

Manitoba Hydro 2023/24 & 2024/25
General Rate Application

Consumers Coalition Aid to Cross Examination
on Asset Management

Exhibit CC-13

Tab	Reference
1.	PUB Order 116/08 at 101
2.	PUB Order 5/12 at 105
3.	PUB Order 73/15 at 68
4.	PUB Order 59/16 at 31
5.	PUB Order 59/18 at 111-112

1

MANITOBA
THE PUBLIC UTILITIES BOARD ACT
THE MANITOBA HYDRO ACT
THE CROWN CORPORATIONS PUBLIC
REVIEW AND ACCOUNTABILITY ACT

Edited for format and typographical errors only
August 25, 2008
Further amended September 4, 2008

Board Order 116/08

July 29, 2008

Before: Graham Lane CA, Chair
 Robert Mayer Q.C., Vice-Chair
 Susan Proven, P.H.Ec., Member

**AN ORDER SETTING OUT FURTHER DIRECTIONS, RATIONALE AND
BACKGROUND FOR OR RELATED TO THE DECISIONS IN BOARD
ORDER 90/08 WITH RESPECT TO AN APPLICATION BY MANITOBA
HYDRO FOR INCREASED RATES AND FOR RELATED MATTERS**

5.0 Operating, Maintenance, and Administrative Expenses

Staffing levels are projected to further increase as the capital expenditure plan develops and is implemented. That said, and some growth explained, the Board remains of the view that MH should develop enhanced analytical tools to allow for a better understanding of the reasons for staff increases over the years. It is important to understand that staff costs represent the vast majority of OM&A expenses. Such staffing analytical tools should be developed and incorporated in the benchmarking analysis which the Board will direct be undertaken in this Order.

Cost Control Measures

The Board notes that staffing levels (EFT) is an important metric, though only one among others that should be further developed. The Board further notes that while the development of performance benchmarks and metrics has long been established as a performance goal of the Corporation, due to prioritization it, regrettably, is yet to be acted on.

The Board agrees with the Coalition that MH should develop performance benchmarks just as the Corporation has indicated it has planned to do for several years in a succession of corporate strategic plans. Given OM&A expense growth in prior years and forecast for the future, MH should assist GRA proceedings by providing the Board better tools to assess the appropriate level of OM&A for rate-setting.

Accordingly, the Board will direct MH to undertake and file with the Board, by June 30, 2009, an independent benchmarking study of key performance metrics, using the most currently-available data and including:

5.0 Operating, Maintenance, and Administrative Expenses

- a) Primary key drivers of OM&A in each operational division [Board preference is to allow for a comparison with a greater number of other utilities].
- b) Comparable other Canadian Utility data for each of the drivers.
- c) Key comparison indicators including staffing levels.
- d) A comparison with and discussion of industry best practices.
- e) Potential improvement areas.

The Board expects to be apprised of the scope of the study in advance of it being undertaken, and will anticipate being provided the opportunity to provide direction.

The Board is convinced that both the Province and ratepayers will benefit from the developments of appropriate metrics to assess the reasonableness of the level of current and future OM&A expenses, in advance and particularly because of, the proposed major capital expansion program.

MH's justification for the level and growth of OM&A expenditures includes an indicated need for increased maintenance and/or replacement of aging capital assets to maintain the safety and integrity of its electrical system. Recently this assertion is difficult for the Board to evaluate, as the Board lacks jurisdiction over MH's capital expenditures, yet capital expenditures are the major driver of rates.

One item that is lacking is sufficient support for the level of maintenance and upgrades to the existing capital assets of the Corporation. The Board notes Mr. Harper's suggestion that as a best practice, MH should undertake an Asset Condition Assessment, and his view that such a study will provide information on the degree of degradation of existing assets and the need for rehabilitation and/or replacement of capital assets.

5.0 Operating, Maintenance, and Administrative Expenses

Despite prior cautions from the Board, MH intends to spend, on average, \$385 million a year on capital construction through to and including 2017/18, capital expenditures that are not related to major generation and transmission projects, which are accounted for separately. In an effort to better justify and demonstrate the necessity of such normal capital expenditures, the Board agrees with interveners on the need for a periodic Asset Condition Assessment Study.

The Board agrees that a study of this nature, done at reasonable intervals, will assist in evaluating MH's progress in maintaining the electrical system, and should also provide additional support for the level of OM&A being incurred and forecast. The Board believes it's appropriate that MH undertake such a study, and will so direct MH to undertake and file with the Board an Asset Condition Assessment by June 30, 2009, that defines:

- a) major assets and categories of assets;
- b) the estimated remaining economic life of each major asset and category of asset;
- c) an indication of the implications for OM&A costs related to maintaining required and scheduled maintenance;
- d) a listing of scheduled, planned or anticipated major upgrading/decommissioning of major assets and/or categories of assets;
- e) forecast expenditures for planned renovations and/or replacements with respect to now-available energy supply and transmission; and
- f) Dam Safety Condition Assessment and Maintenance requirements.

In advance of the commencement of the Asset Condition Assessment Study, MH is to file with the Board detailed Terms of Reference containing the scope for

2

MANITOBA

Board Order 5/12

THE PUBLIC UTILITIES BOARD ACT

THE MANITOBA HYDRO ACT

**THE CROWN CORPORATIONS PUBLIC
REVIEW AND ACCOUNTABILITY ACT**

January 17, 2012

Before: Graham Lane CA, Chairman
Robert Mayer Q.C., Vice-Chair

**A FINAL ORDER WITH RESPECT TO MANITOBA HYDRO'S
APPLICATION FOR INCREASED 2010/11 AND 2011/12
RATES AND OTHER RELATED MATTERS**

- Thermal Generation Facilities:
 - Steam plants - 65 years life. MH's ongoing investments in the Brandon and Selkirk plants may not support the notion of a 65 year life.
 - Natural gas combustion turbine - 25 years life. Some questions of the true economic value of these plants remain.

- Transmission Lines:
 - Towers - 75 to 85 years life. Events on Bipoles I and II in 1996 and 2011 suggest remediation of failed or damaged facilities could reduce the effective life cycles.
 - Conductors - 60 years life. Aside from the former Winnipeg Hydro transmission upgrades, MH has indicated a need for early replacements.

- HVDC Converter Stations:
 - Structures - 57 years life. No indication of problems exists.
 - Serialized equipment - 37-43 years life. Indications from prior evaluations are that the serialized equipment (synchronous condensers) may need replacement in 20 to 50 years.

10.3.0 BOARD FINDINGS

Depreciation (amortization) expense is forecast in this application based on an out-dated 2005 depreciation study. The Board is aware that a result of IFRS requirements for componentization will likely lead to an increase in depreciation expense, as components will have to be carved out and depreciated over their respective shorter

service lives rather than over a longer service life of the asset as a whole. The Board understands that a new depreciation study is being prepared.

The Board remains concerned that an Asset Condition Assessment Study has been delayed and notes that several of the assets, which are being depreciated over long periods of time, may require major repairs in the interim.

There does not appear to be any explicit recognition of the physical condition and ongoing repairs associated with the individual generating stations or transmission facilities. This suggests that MH may not have an adequate history of physical plant conditions and rehabilitation needs such as would be included in an "Asset Condition Assessment". The Board will require MH to file an Asset Condition Assessment and depreciation study at the next GRA.

3

MANITOBA) **Order No. 73/15**
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THE PUBLIC UTILITIES BOARD ACT) **July 24, 2015**

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

**FINAL ORDER WITH RESPECT TO MANITOBA HYDRO'S
2014/15 and 2015/16 GENERAL RATE APPLICATION**

As part of the quarterly reports, the Board should be provided with all capital cost justifications for Major New Generation and Transmission and other projects greater than \$50 million approved by the appropriate Division Vice Presidents, even if such capital cost justifications are subsequently deferred by the Manitoba Hydro Electric Board or Manitoba Hydro's Executive Committee.

The Board accepts that Manitoba Hydro is faced with aging infrastructure and there may be a genuine need to expand sustaining capital expenditures. As such, for the 2014/15 and 2015/16 fiscal years, the Board accepts Manitoba Hydro's increased sustaining capital spending. However, the Board is not satisfied that Manitoba Hydro has adequately evaluated the long term pacing and prioritization requirements. The Board considers that top-down caps or placeholders are insufficient to justify increased spending in the future. As such, the Board's acceptance of the increased sustaining capital spending during this GRA should not be construed as an endorsement of Manitoba Hydro's long term sustaining capital plan.

To bridge what the Board considers to be an information gap, the Board expects Manitoba Hydro to file, by October 31, 2015, updated Terms of Reference and schedules for an Asset Condition Assessment. The schedules should contemplate completion of the Assessment in advance of the next GRA. In the Board's view, the Terms of Reference should, at minimum, include the items set out in Appendix G of this Order.

4

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

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.

5

Order No. 59/18

**FINAL ORDER WITH RESPECT TO MANITOBA HYDRO'S 2017/18 AND 2018/19
GENERAL RATE APPLICATION**

May 1, 2018

BEFORE: Robert Gabor, Q.C., Chair
Marilyn Kapitany, B.Sc., (Hon), M.Sc., Vice Chair
Hugh Grant, Ph.D., Member
Shawn McCutcheon, Member
Sharon McKay, BGS, Member
Larry Ring, Q.C., Member

In addition to the positive impact on Manitoba Hydro's cash flow, reducing Business Operations Capital also results in improvement to the debt-to-equity ratio. Manitoba Hydro's analysis also shows that a reduction of capital spending of \$100 million annually increases its retained earnings by \$414 million after 10 years.

The Board accepts METSCO's evidence that Manitoba Hydro cannot demonstrate the proposed spending is necessary or has been optimized to any extent. Manitoba Hydro acknowledges that it has not evaluated alternative Business Operations Capital spending scenarios or the performance and reliability impacts of different Business Operations Capital spending levels.

The Board recognizes that Order in Council 92/2017 does not give the Board authority to direct Manitoba Hydro to amend its planned Business Operations Capital spending. Rather, the Board has factored into its rate decision the reduction in Business Operations Capital of \$160 million. Manitoba Hydro can decide whether to accept the Board's finding and reduce its Test Year Business Operations Capital spending, or to incur additional debt in order to maintain spending at the proposed levels in CEF16.

The reduction in spending on Business Operations Capital in no way diminishes Manitoba Hydro's responsibility and obligation to provide for an ongoing safe and reliable supply of energy to its customers in the most efficient and environmentally sensitive manner. The Board expects that Manitoba Hydro will appropriately assess, plan, and prioritize Business Operations Capital spending in order to meet its obligations in this regard.

The Board finds that Manitoba Hydro has taken initial steps towards developing asset management processes, and is to be commended for doing so in order to better ensure that the financial resources allocated to Business Operations Capital bring maximum

value to the Utility's ratepayers. Further to the direction from Orders 116/08 and 73/15, Manitoba Hydro has developed asset condition assessments for some asset classes, but the health of certain asset classes is characterized solely by the age of the assets. Manitoba Hydro must continue to develop asset condition assessments for all of its major asset classes so that it has the necessary data to make prudent spending decisions within its asset management framework.

At present, Manitoba Hydro prioritizes its capital spending based on the views and experience of its subject-matter experts in Generation, Transmission, and Distribution. Manitoba Hydro has not yet developed processes and practices that would enable it to objectively compare the value of different projects across its business units, nor can Manitoba Hydro quantify in terms of increased reliability the impact of spending on a generation project compared to a transmission project compared to a distribution project. More mature asset management processes, including a more complete set of asset condition assessments, are required so that Manitoba Hydro is in a position to objectively prioritize and optimize its spending across business units based on a common definition of risk.

The Board understands that developing a modern asset management system takes time and wishes to monitor Manitoba Hydro's progress. Manitoba Hydro is directed to hire an independent consultant to assess the Utility's progress with the development of its asset management program and in addressing the recommendations made by its consultant, UMS. The consultant is to also assess progress with the development of the Corporate Value Framework. Manitoba Hydro is to file with the Board by June 29, 2018 the Terms of Reference for the consultant for the Board's review and comment. Manitoba Hydro is directed to report back to the Board on its progress and the result of the consultant's assessment at the next GRA.