Immediate and Emerging Risks

- Economic Downturn
- Major Capital Expansion Plan
- Export Power Contracts
- Whistleblower
- Shale Gas
- Regulatory Burden
- Generation Development Sequence

THE PUBLIC UTILITIES BOARD
Exhibit No. CAC/MSOS-15
Re: MH-GRA-2011
March 23/11 DATE
SECRETARY

CAC/MSOS
Book of Documents

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CAC/MSOS/MH I-127

Subject: **Operating, Maintenance and Administrative Cost**
Reference: **Volume 1, Appendix 4.4**

a) **Please populate the following table with respect to matters and reports presented in electric regulatory proceedings for each year since 2000/01:**

	Regulatory Costs by Proceeding			
	Insert Name and year(s) of Regulatory Proceeding	Insert Name and year(s) of Regulatory Proceeding	…	Insert Name and year(s) of Regulatory Proceeding
Intervener Cost Awards	$	$	$	$
MH External Consultant Costs	$	$	$	$
MH External Legal Fees	$	$	$	$
PUB Costs (PUB Fees)	$	$	$	$
PUB Costs (PUB Advisors)	$	$	$	$
Other (please specify)	$	$	$	$

ANSWER:

Please refer to the attached schedule.

Electric Regulatory Costs by Proceeding

April 1, 2001 - January 31, 2010 (000s)

	Electric PUB Status Update 2001	Electric GRA 2004/05	Cost of Service Hearing 05/06	Electric GRA 2008/09	Energy Intensive Hearing	Electric GRA 2010/11	Other Regulatory	Diesel Applications	Total
Intervenor Costs	298	146	119	330	97	-	-	75	$ 1,064
PUB Advisor Costs	1,068	791	672	1,327	470	103	426	353	$ 5,209
PUB fees	8	7	9	-	-	-	2,805	5	$ 2,835
External Costs	431	-	-	-	-	-	149	27	$ 607
Internal Costs	1,339	938	417	1,738	195	104	411	534	$ 5,677
Grand Total	$ 3,144	$ 1,882	$ 1,216	$ 3,395	$ 762	$ 208	$ 3,791	$ 994	$ 15,392

CAC/MSOS/MH I-127

Subject: **Operating, Maintenance and Administrative Cost**
Reference: **Volume 1, Appendix 4.4**

b) **Please populate the following table with respect to MH's internal regulatory cost in electric proceedings for each year since 2000/01:**

	Internal Regulatory Costs by Year			
	2000/01	2001/02	...	2011/12
On each line below, insert the Number, Name and Year of Proceeding				
(ie. Board Order 101/04 2004 GRA)	$	$	$	$
(ie. Board Order 1/10 2009 Diesel)	$	$	$	$

ANSWER:

Please refer to the attached schedule.

Internal Electric Regulatory Costs by Fiscal Year

April 1, 2000 - January 31, 2010 (000s)

	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	Total
Electric PUB Status Update 2001	809	457	53	16	3	-	-	-	-	$ 1,339
Electric GRA 2004/05	-	-	111	787	37	3	-	-	-	$ 938
Cost of Service Hearing 05/06	-	-	-	-	190	221	5	1	-	$ 417
Electric GRA 08/09	-	-	-	-	-	37	1,228	442	31	$ 1,738
Energy Intensive Hearing	-	-	-	-	-	-	0	188	8	$ 195
Electric GRA 10/11	-	-	-	-	-	-	-	-	104	$ 104
Other Regulatory	11	44	2	(4)	146	91	11	28	82	$ 411
Diesel Applications	-	47	137	116	41	92	14	43	43	$ 534
	$ 820	$ 547	$ 304	$ 915	$ 418	$ 444	$ 1,259	$ 701	$ 269	$ 5,677

Note: There were no internal costs in fiscal year 2001

CAC/MSOS/MH I-127

Subject: **Operating, Maintenance and Administrative Cost**
Reference: **Volume 1, Appendix 4.4**

c) Please populate the following table that summarizes the above data by year for each year since 2000/01:

	Summary of Regulatory Costs by Year			
	2000/01	**2001/02**	**…**	**2011/12**
PUB (Advisors & PUB Fees)	$	$	$	$
Interveners	$	$	$	$
MH External Costs	$	$	$	$
MH Internal Costs	$	$	$	$

ANSWER:

Please refer to the attached schedule.

Summary of Electric Regulatory Costs by Fiscal Year

April 1, 2000 - January 31, 2010 (000s)

	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	Total
Intervenor Costs	-	-	129	170	111	98	119	-	325	113	$ 1,064
PUB Advisor Costs	-	183	850	436	907	161	534	645	923	571	$ 5,209
PUB fees	-	312	347	318	318	314	318	314	328	266	$ 2,835
External Costs	91	56	19	157	218	66	-	-	-	-	$ 608
Internal Costs	-	820	547	304	915	418	444	1,259	701	269	$ 5,677
	$ 91	$ 1,371	$ 1,892	$ 1,384	$ 2,468	$ 1,057	$ 1,415	$ 2,218	$ 2,277	$ 1,219	15,392

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Rating Report

Report Date:
February 12, 2009

Previous Report:
November 29, 2007

DBRS

Insight beyond the rating

The Manitoba Hydro-Electric Board

Analysts

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The Utility

The Manitoba Hydro-Electric Board (the Utility), a wholly owned Crown corporation of the Province of Manitoba, is a vertically integrated electric utility that provides generation, transmission and distribution of electricity to approximately 522,000 customers throughout Manitoba and natural gas service to approximately 261,000 customers via its subsidiary, Centra Gas Manitoba Inc. The Utility also exports electricity to more than 30 electric utilities through its participation in four wholesale markets in Canada and the mid-western United States.

Authorized Commercial Paper Limit

$500 million

Rating

Debt	Rating Action	Rating	Trend
Short-Term Obligations	Confirmed	R-1 (middle)	Stable
Long-Term Obligations	Confirmed	A (high)	Stable

Note: These Obligations are based on the implicit support of the Province of Manitoba and the unconditional guarantee provided by the Province on Manitoba Hydro's third-party debt, and thus reflect the Province's debt ratings.

Rating Update

The ratings of The Manitoba Hydro-Electric Board (Manitoba Hydro or the Utility) reflect the short- and long-term ratings of the Province of Manitoba (the Province; see the DBRS report published December 15, 2008). Manitoba Hydro's Long-Term Obligations and Short-Term Obligations ratings are a flow-through of the Province's ratings based on (1) the implicit support of the Province as Manitoba Hydro is for all purposes an agent of the Province (see Rating Sovereign Governments for further detail) and (2) the unconditional guarantee provided by the Province on the majority of the Utility's outstanding third-party obligations. The Province's Short-Term Debt and Long-Term Debt ratings were confirmed by DBRS on December 15, 2008, at R-1 (middle) and A (high), respectively. The trends on both ratings are Stable.

The Province supports Manitoba Hydro by both advancing funds and guaranteeing its new issues. As at March 31, 2008, the Province has provided approximately 94% of the Utility's long-term debt in the form of provincial advances, with the same terms and conditions as the Province's external debt. Manitoba Hydro has issued $456 million of long-term debt in its own name, with an unconditional guarantee provided by the Province, except $104 million of Manitoba Hydro-Electric Board Bonds, which do not benefit from an explicit provincial guarantee. (Continued on page 2.)

Rating Considerations

Strengths

(1) Agent of the Crown with debt securities held or guaranteed by the Province
(2) Low-cost hydro-based generation with substantial storage capacity
(3) Reasonable regulatory framework
(4) Interconnections with the United States, Saskatchewan and Ontario provide access to favourable export markets

Challenges

(1) Hydrology risk
(2) High debt levels
(3) Heightened capital expenditure profile
(4) Export revenues sensitive to fluctuations in exchange rates
(5) One Northern Flood Agreement (NFA) First Nations claim not yet settled

Financial Information

	For the year ended March 31				
Manitoba Hydro-Electric Board	2008	2007	2006	2005	2004
EBITDA interest coverage (times) (2)	2.47	1.83	2.41	1.85	0.65
% debt in capital structure (1)	79.0%	82.7%	83.7%	88.5%	90.2%
Cash flow/total debt	10.1%	6.7%	11.1%	6.7%	(2.1%)
Cash flow/capital expenditures (times)	0.84	0.70	1.48	0.89	(0.28)
Reported net income ($ millions)	346	122	415	136	(436)
Operating cash flow ($ millions)	695	454	737	447	(140)

(1) Net of sinking fund assets. (2) Before capitalized interest, AFUDC.

The Manitoba Hydro-Electric Board

Report Date:
February 12, 2009

Rating Update (Continued from page 1.)

The Utility's credit profile is further supported by the low-cost hydro-based generation, a constructive regulatory environment and its vast interconnections (56% of installed capacity), which provide access to favourable export markets. Hydrology continues to be the primary risk factor affecting credit metrics, but the risk is somewhat mitigated by the geographic diversification of the watersheds, reservoir storage capacity and import capabilities.

Manitoba Hydro benefited from robust hydrological conditions during the past year, resulting in a measurable improvement in its operating and financial performance indicators. Interim increases in domestic electricity rates and favourable export market conditions also contributed positively to operating results. While operating cash flow increased markedly, the Utility continued to incur cash flow deficits as a result of substantial capital expenditures. In recent years, cash flow deficits have been funded with debt and, in previous years, with sinking fund withdrawals or a combination of both debt and withdrawals. Despite improvement across key credit metrics, Manitoba Hydro's leverage remains one of the highest among government-owned integrated utilities in Canada.

Continued efforts to forge stronger connections within the U.S. market resulted in the signing of two 15-year term sheets with Minnesota Power (MP) and Wisconsin Public Service (WPS), totalling 750 megawatts (MW) in aggregate. The MP term sheet is for 250 MW starting in 2020, with the sale of surplus energy in 2008, while the WPS term sheet is for 500 MW in 2018. DBRS believes the growing demand for clean, renewable sources of energy, such as water power, will continue to economically benefit Manitoba Hydro over the longer term. These term sheets will require the development of both new major hydro generation and transmission facilities, which the Utility is currently undertaking.

Looking forward, DBRS believes that Manitoba Hydro will continue to generate reasonable levels of EBIT and operating cash flows, with the potential for significant volatility resulting from hydrological and export market conditions. The ongoing heightened capital expenditure program is expected to continue to pressure balance sheet and credit metrics. In addition, completing the large hydro generation and transmission projects on time and within budget is key to maintaining a stable financial profile.

Rating Considerations Details

Strengths

(1) Manitoba Hydro is an agent of the Crown and its debt securities are almost entirely held or guaranteed by the Province. Therefore, the ratings assigned to Manitoba Hydro's obligations are a flow-through of the ratings of the Province.

(2) Low-cost hydroelectric-based generating capacity accounts for approximately 91% of installed capacity and results in one of the lowest variable cost structures in North America. The low-cost power generation has enabled Manitoba Hydro to provide electricity to its domestic customers at one of the lowest rates on the continent. This gives the Utility the flexibility to increase rates in the future, especially in light of the substantially heightened future capital expenditure requirements to replace aging infrastructure and develop new generation facilities. Furthermore, given the water storage capacity of its hydroelectric-based generating facilities, Manitoba Hydro has the ability to trade power, buying low-cost power during off-peak hours and selling its own power during peak periods at higher rates. Some geographic diversification of drainage basins somewhat reduces fluctuations in water flows and water levels.

(3) The regulatory environment in Manitoba is constructive. Manitoba's Public Utilities Board (PUB) has been supportive of Manitoba Hydro's rate applications and its financial targets. While Manitoba Hydro does not benefit from an automatic pass-through of costs, this is mitigated by its low-cost hydroelectric-based generating capacity and the PUB's demonstrated track record of approving rate increases during drought conditions.

(4) Manitoba Hydro's interconnections (approximately 56% of installed capacity), with 2,250 MW to the United States, 525 MW to Saskatchewan and 300 MW to Ontario, provide the Utility with access to favourable export markets. The interconnections also provide a secure supply of electricity for its domestic customers during times of poor hydrology.

Challenges

(1) Given that approximately 91% of Manitoba Hydro's installed generating capacity is hydroelectricity-based, earnings and cash flows are highly sensitive to hydrological conditions. The hydrology risk is somewhat mitigated by the geographic diversification of the watersheds, reservoir storage and import capacity. The two thermal generating stations, with a total capacity of 462 MW (Brandon and Selkirk), and the new 99 MW St. Leon wind farm provide a small amount of diversity to the generation mix. Given that 40% of Manitoba Hydro's exports are under a long-term fixed price-to-volume basis, during times of poor hydrological conditions such as in F2004, Manitoba Hydro may find itself procuring power supply from import markets to honour its export commitments under the fixed price-to-volume contract. This exposes Manitoba Hydro to significant price and volume risk. However, Manitoba Hydro employs the following strategies to mitigate these impacts:

- Manitoba Hydro sells long-term forward contracts into the export markets based on its historically lowest water flow conditions. Any excess power, after accounting for the long-term forward contract sales, are sold into the spot market.
- The three primary advantages of long-term forward contracts are (1) forward prices tend to be higher than spot market prices; (2) long-term large volume power contracts with other utilities provide an incentive for these utilities to build and/or expand transmission infrastructure in their respective jurisdictions to be able to import export power, thus providing Manitoba Hydro with an expanded access to export and import markets; and (3) large long-term forward contracts also provide incentive to Manitoba Hydro to expedite the construction of new generating facilities, thus mitigating the price and volume risk.
- Growing its generation base both through upgrades at existing plants (estimated at 122 MW) and new greenfield developments (more than 2,200 MW), the Utility is currently constructing a 200 MW plant and is in the pre-project planning phase for two major hydro generation facilities. Over the longer term, once these projects are completed, Manitoba Hydro will be significantly long on power, thus mitigating long-term price and volume risk even further.
- Manitoba Hydro can file for a rate increase through a rate application to the PUB.

(2) Despite improvement across key credit metrics, Manitoba Hydro's leverage remains one of the highest among government-owned integrated utilities in Canada, limiting its financial flexibility.

(3) The need to refurbish its aging infrastructure, combined with the aggressive development of both new hydro generation and transmission facilities, will require Manitoba Hydro to deploy significant capital into its electricity infrastructure over the next several years. DBRS expects the heightened future capital expenditures to pressure the already high debt levels. The extent of this pressure is largely contingent on hydrology and export market conditions, which, if robust, would limit funding needs.

(4) The Utility's income statement and balance sheet are sensitive to changes in the U.S.-Canadian dollar exchange rate, since approximately 36% of its outstanding debt and 30% of electricity revenues (at March 31, 2008) are denominated in U.S. dollars. While U.S. dollar-denominated debt is fully hedged by export revenues, the net U.S. dollar surplus is sensitive to changes in the exchange rate. As such, a higher Canadian dollar restricts the rise in export revenue expressed in Canadian dollars.

(5) Four out of five First Nations claims related to the NFA have been settled; however, one NFA First Nations claim (Cross Lake) has not. The NFA provided for compensation and remedial measures necessary to ameliorate the impact of the Churchill River diversion and Lake Winnipeg regulation projects. Manitoba Hydro continues to address the adverse effects of its northern hydroelectric developments on five First Nations communities. Expenditures to mitigate the Churchill River diversion and the Lake Winnipeg regulation projects amounted to $37 million in F2008, with $653 million having been spent since 1977. In recognition of future anticipated mitigation payments, the Utility has recorded a liability of $127 million.

Rating Methodology Update

Manitoba Hydro is, for all purposes, an agent of the provincial government and its powers may be exercised only as an agent of the government. When rating the financial obligations of agents of the federal or provincial governments, DBRS generally flows through the rating of the parent government if (1) the status of the agent is explicitly provided to the organization through legislation or regulation; (2) the agent is empowered to borrow in its constituting act; and (3) there is no provision in the constituting act or the terms of the debt precluding the applicability of the agent status to borrowing activities. As these three criteria apply to Manitoba Hydro, the Province of Manitoba's ratings will flow through to the Utility.

In addition, provincial support for the Utility is reflected in the fact that it advanced approximately 94% of the Utility's long-term debt ($7,114 million) and has provided unconditional guarantee for the rest of the long-term debt ($352 million), the exception being the $104 million Manitoba Hydro-Electric Board Bonds issued for mitigation projects (as part of the NFA), which do not benefit from the provincial guarantee.

Regulation

Manitoba Hydro is governed by the *Manitoba Hydro Act* and its electricity and natural gas rates are regulated by the Manitoba PUB.

Electricity

Each year, Manitoba Hydro reviews its financial targets, with particular focus on achieving a debt-to-equity target capital structure of 75%-to-25% by 2012. If it deems a rate adjustment is needed to meet its financial targets, it submits a rate application to the PUB. The PUB reviews the rate adjustment application with the objective of allowing Manitoba Hydro to recover its cost of service and achieve its long-term debt-to-equity target of 75%-to-25%. The PUB does not have the mandate to pre-approve capital expenditures. The capital expenditure planning responsibility resides with Manitoba Hydro and the government of Manitoba.

In July 2008, Manitoba Hydro was granted a 5.0% rate increase across all customer classes. The additional rate relief was required to meet financial targets and to reduce external funding needs for capital projects. The PUB continues to demonstrate support of Manitoba Hydro's rate applications and its long-term debt-to-equity target of 75%-to-25%.

While Manitoba Hydro is the sole retail electricity supplier in Manitoba, under the *Manitoba Hydro Amendment Act of 1997* (the Act), other utilities may access the transmission system to reach customers in neighbouring provinces and states. The Act also explicitly allows Manitoba Hydro to build new generating capacity for export sales, to offer new energy-related services, to enter into strategic alliances and joint ventures and to create subsidiaries.

There are presently no plans to move to full retail competition in the province. Manitoba retail customers currently enjoy rates that are among the lowest in North America because of Manitoba Hydro's predominantly hydroelectric generation, generally profitable exports and efficient resource management. More than 80% of Manitoba Hydro's export sales are through the Midwest Independent Transmission System Operator (MISO), which is a centrally operated electricity market in the U.S. Midwest region (from parts of North Dakota down through Minnesota, Wisconsin and Illinois through to Kentucky). This market operates much like a typical power pool, with utilities transacting directly with the exchange rather than with one another. The energy saved under the Utility's Power Smart program is sold into these higher-margin markets.

Natural Gas Distribution

Manitoba Hydro distributes natural gas through its wholly owned subsidiary, Centra Gas Manitoba Inc. (Centra Gas). In accordance with the rate-setting methodology for natural gas, commodity rates are changed every quarter based on 12-month forward natural gas market prices. The commodity cost of gas is a pass-through with no markup to customers.

Non-commodity costs, such as transportation, distribution and operating and general expenses related to the natural gas business, are passed on as well. The PUB allows Centra Gas to target an annual profit of approximately $3 million, which is fairly modest compared with Manitoba Hydro's consolidated earnings. In addition, the PUB allows Manitoba Hydro to collect $12 million per year through rates to meet its debt servicing and acquisition costs related to its 1999 purchase of Centra Gas from Westcoast Energy Inc.

Licensed natural gas retailers offer consumers a fixed-price alternative to Centra Gas's quarterly cost-based commodity billings. The PUB licenses all retailers, but their prices are unregulated and market driven. In accordance with a recent decision of the PUB, Centra Gas plans to enter the fixed-rate market in February 2009.

Earnings and Outlook

	For the year ended March 31				
(CAD millions)	2008	2007	2006	2005	2004
Net electricity revenues (1)	1,565	1,413	1,702	1,374	753
Net gas revenues	142	129	120	125	119
Total revenues	1,730	1,558	1,839	1,514	890
EBITDA	1,095	921	1,205	907	320
EBIT	746	589	883	596	24
Gross interest expense (2)	444	504	501	491	495
Net interest expense (3)	367	435	435	432	417
Reported net income	346	122	415	136	(436)
Return on average equity	21.4%	9.1%	38.5%	17.0%	(45.8%)

(1) Net electricity revenues are gross revenues less cost of purchased power. Net gas revenues are gross revenues less cost of gas.

(2) Incudes $32 MM F/X gain on U.S. denominated debt. (3) Adjusted for investment income and interest allocated to construction.

Summary

Earnings as measured by EBIT improved measurably in 2008, largely due to stronger hydrological conditions. The increases in domestic electricity rates, lower fuel and power-purchased costs, as well as favourable export market conditions, also contributed positively to the operating results during this period. Despite a stronger Canadian dollar, U.S. extraprovincial revenues increased to $515 million from $507 million in F2007.

With the adoption of new accounting standards in 2007, net income increased by $32 million because financing charges decreased as result of the recognition of foreign exchange gains on U.S. dollar-denominated debt. Earnings volatility has primarily been due to varying levels of hydrology. While hydrology conditions have been reasonable since F2004, Manitoba Hydro expects drought conditions to typically occur every ten years or so and retains sufficient earnings to accommodate the financial impact.

Outlook

Earnings are expected to remain relatively strong over the next fiscal year, primarily due to above-average energy in reservoir storage, increases in domestic electricity rates and favourable prevailing exchange rates. Manitoba Hydro has projected net income to be greater than $314 million for F2009. Factors that will continue to affect EBIT stability over the longer term include the following:

- Hydrological levels at the Utility's watersheds.
- Demand for power in Manitoba Hydro's export markets and the prevailing exchange rates.
- Domestic rate increases.
- Domestic load growth.

The Manitoba Hydro-Electric Board

Report Date:
February 12, 2009

Financial Profile

Statement of Cash Flow (CAD millions)	For the year ended March 31 2008	2007	2006	2005	2004
Reported net income	346	122	415	136	(436)
Depreciation & amortization	349	332	322	311	296
Other non-cash adjustments	-	-	-	-	-
Cash Flow From Operations	**695**	**454**	**737**	**447**	**(140)**
Capital expenditures (net of contrib.)	(827)	(645)	(498)	(505)	(498)
Dividends	-	-	-	-	(3)
Cash Flow Before W/C Changes	**(132)**	**(191)**	**239**	**(58)**	**(641)**
Changes in working capital	(65)	(11)	(27)	(14)	13
Net Free Cash Flow	**(197)**	**(202)**	**212**	**(72)**	**(628)**
Acq./divest./sinking fund pmt./other inv.	(158)	(143)	(179)	(161)	(152)
Cash Flow bef. Financing	**(355)**	**(345)**	**33**	**(233)**	**(780)**
Sinking fund withdrawals	0	-	84	236	269
Net change in long-term debt	522	240	11	20	487
Other financing	(35)	(13)	(18)	(20)	-
Net Change in Cash Flow	**132**	**(118)**	**110**	**3**	**(24)**
Key Financial Ratios					
EBITDA interest coverage (times) (2)	2.47	1.83	2.41	1.85	0.65
% debt in capital structure (1)	79.0%	82.7%	83.7%	88.5%	90.2%
Cash flow/total debt	10.1%	6.7%	11.1%	6.7%	(2.1%)

(1) Net of sinking fund assets. (2) Before capitalized interest, AFUDC.

Capital Structure	2008	2007	2006	2005	2004
Short-term debt	353	553	118	215	369
Long-term debt	7,217	6,822	7,051	7,048	7,114
LESS: sinking funds	700	630	555	562	715
Total Debt	**6,870**	**6,745**	**6,614**	**6,701**	**6,768**
Equity	1,822	1,407	1,285	870	734
Total Capital	**8,692**	**8,152**	**7,899**	**7,571**	**7,502**

Summary

Despite stronger operating cash flow, Manitoba Hydro continued to generate free cash flow deficits, largely as a result of substantial capital expenditures. Cash flow deficits are typically funded with debt and sinking fund withdrawls. Increased capital expenditures have been driven primarily by (1) generation system upgrades; (2) the development of new generation facilities, specifically Wuskwatim (200 MW), Conawapa (1,485 MW) and Keeyask (695 MW) generating stations; (3) upgrades and additions to improve the reliability of Manitoba Hydro's aging transmission and distribution infrastructure; and (4) the construction of a new head office.

Growth in retained earnings has more than offset higher debt levels, resulting in continued improvement in the debt-to-capital ratio. However, Manitoba Hydro's leverage still remains one of the highest among government-owned integrated utilities in Canada. With no mandatory dividend payment requirements, the Utility has been able to shore up its balance sheet through retained earnings.

Outlook

Capital expenditures are expected to remain higher over the medium term as Manitoba Hydro continues to upgrade and improve the reliability of its aging electric infrastructure, as well as invest in the development of new hydro generation facilities. The ongoing heightened capital program is expected to result in continued cash flow deficits. The extent of the Utility's funding requirements will largely be dependent on hydrology and export market conditions.

Although debt balances will increase over the medium term, leverage could improve modestly from current levels due to increased retained earnings. In addition, completing large hydro generation and transmission projects on time and within budget is key to maintaining a stable financial profile.

The Manitoba Hydro-Electric Board

Report Date:
February 12, 2009

Long-Term Debt Maturities and Bank Lines

Debt Profile (CAD millions)	%	For year ended March 31, 2008	2007
Advances from the Province	94%	7,114	6,640
Manitoba Hydro Bonds	3%	212	386
Manitoba Hydro-Electric Board Bonds*	3%	244	201
Total		7,570	7,227

* $104 million of unguaranteed bonds are part of the $244 million.

Debt Maturities Year	%	(CAD millions)
2009	5%	353
2010	6%	441
2011	4%	296
2012	0%	16
2013	1%	78
Thereafter	84%	6,386
Total		**7,570**

Summary

The Province supports Manitoba Hydro by advancing funds or guaranteeing the Utility's long-term debt issues. Long-term debt, net of sinking funds, at March 31, 2008, consisted of the following:

- $7,114 million in advances from the Province (all of which have annual sinking fund requirements).
- $212 million Manitoba Hydro Bonds.
- $244 Manitoba Hydro-Electric Board Bonds.
- $2,705 or 36% of all obligations are denominated in U.S. dollars.

Manitoba Hydro's maturity schedule is relatively modest and expected to be refinanced. The Utility has bank credit facilities that provide for overdrafts and notes payable up to $500 million denominated in Canadian and/or U.S. dollars. At March 31, 2008, there were no amounts outstanding. Manitoba Hydro issues short-term debt in its own name for all its short-term cash requirements and does not receive short-term funding from the Province. These short-term notes are guaranteed by the Province of Manitoba. The $104 million of Manitoba Hydro-Electric Board Bonds do not carry the provincial guarantee.

The Watershed Storage Capacity

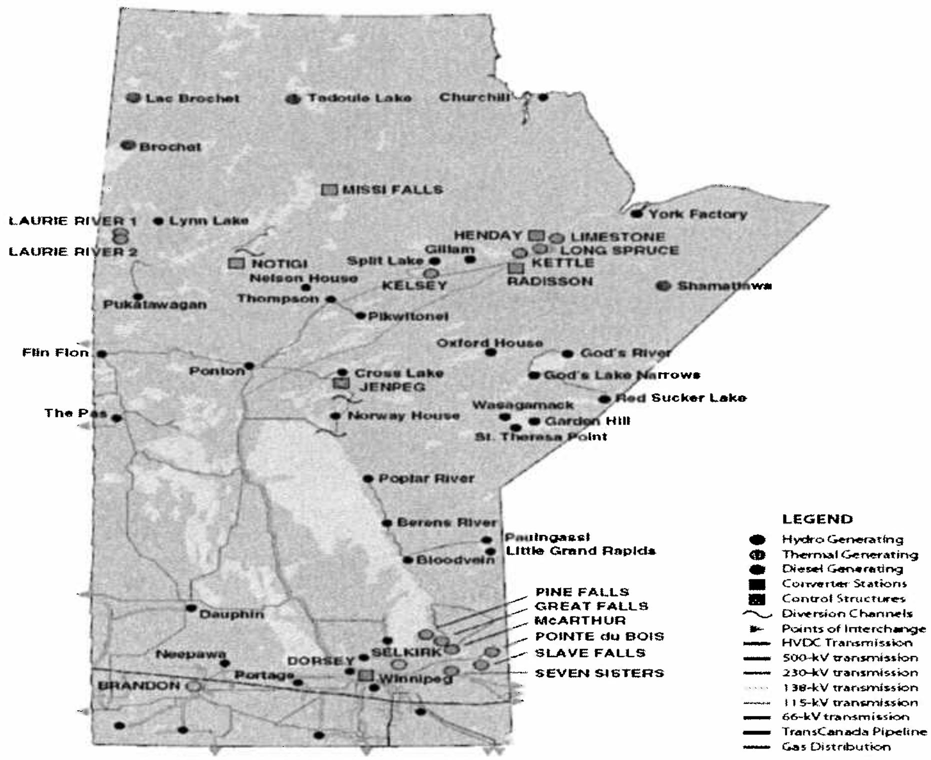
Manitoba Hydro draws water from four distinct watersheds: Nelson River, Winnipeg River, Saskatchewan River and Laurie River. This provides the Utility with some geographic diversification, especially during times of low hydrology. The main generation source is the Nelson River, which accounted for approximately 79% of power generated in F2008.

SOURCE OF ELECTRICAL ENERGY GENERATED AND IMPORTED

For the year ended March 31, 2008

Nelson River	**79%**	**Saskatchewan River**	**6.3%**
Billion kWh generated	**28.3**	**Billion kWh generated**	**2.3**
Limestone	26%	Grand Rapids	6.3%
Kettle	24%		
Long Spruce	20.7%	**Laurie River**	**0.02**
Kelsey	4.6%	**Billion kWh generated**	**0.1**
Jenpeg	3.0%	Laurie River #1	0.1%
		Laurie #2	0.1%
Winnipeg River	**11.8%**		
Billion kWh generated	**4.2**	**Thermal**	**1.3%**
Seven Sisters	3.3%	**Billion kWh Generated**	**0.5**
Great Falls	2.6%	Brandon	1.3%
Pine Falls	1.9%	Selkirk	0.0%
Pointe du Bois	1.5%		
Slave Falls	1.4%	**Imports**	**0.8%**
McArthur	1.2%	**Billion kWh imported**	**0.3**

Source: Manitoba Hydro.



Source: Manitoba Hydro.

Favourable characteristics inherent in Manitoba Hydro's watersheds include the following:

- Cold temperatures reduce overall evaporation rates as much of the water is frozen for up to five months of the year.
- A significant portion of the watersheds consists of rock, which has lower seepage rates and higher runoff than predominately soil-covered watersheds.
- Lake Winnipeg, Cedar Lake and South Indian Lake serve as large storage reservoirs. The Utility's water storage capacity is a competitive advantage in trading electricity (buying surplus U.S. power at low off-peak prices and selling its electricity during peak demand periods at higher prices).

Manitoba Hydro's Generating Capacity

Manitoba Hydro owns and operates an aggregate generating capacity of 5,475 MW and is counterparty to an additional 99 MW of contracted wind capacity.

Manitoba Hydro's Generating Stations and Capabilities

Power Station	Location	# of units	Net Capacity (MW)
Hydroelectric			
Seven Sisters	Winnipeg River	6	165
Great Falls	Winnipeg River	6	132
Pine Falls	Winnipeg River	6	89
McArthur Falls	Winnipeg River	8	55
Pointe du Bois	Winnipeg River	16	74
Slave Falls	Winnipeg River	8	67
Grand Rapids	Saskatchewan River	4	479
Limestone	Nelson River	10	1,340
Kettle	Nelson River	12	1,220
Long Spruce	Nelson River	10	1,010
Kelsey	Nelson River	7	234
Jenpeg	Nelson River	6	128
Laurie River (2)	Laurie River	3	10
Total Hydroelectric Generation		**102**	**5,003**
Thermal			
Brandon (coal: 95 MW, gas: 241 MW)		3	336
Selkirk (gas)		2	126
Total Thermal Generation		**5**	**462**
Isolated Diesel Capabilities			
Brochet			3
Lac Brochet			2
Shamattawa			3
Tadoule Lake			2
Total Isolated Diesel Generation			**10**
Total Generation Capacity			**5,475**

Source: Manitoba Hydro.

The Province of Manitoba

(Excerpt from DBRS rating report dated December 15, 2008)

The Province of Manitoba (Manitoba or the Province) has made steady progress over the past five years at reducing its debt burden, generating consistent economic growth and improving financial transparency, although the current economic turmoil introduces a significant amount of uncertainty. DBRS notes that Manitoba is one of the best-positioned provinces within its current rating to weather a significant downturn, with considerable financial flexibility and a track record of above-average economic resilience in recessionary periods. Provided the Province remains fiscally responsible and makes further progress towards containing debt growth, DBRS would likely review its position on the rating once economic conditions stabilize.

Fiscal results were stronger than expected in 2007-08 as the Province posted a DBRS-adjusted deficit of $174 million (including capital expenditures, as incurred, rather than as amortized by the Province). Strong income tax revenues, solid results at Manitoba Hydro and lower-than-expected capital expenditures more than offset small spending increases in other program areas. For 2008-09, the budget points to a DBRS-adjusted deficit of $354 million as health and education spending will continue to offset modest revenue growth.

Manitoba's debt burden continued to steadily improve, down from 31.0% in 2006-07 to 29.3% in 2007-08. While capital spending plans will lead to debt growth in nominal terms, the Province's debt-to-GDP ratio is expected to remain relatively flat in 2008-09, but could face modest upward pressure next year if GDP growth stalls.

In light of rapidly deteriorating economic conditions, the recent private-sector consensus calls for real GDP growth of 2.3% in 2008 followed by 1.4% in 2009. This outlook is noticeably weaker than the 2.7% growth assumed in both years by the Province at the time of the budget, but compares favourably with provincial peers. Furthermore, DBRS notes that the forecast for growth in Manitoba has not been cut as drastically as in other provinces, and that speaks to the resilient and diversified nature of its economy.

The Manitoba Hydro-Electric Board

Report Date: February 12, 2009

The Manitoba Hydro-Electric Board

Balance Sheet (CAD millions)	As at March 31				As at March 31		
Assets	2008	2007	2006	**Liabilities & Equity**	2008	2007	2006
Cash & equivalents	133	1	119	Short-term debt	0	148	0
Accounts receivable + accrued rev.	465	426	421	L.t. debt due one yr.	353	405	118
Interest receivable & materials	111	127	165	A/P & accrued liab.	443	443	423
Current Assets	**709**	**554**	**705**	**Current Liabilities**	**796**	**996**	**541**
Net fixed assets	8,912	8,378	8,010	Long-term debt	7,217	6,822	7,051
Deferred charges + Goodwill	665	560	493	Def'd & other liab.	613	736	702
Pension assets	781	800	719	Pension obligation	714	663	606
Sinking fund investments	700	630	555	Equity & Other	2,427	1,705	1,582
Total Assets	**11,767**	**10,922**	**10,482**	**Total Equity & Liabilities**	**11,767**	**10,922**	**10,482**

Ratio Analysis	For the year ended March 31				
Liquidity Ratios	2008	2007	2006	2005	2004
Current ratio	0.89	0.56	1.30	0.88	0.64
Total debt in the capital structure (1)	79.0%	82.7%	83.7%	88.5%	90.2%
Cash flow/total debt (1)	10.1%	6.7%	11.1%	6.7%	(2.1%)
Cash flow/capital expenditures (2)	0.84	0.70	1.48	0.89	(0.28)
Debt/EBITDA	6.3	7.3	5.5	7.4	21.2
Coverage Ratios (3)					
EBIT interest coverage	1.68	1.17	1.76	1.21	0.05
EBITDA interest coverage	2.47	1.83	2.41	1.85	0.65
Cash flow interest coverage	2.57	1.90	2.47	1.91	0.72
Earnings Quality/Operating Efficiency					
Puchased power/revenues	7.9%	12.6%	6.0%	8.0%	40.7%
Operating margin	38.3%	31.6%	43.6%	34.8%	(1.4%)
Net margin (before extras.)	18.6%	6.9%	21.3%	8.3%	(31.0%)
Return on avg. equity (before extras.)	21.4%	9.1%	38.5%	17.0%	(45.8%)
Customers/employee	90	93	92	92	93
Growth in electricity customer base	0.9%	1.4%	0.8%	0.8%	0.8%
GWh sold/employee	5.5	5.4	6.1	5.3	4.4

(1) Debt net of sinking fund assets.

(2) Capital expenditures net of customer contributions.

(3) Before capitalized interest, AFUDC

The Manitoba Hydro-Electric Board

Report Date:
February 12, 2009

Rating

Debt	Rating	Rating Action	Trend
Short-Term Obligations	Confirmed	R-1 (middle)	Stable
Long-Term Obligations	Confirmed	A (high)	Stable

Note: These Obligations are based on the implicit support of the Province of Manitoba and the unconditional guarantee provided by the Province on Manitoba Hydro's third-party debt, and thus reflect the Province's debt ratings.

Rating History

	Current	2008	2007	2006	2005	2004
Short-Term Obligations	R-1 (middle)	R-1 (middle)	R-1 (middle)	R-1 (middle)	R-1 (low)	R-1 (low)
Long-Term Obligations	A (high)	A (high)	A (high)	A (high)	A (high)	A (high)

Note: These Obligations are based on the implicit support of the Province of Manitoba and the unconditional guarantee provided by the Province on Manitoba Hydro's third-party debt, and thus reflect the Province's debt ratings.

Related Research

- DBRS Confirms the Province of Manitoba at A (high) and R-1 (middle), December 15, 2008.
- Province of Manitoba Rating Report, December 15, 2008.

Note:
All figures are in Canadian dollars unless otherwise noted.

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Manitoba Hydro

Risk Management Review of Power Sales and Operations

PREPARED BY:

RISKADVISORY
CALGARY, ALBERTA
JANUARY 17, 2003

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Introduction

RiskAdvisory is a Calgary-based consulting firm specializing exclusively in the provision of energy risk management advisory services to members of the global energy sector. Since its inception in 1995, RiskAdvisory has worked on advisory mandates with over 160 energy companies in Canada, the United States and New Zealand on a broad range of issues surrounding the management of commodity and foreign exchange market risks.

RiskAdvisory has been retained by the Manitoba Hydro ("Hydro" or "the Company") to conduct a thorough review of the risk exposures that have arisen from participation in the wholesale electricity markets and fuel procurement activities. Specifically, RiskAdvisory has been retained to complete the following tasks

- Provide a half-day risk management workshop with content determined in consultation with Hydro. The workshop took place on November 12th in Hydro's offices in Winnipeg;
- Assist in building an internal consensus around the objectives behind the trading/export market activities;
- Assist in the design of appropriate benchmarking tools in order to properly assess the success of any trading/export market activities;
- Advise Hydro on appropriate strategies to optimize the power supply and export market portfolio and fuel purchasing activities.

This report is a preliminary report that sets out the primary risks facing Hydro that are a direct result of their activities in the wholesale power and fuel markets. The report is meant to stimulate further discussion of the magnitude of the risks, as well as determining appropriate benchmarks and implementation strategies. A final report, outlining the risks in greater detail, appropriate benchmarks, and implementation strategies will be completed and delivered to Hydro no later than March 31, 2003.

Background

Manitoba Hydro has been engaging in off-system sales for the past 30 years. The explosive growth in this activity occurred in late 1990's when export sales accounted for under $300mm in revenue compared to 2002 when export sales revenue topped $600mm. Over the past two years the export sales market, as a percentage of electric revenues, has made up over 40% of total electric revenues compared to less than 10% in the early 90's.

Hydro has 5,480 MW's of installed capacity. Of this amount, 4,978 MW's are hydro based, 406 MW's are gas based, and 96 is coal-fired generation. Hydro's peak day occurs in the winter at approximately 4,100 MW's leaving ample supply for off system sales to Saskatchewan, Ontario, and/or the U.S. A typical day for Manitoba Hydro would have a peak of approximately 2,500 MW's. There is also over 1000 MW's sold in the forward export market, most of which goes out over the next 15 years. This oversupply situation was primarily brought upon from an expansion in the 1970's that was based on a growth forecast of 7% annually. The growth over the past numbers of years has been closer to 3%.

The largest unknown in the portfolio is the availability of hydro resources. The risk of a drought is a primary reason that more long-term sales have not been consummated. Overselling would put Hydro in a riskier position than if it had not sold anything due to a potential large increase in costs that would result from having to buy natural gas or wholesale power rather than generate the power from hydro resources. Hydro also has to contend with a risk of spill if they do make enough export sales and reservoir levels are above 120% of normal.

Over the past several years, Hydro has been regulated on a cost of service basis that can best be described as light-handed. The Company is also overseen by a Crown Corporation Council that acts on behalf of the shareholders or taxpayers of Manitoba. In 2001, Manitoba Hydro purchased the Manitoba gas LDC, Centra Manitoba ("Centra"). Centra was previously owned by Westcoast Energy, a private sector company based in Vancouver. Centra was, and still is, regulated differently than Hydro. Centra, for legitimate reasons in the past, is regulated on a rate-of-return basis and the regulation can be described as more heavy-handed than Hydro – especially when it comes to trading and risk management policies.

RiskAdvisory and Hydro met in November 2002 to discuss the risks that Hydro is facing from its activity in the wholesale power markets and from its fuel procurement activities. Based on the information provided to us, we have come to the conclusion that the Power Sales and Operations Division of Manitoba Hydro has a very solid understanding of what risks it faces. The challenge going forward will be to determine the magnitude of the risks, how to benchmark the risks, what instruments are available in the marketplace to manage these risks and how to implement a strategy that optimizes the risk/return of the generating assets.

Revenue Risk

Manitoba Hydro has sold over one billion dollars ($1 bln) in exports over the past two years. The customer base has gone from 5 customers to over 90 customers since November 1996. The export sales have accounted for over 40% of total electric revenues, while the target is 26%. The majority of the revenues come from 1 sale to NSP – a large midwestern utility based in Minneapolis.

The staggering amount of revenues has given the government of Manitoba the ability to put a dividend policy in place so that a large cash surplus does not accrue at Hydro. The magnitude of the dividend is such that the export sales are counted on in order to make the dividend payment.

Committed Long Term Firm Contract Revenues

The majority of Hydro's long-term contracts are fixed with an escalator tied to some kind of price index such as PPI or CPI. The risk around the CPI or PPI is likely around $10mm per year[1]. Given that Hydro likely has costs that are associated with a lower price index, the absolute magnitude of this risk is likely small and therefore deserves a lesser focus than other risks within the risk management programme. The main risk tied to the

[1] All figures in this report were calculated by Manitoba Hydro and not independently verified by RiskAdvisory.

committed long-term firm sales is on the cost side of supplying the power in a drought year. These risks will be discussed later in the report.

Uncommitted Long Term Firm Contract Revenues

Manitoba Hydro feels that there is a $40 million risk to its revenue from its uncommitted long-term firm sales. This calculation is based on a $15 move from budgeted expectations. While some may see this as an opportunity loss, we believe that Hydro should manage this risk as long as there is a dividend policy set by the shareholder. If the $40mm risk was left open, the payment of the dividend may be at risk. However, it should be realized that by locking in the sales at current levels, opportunity losses may result in a higher price environment and the Company is also opening itself up to risks tied to an extended drought.

The most optimal method of managing this risk would be through the purchase of electricity options. Unfortunately, the market for electricity options is virtually non-existent. Alternatively, this risk can be managed through a natural gas put option programme. Given the high correlation between natural gas and power prices, Hydro could purchase annually settled natural gas puts to protect against a fall in gas prices. The theory is that as gas prices fall, power prices will fall. If Hydro enters into firm power sales in a depressed market, the shortfall in expected revenue should be made up with the payoffs from the put options.

Manitoba Hydro should begin modeling this and other risks through Monte Carlo simulations. While Monte Carlo modeling presents unique and complex problems, most utilities are moving in this direction for their risk assessments. This Monte Carlo quantification will allow Hydro to make decisions as to an appropriate level of long-term firm sales to make given the risk of drought, as well as the optimal amount of put options required to protect the necessary revenue requirement.

Opportunity Sales

Opportunity sales are very short term in nature and are only made when the sales price exceeds the cost of the additional supply needed to make the sale. Manitoba Hydro has assumed $90 million in risk associated with this activity, which represents the entire amount of opportunity sales in any one year. This level of risk is assuming a drought year and assumes that no opportunity sales will be made due to poor water conditions. The theory behind this is that all of the water will go to serve native load.

The Company can manage this risk with weather derivatives or weather insurance. Hydro would pay a premium in exchange for insurance against a major drought. The insurance payout would replace the revenue that would have been received from opportunity sales. Again, the only way to analyze the management of this risk is through a Monte Carlo simulation that analyzes the cost of the insurance relative to the risk of having a $90 million shortfall.

Credit Risk

Hydro's single largest credit risk is to NSP. The contract runs for fourteen more years and the underlying volumes are substantial. Hydro has calculated a credit risk of $75 million, which represents 1.5 months of receivables. We believe this number to be small. While Hydro may recognize a problem exists as soon as NSP has not paid for the prior months deliveries, it has been our experience that utilities rarely cut off a customer on such a large deal at that point. There may be delays due to discussions around financial remedies that could extend the delivery period. The Company will more than likely have at least three months of deliveries before it terminates future deliveries. That represents approximately $150 million in receivables at risk.

The other potential credit risk lies in the replacement cost of the contract. Hydro is exposed to replacing that contract if NSP fails to perform its obligations and power prices are lower than the price in the contract. Again, this risk is best modeled through a Monte Carlo simulation and it is likely to dwarf the accounts receivable risk due to the length of the contract.

NSP is Hydro's largest credit exposure but the Company has potential credit risk with all 90 of its customers. Hydro should be rigorously determining its credit exposures to all counterparties – especially given the occurrences over the past 3 years with energy companies.

Credit risk can be managed by having margining provisions within the contracts and through credit derivatives. Again, the Monte Carlo simulation will assist Hydro in determining the most suitable products at the most reasonable cost.

Cost of Production Risk

Forward sales are also necessary for balancing the hydro system. As discussed earlier, Hydro will have to spill water if the reservoirs reach 120% of average. This adds to the complexity of the issue of optimizing the generation resources as the Company cannot make all of it's export sales in the short term market so it is forced into selling some of it's production long term or run the risk of spill. On the other hand, selling long-term power opens the Company up to a risk of a drought year in which they will need all of their hydro resources to meet native load. In this case, there will likely be buying either natural gas and/or wholesale power to meet their firm sales commitments. This will be at a significantly greater cost than from the hydro resource, and there would be a high probability that the cost would be greater than what Hydro is receiving for their firm sales.

Gas Volumes

In a drought year Manitoba Hydro would have to turn on its gas units in order to meet native load and committed long term export sales. Without the availability of inexpensive water resources, Hydro would have to use approximately 400MW's of gas-fired generation that would require approximately 110,000 gj's/day of natural gas purchases to meet the native load. Based on forward price of $3.70, Hydro has estimated the risk of higher costs from running the gas units at $175 million.[2]

Hydro should focus on weather derivatives or insurance to cover this risk. Similar to the discussion on weather insurance earlier in this report, Hydro would pay an insurance premium for this coverage and get paid based on a low water year. Hydro should focus on the Monte Carlo simulation as the basis for any weather insurance acquisition. This will assist Management in making the purchase decision based on sound analytics.

[2] Current gas prices of close to $6.00/gj would put this risk at close to $300 million.

Gas Price

Associated with the gas volume risk is the gas price risk. Hydro's analysis showed a gas volume risk of $175 million based on a gas price of $3.70/gj. At the same time, Hydro calculated a risk of $210 million based on the risk of increasing gas prices. As events over the past few months have shown, this risk is real. Based on the current higher mean and volatility, this risk would be closer to $350 based on the same 98% confidence level.

Hydro should look at acquiring natural gas call options to cover at least a portion of this risk. Again, Monte Carlo analysis will help in determining the proper amount and the cost to acquire these options.

Power Purchase Volume

During the course of a drought year, Hydro will have to purchase power from the wholesale power markets in order to meet its committed firm export sales. Similar to the Gas volume issue, this power will be more expensive than the cheaper hydro resources that the Company owns. Hydro has estimated the volume risk to be $110 million based on current MAPP prices.

Similar to the gas volume risk, this risk can be managed through the use of weather insurance. Again, Monte Carlo simulation software is necessary to properly analyze the cost of the insurance relative to the benefits that the Company will receive.

Power Purchase Price

Similar to the gas price risk discussed earlier, Hydro faces the same risk to increased power prices on the volumes it could need to acquire in a drought year. Based on Hydro's analysis, $90 million is at risk to increased power prices in a drought year.

The power markets have not developed to the point where a liquid option market exists. As such, in order to properly hedge this risk, Hydro should look towards the liquid gas option market to hedge the majority of this risk. During times when gas is setting the market, this will be adequate protection. This protection device will begin to break down in times of shortage pricing in the electricity market. In times of shortage pricing, the power price will rise dramatically compared to the gas price. Therefore, the protection will not be adequate during these times. Unfortunately, there are not a lot of choices to cover this risk in today's environment.

Similar to the other risks discussed, a Monte Carlo simulation will be necessary to properly analyze this risk.

"Made in Manitoba Risks"

Examples of risks that exist from within the province of Manitoba are risks to native load, water reserves, water rentals, and interest/guarantee fees. It is unclear at this point whether these risks should be hedged, or if they are risks at all. They might actually benefit other parts of the Manitoba economy or tax base. Therefore, further analysis is required. Hydro has calculated these risks to a total of between $260-280 million.

Again, weather insurance may be the method to cover this risk if indeed they are risks that Hydro needs to manage.

Coal

Hydro also has a small amount of risk to coal. The Company has measured this risk to be under $15 million. The majority of this risk is tied to volume and can be covered with weather insurance.

Regulatory and Political Risk

RiskAdvisory's work in other jurisdictions has caused us to recommend to many clients that they approach their respective regulator to present a proposed risk management programme and effectively take a collaborative approach to gain approval to proceed. This serves to eliminate, to the degree possible, any negative hindsight review. The fundamental concept here is that Hydro is acting in effect as agent on behalf of the ratepayers with respect to the implementation of a risk management programme around its risk portfolio. The Regulator should play a role in examining any proposed risk management initiative and determine if it is in the best interest of the ratepayer. It is imperative therefore that there be a strong collaborative effort between all interested parties to share their views on the risk management programme parameters in order for the programme to have any chance of long-term success.

In the interviews held in November, it was clearly stated that Manitoba Hydro would not approach the MPUB for pre-approval of any risk management programme activity as the Company believes that the MPUB's jurisdiction is limited to rate setting issues. It was indicated that despite an unwillingness to seek approval up front it would be the Company's strong intention to carefully document and monitor all risk management activity and to always be prepared to report on and defend Hydro's risk management activities to the extent required by the regulator.

While we respect the Company's knowledge of their own regulatory environment and how to best proceed on the matter of pre-approval we would suggest that there is an onus on Hydro to provide a basic level of understanding of the risks and risk management concepts to the MPUB. Many utilities conduct extensive statistical analysis to assign probabilities to potential risk factors. This provides the Regulator and interveners with a better understanding of the magnitude of risk in the portfolio. The analysis can also include the effect of proposed hedging strategies with respect to mitigating risk.

RiskAdvisory cannot over-emphasize the importance of documenting the risk management programme parameters, establishing monitoring practices and reporting capabilities as the potential magnitude of hedge losses and opportunity costs could be substantial. It would be our further recommendation that Hydro contemplate the following:

- undertake to conduct periodic workshops with MPUB staff and ratepayer representatives to enhance the understanding of the risk profile faced by Manitoba's ratepayers;
- provide MPUB staff with periodic updates on the status of Hydro's long-term risk position and its potential impact on rate volatility.

Agency Relationship with Affiliate

If Manitoba Hydro determines that a risk management programme is a viable course of action it will need to determine the benefits of developing the required skill set to implement and maintain the programme internally or to outsource this activity. The requisite skill set for natural gas transactions, at least, is already in place at Hydro's wholly-owned subsidiary Centra Manitoba and since gas options would seem to be the primary means of hedging much of the Company's drought year exposures to price, it would seem to make more sense to use Centra's existing infrastructure. Front Office (execution), Middle Office (monitoring and reporting) and Back Office (settlements) are in place at Centra and could be utilized by Hydro on some kind of service arrangement.

Weather derivatives are insurance products that Centra may be unfamiliar with and Hydro would have to develop its competencies in this area internally if, in fact, these tools prove to be a viable option for the Company to pursue.

It was earlier stated that Hydro's relationship with the Regulator has been more light-handed than has been the case with Centra Manitoba. There could be some concern that a service arrangement with Centra could negatively impact Hydro's existing relationship with the regulator. RiskAdvisory is of the opinion, however, that Hydro's reasonable risk management objectives to optimize revenues while defending against drought years and the mechanistic and defensive programme in place at Centra, would not cause any deterioration in the regulatory environment. In fact we are inclined to believe that the regulatory environment could well improve overall. This assumes, of course, that the adheres to the hedge implementation guidelines as set out in the risk management programme.

RiskAdvisory also got the sense that there is a desire on the part of Manitoba Hydro to break down any lines of distinction between the Company and Centra and a service arrangement between the two entities could assist this goal.

Summary and Next Steps

The next steps that Hydro should consider in contemplation of going forward with a risk management programme initiative are as follows:

- develop a Monte Carlo simulation capability that will facilitate both the quantification of the various exposures as well as the potential costs of the instruments used to hedge the exposures;
- review and determine the optimal instruments to employ in the risk management programme;
- establish criteria for benchmarking the risk management activities to properly assess the success of the programme (this will not be easy);
- develop an implementation strategy;
- develop policies and procedures with appropriate guidelines to ensure best industry practices are adopted for the programme.

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Moody's Investors Service

Credit Opinion: Manitoba Hydro Electric Board

Global Credit Research - 08 Feb 2010

Manitoba, Canada

Ratings

Category	Moody's Rating
Outlook	Stable
Bkd Commercial Paper	P-1

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Opinion

Rating Drivers

Manitoba Hydro-Electric Board's (MHEB)'s Prime-1 rating reflects the explicit guarantee of the Province of Manitoba (Province)

The Province is rated Aa1 with a stable outlook

The Province owns 100% of Manitoba Hydro-Electric Board's (MHEB) equity and holds over 90% of MHEB's debt

Extensive ownership, financial and public policy linkages to the Province

Regulated utility with predominantly low cost hydro-electric generation

Corporate Profile

MHEB is a vertically integrated regulated electric and gas utility which is 100% owned by the Province. MHEB's 14 hydroelectric generating stations typically generate the vast majority (>90%) of the energy the company delivers. The balance of energy delivered comes from thermal and wind assets and imports. MHEB's natural gas segment delivers over 2.1 billion cubic meters of natural gas to approximately 100 communities in the Province.

MHEB is a provincial Crown Corporation, and in addition to owning 100% of MHEB, the Province directly provides over 90% of MHEB's debt. The Province also unconditionally guarantees virtually all of MHEB's third party debt, including the promissory notes issued under MHEB's promissory note program (commercial paper or CP program). Only $77 million or less than 1% of MHEB's total debt is neither held nor guaranteed by the Province

Manitoba. This $77 million is comprised of Manitoba Hydro-Electric Bonds related to "mitigation projects".

SUMMARY RATING RATIONALE

MHEB's Prime-1 (P-1) rating reflects the Province's guarantee of MHEB's promissory note program, together with Moody's belief that the Province manages its own liquidity in a professional manner and will have easy access to capital markets over the next year at a minimum.

Recent Developments

In November 2009, MHEB's board of directors approved the corporation's Integrated Financial Forecast (IFF09-1) for the period 2009/10 - 2019/20 inclusive. IFF09-1 reflects the various impacts of the recession as well as the weak spot export power prices that prevailed during 2009. MHEB's base case expectation that weak spot export power prices will persist for some time, combined with large borrowing requirements related to MHEB's heavy capital spending program, is expected to result in a weakening of the company's financial profile. Consequently, MHEB expects to undershoot one or more of its key financial targets (Debt/Equity ratio of 75:25 or less; Interest Coverage ratio of 1.2:1.0 or more; and Capital Coverage ratio (excluding major new projects) of 1.2:1.0 or more) in the medium term.

MHEB filed a general rate application (electrical) on November 30, 2009. The GRA seeks average rate increases of 2.9% effective April 1, 2010 and April 1, 2011. Since MHEB does not expect a final decision from the Manitoba Public Utilities Board (PUB) on the GRA until late summer of 2010, MHEB has requested that the PUB approve the April 1, 2010 rate increase of 2.9% on an interim refundable basis. MHEB hopes to receive a decision on its request for an interim refundable rate increase in February 2010.

The Province's Ombudsman is investigating a complaint made in December 2008 under the Province's whistleblower protection laws claiming that MHEB has seriously miscalculated hydrology risk. The details of the whistleblower's allegations have not been made public, and Moody's notes that MHEB has defended its risk management policies vigorously. A report by independent consultants in September 2009 concluded that MHEB's management of drought risk was reasonable and adequate. The Audit Committee of MHEB's Board of Directors has also engaged KPMG to provide an independent assessment of its drought risk management, long term-contracts, hydrologic modeling and power trading governance. KPMG is expected to present its final report in March 2010. The PUB is expected to consider the report later in the year, and it may be several months before the Ombudsman concludes the formal review of the whistleblower's complaint. Moody's will monitor these developments to determine what, if any, impact they might have on MHEB's credit profile

DETAILED RATING CONSIDERATIONS

PROVINCIAL GUARANTEE

MHEB's Prime-1 (P-1) rating reflects the Province's guarantee of MHEB's promissory note program, together with Moody's belief that the Province manages its own liquidity in a professional manner and will have ready access to capital markets over the next year at a minimum. MHEB and a similar entity, British Columbia Hydro & Power Authority (BC Hydro), are unique among Moody's-rated companies and are not readily comparable to other regulated electric utilities. Both are 100% owned by their respective provincial shareholder and the provincial shareholder owns virtually all of the companies' debts. The ratings of both MHEB and BC Hydro reflect the guarantee of the utility's rated debt by the respective provincial shareholder. Moody's observes that MHEB continues to independently support all of its outstanding debt, make water royalty payments in excess of $100 million annually to the Province, and earn positive net income thereby maintaining or achieving modest improvements in its financial profile.

Other Considerations

PLANNED GENERATION DEVELOPMENTS WILL BOOST EXPORTS AND ANTICIPATE DOMESTIC DEMAND GROWTH

MHEB meets its customers' needs largely with low-cost power from its hydroelectric plants. These assets are valuable in that they provide the company with the opportunity to sell excess supply into neighbouring states and provinces during peak periods and import energy during off-peak periods. Approximately 35% of MHEB's electric revenues come from export sales during normal water years. MHEB continues to have a number of major capital projects in various stages of development. These projects will meet anticipated growth in domestic demand for the next 25-30 years and also allow MHEB to tap increasing demand for renewable energy in export markets. MHEB has signed binding term sheets for long-term export sales contracts with several US utilities that will partially underpin new generation developments. These contracts continue to be subject to regulatory approvals, and represent in total around 1,250 MW of capacity. The agreements are conditional upon the construction of new generation and interconnection facilities. MHEB's policy is to only enter into long-term contracts to the extent of firm energy that could be generated by `dependable flow', which assumes a repetition of the worst river flows on record (1939-41). Moody's notes that this prudent policy does not entirely eliminate the risk that MHEB could be required to purchase power to meet its contractual commitments in extreme drought conditions.

MHEB's major development projects include the 200 MW run of river Wuskwatim project currently under construction. Wuskwatim, together with associated transmission investment, has an estimated capital cost of $1.6 billion and a current expected in-service date of 2011. Two other major run of river projects, Keeyask and Conawapa, are in early stage development. Keeyask is currently envisioned as a 695 MW project with an estimated budget of $4.6 billion and an earliest in service date of 2018 while Conawapa is currently expected to be a 1,485 MW project with an estimated budget of $6.3 billion and a potential in service date of 2022. MHEB's major transmission project, known as Bipole III, is a new high voltage direct current (HVDC) transmission line on the west side of the Province. Bipole III will act as a back-up to the current system as well as carry power from new generation to the south and to export markets. The current targeted in-service date is fiscal 2017/18, at an estimated cost of $2.2 billion.

Moody's expects that MHEB will finance the construction of its major development projects with a combination of additional long-term borrowings from the Province and internally generated funds. Management's 2009 financial forecast, which incorporates an expectation of weaker near to medium-term export revenues, indicates that MHEB will be more reliant on debt financing than had been expected in earlier forecasts.

BORROWING REQUIREMENTS AND WEAK SPOT EXPORT POWER PRICES COULD RESULT IN FAILURE TO MEET FINANCIAL TARGETS IN MEDIUM TERM

MHEB achieved its minimum 25% equity target with an as reported debt/total capitalization of 75% at March 31, 2009. Favourable hydrology conditions enabled MHEB to achieve this level earlier than the original 2012 target. However, according to management's 2009 financial forecast, the company will be challenged to maintain its 75:25 debt/equity target after fiscal 2011 and may not achieve the target again until some time during the next decade. Although management's forecast assumes 2.9% annual average electric rate increases in each of fiscal 2010 and 2011 and 3.5% average electric rate increases annually thereafter, borrowings required to finance MHEB's significant capital program and weak spot export power prices are expected to drive the company's debt/equity ratio to approximately 80:20 later this decade. This ratio is projected to strengthen rapidly after Conawapa enters service, and Moody's also notes that some combination of larger rate increases, an earlier and more dramatic recovery of export power prices or a reduction in debt-financed capital spending could assist MHEB in achieving its financial targets earlier than is indicated by its 2009 financial forecast.

As noted above, MHEB's rating primarily reflects the Province's guarantee and liquidity support. However, MHEB's financial ratios, including interest coverage, are an indication of the extent to which it is capable of supporting its debt independently, which is a consideration in the rating of the Province. MHEB's financial forecasts indicate that management expects to generate sufficient cash flow to service the interest on its debt. However, the anticipated weakening of MHEB's financial profile means that the company has less cushion against unexpected events such as poor hydrology, capital cost overruns or construction delays. In the event of such unexpected events, MHEB might need to seek larger rate increases, curtail its capital spending or take other actions to ensure that the company continues to be able to independently service its debt.

Liquidity Profile

MHEB's CP borrowings are guaranteed by the Province of Manitoba. While the Province does not maintain committed bank credit facilities in support of its short-term borrowing programs, Moody's believes that the probability that the Aa1-rated Province would be unable to obtain funding on a timely basis either from the capital markets or its bankers is highly remote. Accordingly, Moody's is comfortable with the Prime -1 rating assigned to MHEB's provincially guaranteed CP program despite the absence of committed back-up facilities at either MHEB or the Province. While MHEB maintains $500 million uncommitted credit facilities in support of its $500 million CP program, Moody's generally views uncommitted facilities as providing little in the way of support for CP borrowings. Accordingly, our Prime -1 rating of MHEB's CP program relies principally on the guarantee of the Province.

Rating Outlook

The Stable Outlook reflects the outlook of the guarantor, the Province of Manitoba.

What Could Change the Rating - Up

A change in the rating of the guarantor

What Could Change the Rating - Down

A change in the rating of the guarantor

of, and each provider of credit support for, each security that it may consider purchasing, holding or selling.

MOODY'S hereby discloses that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by MOODY'S have, prior to assignment of any rating, agreed to pay to MOODY'S for appraisal and rating services rendered by it fees ranging from $1,500 to approximately $2,400,000. Moody's Corporation (MCO) and its wholly-owned credit rating agency subsidiary, Moody's Investors Service (MIS), also maintain policies and procedures to address the independence of MIS's ratings and rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold ratings from MIS and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually on Moody's website at www.moodys.com under the heading "Shareholder Relations - Corporate Governance - Director and Shareholder Affiliation Policy."

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Moody's
INVESTORS SERVICE

Credit Opinion: Manitoba Hydro Electric Board

Global Credit Research - 07 Feb 2011

Manitoba, Canada

Ratings

Category	**Moody's Rating**
Outlook	Stable
Bkd Commercial Paper	P-1

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Opinion

Rating Drivers

Manitoba Hydro-Electric Board's (MHEB)'s Prime-1 rating reflects the explicit guarantee of the Province of Manitoba (Province)

The Province is rated Aa1 with a stable outlook

The Province owns 100% of Manitoba Hydro-Electric Board's (MHEB) equity and holds over 90% of MHEB's debt

Extensive ownership, financial and public policy linkages to the Province

Regulated utility with predominantly low cost hydro-electric generation

Corporate Profile

MHEB is a vertically integrated regulated electric and gas utility which is 100% owned by the Province. MHEB's 14 hydroelectric generating stations typically generate the vast majority (>90%) of the energy the company delivers. The balance of energy delivered comes from thermal and wind assets and imports. MHEB's natural gas segment delivers over 2 billion cubic meters of natural gas to approximately 100 communities in the Province.

MHEB is a provincial Crown Corporation, and in addition to owning 100% of MHEB, the Province directly provides over 90% of MHEB's debt. The Province also unconditionally guarantees virtually all of MHEB's third party debt, including the promissory notes issued under MHEB's promissory note program (commercial paper or CP program). Only $76 million or less than 1% of MHEB's total debt is neither held nor guaranteed by the Province Manitoba. This $76 million is comprised of Manitoba Hydro-Electric Bonds related to "mitigation projects".

SUMMARY RATING RATIONALE

MHEB's Prime-1 (P-1) rating reflects the Province's guarantee of MHEB's promissory note program, together with our belief that the Province manages its own liquidity in a professional manner and will have ready access to capital markets over the next year at a minimum.

Recent Developments

In November 2009, MHEB filed a general rate application (electrical), seeking average rate increases of 2.9% effective April 1, 2010 and April 1, 2011. In February 2010 the Manitoba Public Utilities Board's (PUB) approved a 2.8% interim rate increase, effective April 1, 2010.

However, final resolution of the rate application has been delayed, largely because of the PUB's extensive review of MHEB's risk management practices. This review was prompted by a complaint made by a former consultant to the company in December 2008 under the Province's whistleblower protection laws claiming that MHEB had seriously miscalculated hydrology risk. The Audit Committee of MHEB's Board of Directors and the PUB each engaged independent consultants to assess the validity of these claims. While these reports recommend a number of improvements to risk processes and modelling capabilities, they conclude that MHEB is managing its risk profile appropriately within established risk tolerances. We will continue to monitor the progress of the PUB's risk review, but do not expect this to have any material impact on MHEB's credit profile.

DETAILED RATING CONSIDERATIONS

PROVINCIAL GUARANTEE

MHEB's Prime-1 (P-1) rating reflects the Province's guarantee of MHEB's promissory note program, together with our belief that the Province manages its own liquidity in a professional manner and will have ready access to capital markets over the next year at a minimum. MHEB and a similar entity, British Columbia Hydro & Power Authority (BC Hydro), are unique among Moody's-rated companies and are not readily comparable to other regulated electric utilities. Both are 100% owned by their respective provincial shareholder and the provincial shareholder owns virtually all of the companies' debts. The ratings of both MHEB and BC Hydro reflect the guarantee of the utility's rated debt by the respective provincial shareholder. We observe that MHEB continues to independently support all of its outstanding debt, make water rental payments in excess of $100 million annually to the Province, and earn positive net income thereby maintaining or achieving modest improvements in its financial profile.

Other Considerations

PLANNED GENERATION DEVELOPMENTS WILL BOOST EXPORTS AND ANTICIPATE DOMESTIC DEMAND GROWTH

MHEB meets its customers' needs largely with low-cost power from its hydroelectric plants. Approximately 35% of MHEB's electric revenues come from export sales during normal water years, although low power prices meant that exports represented only 27% of electric revenues for the fiscal year ending March 31, 2010. MHEB continues to have a number of major capital projects in various stages of development. These projects will meet anticipated growth in domestic demand for the next 25-30 years and also allow MHEB to tap increasing demand for renewable energy in export markets. The new generation developments will be partially underpinned by long-term export sales contracts with several US utilities. In April 2010, MHEB entered into power purchase agreements with Xcel Energy for the sale of at least 325 MW of capacity (375MW in summer) between 2015-2025, which will increase by 125 MW from 2021 if MHEB's proposed Conawapa hydroelectric plant has entered service. The agreements remain subject to regulatory approval. MHEB continues to negotiate definitive contracts for a further 750 MW of capacity sales to other US utilities pursuant to binding term sheets signed in 2007 and 2008. These agreements would be conditional upon the construction of the proposed plants at Keeyask and Conawapa as well major new transmission investments. MHEB's policy is to only enter into long-term contracts to the extent of firm energy that could be generated by 'dependable flow', which assumes a repetition of the worst river flows on record (1939-41). We understand MHEB's export contracts all contain curtailment provisions which apply if hydrology conditions are more severe than previously experienced, and these help mitigate the low probability, high impact risk associated with extreme drought. We regard this strategy as prudent, but believe that the risk that MHEB could be required to purchase power to meet export commitments has not been entirely eliminated, partly because we believe any attempt to exercise this type of force majeure protection could be subject to dispute.

MHEB's major development projects include the 200 MW run of river Wuskwatim project currently under construction. Wuskwatim, together with associated transmission investment, has an estimated capital cost of $1.6 billion and a current expected in-service date of 2011. Two other major run of river projects, Keeyask and Conawapa, are in early stage development. Keeyask is currently envisioned as a 695 MW project with an estimated budget of $5.6 billion and an earliest in service date of 2019 while Conawapa is currently expected to be a 1,485 MW project with an estimated budget of $7.8 billion and a potential in service date of 2023. MHEB's major transmission project, known as Bipole III, is a new high voltage direct current (HVDC) transmission line on the west side of the Province. The Bipole III line is required to improve the reliability of MHEB's high voltage direct current transmission system and to provide additional capability to deliver power from new generation to southern markets. The current targeted in-service date is 2017, at an estimated cost of $2.2 billion. We note that MHEB's latest estimates resulted in an approximate one-year deferral for the entry into service of both Keeyask and Conawapa projects, and an increase in their combined cost of approximately $2.5 billion. Similarly, revisions to timetable and budget may be made in respect of Bipole III when a review of that project is completed later this year.

BORROWING REQUIREMENTS AND WEAK SPOT EXPORT POWER PRICES LIKELY TO RESULT IN FAILURE TO MEET FINANCIAL TARGETS IN MEDIUM TERM

MHEB achieved its minimum 25% equity target with an as reported equity/total capitalization of 27% at March 31, 2010. Favourable hydrology conditions enabled MHEB to achieve this level earlier than the original 2012 target. However, according to management's 2010 financial forecast, the company will be challenged to maintain its minimum 25% equity ratio after fiscal 2012 and may not achieve the target again until sometime during the middle of the next decade. Although management's forecast assumes a 2.9% annual average electric rate increase in 2011 and 3.5% average electric rate increases annually thereafter, borrowings required to finance MHEB's significant capital program and weak spot export power prices are expected to drive the company's equity ratio below 20% later this decade. This ratio is projected to strengthen rapidly after Conawapa enters service, and we also note that some combination of larger rate increases, an earlier and more dramatic recovery of export power prices or a reduction in debt-financed capital spending could assist MHEB in achieving its financial targets earlier than is indicated by its 2010 financial forecast.

As noted above, MHEB's rating primarily reflects the Province's guarantee and liquidity support. However, MHEB's financial ratios, including interest coverage, are an indication of the extent to which it is capable of supporting its debt independently, which is a consideration in the rating of the Province. MHEB's financial forecasts indicate that management expects to generate sufficient cash flow to service the interest on its debt. However, the anticipated weakening of MHEB's financial profile means that the company has less cushion against unexpected events such as poor hydrology, capital cost overruns or construction delays. Should such unexpected events arise, MHEB might need to seek larger rate increases, curtail its capital spending or take other actions to ensure that the company continues to be able to independently service its debt.

Liquidity Profile

MHEB's CP borrowings are guaranteed by the Province of Manitoba. While the Province does not maintain committed bank credit facilities in support of its short-term borrowing programs, Moody's believes that the probability that the Aa1-rated Province would be unable to obtain funding on a timely basis either from the capital markets or its bankers is highly remote. Accordingly, Moody's is comfortable with the Prime -1 rating assigned to MHEB's provincially guaranteed CP program despite the absence of committed back-up facilities at either MHEB or the Province. While MHEB maintains $500 million uncommitted credit facilities in support of its $500 million CP program, Moody's generally views uncommitted facilities as providing little in the way of support for CP borrowings. Accordingly, our Prime -1 rating of MHEB's CP program relies principally on the guarantee of the Province.

Rating Outlook

The Stable Outlook reflects the outlook of the guarantor, the Province of Manitoba.

What Could Change the Rating - Up

A change in the rating of the guarantor

What Could Change the Rating - Down

MOODY'S
INVESTORS SERVICE

Notwithstanding the foregoing, credit ratings assigned on and after October 1, 2010 by Moody's Japan K.K. ("MJKK") are MJKK's current opinions of the relative future credit risk of entities, credit commitments, or debt or debt-like securities. In such a case, "MIS" in the foregoing statements shall be deemed to be replaced with "MJKK". MJKK is a wholly-owned credit rating agency subsidiary of Moody's Group Japan G.K., which is wholly owned by Moody's Overseas Holdings Inc., a wholly-owned subsidiary of MCO.

This credit rating is an opinion as to the creditworthiness or a debt obligation of the issuer, not on the equity securities of the issuer or any form of security that is available to retail investors. It would be dangerous for retail investors to make any investment decision based on this credit rating. If in doubt you should contact your financial or other professional adviser.

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<u>CAC/MSOS/MH I-120</u>

Subject: **Integrated Financial Forecast**
Reference: **PUB/MH I-68**
Volume 2, Appendix 5.2

a) **Please ensure that the bond rating reports provided under the PUB/MH I-68 include all those since the ones that were provided in the 2008 GRA.**

<u>ANSWER</u>:

Attached to this response are additional reports issued by Moody's for the MHEB, dated October 22, 2008 and October 15, 2009.

Credit Opinion: Manitoba Hydro Electric Board

Manitoba Hydro Electric Board

Manitoba, Canada

Ratings

Category	Moody's Rating
Outlook	Stable
Bkd Commercial Paper	P-1

Contacts

Analyst	Phone
Allan McLean/Toronto	416.214.3852
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Opinion

Corporate Profile

Manitoba Hydro-Electric Board (MHEB) is a vertically integrated regulated electric and gas utility which is wholly owned by the Province of Manitoba (the Province). A provincial Crown Corporation, MHEB generates approximately 98% of electricity for the Province of Manitoba primarily through 14 hydroelectric generation stations with the balance produced by thermal and diesel generating stations. MHEB's natural gas segment delivers over 2.1 billion cubic meters of natural gas to approximately 100 communities in the Province.

MHEB meets its customers' needs largely with power from its low-cost hydroelectric plants. These assets are valuable in that they provide the company with the opportunity to sell excess supply into neighbouring states and provinces during peak periods and import energy during off-peak periods. Approximately one-third of MHEB's electric revenues come from export sales during normal water years. MHEB's results for fiscal year 2008 (ended March 31, 2008) were reflective of better than average hydrology, similar to those seen in fiscal year 2006, and changes in accounting standards that led to a reduction in finance charges pertaining to the recognition of foreign exchange gains on U.S. denominated long-term debt. The favourable hydrology conditions gave rise to robust revenues and cash flows from electricity exports. In fiscal year 2008, MHEB produced total generation of 35.4 million MWh and net income from electricity and natural gas operations of $346 million. Total generation in 2008 was up from 32.6 MWh in 2007 although lower than the 37.6 million MWh generated in 2006. Net income in 2008 was up from $122 million in the previous year although lower than the $415 million recorded in 2006. Export energy sales, primarily to the United States, increased to $625 million in 2008 from $592 million in 2007, resulting in the second highest export sales in MHEB's history. During fiscal 2008, MHEB generated approximately 36.3% of its electricity revenue from export sales to neighbouring provinces and states, unchanged from the previous year and down from 47% in 2006. For the fiscal year ending March 31, 2008, the electricity segment comprised approximately 76.6% of the company's total revenues and 98.3% of its net income, with 1.7% of net income attributable to MHEB's natural gas business.

With an as-reported debt/equity ratio of 77:23 at March 31, 2008, MHEB continued to make progress towards management's primary financial targets, including reducing its debt/equity ratio to 75:25 by 2012 and reducing its reliance on debt to finance its capital expenditure needs. According to MHEB`s management, the target 75:25 debt/equity ratio is likely to be achieved in the fiscal year ending March 31, 2009 largely due to favourable hydrology. Management believes that the 75:25 debt/equity target should be sustainable going forward assuming annual rate increases approximate the rate of inflation and barring one or more poor hydrology years. However, Moody's notes that major debt-financed capital projects such as Wuskwatim, Conawapa, Keeyask and Bipole III could result in a weakening of MHEB's debt/equity going forward.

In addition to owning 100% of MHEB, the Province directly provides over 90% of MHEB's debt and unconditionally guarantees virtually all of MHEB's third party debt, including the promissory notes issued under MHEB's promissory note program (commercial paper or CP program). Only $104 million or less than 1% of MHEB's total debt is neither held nor guaranteed by the Province Manitoba. This $104 million is comprised of Manitoba Hydro-Electric Bonds related to "mitigation projects".

Recent Developments

Subsequent to MHEB's March 31, 2008 year end, MHEB received approval for two increases in its electricity rates. The first increase of 5% became effective on July 1, 2008. The second increase of 4% is to become effective on April 1, 2009 although that increase is conditional upon the Public Utilities Board of Manitoba's (PUB) satisfactory review of certain information to be submitted to the PUB by MHEB. These rate increases are expected to be helpful in maintaining MHEB's primary financial ratios within its target ranges during the upcoming years of significant capital expansion.

MHEB continues to have a number of major capital projects in various stages of development. Hydro projects include the 200 MW run of river Wuskwatim project currently under construction. Wuskwatim, with an estimated capital cost of $1.3 billion, is expected to be on budget and in service on schedule in 2012. Two other major run of river projects, Keeyask and Conawapa, are in early stage development. Keeyask is currently envisioned as a 620 MW project with an estimated budget of $3.7 billion and a potential in service date of 2018 while Conawapa is currently expected to be a 1,300 MW project with an estimated budget of $5.0 billion and a potential in service date of 2022. MHEB's major transmission project, known as Bipole III, is a new high voltage direct current (HVDC) transmission line on the west side of the Province. Bipole III will act as a back-up to the current system as well as carry power from new generation to the south and to export markets. The targeted in-service date is 2017 with an estimated cost of $2.2 billion. Since management's projections indicate that internally generated funds are anticipated to be roughly equal to maintenance capital expenditures, Moody's expects that MHEB will finance the construction of its major development projects primarily with additional long-term borrowings from the Province.

Rating Rationale

PROVINCIAL GUARANTEE

MHEB's Prime-1 (P-1) rating reflects the Province's unconditional guarantee of all of MHEB's short-term debt, together with Moody's belief that the Province manages its own liquidity in a professional manner and will have easy access to capital markets over the next year at a minimum. MHEB and a similar entity, British Columbia Hydro & Power Authority (BC Hydro), are unique among Moody's-rated companies and are not readily comparable to other regulated electric utilities. Both are 100% owned by their respective provincial shareholder and the provincial shareholder owns virtually all of the companies' debts. Moody's observes that MHEB continues to independently support all of its outstanding debt, make water royalty payments in excess of $100 million annually to the Province, and earn positive net income thereby maintaining or achieving modest improvements in its financial profile.

LIQUIDITY

MHEB's CP borrowings are guaranteed by the Province of Manitoba. While the Province does not maintain committed bank credit facilities in support of its short-term borrowing programs, Moody's believes that the probability that the Aa1-rated Province would be unable to obtain funding on a timely basis either from the capital markets or its bankers is highly remote. Accordingly, Moody's is comfortable with the Prime -1 rating assigned to MHEB's provincially guaranteed CP program despite the absence of committed back-up facilities at either MHEB or the Province. While MHEB maintains $500 million uncommitted credit facilities in support of its $500 million CP program, Moody's generally views uncommitted facilities as providing little in the way of support for CP borrowings. Accordingly, our Prime -1 rating of MHEB's CP program relies principally on the guarantee of the Province.

Rating Outlook

The Stable Outlook reflects the outlook of the guarantor, the Province of Manitoba.

What Could Change the Rating - Up

A change in the rating of the guarantor.

What Could Change the Rating - Down

A change in the rating of the guarantor.

Moody's Investors Service

Credit Opinion: Manitoba Hydro Electric Board

Global Credit Research - 15 Oct 2009

Manitoba, Canada

Ratings

Category	Moody's Rating
Outlook	Stable
Bkd Commercial Paper	P-1

Contacts

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Opinion

Rating Drivers

Manitoba Hydro-Electric Board's (MHEB)'s Prime-1 rating reflects the explicit guarantee of the Province of Manitoba (Province)

The Province is rated Aa1 with a stable outlook

The Province owns 100% of Manitoba Hydro-Electric Board's (MHEB) equity and holds over 90% of MHEB's debt

Extensive ownership, financial and public policy linkages to the Province

Regulated utility with predominantly low cost hydro-electric generation

Corporate Profile

MHEB is a vertically integrated regulated electric and gas utility which is 100% owned by the Province. MHEB's 14 hydroelectric generating stations contribute 92% of total electricity generation, with the balance produced by thermal and diesel generating stations. MHEB's natural gas segment delivers over 2.1 billion cubic meters of natural gas to approximately 100 communities in the Province.

MHEB is a provincial Crown Corporation, and in addition to owning 100% of MHEB, the Province directly provides over 90% of MHEB's debt. The Province also unconditionally guarantees virtually all of MHEB's third party debt, including the promissory notes issued under MHEB's promissory note program (commercial paper or CP program). Only $77 million or less than 1% of MHEB's total debt is neither held nor guaranteed by the Province Manitoba. This $77 million is comprised of Manitoba Hydro-Electric Bonds related to "mitigation projects".

SUMMARY RATING RATIONALE

MHEB's Prime-1 (P-1) rating reflects the Province's guarantee of MHEB's promissory note program, together with Moody's belief that the Province manages its own liquidity in a professional manner and will have easy access to capital markets over the next year at a minimum.

Recent Developments

Subsequent to MHEB's March 31, 2009 year end, the Public Utilities Board of Manitoba (PUB) confirmed its approval for a 2.9% increase in electricity rates. The rate increase became effective on April 1st, 2009. Previously, in June 2008 the PUB had approved a conditional increase of 4% for fiscal 2010, subject to satisfactory review of certain information to be submitted to the PUB by MHEB. The downward revision of the increase from 4% to 2.9% reflected MHEB's better than projected financial results for fiscal 2009 as well as the PUB's concern about the impact of rate increases on consumers during the economic downturn. MHEB expects to file its rate application in November 2009 for rates effective from April 1, 2010 and April 1, 2011.

On October 2, 2009, the International Brotherhood of Electrical Workers (IBEW), Local 2034 representing 2,913 line and technical trade workers (approximately 60% of MHEB's workforce excluding construction workers), commenced strike action over wage and contract demands. This is the first strike in MHEB's history. On October 8, 2009, MHEB announced that a tentative agreement had been reached with the IBEW and that its unionized staff had returned to work pending ratification of the proposed collective agreement. Moody's understands that essential services were maintained during the period that the unionized employees were off the job.

DETAILED RATING CONSIDERATIONS

PROVINCIAL GUARANTEE

MHEB's Prime-1 (P-1) rating reflects the Province's guarantee of MHEB's promissory note program, together with Moody's belief that the Province manages its own liquidity in a professional manner and will have ready access to capital markets over the next year at a minimum. MHEB and a similar entity, British Columbia Hydro & Power Authority (BC Hydro), are unique among Moody's-rated companies and are not readily comparable to other regulated electric utilities. Both are 100% owned by their respective provincial shareholder and the provincial shareholder owns virtually all of the companies' debts. The ratings of both MHEB and BC Hydro reflect the guarantee of the utility's rated debt by the respective provincial shareholder. Moody's observes that MHEB continues to independently support all of its outstanding debt, make water royalty payments in excess of $100 million annually to the Province, and earn positive net income thereby maintaining or achieving modest improvements in its financial profile.

Other Considerations

NEW GENERATING CAPACITY WILL BOOST EXPORTS AND ANTICIPATE DOMESTIC DEMAND GROWTH

MHEB meets its customers' needs largely with low-cost power from its hydroelectric plants. These assets are valuable in that they provide the company with the opportunity to sell excess supply into neighbouring states and provinces during peak periods and import energy during off-peak periods. Approximately 35% of MHEB's electric revenues come from export sales during normal water years. MHEB continues to have a number of major capital projects in various stages of development. These projects will meet anticipated growth in domestic demand for the next 25-30 years and also allow MHEB to exploit additional export opportunities. MHEB has negotiated long-term export sales contracts with several US utilities that will partially underpin new generation developments. These contracts are subject to regulatory approvals, and represent in total around 1,125 MW of capacity. The agreements are conditional upon the construction of new generation and interconnection facilities. MHEB's policy is to only enter into long-term contracts to the extent of firm energy that could be generated by `dependable flow', which assumes a repetition of the worst 18-month drought on record (1939-41). Moody's notes that this prudent policy does not entirely eliminate the risk that MHEB could be required to import power to meet its contractual commitments in extreme drought conditions.

MHEB's development projects include the 200 MW run of river Wuskwatim project currently under construction. Wuskwatim, together with associated transmission investment, has an estimated capital cost of $1.6 billion and the in-service date has advanced to 2011 from 2012. Two other major run of river projects, Keeyask and Conawapa, are in early stage development. Keeyask is currently envisioned as a 695 MW project with an estimated budget of $4.5 billion and an earliest in service date of 2018 while Conawapa is currently expected to be a 1,485 MW project with an estimated budget of $6.3 billion and a potential in service date of 2022. MHEB's major transmission project, known as Bipole III, is a new high voltage direct current (HVDC) transmission line on the west side of the Province. Bipole III will act as a back-up to the current system as well as carry power from new generation to the south and to export markets. The targeted in-service date is 2017, with costs estimated in 2008 at $2.2 billion.

Moody's expects that MHEB will finance the construction of its major development projects with a combination of additional long-term borrowings from the Province and internally generated funds. Management projections indicate that MHEB can fund its maintenance capital expenditures and approximately 25% of its new capital projects over the next decade from internally generated cash flow.

MHEB EXPECTS TO CONTINUE TO MEET ITS FINANCIAL TARGETS

MHEB achieved its target minimum 25% equity with an as reported debt/total capitalization of 75% at March 31, 2009. Favourable hydrology conditions enabled MHEB to achieve this level earlier than the original 2012 target. MHEB is cognizant that its hydro-generation results in unavoidable exposure to drought risk, and management therefore attaches a high priority to this equity target. MHEB believes that the 75:25 debt/capital target should be sustainable going forward assuming annual rate increases that approximate the rate of inflation and barring one or more poor hydrology years. The attainment of financial targets also assumes that there will be an economic recovery in major export markets and prices of electricity exports will recover from current depressed levels. Management's other targets are a minimum interest coverage ratio of 1.2x (based on net income plus gross interest / gross interest) and a minimum capital coverage ratio of 1.2x (based on cash flow from operations / maintenance capital expenditures). For the year ended March 31, 2009, MHEB's interest coverage ratio of 1.58x and capital coverage ratio of 1.81x exceeded the company's minimum targets. Despite the high level of planned capital expenditures during the next decade, much of which is expected to be debt financed, MHEB expects to be able to continue to satisfy each of its financial targets. However, Moody's notes that the occurrence of poor hydrology years during the period of elevated capital expenditures could result in a material deterioration in these metrics.

Liquidity Profile

MHEB's CP borrowings are guaranteed by the Province of Manitoba. While the Province does not maintain committed bank credit facilities in support of its short-term borrowing programs, Moody's believes that the probability that the Aa1-rated Province would be unable to obtain funding on a timely basis either from the capital markets or its bankers is highly remote. Accordingly, Moody's is comfortable with the Prime -1 rating assigned to MHEB's provincially guaranteed CP program despite the absence of committed back-up facilities at either MHEB or the Province. While MHEB maintains $500 million uncommitted credit facilities in support of its $500 million CP program, Moody's generally views uncommitted facilities as providing little in the way of support for CP borrowings. Accordingly, our Prime -1 rating of MHEB's CP program relies principally on the guarantee of the Province.

Rating Outlook

The Stable Outlook reflects the outlook of the guarantor, the Province of Manitoba.

What Could Change the Rating - Up

A change in the rating of the guarantor

What Could Change the Rating - Down

A change in the rating of the guarantor

Moody's Investors Service

CREDIT RATINGS ARE MIS'S CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES. MIS DEFINES CREDIT RISK AS THE RISK THAT AN ENTITY MAY NOT MEET ITS CONTRACTUAL, FINANCIAL OBLIGATIONS AS THEY COME DUE AND ANY ESTIMATED FINANCIAL LOSS IN THE EVENT OF DEFAULT. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. CREDIT RATINGS DO NOT CONSTITUTE INVESTMENT OR FINANCIAL ADVICE, AND CREDIT RATINGS ARE NOT RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. CREDIT RATINGS DO NOT COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MIS ISSUES ITS CREDIT RATINGS WITH THE EXPECTATION AND UNDERSTANDING THAT EACH INVESTOR WILL MAKE ITS OWN STUDY AND EVALUATION OF EACH SECURITY THAT IS UNDER CONSIDERATION FOR PURCHASE, HOLDING, OR SALE.

COSS Design and Supplementary Information

The Board accepts the basic process of functionalization, classification and allocation in the COSS model advanced by MH's recommended approach. The historical embedded cost COSS model will, however, be amended as herein directed. Parallel and additional information on marginal costs and carbon emissions will supplement the embedded cost COSS filing, providing the Board with a broader and more comprehensive understanding of matters important to rate setting, fairness between customer classes and environmental concerns.

The Board will consider displaced carbon emissions as well as marginal cost when reviewing the RCC indices produced through the mechanism of an historic embedded cost COSS. The Board confirms that the primary objective of COSS is to assist in the testing of the fairness of rates between domestic customer classes. This objective is met in part by the allocation of MH's prospective revenues and expenses by customer class, in accordance with cost causation, legislation, policy and the public interest.

COSS forms one of three primary components of rate setting, the others being the determination of revenue requirement and rate design. The Board confirms the continued use of ZOR within COSS, with the ZOR range of .95-1.05 to also continue being the test for fairness provided by the historical embedded cost COSS model, excluding and in advance of the consideration of other information and objectives.

The Board will evaluate RCC ratings both pre and post net export allocations. This test will allow the Board to consider what the RCC of each class would be if there either were no export earnings to allocate or net export revenues were distributed in some other manner. In assessing rate fairness, the Board will also consider parallel marginal and environmental cost information. This other information may also prove of assistance with respect to revenue requirement and rate design.

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CAC/MSOS/MH II-75

Subject: **Proposed Rates and Customer Impacts**
Reference: **CAC/MSOS/MH I- 66 c)**
CAC/MSOS/MH I-46 a)

a) **Please reconcile the marginal costs provided in response to 66 c) with the levelized value assigned to DSM per 46 a).**

ANSWER:

It should be noted that the marginal cost components in the response to CAC/MSOS/MH I-66(c) were not correct and should be revised as follows:

Generation -	6.01 ¢/kW.h
Transmission -	0.83 ¢/kW.h
Distribution -	0.51 ¢/kW.h
Total Estimated Marginal Cost	7.23 ¢/kW.h

The above marginal costs apply to customers at the distribution level and were derived for the year 2010/11. This marginal cost is in 2010 dollars and was derived utilizing assumptions that are consistent with the 2009 power resource plan. If this marginal cost were to be referenced to a generating station location, the marginal cost of the generation component would be 5.27 ¢/kW.h instead of 6.01 due removing the 14% loss factor between the generating station and the distribution level reference points. The 5.27 ¢/kW.h marginal cost is the appropriate value that should be compared to the levelized marginal cost for DSM that is provided in the response to CAC/MSOS/MH I-46(a).

The marginal cost for DSM of 5.53 ¢/kW.h that is provided in the response to CAC/MSOS/MH I-46(a) for the 2009 Power Smart Plan is referenced to the generating station location in the system as requested and thus does not include the transmission and distribution components. This marginal cost utilized assumptions that are consistent with the 2008 power resource plan and was escalated such that it could be stated in 2009 dollars. An additional factor that is different compared to the marginal cost in the response to CAC/MSOS/MH I-66(c) is that it reflects a 10 year levelized value. This 10-year marginal cost would be higher than a 2010/11 value because marginal costs increase over the years as export prices are forecast to increase.

In summary, the marginal costs in the two responses are relatively similar after appropriate adjustments are made for several factors that are different in the two applications.

(10)

CAC/MSOS/MH I-62

Subject: **Financial Forecast – Risk Analysis**
Reference: **Appendix 5.2, pages 20-22**

d) **Please provide a forecast for 2008/09 through to 2019/20 of the marginal domestic energy price for each customer class based on the current MH09-1. Note: For purposes of the response assume the average rate increase is applied to all customer classes.**

ANSWER:

The table on the following page depicts the marginal domestic energy price for each customer class for the period 2009/10 to 2019/20. The 2009/10 and 2010/11 figures are based on approved rates, whereas 2011/12 figures are based on rates proposed as part of the current General Rate Application for rates effective April 1, 2011. All prices thereafter assume that IFF09 rate increases are applied across-the-board.

FISCAL YEAR:		2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20
Rate Increase per IFF09			2.90%	2.90%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%
Residential												
1st block:	53%	6.25	6.38	6.47	6.70	6.93	7.17	7.42	7.68	7.95	8.23	8.52
Run-off:	47%	6.30	6.57	7.23	7.48	7.74	8.01	8.29	8.58	8.88	9.19	9.51
GS Small:												
1st Block:	87% of bills	6.66	6.84	7.03	7.28	7.53	7.79	8.06	8.34	8.63	8.93	9.24
2nd Block:	6% of bills	4.48	4.69	4.88	5.05	5.23	5.41	5.60	5.80	6.00	6.21	6.43
Run-Off:	7% of bills	2.86	3.05	3.20	3.31	3.43	3.55	3.67	3.80	3.93	4.07	4.21
GS Medium:		2.86	3.05	3.20	3.31	3.43	3.55	3.67	3.80	3.93	4.07	4.21
GS Lrg 750-30		2.73	2.88	3.01	3.12	3.23	3.34	3.46	3.58	3.71	3.84	3.97
GS Lrg 30-100		2.58	2.69	2.81	2.91	3.01	3.12	3.23	3.34	3.46	3.58	3.71
GS Lrg >100		2.52	2.62	2.73	2.83	2.93	3.03	3.14	3.25	3.36	3.48	3.60