

Order No. 59/16

**ORDER IN RESPECT OF AN APPLICATION BY
MANITOBA HYDRO FOR
APRIL 1, 2016 INTERIM RATES**

April 28, 2016

BEFORE: Régis Gosselin, B ès Arts, MBA, CPA, CGA, Chair
Richard Bel, B.A.,M.A.,M.Sc., Member
Hugh Grant, Ph.D., Member
Marilyn Kapitany, B.Sc. (Hon), M.Sc., Member

TABLE OF CONTENTS

| | | |
|-----|---|----|
| 1.0 | Executive Summary | 3 |
| 2.0 | Manitoba Hydro's Application for Interim Rates | 6 |
| 3.0 | Finance Expense | 14 |
| 4.0 | Operation, Maintenance and Administration Expenses..... | 18 |
| 5.0 | Depreciation and Amortization | 24 |
| 6.0 | Capital Expenditures | 27 |
| 7.0 | Power Resource Plan, Load Forecast and Demand-Side Management | 32 |
| 8.0 | Export Markets | 38 |
| 9.0 | IT IS THEREFORE ORDERED THAT: | 42 |

1.0 Executive Summary

By this Order, the Manitoba Public Utilities Board (Board) approves a 3.36% interim increase in Manitoba Hydro consumers' billed rates effective August 1, 2016; Manitoba Hydro had requested an increase of 3.95% effective April 1, 2016.

The monthly bill of an average residential customer without electric space heat (using 1,000 kWh per month) will increase by \$2.83 and an average consumer with electric space heat (using 2,000 kWh per month) by \$5.41.

The Board will require that all additional revenue generated from this interim rate increase to flow into the previously established Bipole III Deferral Account. This account was established by the Board to mitigate significant rate increases that will be required when the Bipole III Transmission Project (Bipole III), including the Riel Converter Station, comes into service in 2018/19.

Reasons for the Rate Increase

Manitoba Hydro is making very large capital investments to meet growing energy requirements of Manitoba, to replace aging utility assets, and address increased capacity needs on the system. These investments, which will double Manitoba Hydro's assets and associated costs, will be funded mostly by debt and the remaining balance funded by monies generated from ongoing operations.

The Board last approved a rate increase for Manitoba Hydro effective August 1, 2015 following the Board's review of Manitoba Hydro's General Rate Application. Since then, Manitoba Hydro's long-term financial projections have improved significantly. In 2015, Manitoba Hydro was projecting annual rate increases of 3.95% would be required to return Manitoba Hydro to its target debt-to-equity ratio of 75:25 by 2033/34. The Board is satisfied that, based on Manitoba Hydro's latest financial projections, and the implementation of the accounting Directives set out in Board Order 73/15 (following the 2015/16 General Rate Application), Manitoba Hydro's projected annual rate increase of

3.95% can be reduced to 3.36%. Because this is an 'interim' rate increase, the final amount of this increase is subject to the Board's determinations following a General Rate Application that Manitoba Hydro is to file in the fall of 2016. Further, the Board has decided that the rate increase be implemented as of August 1, 2016 to minimize the impact on ratepayers; the earlier increase would result in two significant increases in less than a one year time period.

The Board has concluded that Manitoba Hydro's financial situation for the 2016/17 fiscal year has improved and Manitoba Hydro does not require additional revenues from a rate increase to obtain a positive net income for 2016/17. This is especially the case when Manitoba Hydro's own projections are adjusted to implement the accounting Directives set out in Order 73/15. As such, the Board considers the public interest to be best served if the entirety of the interim rate increase flows into the Bipole III Deferral Account and can serve to reduce the expected rate shock in 2018/19 and subsequent fiscal years when Bipole III and the Keeyask Generating Station come into service.

In light of the significant revenue requirements related to the construction of new generation and transmission assets, replacement of aging infrastructure, and uncertainties associated with export markets, interest rates, domestic loads and foreign exchange rates, the Board considers it important that General Rate Applications are heard on a regular basis, and no more than two fiscal years apart. By this Order, the Board accordingly directs Manitoba Hydro to file a General Rate Application for the 2016/17 and 2017/18 years by no later than December 1, 2016. A December 2016 filing would allow for the adjustment of consumer rates for August 1, 2017. Should Manitoba Hydro wish an earlier date for rate adjustments they would need to file their Application earlier and allow approximately six months for the Board's review of a General Rate Application. The Board is not prepared to consider interim rate applications unless warranted by unforeseen or emergency situations.

The Board shares the Interveners' concerns that interim rate applications ought not be the 'norm' for Manitoba Hydro. Interim rate applications do not offer the same level of public review as General Rate Applications. Manitoba Hydro's internal planning cycles will need to be adjusted, with prior Board and Intervener consultation, if the Utility requests rate adjustments to coincide with April 1 – the start of Manitoba Hydro's fiscal year.

As there are different Intervener representatives and Board Panels involved in electricity regulatory matters as compared to natural gas regulatory matters, the Board does not intend to conduct any joint reviews at this time. As Manitoba Hydro is aware, the Board is considering the efficiency of changes in the regulatory hearing process, (including in the Manitoba Hydro Cost of Service Study Methodology Review Hearing), involving the use of workshops, technical conferences, and concurrent evidence sessions. The assessment of the results of these efficiency initiatives will allow the Board to consider whether combining electricity and natural gas regulatory processes should be further considered.

At the next Manitoba Hydro General Rate Application, the Board will expect all Parties to thoroughly review and test the revised financial information provided by Manitoba Hydro in this interim rate Application. The granting of interim rate increases does not reduce the onus on Manitoba Hydro to demonstrate that any such rate increases are just and reasonable and should be finalized.

2.0 Manitoba Hydro's Application for Interim Rates

Previous Rate Increases

In June of 2012 Manitoba Hydro filed a General Rate Application seeking, among other matters, a 3.5% increase in consumer rates effective April 1, 2013. In Board Order 43/13, the Board approved an overall increase of 3.5% to all customer classes, but ordered the revenues from 1.5% (of the 3.5%) increase to be placed in the Bipole III Deferral Account. In Order 49/14, the Board, on an interim basis, further approved a 2.75% overall average rate increase, but the revenues from a 0.75% increase were to be placed into the Bipole III Deferral Account.

In 2015, the Public Utilities Board (Board) received a General Rate Application from Manitoba Hydro for revised electricity rates. Manitoba Hydro sought a 3.95% average annual rate increases in successive fiscal years (2015/16 and 2016/17) and finalization of the 2014/15 interim increase of 2.75%. In that proceeding the Board determined that it was only prepared to hear a two-year Application dealing with 2014/15 and 2015/16 rates, and that a subsequent proceeding would be required for 2016/17 rates.

Order 73/15 finalized this interim rate increase for 2014/15 and awarded a further 3.95% increase to billed rates for the 2015/16 fiscal year, starting on August 1, 2015. Of this 3.95% increase, the revenues from a 2.15% increase were to be placed in the Bipole III Deferral Account.

The Current Interim Rate Application

On November 18, 2015, Manitoba Hydro filed the current interim rate Application seeking an interim rate increase of 3.95% for all customer classes starting April 1, 2016.

By letter dated December 2, 2015, the Board sought comments from past Interveners of Record as to the procedure for hearing the Application. The Board received comments from a coalition consisting of Consumers' Association of Canada (Manitoba) Inc. and

Winnipeg Harvest (collectively, Consumer Coalition), the Green Action Centre (GAC), and the Manitoba Industrial Power Users Group (MIPUG). Manitoba Hydro also made written process submissions.

After considering the process submissions from the Parties, the Board directed that Manitoba Hydro's Application would be heard by way of a written process with one round of written information requests followed by written submissions by Interveners and Manitoba Hydro. The Board would then make a decision with respect to the substantive merits of the Application.

The Board, the Consumer Coalition, and MIPUG all filed information requests, which Manitoba Hydro answered on February 1, 2016.

Interveners filed written submissions on February 10, 2016. Manitoba Hydro filed a written response submission on February 19, 2016.

Projected Income With and Without a Rate Increase

Manitoba Hydro based its Application on its 2015 Integrated Financial Forecast (IFF15). This financial forecast did not completely comply with the accounting Directives issued by the Board in Order 73/15. Under IFF15, Manitoba Hydro projected a loss of \$33 million in 2016/17 without any interim rate increase for that year, and \$29 million in net income if the 3.95% interim rate increase sought by Manitoba Hydro was implemented effective April 1, 2016.

In the long term, however, Manitoba Hydro noted a significant improvement to its financial position from what had been forecast in its prior General Rate Application. At the last General Rate Application, Manitoba Hydro projected \$978 million in cumulative losses in the eight year period from 2018/19 through 2025/26. In the current Interim Application Manitoba Hydro is now forecasting losses of \$58 million during three of the eight years, and a positive cumulative projected net income of \$283 million over the

same eight-year period. This represents a significant improvement in Manitoba Hydro's financial forecast of \$1.261 billion.

Impact of Accounting Measures on Projected Income

Manitoba Hydro's last General Rate Application resulted in final rates for the 2014/15 and 2015/16 fiscal years being approved in Order 73/15. In that Order, the Board made several findings with respect to Manitoba Hydro's accounting treatment of depreciation and operation, maintenance & administration (OM&A) expense. With respect to depreciation expense, the Board stated that:

The Board, at this time, is not prepared to determine Manitoba Hydro's revenue requirement for rate-setting purpose based on a switch from the [Average Service Life] ASL methodology to the [Equal Life Group] ELG procedure.

Under either ASL or ELG, Manitoba Hydro is eventually made whole, since by the time an asset is decommissioned, the entire capital cost has been recovered by Manitoba Hydro from ratepayers. However, there is no doubt that over the next twenty years (the timeframe for Manitoba Hydro's integrated financial forecast), a switch to ELG would increase Depreciation Expense in every single year. Furthermore, Manitoba Hydro was unable to advise the Board at which point ratepayers should expect a "crossover point" at which the increased Depreciation Expense recovered in the early years reduces Depreciation Expense in the later years. As such, the Board must assume that during the entirety of the foreseeable 20 year planning horizon, a switch to ELG would increase the amount of Depreciation Expense consumers are expected to fund through their rates.

For purposes of rate-setting, the Board orders Manitoba Hydro to continue to determine Depreciation Expense based on its existing ASL methodology at this time.

Manitoba Hydro's Application for interim April 1, 2016 rates was filed based on the ELG methodology, not the ASL methodology directed by the Board in Order 73/15. Manitoba Hydro's methodology increases the depreciation expense reflected in IFF15 by \$31 million for 2015/16 and \$33 million for 2016/17. In Order 73/15, the Board further

directed Manitoba Hydro to capitalize certain overhead costs that were previously expensed on an annual basis. Specifically, the Board directed that:

The Board understood that with the adoption of IFRS, additional overhead costs of \$36 million per year would be no longer capitalized. The quantum of those costs has increased materially in Manitoba Hydro's status IFRS status Update, by \$20 million per year. The Board understands that Manitoba Hydro has made changes in 2012/13 to its integrated cost allocation methodology and overhead rates in its compliance with IFRS. The increases in overhead costs have been primarily attributed to changes in capital activity and overhead allocations. The Board will not accept the higher level of OM&A costs requested in this application but will allow \$36 million of additional costs be expensed for 2015/16 as indicated at the last GRA. The remaining administrative costs will continue to be capitalized as per existing practices.

Manitoba Hydro's Application for interim rates continues to expense \$20 million of OM&A costs that Order 73/15 required Manitoba Hydro to capitalize. Following the methodology directed in Order 73/15 for OM&A expenses results in an increase in Manitoba Hydro's net income by another \$20 million annually.

If Manitoba Hydro had complied with the above Directives, net income would be higher than forecast in IFF15 with net income forecast at over \$60 million for 2015/16 and approximately \$80 million for 2016/17 based on an assumed 3.95% rate increase. Absent any rate increase for the 2016/17 fiscal year, Manitoba Hydro would still have a net income of at least \$20 million.

Over the long term, compliance with accounting Directives in Order 73/15 would reduce the equal annual rate increases that would be required to achieve a debt to equity ratio of 75/25 by fiscal year 2033/34 to 3.36%.

The following table reflects Manitoba Hydro's forecast operating results under the Board-approved accounting methodology:

| Electric Operations With and Without Rate Increase IFF 15 Adjusted (AOCI) Net Income – Electricity Operations (\$Millions) | | |
|--|------------------|------------------|
| | Forecast 2016 | Forecast 2017 |
| Revenue | | |
| General Consumers Revenue | | |
| - At approved rates | \$1,517 | \$1,556 |
| - Bipole III Reserve | (54) | (66) |
| Extraprovincial Revenue* | 149 | 139 |
| Other Revenue | 29 | 28 |
| | <u>1,641</u> | <u>1,657</u> |
| Expenses | | |
| Operating, Maintenance and Administrative | 522 | 532 |
| Finance Expense | 566 | 588 |
| Depreciation and Amortization | 379 | 393 |
| Capital and Other Taxes | 108 | 123 |
| Corporate Allocation | 8 | 8 |
| Other Expenses | 2 | 2 |
| | <u>1,585</u> | <u>1,646</u> |
| Non-controlling Interest | 10 | 9 |
| Net Income(loss) before scenario rate increase | \$66 | \$20 |
| Scenario rate increase (3.36% April 1, 2016) | - | 52 |
| | <u>\$66</u> | <u>\$72</u> |

Revenue Requirement with Bipole III in Service

Manitoba Hydro would still realize a positive net income in 2016/17 of \$20 million even without a rate increase as long as the Board-approved accounting methodology is followed from Order 73/15. However, the absence of a rate increase for the 2016/17 fiscal year could result in a significantly higher rate increase being required once Bipole III comes into service. Bipole III was not within the scope of the Board's Needs For and Alternatives To (NFAT) Review of Manitoba Hydro's major capital projects. Bipole III has received Provincial approval and is currently under construction with an in-service

sometime in the 2018/19 fiscal year. In the initial year of service, the finance expense, depreciation, capital and other taxes, and operating costs will increase Manitoba Hydro's revenue requirements by \$234 million. By the time the Bipole III project is fully in service the additional costs to be recovered from Domestic Customers will be approximately \$384 million per year. By way of comparison, Manitoba Hydro's requested rate increase of 3.95% would recover an additional \$61 million of revenues over a one-year period.

Board Findings

Manitoba Hydro's Integrated Financial Forecast (IFF15) represents a significant improvement in Manitoba Hydro's financial situation. Manitoba Hydro had forecast, in IFF14, losses of \$978 million accumulated over eight years of consecutive losses from 2018/19 through 2025/26. The Corporation is now forecasting in IFF15 to incur losses in just three of the eight years totaling \$58 million and earn a cumulative net income (including the losses) of \$283 million over the same eight year period. This represents an improvement of \$1.261 billion from IFF14. This is good news for ratepayers and somewhat reduces the long-term upward rate pressure forecast at the last General Rate Application.

Nonetheless, the Board is not prepared to take IFF15 at face value since it is not fully compliant with the Board's accounting directives set out in Order 73/15. In Board Order 73/15 the Board directed the ASL methodology for depreciation and to capitalize OM&A costs above \$36 million. Adjusting IFF15 accordingly further improves Manitoba Hydro's projected financial situation such that, if the Board were to look at the 2016/17 fiscal year in isolation, no interim rate increase would be required to ensure that Manitoba Hydro achieves a positive net income in 2016/17. As such, the Board is not of the view that Manitoba Hydro has made a *prima facie* case to receive an interim rate increase that would flow to the company's general revenues.

However, as expressed by the Board in Orders 43/13 and 73/15, and in this interim Application, the Board considers it to be in the public interest to look beyond the test years and mitigate potential rate shock to consumers that, due to the additional costs imposed by Bipole III in a few years, may be inevitable unless the Board implements a form of rate smoothing. Since the Bipole III project and the Keeyask Generating Station have both received approval and are under construction, the Board considers it appropriate to examine Manitoba Hydro's entire planning horizon in setting rates.

If the Board's prescribed accounting methodology is followed, Manitoba Hydro would require equal annual rate increases of 3.36% to achieve its 75:25 debt-to-equity target by 2033/34. While it is still fairly early into Manitoba Hydro's planning horizon of projected above-inflation rate increases, the Board considers the 3.36% projection to be the best available rate increase projection at this time and will approve a 3.36 interim rate increase effective August 1, 2016.

This interim rate will be further examined in the next Manitoba Hydro General Rate Application and may be varied or finalized. If Manitoba Hydro's financial situation improves further, a 3.36% rate increase for 2016/17 may reduce required rate increases in the future. If, on the other hand, Manitoba Hydro's financial situation deteriorates from the IFF15 projections, such a rate increase provides a financial cushion not available if an interim rate increase were refused at this time.

The Board directs all additional revenues realized by Manitoba Hydro from this increase to be placed in the previously established Bipole III Deferral Account. This account will be used to partially offset the revenue requirements from the Bipole III project coming into service and aid in alleviating potential rate shock in the later years of this decade.

The Board is not prepared to consider future interim rate applications from Manitoba Hydro unless warranted by unforeseen or emergency situations. It is the Board's desire that Manitoba Hydro file General Rate Applications on a regular basis and no more than two years apart. The Board shares the Interveners' concerns that interim rate

applications ought not be the 'norm' for Manitoba Hydro and that Manitoba Hydro's planning cycles be adjusted if the Utility requests rate adjustments to coincide with the beginning of its fiscal year (April 1).

This Board previously commented that Manitoba Hydro is involved in a process of unprecedented capital expansion, approximately doubling its asset base when all of the currently planned projects have been completed. As such, the Board remains of the view that Manitoba Hydro should be subject to regular and timely General Rate Application reviews that address no more than two fiscal years at a time. Future interim rate requests related General Rate Applications are to be avoided by Manitoba Hydro. Manitoba Hydro is to adjust its planning cycles to ensure the required information is available on a timely basis. Manitoba Hydro is therefore directed to file on or before December 1, 2016, a General Rate Application to finalize rates for the 2016/17 fiscal year and prospectively set rates for the 2017/18 fiscal year. A December 2016 filing would allow for the adjustment of consumer rates for August 1, 2017. Should Manitoba Hydro wish an earlier date for rate adjustments (say April 1 – the beginning of Manitoba Hydro's fiscal year) they would need to file their Application earlier and allow approximately six months for the Board's review. Such a General Rate Application is to be restricted to Manitoba Hydro's electric utility and not, at this time, include matters related to Centra Gas Manitoba Inc.'s natural gas operations.

3.0 Finance Expense

Finance expense is Manitoba Hydro's largest expense category. IFF15 projects finance expense to be \$566 million in 2015/16 and \$588 million in 2016/17.

The finance expense projected in IFF15 is \$56 million higher in 2015/16 and \$40 million higher in 2016/17 than what was projected in IFF14. This increase is primarily due to the impacts of foreign exchange associated with US-dollar debt balances, borrowings made in advance of actual capital need (to take advantage of what Manitoba Hydro considers favourable borrowing conditions), and related reduction in capitalized interest as a result of capital expenditures being incurred later than originally projected. As a result, interest on funds already borrowed, that would have been capitalized had the capital costs already been incurred, is currently accruing as a yearly finance expense contributing to the increased costs.

Over the long term, Manitoba Hydro's finance expense is projected to double over a ten-year period as a result of Manitoba Hydro's extensive capital expenditures. However, the total level of projected finance expense is lower under IFF15 than it was under IFF14. At the last General Rate Application, finance expense was forecast to peak at \$1.3 billion in 2023/24. Finance expense is now forecast to peak at \$1.2 billion in 2023/24. In comparison to IFF14, finance expense is \$757 million lower in the 10-year period to 2024/25 and \$2.541 billion lower in the 19-year period to 2033/35.

Manitoba Hydro's Long-Term Debt

Manitoba Hydro's projected long-term debt balance is \$679 million higher in 2015/16 and \$905 million higher in 2016/17 from what was forecast in IFF14. The projected changes are illustrated in the following table:

Long Term Debt – Electric (\$Millions)

| | 2015Actual | 2016Forecast | 2017Forecast |
|--------------|------------|--------------|--------------|
| Actual/IFF15 | \$11,998 | \$14,487 | \$17,586 |
| IFF14 | 11,705 | 13,808 | 16,681 |
| Difference | \$293 | \$679 | \$905 |

The short-term increase in net debt from IFF14 is due to two primary factors: Manitoba Hydro's borrowing of additional funds now when Manitoba Hydro considers rates be exceptionally low and to increase Manitoba Hydro's cash position/liquidity. Manitoba Hydro claims that borrowing additional funds when rates are at an all-time low will benefit ratepayers over the long term as interest expense will be lower for the entire term of the debt.

Interest Rates

Long-term interest rates in IFF15 were estimated based on a Fall 2015 interest rate forecast. Long-term interest rates have generally declined since the last General Rate Application. The long-term rate used in forecasting by Manitoba Hydro at the last General Rate Application was 5.1% for 2015/16 and 5.5% for 2016/17. IFF15 saw a decline to 4.05% for 2015/16 fiscal year and to 4.35% for 2016/17; over 100 basis points lower for both years. A January 2016 update indicates further declines and the long-term interest rate dropped further to 3.95% for 2015/16 and 4.15% for 2016/17.

Long-term interest rates have declined since the last General Rate Application as follows:

| Fiscal Year | Jan/16 Update | IFF15 Application | Jan/15 Update | IFF14 Application |
|-------------------|---------------|-------------------|---------------|-------------------|
| 2015/16 | 3.95% | 4.05% | 4.00% | 5.10% |
| 2016/17 | 4.15% | 4.35% | 4.55% | 5.50% |
| 2017/18 | 4.60% | 4.80% | 5.70% | 5.80% |
| 2018/19 | 5.60% | 5.40% | 5.75% | 6.00% |
| 2019/20 – 2033/34 | 5.50% | 5.60% | 5.75% | 6.20% |

As a result of the reduction in interest rates, the weighted average interest rate for the debt portfolio has decreased from 5.81% in IFF14 to 5.42% in IFF15. This favourable variance was partially offset by an increase in the forecast foreign exchange rate used to value the USD long-term debt interest payments (from 1.12 in IFF14 to 1.32 in IFF15).

The reduction in the projected weighted average interest rate between IFF14 and IFF15 demonstrates the significance of interest rates on debt financing. The reduction in projected interest rates results in finance expense being reduced by \$757 million, from what was forecast in IFF14, in the 10-year period to 2024/25.

The Consumer Coalition questioned the overall reliability of Manitoba Hydro's financial forecasts given the significant improvement from reduced finance expense.

Manitoba Hydro has indicated that it will require \$10.7 billion of debt financing in the next three years (\$4.1 billion for 2016/17, \$3.3 billion for 2017/18, and \$3.4 billion for 2018/19). Manitoba Hydro cautioned the Board as to the risk of rising interest rates and advised that a sharp rise in interest rates in the next few years could have a material

detrimental impact to Manitoba Hydro's forecast finance expense as presented in IFF15.

Board Findings

It is clear that the reduction in Manitoba Hydro's projected finance expense is the primary contributor to the almost \$1 billion improvement in the Corporation's financial outlook over the next ten years. At the last General Rate Application, Manitoba Hydro's IFF14 had forecast corporate losses of \$980 million. These losses have substantially disappeared in IFF15. The reduction in long-term finance expense, in turn, is caused by a further reduction in the projected interest rate. The weighted average interest rate for the debt portfolio has declined from 5.81% to 5.42%. As such, a future upward change in interest rates could have a material impact on Manitoba Hydro's revenue requirement and remains a real risk given the planned borrowings of \$10.7 billion over the next three years.

One issue that remains to be resolved is the treatment of interest incurred on funds borrowed in advance of actual capital spending. While Manitoba Hydro ordinarily capitalizes interest with respect to funds used for capital projects until such projects are in service, it is currently treating interest on these funds, borrowed in advance of need, as a finance expense accrued annually. It is the Board's intention to consider, at the next General Rate Application, whether this represents the appropriate treatment for rate-setting purposes or whether such interest should be capitalized as well.

4.0 Operation, Maintenance and Administration Expenses

After Finance Expense, Operation, Maintenance and Administration (OM&A) Expense is the second largest annual expenditure by Manitoba Hydro.

OM&A expense has remained at \$542 million in 2015/16 and \$552 in 2016/17 in IFF15, which is consistent with what was forecast in IFF14 provided at the last General Rate Application. Manitoba Hydro made no changes to the 20 year forecast in IFF15 from what was budgeted in IFF14. The OM&A forecast in IFF15 was held constant to IFF14 due to Manitoba Hydro's commitment to limit increases in OM&A costs to below inflationary levels. Manitoba Hydro has previously committed to limiting increases in OM&A expense to one percent annually, excluding the impact of accounting changes. This included a commitment to reducing approximately 330 operational positions between 2014/15 and 2016/17. As of the filing of the interim Application, Manitoba Hydro had succeeded in eliminating 315 positions, suggesting that the Utility is ahead of schedule.

The actual and forecast OM&A expenses for fiscal years 2012/13 to 2016/17 are as follows:

Operating, Maintenance and Administrative Costs (\$Millions)

| Fiscal Year | Actual | | | IFF15 | |
|-------------------------------|----------------|----------------|----------------|----------------|----------------|
| | 2012/13 | 2013/14 | 2014/15 | 2015/16 | 2016/17 |
| Labour and Benefit | \$658.1 | \$700.0 | \$727.6 | \$751.4 | \$766.1 |
| Other Expense | 183.1 | 188.0 | 192.9 | 198.5 | 201.0 |
| Total OM&A | 841.2 | 888.0 | 920.5 | 950.0 | 967.1 |
| OM&A Charged to Centra | (63.7) | (66.8) | (67.5) | (66.7) | (67.8) |
| Total Electric Costs | \$777.5 | \$821.2 | 853.0 | \$883.3 | \$899.3 |
| Capitalized Costs* | (314.5) | (340.4) | (372.6) | (341.6) | (347.6) |
| Total OM&A Expense | \$463.0 | \$480.7 | \$480.5 | \$541.7 | \$551.7 |

*Breakdown of Capitalized Costs is summarized as follows:

| Fiscal Year | 2012/13 | 2013/14 | 2014/15 | 2015/16 | 2016/17 |
|--------------------------------------|--------------|--------------|--------------|--------------|--------------|
| Labour & Benefits Charged to Capital | \$215.5 | \$234.5 | \$257.5 | \$282.3 | \$288.0 |
| Other Costs Charged to Capital | 29.3 | 31.5 | 33.4 | 34.6 | 34.8 |
| Capitalized Overhead | 69.7 | 74.4 | 81.7 | 24.6 | 24.8 |
| Capitalized Costs | 314.5 | 340.4 | 372.6 | 341.6 | 347.6 |

Manitoba Hydro capitalized \$372.6 million (44%) of labour and other OM&A cost in 2014/15 and forecasts to capitalize \$341.6 million (39%) in 2015/16 and \$347.6 million (39%) in 2016/17. Manitoba Hydro reduced the level of capitalized overheads from \$81.7 million in 2014/15 to \$24.6 million in 2015/16 upon the implementation of International Financial Reporting Standards (IFRS).

The actual OM&A expenditures recorded in IFF15 do not accurately reflect the Board's Directive in Order 73/15 for Manitoba Hydro to continue to capitalize \$20 million in overhead costs rather than expense that amount when Manitoba Hydro converted to IFRS. If Manitoba Hydro had complied with Order 73/15, OM&A expense would have been \$522 million in 2015/16 and \$532 million in 2016/17.

Staffing Levels

Over 79% of total OM&A expenses are payroll-related costs (including overtime and employee benefits). Wages and salaries have increased by an average of 4% per year, primarily as a result of contract settlements with bargaining units and an increase in total Equivalent Full-Time positions (EFTs). Staffing levels were projected to grow from 5,769 EFTs in 2004 to 6,814 EFTs in 2016/17, an increase of over 1,045 EFTs over 12 years. At the last General Rate Application, Manitoba Hydro attributed the increase in EFTs to growth in its capital program, including new generation and transmission projects such as Bipole III, the Keeyask Generating Station and the Pointe du Bois Generating Station spillway.

Between 2013/14 and 2016/17, Manitoba Hydro's staffing levels have changed as follows:

MANITOBA HYDRO
TOTAL EQUIVALENT FULL TIME (EFT) EMPLOYEES BY BUSINESS UNIT

| (Straight Time & Overtime Combined) | 2013/14 Actual | 2014/15 Actual | Dec 2015 Actual* | 2015/16 Forecast | 2016/17 Forecast |
|--|-------------------|-------------------|---------------------|---------------------|---------------------|
| President & CEO | 14 | 15 | 14 | 15 | 15 |
| Corporate Communication & Public Affairs | 46 | 40 | 38 | 44 | 41 |
| General Counsel & Corporate Secretary | 44 | 41 | 44 | 45 | 43 |
| Human Resources & Corporate Services | 830 | 813 | 794 | 823 | 796 |
| Corporate Relations | 109 | 108 | 106 | 107 | 114 |
| Finance & Regulatory | 152 | 148 | 142 | 145 | 142 |
| Generation Operations | 1,453 | 1,301 | 1,223 | 1,290 | 1,265 |
| Major Capital Projects | 210 | 238 | 295 | 380 | 393 |
| Transmission | 1,670 | 1,773 | 1,708 | 1,805 | 1,776 |
| Customer Service & Distribution | 1,737 | 1,753 | 1,780 | 1,752 | 1,737 |
| Customer Care & Energy Conservation | 491 | 483 | 485 | 496 | 492 |
| Total Corporation | 6,756 | 6,713 | 6,629 | 6,902 | 6,814 |

Cost Containment Measures

As stated in Order 73/15, Manitoba Hydro committed to containing the growth of OM&A expenses to one percent, excluding the impact of accounting changes. Manitoba Hydro completed a review of staffing and operational efficiency to meet customer needs in the most cost effective and efficient manner. As part of the process, the utility committed, over a three year period (2014/15 through 2016/17), to reduce its full-time staff complement by at least 330 positions through attrition and process efficiencies.

At the 2015/16 General Rate Application, Manitoba Hydro indicated that the Corporation had set a target to limit operating cost increases to 1% per year over the ten-year period, excluding the impacts of accounting changes. To accomplish this 1% target, the Utility had identified the need for an additional 600 position reductions by 2022/23.

The actual EFT position reductions for the first nine months of 2015/16 show Manitoba Hydro has achieved a cumulative reduction of 347 positions as compared to a forecast of 236 positions to end of 2015/16 fiscal year. A comparison of planned staff reductions and related savings with actual savings realized to December 31, 2015 is as follows:

Operational Position Commitments and Reductions Achieved

| Business Unit | Committed Reductions 2014/15 & 2015/16 GRA | | | | Actual Position Reductions | | |
|--|---|----------------|----------------|----------------|----------------------------|----------------|------------|
| | 2014/15 | 2015/16 | 2016/17 | Total | 2014/15 | 2015/16* | Total |
| President & CEO | 2 | - | - | 2 | 2 | - | 2 |
| Corporate Communication & Public Affairs | - | 2 | 2 | 4 | - | 1 | 1 |
| General Counsel & Corporate Secretary | 1 | 1 | 1 | 3 | 2 | - | 2 |
| Human Resources & Corporate Services | 33 | 27 | 21 | 81 | 53 | 15 | 68 |
| Corporate Relations | 3 | 3 | 1 | 7 | 8 | 1 | 9 |
| Finance & Regulatory | 4 | 3 | 3 | 10 | 6 | 4 | 10 |
| Generation Operations | 9 | 12 | 6 | 27 | 41 | 23 | 64 |
| Major Capital Projects | 1 | - | - | 1 | 1 | - | 1 |
| Transmission | 30 | 18 | 42 | 90 | 49 | 52 | 101 |
| Customer Service & Distribution | 46 | 19 | 13 | 78 | 49 | 17 | 66 |
| Customer Care & Energy Conservation | 16 | 6 | 5 | 27 | 21 | 2 | 23 |
| Total Position Reductions | 145 | 91 | 94 | 330 | 232 | 115 | 347 |
| Estimated Savings(in millions) | 2014/15 | 2015/16 | 2016/17 | 2017/18 | 2014/15 | 2015/16 | |
| Estimated Annual Savings | \$ 7.3 | \$ 12.3 | \$ 10.0 | \$ 5.1 | \$ 11.6 | \$ 18.0 | |
| Estimated Cumulative Annual Savings | 7.3 | 19.6 | 29.6 | 34.7 | \$ 11.6 | \$ 29.6 | |

* Reflects Actual Position reductions as of December 31, 2015

The chart shows that Manitoba Hydro has exceeded its targeted staff reductions a year ahead of the schedule presented at the last General Rate Application, with 111 EFT more staff reductions than planned for 2015/16. This has resulted in \$29.6 million in savings in 2015/16 compared to savings of only \$19.6 million forecast in IFF14, which represent an additional \$10 million in payroll savings are not reflected in IFF15.

Third-Quarter OM&A Forecast Update

Manitoba Hydro provided an update to its OM&A expense relative to its 2015/16 forecast for the nine months as of December 31, 2015. The third-quarter update indicated that projected 2015/16 OM&A was \$8 million lower than forecast in IFF15, primarily due to the staffing reductions as set out above.

The following chart shows Manitoba Hydro's actual OM&A for the nine months ending December 31, 2015 is as follows:

**ELECTRIC OPERATIONS
OPERATING & ADMINISTRATIVE COSTS BY COST ELEMENT
FOR THE NINE MONTH PERIOD ENDED DECEMBER 31, 2015
(In Millions of Dollars)**

| | | 2016 Annual Forecast* | YTD Actual | YTD Forecast IFF15 | Favorable (Unfavorable) Variance |
|---|--------------------------------|-----------------------------|---------------|--------------------------|--|
| 1 | Wages & Salaries | 525.1 | 378.7 | 392.3 | 13.6 |
| 2 | Overtime | 71.1 | 50.6 | 52.9 | 2.3 |
| 3 | Employee Benefits | 160.3 | 115.2 | 116.2 | 1.1 |
| 4 | | <u>756.5</u> | <u>544.4</u> | <u>561.5</u> | <u>17.1</u> |
| 5 | Other Expenses | 194.9 | 138.3 | 146.2 | 7.9 |
| | | <u>951.4</u> | <u>682.7</u> | <u>707.7</u> | <u>25.0</u> |
| 6 | Less: Capital Order Activities | (318.4) | (223.9) | (238.5) | (14.6) |
| 7 | Capitalized Overhead | (24.5) | (18.1) | (18.6) | (0.4) |
| 8 | O&A Charged to Gas Operations | (66.7) | (47.4) | (49.4) | (2.0) |
| 9 | | <u>541.7</u> | <u>393.2</u> | <u>401.2</u> | <u>8.0</u> |

*Forecast is based on IFF15

Manitoba Hydro did not adjust its IFF15 forecast of OM&A expense to reflect the higher level of labour savings for 2015/16, indicating that it was premature to do so because of other potential factors such as storms, year-end valuation of benefit costs, maintenance requirement and other cost considerations.

Board Findings

With respect to OM&A projections, IFF15 reflects an essentially unchanged view from what was presented at the last General Rate Application in IFF14. Manitoba Hydro stated it is unwilling to update the IFF15 OM&A forecast for 2015/16 because of various factors, notwithstanding the substantial reduction in positions as of December 2015 compared to the forecast for 2015/16. Furthermore, there does not appear to be any reason why the OM&A forecast for subsequent years of IFF15 should not be updated. In the Board's view, it is likely that IFF15 materially overstates total OM&A as the forecast has not yet been adjusted to take into account the additional savings received as a result of Manitoba Hydro being ahead of schedule with respect to its staffing reductions.

The OM&A forecast reflected in IFF15 is further overstated by Manitoba Hydro as a result of IFF15 not reflecting the Board's accounting directive, set out in Order 73/15, of capitalizing an additional \$20 million in overhead costs for rate-setting purposes. If this requirement were implemented, OM&A would be reduced and net income would increase correspondingly.

5.0 Depreciation and Amortization

Depreciation Expense is Manitoba Hydro's third highest expense category and is projected to be almost double by 2024/25 as a result of both new major generation and transmission assets and planned sustaining capital expenditures. Depreciation expense is projected to be \$410 million in 2015/16 and \$426 million in 2016/17.

IFF15 shows that in the near term, depreciation expense is \$9 million higher in 2015/16 and \$4 million higher in 2016/17 than what was forecast in IFF14 presented at the last General Rate Application. The increases in both years were attributable to a reclassification of amortization of customer contributions in aid of construction to other revenue. Previously, customer contributions were recorded against property, plant & equipment, which reduced depreciation expense. Manitoba Hydro made the change to comply with International Financial Reporting Standards (IFRS) in 2015/16.

Over the long-term, depreciation expense is projected to be \$335 million higher over the next decade compared to what was projected in IFF14. This increase is primarily due to three factors: firstly, the reclassification of customer contributions (\$127 million); secondly, the recognition of Bipole III Deferral account revenues into Other Revenue (\$162 million); and thirdly, the higher amortization (\$16 million) associated with increased DSM expenditures.

Over the 20-year forecast period, cumulative depreciation expense is projected to be approximately \$850 million higher in IFF15 than in what was forecasted in IFF14. In addition, with the cancellation of the Conawapa project subsequent to the 2014 NFAT Review of Manitoba Hydro's Preferred Development Plan, IFF15 now treats deferred Conawapa costs in a regulatory deferral account to be amortized over a period of 30 years commencing in 2017/18. The Board has not reviewed or accepted Manitoba Hydro's proposed treatment of stranded Conawapa costs.

At the last General Rate Application, Manitoba Hydro expressed its intention to switch its depreciation methodology from the long-standing Average Service Life (ASL) methodology to the Equal Life Group (ELG) methodology. The Board examined that plan comprehensively and, in Order 73/15, directed Manitoba Hydro to continue to use ASL to calculate depreciation expense for rate-setting purposes. IFF15 does not comply with the Board's directive and continues to assume the use of ELG both for financial reporting and for rate-setting purposes. This means that IFF15 projects 2015/16 depreciation expense to be \$32 million higher than it would be under ASL. For 2016/17, depreciation expense is \$33 million higher than if Directive 10 of Order 73/15 had been followed.

The detailed comparison of depreciation expense between ELG methodology and ASL methodology is summarized in the table below:

| | MH15 | | Order 73/15 AOCI | | Difference | |
|---------------------------------------|--|--|--|--|---------------------|---------------------|
| | 2015/16 Forecast ELG - NO SALVAGE | 2016/17 Forecast ELG - NO SALVAGE | 2015/16 Forecast CGAAP ASL - NO SALVAGE | 2016/17 Forecast CGAAP ASL - NO SALVAGE | 2015/16 Forecast | 2016/17 Forecast |
| Generation | 161 | 167 | 151 | 157 | 9 | 10 |
| Transmission | 14 | 14 | 13 | 13 | 1 | 1 |
| Distribution | 155 | 165 | 137 | 146 | 18 | 19 |
| Other | 81 | 80 | 78 | 76 | 3 | 3 |
| Total MH15 vs Order 73/15 AOCI | 410 | 426 | 379 | 393 | 32 | 33 |

Both the Consumer Coalition and the Manitoba Industrial Power Users Group (MIPUG) submitted that Manitoba Hydro's interim rate increase request is based on a financial forecast methodology which does not comply with Board Order 73/15 in terms of depreciation method and the OM&A accounting treatment for capitalized overhead. The Consumer Coalition stated that for the two-year period from 2015/16 to 2016/17, Manitoba Hydro's revenue requirement is misaligned by almost \$100 million as a result of IFF15 not being prepared in compliance with Order 73/15. The Consumer Coalition

further suggested that over the next decade, the cumulative impact will be over \$500 million. The Consumer Coalition further recommended to the Board that Manitoba Hydro be directed to change its forecasting methodology to comply with the existing Board Directives.

Board Findings

Manitoba Hydro has asked the Board to award an April 1, 2016 rate increase by means of an interim proceeding. Manitoba Hydro did not file a motion to Review and Vary any aspects of Order 73/15 and the Board is not prepared to accept Manitoba Hydro's projected depreciation expense based on ELG contrary to an existing Board Directive. However, the Board notes that by conservatively overstating depreciation expense due to the use of ELG, IFF15 would show a reduced level of depreciation expense (and corresponding higher level of net income) if it were prepared in compliance with Order 73/15.

The Board notes that the status of Conawapa and the recovery of existing "sunk" costs incurred in relation to that generating station have not yet been decided by the Board. This is an issue that will have to be examined at the next General Rate Application. Since the financial impacts of Manitoba Hydro's assumption that these costs will be amortized over a 30-year period will not start to be incurred until the 2017/18 test year, Manitoba Hydro's proposal has no impact on the Board's decision with respect to interim April 1, 2016 rates.

6.0 Capital Expenditures

Issues

Major New Generation and Transmission

Manitoba Hydro is currently in the midst of an unprecedented capital investment campaign. Following the Needs For and Alternatives To (NFAT) Review of Manitoba Hydro's Preferred Development Plan in 2014, the Board recommended that the Keeyask Generating Station and a new transmission line to the U.S. proceed but not the Conawapa Generating Station.

Manitoba Hydro's IFF15 forecasts \$25 billion of capital spending over the next 20 years, essentially the same level of spending as IFF14, with more than \$16 billion of that spending occurring prior to 2025. In the medium term, it is this investment in new assets that drives the requirement for rate increases and higher revenue requirements over the next 20 years.

In Manitoba Hydro's Capital Expenditure Forecast (CEF15), there are no significant cost increases compared to CEF14 for Manitoba Hydro's largest projects. The total projected costs of Bipole III and Keeyask remain unchanged from CEF14. The most significant change is the elimination of the Pointe du Bois powerhouse rebuild from the 20-year forecast period. The Board previously expressed concerns with the \$1.8 billion cost of this project in relation to its benefits.

Manitoba Hydro is also investing in the Manitoba-Minnesota Transmission Project and taking responsibility for the majority of the cost of the Great Northern Transmission Line in the United States, which together comprise the new U.S. intertie. Manitoba Hydro will make a final commitment whether to proceed with this transmission line by October 2016. Manitoba Hydro has not announced any additional firm export contracts that will use this transmission line, meaning there are no additional contracted export revenues to offset the annual in-service costs of this transmission line.

Sustaining Capital Expenditures

Sustaining capital (also known as “base capital”) spending is used to replace and refurbish existing assets, extend the electrical system to new customers, and to meet the load growth of existing customers. At the last General Rate Application, Manitoba Hydro proposed to increase its sustaining capital expenditures from \$470 million to \$570 million in 2014/15. Manitoba Hydro spent \$559 million in 2014/15.

In CEF15, Manitoba Hydro plans to spend \$577 million in 2015/16, which is the same level projected in CEF14. For 2016/17, CEF15 projects \$610 million, which is \$25 million more than projected in CEF14. Because sustaining capital expenditures are capitalized and not expensed, the increase of \$25 million in 2016/17 has an immediate annual revenue requirement impact of only approximately \$1 million and is not a significant driver of the 2016/17 proposed rate increase.

In Order 73/15 Directive 13, the Board directed Manitoba Hydro to file quarterly reports for all Major New Generation and Transmission projects. The reports were to outline the original budgets, budget changes, revisions to in-service costs, and how any material cost increases will affect revenue requirements and Manitoba Hydro’s financial forecasts. Manitoba Hydro filed one report for the period July to September 2015, which details no substantive changes to the total project costs from what was presented at the last General Rate Application.

Manitoba Hydro’s Asset Condition Assessment Process

Manitoba Hydro’s proposed level of sustaining capital expenditures remains under scrutiny. In Directive 7 of Order 73/15, the Board directed Manitoba Hydro to file Terms of Reference for an asset condition assessment report for generation, transmission, and distribution assets. This Directive followed similar Directives in Orders 116/08 and 73/13.

Manitoba Hydro intends to engage a consultant to assist in refining and documenting Manitoba Hydro's asset management policy and strategy. Manitoba Hydro expects the consultant to recommend: *"key asset management processes and systems Manitoba Hydro should improve upon or develop, including a performance management framework, risk management assessments, operations and maintenance asset planning, adherence to industry accepted standards and ongoing audit reviews."*

Following last General Rate Application, Manitoba Hydro engaged Kinectrics to audit the asset condition assessment methodologies for Manitoba Hydro's HVDC and distribution assets. Manitoba Hydro expects the results of this audit to be available at the next General Rate Application.

Manitoba Hydro reports that on a preliminary basis, Kinectrics found that its transmission asset assessment methodologies follow best practices. However, Kinectrics identified that Manitoba Hydro's distribution asset assessment methodologies and characterization should be enhanced. Manitoba Hydro has engaged Kinectrics to develop asset health indices and refine the distribution asset condition assessment methodologies and provided the terms of reference for this engagement.

Manitoba Hydro has also responded to the Board's direction to enhance its capital spending pacing and prioritization by engaging Copperleaf Technologies Inc. to assist in developing a corporate value framework methodology. The corporate value framework helps identify the set of investments that will deliver the greatest value to Manitoba Hydro. Concurrently, Manitoba Hydro is implementing software from Copperleaf that will help with investment planning and asset management.

In the Consumer Coalition's view, Manitoba Hydro has not provided an asset condition assessment and management plan which can support the sustaining capital expenditures which are portrayed in IFF15. The Consumer Coalition also submitted that Manitoba Hydro has still not addressed the information gap relating to sustaining capital expenditures.

The Manitoba Industrial Power Users Group (MIPUG) stressed the importance of completing the asset condition assessments and being able to test the pacing and prioritization of capital spending in a full rate review process. MIPUG's view is the current interim rate review process does not allow the parties or the Board to perform this review. MIPUG also stated that the forthcoming asset condition assessments will reduce financial risks by balancing ratepayer impacts with safety and reliability.

Board Findings

The Board reviewed Manitoba Hydro's quarterly report on Major New Generation and Transmission projects, filed in response to Order 73/15 Directive 13. The Board notes that this report omits budget information on the Bipole III transmission line, Dorsey converter station, and Manitoba-Minnesota Transmission Project construction contracts. Manitoba Hydro also did not file reports for April through June 2015. The Board sees value in assessing the progression of the budgets and potential changes on an ongoing basis over multiple reports, and so will reserve comment until additional reports are reviewed at the next General Rate Application.

The Board also requested, as part of the quarterly reports, that capital cost justifications for Major New Generation and Transmission and other projects greater than \$50 million be provided. While the capital project justifications for Bipole III and Keeyask have been previously filed and reviewed by the Board, the Board would like to clarify that if any capital project justifications are revised for existing projects, these should be filed with the quarterly reports.

In Order 73/15, the Board directed Manitoba Hydro to file Terms of Reference and schedules for an Asset Condition Assessment by October 31, 2015. This Directive also required the Terms of Reference to set out the items in Appendix G of Order 73/15. It is understood that Manitoba Hydro is carrying out the Asset Condition Assessments with support from sub-consultants. To date, Manitoba Hydro has only filed the Terms of Reference for the engagement of a sub-consultant to review the distribution asset

condition assessment methodology. An overall work plan or schedule has not been filed.

Manitoba Hydro has not filed Terms of Reference or schedules for internal reviews of the generation or transmission asset condition assessments. Both of these assessments are apparently underway as evidenced by Manitoba Hydro's filing of its response to Order 73/15 Directive 7. The Board is again requesting the Terms of Reference and schedules for these two assessments be filed with the Board by April 15, 2016.

Manitoba Hydro stated that providing asset condition information based on geographic categories for distribution assets would require considerable additional work and does not expect the additional information to provide incremental value. The Board will consider alternate categories that identify age and remaining life of various distribution assets to be acceptable and will vary its previous direction to Manitoba Hydro.

The Board will require Manitoba Hydro to file the complete asset condition assessment information for generation, transmission, and distribution at the next General Rate Application.

7.0 Power Resource Plan, Load Forecast and Demand-Side Management

Issues

Power Resource Plan

Manitoba Hydro annually prepares a Power Resource Plan, now known as Resource Planning Assumptions and Analysis, that identifies the domestic load and export commitments as well as the generation and import resources to meet the expected load.

The 2015/16 Resource Planning Assumptions and Analysis shows that Keeyask is expected to enter service in 2019/20 with full operation in 2020/21. Based on the most recent net load projections as set out below, on an energy basis, Keeyask is not needed to meet domestic load and existing export commitments on a continuous basis until 2030/31. However, the need for Keeyask to supply a potential export sales contract with SaskPower of 100 MW in 2024/25 is temporary. The following year, with the expiration of the Northern States Power contract, the entire output of Keeyask is surplus to Manitoba Hydro's firm commitments and domestic load until 2030/31.

According to the 2015/16 Resource Planning Assumptions and Analysis, new generation resources are not needed until 2033/34 due to a shortage of winter generation capacity. A shortfall in dependable energy does not occur until 2036/37. The earliest post-Keeyask date that new resources are needed is 2033/34 unless outages due to replacement or refurbishment of existing generating units advance this date.

Load Forecast

Manitoba Hydro annually prepares a Load Forecast of domestic electricity consumption, the most recent of which was prepared in 2015. The projected net Manitoba demand for electricity consists of the amounts projected in the load forecast minus any savings

to be realized from demand-side management (DSM). Manitoba Hydro projects DSM savings separately through its Power Smart Plan and does not integrate them into the load forecast, but does recognize these in the Resource Planning Assumptions and Analysis.

The load forecast embedded in IFF15 for 2016/17, net of DSM, is expected to be 724 GWh higher than the previous year's forecast embedded in IFF14. The principal reasons for the increase are the delay in a planned load reduction by a large industrial customer and increased average use by Residential customers, partially offset by forecasted decreases in General Service Mass Market consumption. The increase in the 2016/17 load forecast results in an increase in the domestic revenue forecast in IFF15 compared to IFF14 of \$38 million.

By 2024/25, the total peak load net of DSM is forecasted to be 4,822 MW, compared to 4,941 MW in the previous year's forecast. As shown in the following table, by 2024/25, the updated firm energy forecast net of DSM is 27,295 GWh, compared to the previous year's forecast embedded in IFF14 of 27,483 GWh. The table shows that while there is a significant short-term increase in the projected net load, in the long term the cumulative growth projection until 2024/25 is now almost 1,000 GWh less than what was forecast at the 2014 NFAT Review.

Manitoba Hydro Load Forecast

| | Net Domestic Load | | | Difference in Net Load | |
|---------|-------------------------|--------------------|---------------------|---|---|
| | NFAT 2014 Update (1) | IFF14 PRP14 (2) | IFF15 RPAA15 (2) | Change Between NFAT and IFF 15 | Change between IFF14 and IFF15 |
| | (GWh) | (GWh) | (GWh) | (GWh) | (GWh) |
| 2015/16 | 25,416 | 25,753 | 26,038 | 622 | 285 |
| 2016/17 | 25,546 | 25,766 | 26,490 | 944 | 724 |
| 2017/18 | 25,940 | 26,228 | 26,384 | 444 | 156 |
| 2018/19 | 26,352 | 26,365 | 26,365 | 13 | 0 |
| 2019/20 | 26,874 | 26,627 | 26,058 | -816 | -569 |
| 2020/21 | 27,075 | 26,678 | 26,592 | -483 | -86 |
| 2021/22 | 27,350 | 26,754 | 26,555 | -795 | -199 |
| 2022/23 | 27,624 | 26,988 | 26,798 | -826 | -190 |
| 2023/24 | 27,939 | 27,221 | 27,033 | -906 | -188 |
| 2024/25 | 28,243 | 27,483 | 27,295 | -948 | -188 |

(1) 2014 NFAT MH 104-3 p. 83 [K19/Gas30/750MW (WPS Sale) DSM Level 2 with Pipeline Load]

(2) 2016/17 Supplemental Filing PUB/MH-I-15a-e

Another significant change between the 2014 and 2015 load forecasts is the one year delay in a significant industrial load expansion within the Oil and Gas sector. In 2019/20, the forecasted load net of DSM is 569 GWh lower than the previous year's forecast, primarily because of the delay in the start-up of a pipeline until 2020/21. Manitoba Hydro stated that if this additional pipeline load does not materialize as forecasted, domestic revenues will be negatively impacted by \$25 million annually. If the additional pipeline load does not materialize, the load forecast may be lower by the reduction expected for 2019/20, or approximately 569 GWh. At the 2014 NFAT Review, Manitoba Hydro estimated the pipeline load to be 1,700 GWh annually starting in 2019/20. In the course of the NFAT, this estimate was revised downward to 1,478 GWh, and subsequently reduced further to 655 GWh at the last General Rate Application.

In the Top Consumers sector, Manitoba Hydro includes Potential Large Industrial Load (PLIL) of 104 GWh per year starting in Year 4 of the Load Forecast. This is an increase from 91 GWh used in the 2014 Load Forecast. The inclusion of PLIL recognizes that industrial load is not added gradually in the same way as residential or General Service load, but through infrequent, large increments. PLIL adds about 1,760 GWh to the 20 year forecast for the Top Consumers load.

Demand-Side Management

In the Board's December 24, 2015 letter which defined the scope of the review of Manitoba Hydro's 2015/16 Interim Application, the proposed methodology for a Bill Affordability program and Manitoba Hydro's long term Demand-Side Management (DSM) plan were excluded from the review. However, the impact of planned DSM measures on the revenue requirement underpinning the request for April 1, 2016 rates is relevant to the proceeding.

The collaborative process directed by the Board in Order 73/15 for investigating and implementing bill affordability programs or measures for lower income customers is continuing and is not expected to be complete until later in 2016/17.

The Power Smart Plan is Manitoba Hydro's plan for DSM energy conservation and load management activities designed to lower the demand for both electricity and natural gas in Manitoba. In Accordance with *The Energy Savings Act*, Manitoba Hydro prepares a Power Smart Plan annually in cooperation with the Provincial Government. The most current one-year Power Smart Plan for 2015/16 was reviewed at the 2015/16 General Rate Application.

For its long term internal planning purposes, Manitoba Hydro also prepares a 15 year supplement to the Power Smart Plan. In this proceeding, Manitoba Hydro provided the 2015/16 Power Smart Plan 15 Year Supplement. This Supplement was not available for review at the 2015/16 General Rate Application.

As shown in the following table, for 2016/17, Manitoba Hydro forecasts significantly decreased DSM spending and savings compared to the 2014 Power Smart Plan 15 Year Supplement. Over the 15 year forecast period, Manitoba Hydro now forecasts increased capacity savings of 13% and increased energy savings of 16% compared to the 2014 plan. DSM spending is forecasted to increase by \$412 million, or 50%, compared to the 2014 plan, with most of this increased spending commencing in 2021/22.

| Increase (Decrease) from 2014 Power Smart Plan | | |
|---|-----------|-------|
| 2016/17 Capacity | (15 MW) | (26%) |
| 2016/17 Energy | (98 GWh) | (33%) |
| 2016/17 Cost | (\$16.5M) | (22%) |
| 15 year period total Capacity | +152 MW | +13% |
| 15 year period total Energy | +641 GWh | +16% |
| 15 year period total Cost | +\$412M | +50% |

The Consumer Coalition noted that Manitoba Hydro's DSM efforts for lower-income customers are still evolving and that DSM budgets continue to be underspent. The Province's recently announced "Climate Change and Green Economy Action Plan" also introduces uncertainty with respect to the delivery of energy efficiency programs. The Consumer Coalition continues to support DSM as one of only a few tools customers have to mitigate the impacts of increasing rates.

Board Findings

Power Resource Plan

The Board notes that new post-Keeyask generation is not needed until 2033/34 at the earliest or 2036/37 with the addition of new capacity resources, such as the extension of existing diversity exchange agreements or an expansion of the Curtailable Rate Program to include long-term contracts.

Load Forecast

The revisions to the load forecast and the Power Smart Plan compared to the previous year's load forecast and Power Smart Plan mean that the net domestic load will be 724 GWh higher in 2016/17 than was forecasted last year. This increased domestic load will contribute additional revenue of \$38 million in 2016/17 compared to the IFF14 forecast.

As noted in Order 73/15, the Board continues to have concerns with Manitoba Hydro's forecasts for Top Consumers load growth. The deferral of additional pipeline load in the Oil and Gas sector by one year demonstrates the variations in industrial load growth. The Potential Large Industrial Load (PLIL) does not recognize the last ten years of near-zero load growth in the Top Consumers sector, or that using PLIL in addition to large pipeline load additions overlaps in some years and may be double-counting. The Board continues to question Manitoba Hydro's PLIL assumptions and the upward adjustment to the load forecast associated with PLIL. The Board will review the Top Consumers load forecast in additional detail at the upcoming General Rate Application and recommends that Manitoba Hydro provide additional support for its forecasts.

Demand-Side Management

The Board continues to encourage Manitoba Hydro to provide ratepayers with the tools to mitigate their exposure to rising electricity rates through DSM. The Board notes the significant reduction in the DSM savings and spending forecasted for 2016/17. These reductions are contrary to previous Board direction to Manitoba Hydro to enhance and expand its DSM initiatives. The Board will review the reasons underpinning this unexpected decline in spending and DSM savings at the upcoming General Rate Application and will establish an appropriate target for the DSM deferral account for 2016/17 at that time.

8.0 Export Markets

Issues

Manitoba Hydro exports electricity, primarily to the United States, by way of long-term fixed-price contracts with U.S. utilities and also opportunity sales into the Midcontinent Independent System Operator (MISO) market. The opportunity sales are made during either 'On-Peak' hours or 'Off-Peak' hours. Typically, the volumes of electricity sold on the opportunity market greatly exceed the volumes of electricity sold pursuant to long-term fixed-price contracts, as the latter sales are made from 'dependable' resources whereas opportunity sales are made from surplus hydraulic generation in years when water flows are above minimum flows.

For close to a decade, export prices have not materialized as planned, with prices significantly decreasing around the time of the 2008 recession. This has placed, and continues to place, upward pressure on domestic rates, as any revenue that cannot be obtained from exports must be obtained from domestic ratepayers. However, the overall impact on rates has been somewhat mitigated by many years of higher-than-average water flows, allowing Manitoba Hydro to generate and sell more energy into the export market. Furthermore, most recently Manitoba Hydro has significantly benefitted from the stronger U.S. dollar, as most export sales are in U.S. dollars.

Manitoba Hydro's export price forecast embedded in IFF15 shows average prices down 20% in 2015/16, down 34% in 2016/17, and down between 3% and 7% over the next 20 years, compared to the prior forecast presented at the 2015/16 General Rate Application.

Even though market prices have declined compared to the General Rate Application forecast, Manitoba Hydro forecasts a significant increase in net export revenues due to a favourable U.S. to Canadian dollar exchange rate, decreased amounts of purchased power, and increases in the volumes of exports due to a lower domestic load forecast.

Manitoba Hydro now forecasts net export revenue of \$3,853 million over the period 2015/16 to 2024/25, which is a \$580 million improvement compared to the last General Rate Application forecast.

However, the favourable exchange rate, decreased purchased power volumes, and increased export volumes are not enough to offset the export price declines forecasted for 2016/17, with Manitoba Hydro forecasting \$139 million in net export revenue. This is a decline of \$7 million compared to the General Rate Application forecast.

Net export revenues in IFF15 for 2016/17 assume median water flows and average levels of energy in storage as of April 1, 2016. Energy in storage refers to the volumes of water stored in Manitoba Hydro's reservoirs, including Lake Winnipeg. The most current information filed by Manitoba Hydro suggests 3,500 GWh above average energy in storage for April 1, 2016.

The Consumer Coalition characterized Manitoba Hydro's export revenue forecasts as "multi-billion dollar errors", noting that "there is substantial reason to question the forecasting veracity of Manitoba Hydro especially with regard to finance expense and export revenues."

Board Findings

The Board continues to be concerned with the decade-long trend of Manitoba Hydro's forecasting inaccuracies and further revising its export price forecast downward every year. IFF15 is no exception to the trend, showing a further price decline which will negatively impact the business case for Manitoba Hydro's new investments in generation and transmission. A favourable change in the exchange rate means the export price decline is not as pronounced, but the Board notes that exchange rate movements that are favourable for export revenues are unfavourable for Manitoba Hydro's U.S. dollar-denominated debt. According to Manitoba Hydro, the gains from exchange rate movements on export sales are largely offset by losses on finance expense, providing a natural hedge against currency fluctuations.

According to Manitoba Hydro's current forecast, the average unit export price will increase from \$37/MWh in 2015/16 to \$77/MWh in 2020/21.

After 2019, nearly three-quarters of Manitoba Hydro's export sales are opportunity sales as opposed to firm sales and thus are subject to fluctuations in MISO market prices. Consequently, Manitoba Hydro's export revenues are affected by all factors that impact MISO prices, including subsidies for renewable energy, the price of natural gas, the recent FERC ruling on Demand Response that was upheld by the U.S. Supreme Court, and the Environmental Protection Agency's Clean Power Rule.

Despite this uncertainty, the Board notes that Manitoba Hydro's latest export price and export revenue forecasts still appear to increase annually until 2024/25 due to assumed, but uncertain, increasing natural gas prices and the potential implementation of carbon dioxide (CO₂) pricing in the U.S. electricity generation sector. Manitoba Hydro's future exports into the United States are highly dependent on evolving United States Environmental Protection Agency rules on CO₂ emissions reductions. These future export sales will be competing with new wind, solar, and natural gas-fired combined cycle combustion turbine generation. Manitoba Hydro's hydraulically generated energy is not assured of favourable treatment under the EPA Clean Power Rule as are other United States-based renewable energy resources.

One factor that benefits Manitoba Hydro and its ratepayers has been continued above average water flows. With the 2016/17 year starting with additional energy in storage of 3,500 GWh compared to average water levels, Manitoba Hydro will likely have another year of above average hydraulic generation and above average opportunity export volumes. If Manitoba Hydro exports this additional 3,500 GWh of energy in storage at MISO market prices of \$25/MWh, which is the average opportunity unit sale price in February 29, 2016, Manitoba Hydro would earn an additional \$88 million from that water. These additional revenues are not reflected in the IFF15 forecast for net export revenue in 2016/17 and could measurably improve Manitoba Hydro's net income.

Board decisions may be appealed in accordance with the provisions of Section 58 of *The Public Utilities Board Act*, or reviewed in accordance with Section 36 of the Board's Rules of Practice and Procedure. The Board's Rules may be viewed on the Board's website at www.pub.gov.mb.ca.

9.0 IT IS THEREFORE ORDERED THAT:

1. Manitoba Hydro's Application for a 3.95% interim rate increase to all rate classes effective April 1, 2015 **BE AND HEREBY IS DENIED.**
2. A 3.36% interim rate increase effective August 1, 2016 to existing rates for all customer classes, with the revenues generated being placed into the Bipole III Deferral Account established in Order 43/13, **BE AND HEREBY IS APPROVED.** The rate increase approved by this Order will remain interim and is subject to being varied by the Board at the next General Rate Application.
3. Manitoba Hydro is directed to file revised Rate Schedules, Proof of Revenue, and Customer Bill Impact Schedules.
4. Manitoba Hydro is directed to file a comprehensive General Rate Application for only electric operations for the 2016/17 and 2017/18 fiscal years by no later than December 1, 2016. Manitoba Hydro is to file its General Rate Application no later than September 1, 2016 should it wish to have revised rates effective April 1, 2017.
5. Directive 7 from Order 73/15, which required Manitoba Hydro to file the Terms of Reference for an Asset Condition Assessment Report that includes the information set out in Appendix F of Order 73/15, **IS VARIED.** The Report does not need to differentiate assets based on geography, but must differentiate based on age and remaining life.

THE PUBLIC UTILITIES BOARD

"RÉGIS GOSSELIN, B ès Arts, MBA, CPA, CGA"
Chair

"Kurt Simonsen"
Acting Secretary

Certified a true copy of Order No. 59/16
issued by The Public Utilities Board

Acting Secretary