

MANITOBA HYDRO**2012/13 & 2013/14 ELECTRIC GENERAL RATE APPLICATION****UNDERTAKING PROVIDED BY: V. WARDEN**

Manitoba Hydro Undertaking #27

Provide PUB with link to BC Hydro review that was done by the British Columbia Deputy Minister. Manitoba Hydro to also provide a copy of the report prepared by Manitoba Hydro in response to the BC Hydro report which includes an indication of the initiatives Manitoba Hydro undertook.

Response:

Please see the following link for the BC Hydro report:

<http://www.newsroom.gov.bc.ca/downloads/bchydroreview.pdf>

Please see the attachment to this response for Manitoba Hydro's comments on the BC Hydro Review report.



Manitoba Hydro's Comments on BC Hydro Review Report

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BC HYDRO REVIEW REPORT

1.0 Overview

In June 2011, a report entitled, "Review of BC Hydro" was presented to the Premier of British Columbia and the Minister of Energy and Mines for the province of British Columbia. The purpose of the report was to examine both the operating and capital requirements of BC Hydro and to provide recommendations and options for minimizing rate increases to electricity consumers.

The 124 page report was authored by three senior BC government officials with the support of a multi-disciplinary team consisting of external consultants and BC Hydro management and staff. In summary, the report contained the following observations:

- BC Hydro has inefficient processes and practices;
- Some expenditures are generous at the expense of ratepayers;
- BC Hydro requires a more aggressive approach to achieve cost savings including a review of all significant costs within the organization;
- Cost savings are required to reduce the planned rates and proposed cost savings must be realized soon;
- BC Hydro can reduce costs by achieving efficiencies in a number of areas including paying greater attention to operational processes, capital asset planning and management, utilizing stronger procurement approaches and project management;
- BC Hydro's culture of "being the best" and the desire to have the gold standard is not necessarily the lowest cost or greatest value for money;
- Understanding the base costs will provide BC Hydro greater opportunity to challenge the current costs and improve overall cost effectiveness;
- As a result of the regulatory environment and Corporate culture, BC Hydro has become very risk adverse, increasing both operating and capital costs and limiting the potential effectiveness of the organization;
- There are many examples of excessive planning, over-engineering of projects and the use of multiple layers of contingencies and reserves in order to satisfy various stakeholders and regulatory agencies;
- There is a general need to improve the communication between the province and BC Hydro in regard to policy options to improve information available for decisions; and
- BC Hydro needs to more effectively manage its relationship and utilization of the vendor community with a view to optimizing efficiencies and cost effectiveness in service delivery.

The BC Hydro Review report contained a total of 56 recommendations (reproduced and attached as Appendix B -Summary of Recommendations) of which 25 were considered to be relevant to Manitoba Hydro. The 25 recommendations are listed in section 3.0 with Manitoba Hydro comments and, where applicable, Manitoba Hydro action plans. A summary of Manitoba Hydro's action plans is provided in the following section (Section 2.0).

2.0 Summary of Manitoba Hydro Action Plans related to the BC Hydro Review Report Recommendations

1. [BCH (1)] The cost constraint measures currently in place for operating and administrative expenses will be maintained with regular updates provided to the Board. In addition, a review will be undertaken to determine what steps can be taken to further constrain operating and administrative expenses. This review will also be expanded to include capital expenditures. Further, technology will be leveraged to further increase the productivity and efficiency of the Corporation (eg: Mobile Workforce Management, Enterprise Asset Management, Travel Management).
2. [BCH (7)] Investigate whether cost reductions can be achieved through increased use of external resources.
3. [BCH (11)] Establish an Information Technology Coordinating Committee at the Corporate level to confirm that all Information Technology projects are fully aligned with strategic objectives.
4. [BCH (29)] Undertake a comprehensive supply chain management and logistics review (including upstream and downstream processes).
5. [BCH (8)] In consultation with unions, continue with ongoing efforts to reduce the overall cost of operations and further improve productivity.
6. [BCH (9)] Consider the use of private sector contractors in ongoing efforts to effectively manage overtime and other costs.
7. [BCH (13)] Further review employee benefit costs to confirm that costs are being effectively incurred to attract and retain talented employees at Manitoba Hydro.
8. [BCH (14)] Consider the merits of a variable pay for performance incentive program for management and professional staff.
9. [BCH (5)] Review budgeting and forecasting processes to ensure that all programs are cost-justified and that appropriate measures are in place to ensure the cost effectiveness of operating and maintenance expenditures.
10. [BCH (21)] Examine the concept of requiring a commitment from staff to remain with Manitoba Hydro for a minimum of five years after obtaining apprenticeship training.
11. [BCH (30)] Investigate the extent to which increased value can be derived from expanding the use of innovative approaches to constructing major capital projects.

12. [BCH (35)] Research whether further savings can be realized by providing more flexibility to vendors and contractors to achieve project deliverables.
13. [BCH (38)] Formalize the use and reporting of project contingencies and segregate contingencies as identifiable components of projects.
14. [BCH (40)] Review policies and processes related to First Nation consultations and environmental assessments with a view to reducing these costs.
15. [BCH (43)] Provide updated recommendations to the Manitoba Hydro Board on rate design objectives that continue to balance the criteria of energy efficiency, fairness, competitiveness, simplicity, and appropriate cost recovery (among other criteria).
16. [BCH (45)] Provide an updated Cost of Service Study to the Manitoba Hydro Board that incorporates updated rate design objectives.
17. [BCH (49)] Conduct a review and provide recommendations on the appropriate capital structure for Manitoba Hydro during the period of the major capital expansion program.

3.0 BC Hydro Recommendations Relevant to Manitoba Hydro with MH Comments and Action Plans (where applicable)

Reporting

BCH RECOMMENDATION (1): *Provide a business plan to their Board of Directors that details the savings to be realized over Fiscal 2012-2014, as well as continued savings in the next Revenue Requirements Application.*

MH Comments: In August 2010, it was reported to the Manitoba Hydro Board (Report from the President & CEO) that a number of initiatives were underway to constrain administrative costs (including restrictions on out-of-province travel, a freeze on the filling of vacant positions, reductions to overtime, reductions to fleet and equipment costs, etc.). As reported in the Annual Report for the year ended March 31, 2011, constraint measures have been successful with operating and administrative expenses increasing by only 0.8% over the previous year (after adjusting for accounting changes).

MH Action Plan: The cost constraint measures currently in place for operating and administrative expenses will be maintained with regular updates provided to the Board. In addition, a review will be undertaken to determine what steps can be taken to further constrain operating and administrative expenses. This review will also be expanded to include capital expenditures. Further, technology will be leveraged to further increase the productivity and efficiency of the Corporation (eg: Mobile Workforce Management, Enterprise Asset Management, Travel Management).

Operational Efficiencies

BCH RECOMMENDATION (4): *Utilize risk management to focus on mitigating risks, not necessarily avoiding them entirely, in order to better manage costs of mitigation strategies.*

MH Comments: The Public Utilities Board has recently concluded a comprehensive review of Manitoba Hydro's risk management practices. The review included reports by KPMG, ICF International and independent consultants engaged by the PUB. While the PUB's final Order has not yet been issued, the consensus of all external experts was that Manitoba Hydro's risks are well-managed and that any required improvements are mainly in the areas of documentation and ongoing modeling enhancements.

With respect to risk mitigation, all major risks are assessed on an ongoing basis with mitigation plans and activities updated as required. Manitoba Hydro's risks and risk mitigation plans are summarized in the Corporate Risk Management Report and presented to the Audit Committee and the Manitoba Hydro Board annually. Management is of the view that the appropriate balance is being maintained between the costs incurred to mitigate risks and the acceptance of reasonable degrees of risk within specified tolerance parameters.

BCH RECOMMENDATION (7): Accelerate the pace and magnitude of change to develop an organizational structure that reflects the reasonable level of internal and external staffing that reduces costs passed on to ratepayers.

MH Comments: Manitoba Hydro's practice has been to employ the staff necessary to ensure the ongoing safety and reliability of the energy delivery system with minimal reliance on external resources (except for contracting of specialized and peak resource requirements). While the use of internal staffing has served ratepayers well in the past, management will investigate whether cost reductions can be achieved through increased reliance on external resources.

MH Action Plan: Investigate whether cost reductions can be achieved through the increased use of external resources.

BCH RECOMMENDATION (11): Implement stronger commitment and oversight to the Information Technology and Telecommunications Plan to change business processes necessary to ensure benefits and efficiencies are fully achieved during this rate period.

MH Comments: One of Manitoba Hydro's strategies to further improve Corporate productivity is to "leverage technology to support cost-effective innovation." As referenced in the Action Plan related to BC Hydro Recommendation (1), a number of projects are currently underway in support of this strategy (e.g., Mobile Workforce Management, Enterprise Asset Management, Travel Management System).

MH Action Plan: In addition to the IT Coordinating Committees that currently exist at the Business Unit level, establish an Information Technology Coordinating Committee at the Corporate level to confirm that all Information Technology projects are fully aligned with strategic objectives.

BCH RECOMMENDATION (29): Expedite the full implementation of its technology projects to support electronic ordering, receipt and payment of goods and services. Simply adopting a process of redesign is not adequate to ensure benefits are effectively realized. Technology projects' implementation need to be supported by a strong executive change management strategy.

MH Comments: Manitoba Hydro's systems for Purchasing, Inventory and Accounts Payable were implemented during the mid-1990's. While updates and system changes have been implemented on an ad hoc basis, a comprehensive supply chain management review would be of value.

MH Action Plan: Undertake a comprehensive supply chain management and logistics review (including upstream and downstream processes). An RFP will be issued to obtain external assistance with this review.

Labour Costs

BCH RECOMMENDATION (8): Work with Unions, through a collaborative process, to identify and implement cost effective solutions to reduce overtime, including scheduled overtime and improve overall productivity of the organization.

MH Comments: As part of the cost constraint measures implemented in 2010, increased controls were placed on overtime and this has been successful in reducing the rate of increase in overtime costs to some degree. However, overtime costs account for approximately 12% of total labour costs and further reductions may be possible. It must be recognized, however, that overtime costs incurred at Manitoba Hydro are largely to respond to system emergencies, to complete critical projects on schedule, and to perform scheduled maintenance to generation and transmission systems during off-peak price periods in the export market.

MH Action Plan: In consultation with unions, continue with ongoing efforts to reduce the overall cost of operations and further improve productivity.

BCH RECOMMENDATION (9): Evaluate whether overtime may be more effectively managed through the use of private sector contractors.

MH Comments: As stated in the response to BCH Recommendation (8), the majority of overtime worked at Manitoba Hydro is for purposes of completing critical projects and for responding to emergencies. It is also important to note that each maintenance-related generation and transmission outage is evaluated on a business case basis taking into account potential export revenues during peak and off period periods. Overtime is often justified on the basis of incremental export revenues (the benefit/cost ratio is usually 10:1 or more). For these reasons, the use of private sector contractors may not always be an option. However, this will be considered.

MH Action Plan: Consider the use of private sector contractors in ongoing efforts to effectively manage overtime and other costs (with due consideration to net revenue impacts).

BCH RECOMMENDATION (13): Revisit compensation policies and compare with public sector allowances to determine if other Management and Professional benefit costs are in the best interest of the ratepayer.

MH Comments: As a component of the cost constraint measures, limits were placed on the number of days of vacation that could be banked for future pay-out. While this has been effective in reducing this component of expense, other components of benefit costs will be reviewed to ensure benefits are comparable to public sector compensation practices.

MH Action Plan: Further review employee benefit costs to confirm that costs are being effectively incurred to attract and retain talented employees at Manitoba Hydro.

BCH RECOMMENDATION (14): Adjust incentive plans under the Variable Pay program for Management and Professional staff to ensure targets for performance measures are set at a level that is not easily attained to prevent the incentive pay becoming part of base compensation.

MH Comments: Manitoba Hydro does not have a variable pay program for Management and Professional staff. However, it may be useful to implement such a program provided that it can be directly linked to performance.

MH Action Plan: Consider the merits of a variable pay for performance incentive program for management and professional staff.

BCH RECOMMENDATION (16): Revisit the current post-retirement benefit coverage for extended health and life insurance benefits provided to reduce the impact to ratepayers.

MH Comments: Manitoba Hydro's post-retirement benefit coverage is minimal compared to other organizations and Crown Corporations (consisting mainly of a Health Spending amount of \$628 per year indexed to inflation). It is not recommended that this be changed at this time.

Operating Costs Policy and Processes

BC RECOMMENDATION (5): Improve its budgeting and forecasting processes by periodically undertaking a zero-based budgeting exercise to obtain a better understanding of their incremental costs and improve overall cost effectiveness.

MH Comments: Manitoba Hydro employs a "top-down/bottom-up" approach to budgeting whereby the Executive Committee sets budget targets and the departments prepare detailed budgets to meet those targets. In effect, the bottom-up approach is zero-based with 75% of total operating costs comprised of specifically identified employees who are costed through the payroll system and inputted to budgets.

MH Action Plan: Review budgeting and forecasting processes to ensure that all programs are cost-justified and that appropriate measures are in place to ensure the cost effectiveness of operating and maintenance expenditures.

BCH RECOMMENDATION (6): Executive management team and the Board of Directors establish stronger targets and controls on all spending of a discretionary nature (e.g., business expenses, travel and contracting for professional services).

MH Comments: Manitoba Hydro's cost constraint measures have been in place for approximately two years and have been effective in reducing travel and other costs. Continued vigilance is required and opportunities for further reductions will be investigated [consistent with the Action Plan related to Recommendation (1)].

BCH RECOMMENDATION (21): Consider a payback policy requiring a commitment from staff to remain as a BC Hydro employee for a certain number of years after receiving apprenticeship training so that BC Hydro and ratepayers may benefit from the investment in the employee. BC Hydro should work collaboratively with the IBEW to establish a suitable arrangement for the apprentices under this collective bargaining unit.

MH Comments: Manitoba Hydro's staff turnover rates are very low and, to date, very few staff leave the Corporation after receiving apprenticeship training. However, this is projected to change in the coming years as competition for skilled labour becomes more intense. Manitoba Hydro currently has a policy in place committing management and supervisory employees to remain with the Corporation for a period of time if they receive course subsidies for such programs as MBA, MSc, etc.

MH Action Plan: Examine the concept of requiring a commitment from staff to remain with Manitoba Hydro for a minimum of five years after obtaining apprenticeship training.

Operational and Capital Procurement Practices

BCH RECOMMENDATION (30): Capital staff work more closely with procurement staff to achieve the greatest value from innovative procurement approaches for example, Design-Build and Public-Private Partnerships.

MH Comments: Manitoba Hydro has been successful in using a variety of procurement practices such as Design - Procure - Build and EPCM (Engineer – Procure – Construct – Manage) on some capital projects. Opportunities to expand such approaches will be investigated.

MH Action Plan: Investigate the extent to which increased value can be derived from expanding the use of innovative approaches to constructing capital projects.

Capital Project Planning and Spending

BCH RECOMMENDATION (35): Move towards more performance based project management in order to enable contractors to more effectively achieve deliverables.

MH Comments: Manitoba Hydro develops rigorous project specifications before going to market to find a vendor to deliver a product or service. However, the vendor is normally encouraged to propose alternatives to the specifications if additional value can be provided.

More research will be required to ascertain if providing greater flexibility to vendors will result in cost savings to Manitoba Hydro.

MH Action Plan: Research whether further savings can be realized by providing more flexibility to vendors and contractors (within tolerable risks) to achieve project deliverables.

BCH RECOMMENDATION (37): Review concept plans and cost estimates as a basis for setting preliminary cost expectations on capital projects before detailed estimating is undertaken.

MH Comments: The BC Hydro Report notes that, "currently the planners and project managers are not constrained by a price cap. If a concept plan and cost estimate were provided to the Board or Executive before the detailed estimating work is undertaken, preliminary cost expectations could be established serving as a price cap."

Manitoba Hydro doubts the value of this recommendation. Preliminary cost estimates are currently prepared (with \pm 50% accuracy) to test the feasibility of a project compared to other competing alternatives. A "price cap" based on incomplete or rudimentary data would serve little value.

BCH RECOMMENDATION (38): Reduce project contingencies and reserves to realistically reflect risks.

MH Comments: The BC Hydro Report stated that, "Good practice suggests that contingencies should be in the 5 to 10% range, and up to double that amount for a very difficult project." At BC Hydro, contingencies range from 10 to 20% of direct construction costs plus an additional 13% for project reserves.

At Manitoba Hydro, project reserves are not used extensively at this time. However, project contingencies are extensively used and can exceed 25% depending on project circumstances.

MH Action Plan: Formalize the use and reporting of project contingencies and segregate contingencies as identifiable components of projects.

BCH RECOMMENDATION (39): Ensure project reserve expenditures continue to be scrutinized and approved by the Capital Committee of the Board before they are spent.

MH Comments: BC Hydro develops a project estimate including contingencies and refers to this as the "Expected Amount". As the project advances and uncertainties become known, contingencies are reduced. BC Hydro also calculates an "Authorized Amount" which includes an additional amount for project risks such as cost escalation, foreign exchange or scope changes. This additional amount is referred to as the "Project Reserve". The Project Reserve is only released with the approval of the Capital Committee of the Board or some other higher level authority.

MH Action Plan: This recommendation will be considered as part of the Action Plan for BCH Recommendation (38).

BCH RECOMMENDATION (40): Review its soft costs related to stakeholder and First Nations consultations and environmental assessment with a view to reducing them.

MH Comments: The following is an excerpt from The BC Hydro Review Report: "The legal requirements for First Nations consultations have been defined in court cases. For projects with Federal and Provincial permitting requirements, environmental assessments have fairly well-defined scope and schedule. Both have reduced the level of discretion for these activities It is reasonable to assume that project risks can be reduced through consultation with Stakeholders and First Nations. However, there may be an opportunity to reduce these costs. In some instances, such as for First Nation costs, we have heard others express concern that BC Hydro is doing more work than necessary and raising expectations for others to do the same."

Similar to BC Hydro, Manitoba Hydro incurs significant costs related to First Nation consultations and environmental assessments. From a strictly legal perspective, not all of these costs are necessary. However, Manitoba Hydro is of the view that such costs are essential in order to have projects supported and approved in a timely way. Both environmental assessments and stakeholder consultations are proven ways for avoiding project problems that can occur in the absence of robust planning and honest dialogue with people whose rights and interests are affected. Nevertheless, a process review may be of value.

MH Action Plan: Review policies and processes that guide the implementation of Aboriginal consultation activities and environmental assessments with a view to reducing these costs.

Rate Structures

BCH RECOMMENDATION (43): Clarify the objectives, priorities and/or relative ranking among competing objectives of the rate structure design.

MH Comments: BC Hydro has the following parameters for rate structure design:

1. Explore new rate structures that encourage energy efficiency and conservation;
2. Collect revenue that is sufficient to recover the utility's costs;
3. Ensure that rates remain among the most competitive of rates charged by public utilities in North America;
4. Avoid unjust, unreasonable, unduly discriminatory or unduly preferential rates; and
5. Provide for simplicity of the rate structure to ensure customer understanding and acceptance.

The BC Review Report noted that, "when there are a number of objectives to be met, there is a possibility that a rate structure designed to achieve one objective can impact obtaining another objective. For example, moving from a flat rate structure to a stepped rate improves consideration yet reduces simplicity." The report, therefore, contained the recommendation that the rate design objectives needed to be clarified. Manitoba Hydro agrees that it is important to periodically refresh rate design objectives.

MH Action Plan: Provide updated recommendations to the Manitoba Hydro Board on rate design objectives that continue to balance the criteria of energy efficiency, fairness, competitiveness, simplicity, and appropriate cost recovery (among other criteria).

BCH RECOMMENDATION (45): Review the methodology to allocate costs among customer classes to ensure it supports government priorities and objectives for rates.

MH Comments: Manitoba Hydro has recently undertaken a major review of its cost of service methodology including how costs and export revenues are allocated to customer classes. The updated Cost of Service Study and its impacts on customer rates will be reviewed with the Manitoba Hydro Board prior to filing with the PUB.

MH Action Plan: Provide an updated Cost of Service Study to the Manitoba Hydro Board that incorporates the updated rate design objectives identified as part of MH Action Plan related to BCH Recommendation (43).

Government Policy

BCH RECOMMENDATION (47): Burrard Thermal Generation Station continue to be used as a source of back-up energy as well as for voltage stabilization.

MH Comments: Manitoba Hydro successfully negotiated a provision with the Province (Regulation 186/2009) that allows the Brandon Generating Station Unit #5 (coal) to be used under emergency and drought conditions.

BCH RECOMMENDATION (49): Determine collaboratively, as the economy improves, a capital structure to support the desired debt to equity ratio and dividend payout policy that balances the needs of the province and the utility.

MH Comments: Manitoba Hydro's major capital development plan (including the construction of Bipole III, Keeyask and Conawapa Generating Stations) will require the expenditure of approximately \$18 billion over the next decade. With this level of expenditure, the debt/equity ratio will deteriorate from the current level of 73:27 to approximately 85:15 by 2021, before gradually improving to the 75:25 range over the following decade. Credit rating agencies and other stakeholders will accept short-term weakness in financial ratios with the assurance that financial ratios will be significantly stronger over the long-term.

A dividend policy would provide Manitoba Hydro with the framework needed to appropriately formulate financial structures and consumer rate strategies.

MH Action Plan: Conduct a review and provide recommendations on the appropriate capital structure for Manitoba Hydro during the period of the major capital expansion program.

Regulatory / Deferral Accounts

BCH RECOMMENDATION (53): Work with the province to perform a more in-depth review of the growth of regulatory accounts and determine a more sustainable approach to utilizing them over the long term.

MH Comments: BC Hydro currently has 29 deferral regulatory accounts with a total balance of \$2.1 billion at the end of March 2011. The deferral accounts are comprised largely of DSM Programs (\$506 million), First Nation Negotiation and Settlement Costs (\$400 million), PCB Environmental Compliance (\$231 million), Variances between forecasted and actual costs in rate applications (\$600 million). Concern was expressed in the BC Review Report that future ratepayers will be expected to cover these deferred costs, even though benefits were realized by current ratepayers. More recently, in a report issued by the Auditor General of BC (October 2011), the Auditor expressed concern that, "there does not appear to be a plan to reduce the balance of these accounts, let alone halt their growth." The Auditor further stated, "If overused, rate-regulated deferrals can mask the true cost of doing business, distort the financial condition of an enterprise and place undue burdens on future ratepayers." The Auditor recommended that the government should, "at the earliest opportunity, determine how BC Hydro will recover the net deferred costs in its regulatory accounts." The Auditor further recommended that the government should "prescribe that the annual financial statements for BC Hydro be prepared fully in accordance with Canadian generally accepted accounting principles."

At Manitoba Hydro, plans are in place to fully adopt International Financial Reporting Standards (IFRS). Under IFRS, regulatory deferral accounts (referred to as Rate Regulated Accounting) are not permitted. With the adoption of IFRS, the balance in rate-regulated deferred accounts of approximately \$300 million (comprised mostly of DSM Programs) will be written-off against Retained Earnings. Thereafter, all costs incurred for DSM programming (currently about \$50 million per year) will be charged to operating expense in the year incurred.

Energy Conservation

BCH RECOMMENDATION (54): Re-evaluate its various energy conservation programs to reduce the overall costs to ratepayers while still achieving value for money.

MH Comments: BC Hydro's Power Smart targets are aggressive and have been arbitrarily established by the Provincial Government through the *Clean Energy Act*. The Act directed BC Hydro to meet 66% of the province's incremental electricity needs through energy efficiency and conservation by 2020. To meet the targets, BC Hydro's Power Smart Program may involve pursuing opportunities which may not be economic.

Manitoba Hydro's Power Smart targets are established from a bottom-up approach. The aggregate energy savings expected to be achieved through individual programs establishes the Corporation's overall plan and energy efficient targets. On an annual basis, Manitoba Hydro undertakes a review of each of its Power Smart programs and program designs are updated to reflect the most current available information. Under this approach, all economic opportunities are identified and pursued. Non-economic opportunities are only pursued under certain circumstances, including:

- Programs designed to fulfill the objectives established under Bill 11 (i.e., the Affordable Energy Fund).
- Programs directed by The Manitoba Public Utilities Board (e.g., Low Income Furnace Replacement Program).

APPENDIX A

**STATISTICAL COMPARISONS
MANITOBA HDYRO / BC HYDRO**

APPENDIX A

STATISTICAL COMPARISONS
MANITOBA HDYRO / BC HYDRO
For the Year Ended March 31, 2011

| | <u>Manitoba Hydro</u> | <u>BC Hydro</u> |
|---|------------------------------|------------------------|
| Financial (<i>dollars are in millions</i>) | | |
| Total Assets | \$ 12 882 | \$ 19 479 |
| Total Revenue | \$ 2 019 | \$ 4 016 |
| Net Income | \$ 150 | \$ 589 |
| Total Liabilities | \$ 10 126 | \$ 16,599 |
| Total Equity | 2 756 | \$ 2 880 |
| Debt/Equity Ratio | 73:27 | 80:20 |
| Interest Coverage Ratio | 1.27 | 2.05 |
| Capital Coverage Ratio | 1.20 | n/a |
| Payments to Government | \$ 271 | \$ 945 |
| Operational | | |
| Numbers of Employees * | 6 299 | 5 805 |
| Numbers of Customers | | |
| - Electric | 537 299 | 1 853 406 |
| - Gas | 265 961 | -- |
| Electric System Capability (000 kW) | 5 489 | 12 019 |
| Firm Peak Demand (000 kW) | 4 261 | 9 790 |
| Energy Delivered (000 000 kW.h) | | |
| - In Province | 20 787 | 50 607 |
| - Extraprovincial | 10 344 | 49 615 |
| Consumer Rates (<i>monthly bills</i>) | | |
| Residential (1 000 kW.h) | \$ 73.05 | \$ 82.71 |
| Commercial (120 000 kW.h) | \$ 6 731 | \$ 7 805 |
| Industrial (2 555 000 kW.h) | \$ 115 220 | \$154 568 |
| System Reliability | | |
| Outage frequency/Customer/Year | 1.40 | 1.49 |
| Outage duration (minutes) | 124 | 132 |
| Safety | | |
| Days lost per 200 000 hrs. worked | 14 | 22 |
| Injuries per 200 000 hrs. worked | 1.0 | 1.7 |

* **Note:** Numbers of employees are not comparable as BC Hydro outsourced support services (IT, Customer Care, Human Resources, Accounts Payable, Building Maintenance) to Accenture Business Services in 2006. Approximately 1 500 employees were outsourced. In addition, BC Hydro contracts-out more field work than Manitoba Hydro.

APPENDIX B

SUMMARY OF BC HYDRO REVIEW RECOMMENDATIONS

APPENDIX B**SUMMARY OF RECOMMENDATIONS**

The report recommendations have been organized by topic area. For further details, refer to the corresponding recommendation number in the report.

| RECOMMENDATIONS |
|--|
| <p>Reporting</p> <p>We recommend that BC Hydro:</p> <ul style="list-style-type: none"> (1) Provide a business plan to their Board of Directors that details the savings to be realized over Fiscal 2012-2014, as well as continued savings in the next Revenue Requirements Application. (2) Chief Executive Officer and Board Chair provide interim progress reports to the Minister of Energy and Mines and Treasury Board, given the impact on government's overall debt and fiscal plan if targets are not met. (18) Continue with the new implementation of their human resource information system to ensure sufficient monitoring and reporting of active consultant and contractors. |
| <p>Operational Efficiencies</p> <p>We recommend that BC Hydro:</p> <ul style="list-style-type: none"> (3) Accelerate the completion of the BCTC integration and collaboration between departments to achieve efficiencies and other benefits. (4) Utilize risk management to focus on mitigating risks, not necessarily avoiding them entirely, in order to better manage costs of mitigation strategies. (7) Accelerate the pace and magnitude of change to develop an organizational structure that reflects the reasonable level of internal and external staffing that reduces costs passed on to ratepayers. (10) Continue to focus on areas requiring improvement under the Maintenance Improvement Initiative such as material supplies management to increase efficiencies. (11) Implement stronger commitment and oversight to the Information Technology and Telecommunications Plan to change business processes necessary to ensure benefits and efficiencies are fully achieved during this rate period. (29) Expedite the full implementation of its technology projects to support electronic ordering, receipt and payment of goods and services. Simply adopting a process of redesign is not adequate to ensure benefits are effectively realized. Technology projects' implementation need to be supported by a strong executive change management strategy. |
| <p>Labour Costs</p> <p>We recommend that BC Hydro:</p> <ul style="list-style-type: none"> (8) Work with Unions, through a collaborative process, to identify and implement cost effective solutions to reduce overtime, including scheduled overtime and improve overall productivity of the organization. (9) Evaluate whether overtime may be more effectively managed through the use of private sector contractors. |

RECOMMENDATIONS

- (12) Work with the COPE and IBEW unions to make the collective agreements more aligned with other public sector agreements and to better facilitate the shift schedule changes required to allow BC Hydro to manage their resources and advance their strategic plans in a cost effective manner.
- (13) Revisit compensation policies and compare with public sector allowances to determine if other Management and Professional benefit costs are in the best interest of the ratepayer.
- (14) Adjust incentive plans under the Variable Pay program for Management and Professional staff to ensure targets for performance measures are set at a level that is not easily attained to prevent the incentive pay becoming part of base compensation.
- (15) Reduce or eliminate the flex time sign up incentive and pay out options for hours worked beyond the 35 hour work week while maintaining the flex schedule option.
- (16) Revisit the current post-retirement benefit coverage for extended health and life insurance benefits provided to reduce the impact to ratepayers.

Operating Costs Policy and Processes

We recommend that BC Hydro:

- (5) Improve its budgeting and forecasting processes by periodically undertaking a zero-based budgeting exercise to obtain a better understanding of their incremental costs and improve overall cost effectiveness.
- (6) Executive management team and the Board of Directors establish stronger targets and controls on all spending of a discretionary nature (e.g. business expenses, travel and contracting for professional services).
- (17) Strengthen its controls over travel planning and align its travel policies and allowable business expenses with provincial government's Core Policy.
- (19) Implement stronger policy to ensure appropriate use of contract services.
- (20) Revisit their policy on funding all of the apprenticeship training costs and look into cost sharing opportunities by partnering with trade schools and trade associations.
- (21) Consider a payback policy requiring a commitment from staff to remain as a BC Hydro employee for a certain number of years after receiving apprenticeship training so that BC Hydro and ratepayers may benefit from the investment in the employee. BC Hydro should work collaboratively with the IBEW to establish a suitable arrangement for the apprentices under this collective bargaining unit.

Operational and Capital Procurement Practices

We recommend that BC Hydro:

- (22) Where appropriate, include Shared Services BC in procurement strategies and solicitation processes for possible opportunities to onboard or leverage existing government wide contracts. As well, BC Hydro should utilize corporate supply arrangements to maximize discounts through government wide purchases.
- (23) Continue to investigate opportunities to streamline and consolidate the procurement of common goods or services to achieve significant long-term savings.

RECOMMENDATIONS

- (24) Ensure that weighted and defined evaluation criteria are mandatory within competitive bid documents to improve transparency, promote consistency and enhance vendor relationships.
- (25) Adopt the Government's formalized Vendor Complaint Review Process to provide vendors with a fair and transparent way of addressing their concerns. This process will also provide a means to identify gaps in policy, or procedures, thereby acting as a process improvement tool.
- (26) Continue to work with vendors through the Joint BC Hydro/Supplier Working Group to improve contractual (both commercial and technical) language and involve vendors in risk transfer strategies to ensure risks are allocated appropriately between BC Hydro and vendors.
- (27) Work with the province to fully adopt the functionalities of Government's BC Bid technology to maximize efficiencies by leveraging existing government technology and through strategic sourcing and consolidation of new bid opportunities and purchases.
- (28) Cease absorbing the cost of supplying interested vendors with professional detailed drawings and plans in hard copy. The current policy of covering costs is not consistent with other government entities and would result in direct savings.
- (30) Capital staff work more closely with procurement staff to achieve the greatest value from innovative procurement approaches for example, Design-Build and Public-Private Partnerships.
- (31) Ensure procurement staff are sufficiently trained and continuously update their knowledge around procurement.
- (32) Fully identify project risks in a risk register and communicate the assignment of capital project risks with vendors, for all large capital projects.
- (33) Ensure the cost of change orders is within 3% of initial project and contract budgets.
- (34) Document change order origin, submitted amount and settled amount in the change order log to allow for a comprehensive assessment at project completion.
- (50) Ensure that weighted and defined evaluation criteria for bids on electricity purchase agreements are disclosed within competitive bid documents, to improve transparency, promote consistency and enhance vendor relationships.
- (51) Consider revising and implementing evaluation criteria, which reflect financial and project viability, within its solicitation documentation for Power Calls.
- (52) Review the process for risk allocation to ensure that risks are being transferred to those IPPs which are best able to manage risks at the least cost, while serving the public interest.

Capital Project Planning and Spending

We recommend that BC Hydro:

- (35) Move towards more performance based project management in order to enable contractors to more effectively achieve deliverables.
- (36) Implement and use their new project management system to provide better information for strategic decision making and project management.
- (38) Reduce project contingencies and reserves to realistically reflect risks.

RECOMMENDATIONS

- (39) Ensure project reserve expenditures continue to be scrutinized and approved by the Capital Committee of the Board before they are spent.
- (40) Review its soft costs related to stakeholder and First Nations consultations and environmental assessment with a view to reducing them.
- (41) Take a more strategic approach to assigning engineering design and oversight resources to ensure that it is providing ratepayers with good value.
- (42) Postpone the office renovation work at both headquarters and field offices currently underway or scheduled until new needs assessments are completed following this review.

We recommend that BC Hydro Board and/or Executive:

- (37) Review concept plans and cost estimates as a basis for setting preliminary cost expectations on capital projects before detailed estimating is undertaken.

Rate Structures

We recommend that the province:

- (43) Clarify the objectives, priorities and/or relative ranking among competing objectives of the rate structure design. If necessary, legislation or the Shareholder's Letter of Expectations can be used for this clarification.
- (44) Ensure rate structures are designed to achieve the priority objectives, including requiring the BCUC to confirm this as part of their review of the new rate structures.

We recommend that the province work with BC Hydro to:

- (45) Review the methodology to allocate costs among customer classes to ensure it supports government priorities and objectives for rates.

Government Policy

We recommend that BC Hydro and the province:

- (46) Evaluate alternative definitions and timelines for government's self-sufficiency policy that meet the needs of the province and ratepayers in a way that is sustainable for the long term.

We recommend that:

- (47) Burrard Thermal Generation Station continue to be used as a source of back-up energy as well as for voltage stabilization.

We recommend that BC Hydro and the province:

- (48) Determine collaboratively, as the economy improves, government's water rental rates charged to BC Hydro, which balance the needs of the province and the utility.
- (49) Determine collaboratively, as the economy improves, a capital structure to support the desired debt to equity ratio and dividend payout policy that balances the needs of the province and the utility.

RECOMMENDATIONS**Regulatory / Deferral Accounts**

We recommend that BC Hydro:

- (53) Work with the province to perform a more in-depth review of the growth of regulatory accounts and determine a more sustainable approach to utilizing them over the long term.

Energy Conservation

We recommend that BC Hydro:

- (54) Re-evaluate its various energy conservation programs to reduce the overall costs to ratepayers while still achieving value for money.
- (55) Re-evaluate the cost estimates of the SMI project to determine if there are opportunities to reduce the overall costs of the project, decreasing costs to ratepayers over the longer term, including reassessment of high project contingencies.
- (56) Re-evaluate the SMI in home display rebate program to actively track real time use of electricity and to assess the benefits of the program versus the impact of the program costs on ratepayers. Consider whether this element of the program should require prior BC Utilities Commission approval.

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