longer an option at this time
- Manitoba Hydro anticipates a write-off to net income in the 2017/18 fiscal year
- Manitoba Hydro recommends deferral of the balance with amortization over a 30 year period to minimize impact on customer rates
- 30 year period supported by Mr. Harper

Depreciation Methodology Changes

- Manitoba Hydro changed to ELG method for compliance with the requirements of IFRS
- Manitoba Hydro uses CGAAP ASL method for rate setting purposes as directed by the PUB
- In the interim, requirements of PUB directive addressed through establishment of regulatory deferral account for differences in depreciation methodologies
- Not seeking approval for the amortization period of the deferral account at this time

Depreciation Methodology Changes

- Manitoba Hydro's preference is a single basis of depreciation for financial reporting and rate setting purposes (eliminate deferral account)
  - Concerns over excessive growth & significant ongoing administration
- For single basis of depreciation to apply, PUB directives must be addressed
- Given the specialized and technical nature of this subject matter, Manitoba Hydro is supportive of finding an alternate process where issues can be discussed in more detail and resolution achieved

Ineligible Overhead

- Manitoba Hydro is required to capitalize less overhead costs upon transition to IFRS
- Order 73/15 directed Manitoba Hydro to continue to defer $20 million annually in overhead costs for rate setting purposes
- Manitoba Hydro proposing to amortize deferral balance over 20 years

Ineligible Overhead cont'd

- Order 73/15 does not provide direction as to how long Manitoba Hydro should continue to capitalize ineligible overhead costs
- Indefinite deferral is not appropriate given no impact to net income by end of the amortization period
- Manitoba Hydro is supportive of finding an alternative process where the issue of indefinite deferral can be discussed in more detail

Gains & Losses on Disposition of Assets

- IFRS requires asset disposition gains and losses to be recognized immediately in net income
- Under CGAAP, gains and losses were deferred and amortized to income over remaining life of asset pool
- Order 73/15 directed Manitoba Hydro to maintain existing CGAAP ASL method
- Manitoba Hydro proposing to continue to defer gains and losses and amortize to income over a 20 year period
- 20 year period supported by Mr. Harper

Bipole III Deferral

- Order 43/13 directed Manitoba Hydro to defer the recognition of a % of approved rate increases to offset the additional costs that will occur when Bipole III is in-service
- Deferral account projected to approximate $400 million by the Bipole III in-service date
- Manitoba Hydro proposing to recognize the $400 million in income over 5 years (coincides with final Keeyask in-service date)
- Recognition period has no impact on cash (already collected via prior year's rate increases), no impact on the debt-equity ratio (amounts collected already included in the debt-equity calculation) ➔ no impact on proposed rate increases.