CAC/MSOS/MH/RISK-1

Reference: **KPMG - Manitoba Hydro - External Quality Review, Chapter 2, pages 16 - 17**

Preamble: **KPMG states:**

For utilities, equity, through retained earnings, provides confidence to financial markets and aids in securing financing at attractive interest rates, and provides increased assurance of future rate stability and a cushion against risk.

a) Please provide copies of each document, analysis and working paper support relied on by KPMG to make the above statement with respect to utilities in general.

ANSWER:

KPMG Response:

This is a general statement based on KPMG's extensive global experience in this industry and extensive client base of utilities.

CAC/MSOS/MH/RISK-1

Reference: **KPMG - Manitoba Hydro - External Quality Review, Chapter 2, pages 16 - 17**

Preamble: **KPMG states:**

> **For utilities, equity, through retained earnings, provides confidence to financial markets and aids in securing financing at attractive interest rates, and provides increased assurance of future rate stability and a cushion against risk.**

b) **Please clarify the reason to distinguish "equity, through retained earnings" from other equity" in the context of the above passage.**

c) **Provide examples where an investor owned utility distinguishes the importance of its equity between retained earnings and equity from shareholder equity for the purpose of setting its rates.**

d) **Provide examples where a regulator of an investor owned utility distinguishes the importance of its equity between retained earnings and equity from shareholder equity for the purpose of setting rates for the utility.**

ANSWER:

KPMG Response:

The general practice for most utilities, particularly for government-owned utilities, is that equity is generated in the company predominantly from retained earnings. Shareholders' equity in broad terms consists of share capital and retained earnings. The intention is not to separate equity and retained earnings but to describe Manitoba Hydro's current circumstance. See Manitoba Hydro's Consolidated Financial Statements.

CAC/MSOS/MH/RISK-1

Reference: **KPMG - Manitoba Hydro - External Quality Review, Chapter 2, pages 16 - 17**

Preamble: **KPMG states:**

For utilities, equity, through retained earnings, provides confidence to financial markets and aids in securing financing at attractive interest rates, and provides increased assurance of future rate stability and a cushion against risk.

e) Please clarify the specific qualities of retained earnings, contemplated by KPMG, that provide "confidence to the financial markets", for i) utilities generally and ii) for Manitoba Hydro.

f) Please clarify the specific qualities of retained earnings, contemplated by KPMG, that "aids in securing financing at attractive interest rates" for i) utilities generally and ii) for Manitoba Hydro.

ANSWER:

KPMG Response:

The capital structure of utilities is one of many factors considered by financial and credit markets. Capital structures and debt to equity ratios are typically compared among peer companies by financial analysts.

CAC/MSOS/MH/RISK-1

Reference: **KPMG - Manitoba Hydro - External Quality Review, Chapter 2, pages 16 - 17**

Preamble: **KPMG states:**

For utilities, equity, through retained earnings, provides confidence to financial markets and aids in securing financing at attractive interest rates, and provides increased assurance of future rate stability and a cushion against risk.

g) Please confirm that interest coverage and cash flow are the key determinants of ability to finance at attractive rates.

h) If the confirmation sought in (g) above, is not provided, please explain.

ANSWER:

KPMG Response:

Market confidence and interest rates are affected by a wide range of factors, including interest coverage, cash flow, capital structure, business outlook and others.

<u>CAC/MSOS/MH/RISK-1</u>

Reference: **KPMG - Manitoba Hydro - External Quality Review, Chapter 2, pages 16 - 17**

Preamble: **KPMG states:**

For utilities, equity, through retained earnings, provides confidence to financial markets and aids in securing financing at attractive interest rates, and provides increased assurance of future rate stability and a cushion against risk.

i) Please provide copies of the covenants associated with MH debt issued by the Province or guaranteed by the Province, including those dealing with interest coverage and cash flow.

<u>ANSWER</u>:

KPMG is not in possession of the requested information.

<u>CAC/MSOS/MH/RISK-1</u>

Reference: **KPMG - Manitoba Hydro - External Quality Review, Chapter 2, pages 16 - 17**

Preamble: **KPMG states:**

For utilities, equity, through retained earnings, provides confidence to financial markets and aids in securing financing at attractive interest rates, and provides increased assurance of future rate stability and a cushion against risk.

j) To the extent that MH debt does not include debt covenants commonly found in debt issued in the capital markets, please clarify which of those are absent from MH debt covenants.

<u>ANSWER</u>:

KPMG is not in possession of the requested information.

CAC/MSOS/MH/RISK-1

Reference: **KPMG - Manitoba Hydro - External Quality Review, Chapter 2, pages 16 - 17**

Preamble: **KPMG states:**

For utilities, equity, through retained earnings, provides confidence to financial markets and aids in securing financing at attractive interest rates, and provides increased assurance of future rate stability and a cushion against risk.

k) Please confirm that "retained earnings" are a historical accounting categorization of income not distributed to the shareholders, reinvested in the operation of the business and do not represent a source of ready cash to pay a firms liabilities as they come due.

l) If the confirmation sought in (j) above, is not provided, please explain.

ANSWER:

KPMG Response:

"Retained earnings" has the meaning attributed to it under Canadian GAAP.

<u>CAC/MSOS/MH/RISK-1</u>

Reference: **KPMG - Manitoba Hydro - External Quality Review, Chapter 2, pages 16 - 17**

Preamble: **KPMG states:**

> **For utilities, equity, through retained earnings, provides confidence to financial markets and aids in securing financing at attractive interest rates, and provides increased assurance of future rate stability and a cushion against risk.**

m) **Please confirm that the investment community/financial market rely little on the retained earnings in determining the interest rates that Manitoba Hydro can secure for its debt obligations.**

n) **If the confirmation sought in (l) above, is not provided, please provide copies of the analysis, working papers and other documents to demonstrate that the investment community/financial markets rely on the retained earnings of Manitoba Hydro in determining interest rates for debt obtained by Manitoba Hydro.**

<u>ANSWER</u>:

<u>KPMG Response</u>:

Capital structure is one of many factors that financial markets consider in determining the interest rate on Manitoba Hydro debt.

CAC/MSOS/MH/RISK-2

Reference: **KPMG - Manitoba Hydro - External Quality Review, Chapter 2, page 17**

Noteworthy is that MH's long-term debt is guaranteed by the Government of Manitoba (with the exception of $77 million in bonds issued for mitigation projects) ***(Manitoba Hydro Consolidated Financial Statements for the year ending March 31, 2009, Note 11)*****.**

a) Please clarify KPMG's understanding that the long term debt is actually guaranteed by the Government of Manitoba given that the Government of Manitoba is the issuer of the debt.

ANSWER:

KPMG Response:

See Note 11 to the Consolidated Financial Statements in of The Manitoba Hydro-Electric Board 58th Annual Report.

"Long-term debt is guaranteed by the Province of Manitoba, with the exception of Manitoba Hydro-Electric Board Bonds in the amount of $77 million (2008 – $104 million) issued for mitigation projects."

Most of the financing as indicated in Note 11 of the Consolidated Financial Statements is from advances from the Province of Manitoba represented by debenture debt of the Province.

CAC/MSOS/MH/RISK-3

Reference: **KPMG - Manitoba Hydro - External Quality Review, Executive Summary, page xviii**

Preamble: **KPMG defines "excess dependable energy" as the excess firm capacity until such time that the incremental Manitoba load "catches up" to the incremental resources added to the system.**

a) Provide the Excess Dependable Energy for each year 2000 – 2012.

ANSWER:

The following table provides the amount of "excess dependable energy" which is defined as the dependable energy supply that is surplus to Manitoba domestic load. This surplus energy supply has been determined as the difference between the dependable supply of the system from all sources and the Manitoba domestic load that was forecasted for the specified year.

Year	Excess Dependable Energy GW.h
2000/01	7904
2001/02	7486
2002/03	9268
2003/04	8114
2004/05	7539
2005/06	5885
2006/07	5326
2007/08	4683
2008/09	4417
2009/10	4349
2010/11	4503
2011/12	5071
2012/13	5414

CAC/MSOS/MH/RISK-4

Reference: **KPMG - Manitoba Hydro - External Quality Review, Chapter 2, page 16**

Preamble: **KPMG states:**

"Capital intensive industries such as electric utilities typically use greater leverage and have relatively high debt to equity ratios compared to most industries. In particular, a regulated utility with significant tangible assets and stable, relatively predictable future earnings will tend to use more debt financing and can take on higher debt than most companies in other industries. The more debt it can take on in its capital structure, the lower the overall cost of capital as the cost of debt is lower than the cost of equity."

a) **Please provide copies of each document, analysis and workpaper support relied on by KPMG to make the above statement.**

ANSWER:

KPMG Response:

KPMG has deep global experience in corporate finance and in working in the utility sector and other sectors of the economy.

This is a general statement based on our extensive experience.

The capital intensive nature of electric utilities and relatively higher debt to equity ratios than many other industries is well understood. The fact that the cost of debt is lower than the cost of equity is also well understood.

<u>CAC/MSOS/MH/RISK-5</u>

Reference: **KPMG - Manitoba Hydro - External Quality Review, Chapter 4 and Appendix J**

a) **Provide the source of the Debt Equity target of 75:25 used by KPMG in its report.**

<u>ANSWER</u>:

<u>KPMG Response</u>:

See Manitoba Hydro's Consolidated Financial Statements for the year ended March 31, 2009, Note 17, second paragraph.

"The Corporation monitors its capital structure on the basis of its equity ratio. Manitoba Hydro's current target is to maintain a minimum equity ratio of 25%."

CAC/MSOS/MH/RISK-5

Reference: KPMG - Manitoba Hydro - External Quality Review, Chapter 4 and Appendix J

b) Confirm that KPMG did not conduct analysis on the appropriateness of the 75:25 debt equity for Manitoba Hydro.

c) If the confirmation sought in (b) above, is not provided, provide each of the specific references from the KPMG report which provide analysis, assessment and conclusions of KPMG regarding the appropriateness of a 75:25 debt equity ratio for Manitoba Hydro.

d) Provide copies, of independent third party reports, analysis and other documents (of which KPMG is aware) which demonstrate that the appropriate debt equity ratio for Manitoba Hydro is 75:25.

ANSWER:

KPMG Response:

As noted in the Executive Summary and in Chapter 2, the appropriate balance and mix of debt and equity has, and will likely continue to be, an ongoing issue for Manitoba Hydro, its regulator, its shareholder, rate payers and lenders.

It was not in KPMG's scope to determine the optimal capital structure.

As noted in Chapter 2, various PUB Board Orders (such as 101/04 below) reiterated the 75:25 debt to equity target.

"Achieving a debt:equity level of 75:25 would provide increased rate stability benefits, and hold down financial charges. The 75:25 benchmark represents a modest target, one comparable with the current debt: equity ratios of similar Crown hydroelectric utilities in other Canadian provinces (B.C. Hydro and Hydro Quebec). In summary, meeting this target within a reasonable period of time would reduce long-term pressure on domestic electricity rates, better assure bondholders and thus constrain financial charges and provide a hedge against a future drought." (PUB, Board Order 101/04, July 28, 2004, p.31)

CAC/MSOS/MH/RISK-6

Reference: KPMG Report, pages 17 - 19

a) Did KPMG undertake any analysis to determine the appropriateness of Manitoba Hydro's current minimum target equity ratio of 25% from a risk management perspective? If yes, please specifically note the conclusions and provide the supporting analysis.

ANSWER:

KPMG Response:

It was not in KPMG's scope to determine the optimal capital structure.

<u>CAC/MSOS/MH/RISK-6</u>

Reference: KPMG Report, pages 17 - 19

b) With respect to page 18 (paragraph #7), please describe more fully how (without sufficient equity) Manitoba Hydro "would have had to turn to the Government of Manitoba as its shareholder and/or its ratepayers to cover the large loss in 2003/04".

<u>ANSWER</u>:

<u>KPMG Response</u>:

See Exhibit 2-1 of retained earnings declined from $1,302 million in fiscal 2001/02 to $734 million in fiscal 2003/04, a sharp decline of $568 in only two years.

In 1996, retained earnings were only $354 million. From 1996 to 2003, retained earnings were built up to $1,302 million. If equity through to 2003 remained at, say, 1996 levels, Manitoba Hydro would have ended up in a deficit position, with negative equity, as a result of the financial losses incurred during the 2003-2004 drought period.

<u>CAC/MSOS/MH/RISK-7</u>

Reference: **KPMG Report, page 4 and Appendix B, pages 16-17**

Preamble: **The Main Report identifies four Issue Themes and presents its findings for each. The Phase 1 Report (Appendix B) identifies five Issue Themes for carry forward to Phase 2. The additional one identified in Phase 1 for carry forward to Phase 2 but not specifically noted as an Issue Theme in the Main Report is "Portfolio Monitoring and Reporting".**

a) Please reconcile the categorization of Issue Themes as set out in the Phase 1 Report with the Issue Theme areas used in the Main (Phase 2) Report.

b) Please explain if and how the issues categorized under "Portfolio Monitoring and Reporting" were dealt with in the Phase 2 Report.

<u>ANSWER</u>:

<u>KPMG Response</u>:

Please refer to section 1.2.1 that reconciles the categorization of Issues and Themes as set out in the Phase 1 Report with the Issues and Theme areas used in the Main (Phase 2) Report and further specifically explains that for ease of presentation, the theme regarding portfolio monitoring and reporting that was included in Phase 1 work was merged into Theme 4 (power risk management). Power risk management is comprehensively covered in chapter 6.

<u>CAC/MSOS/MH/RISK-8</u>

Reference: **NYC Public Document, June 2010**
KPMG Report, page 1

a) **Please provide "table of concordance" which indicates the alignment of each of the issues noted in the NYC's Public Document with the four Theme and nine Issue categories adopted by KPMG.**

<u>ANSWER</u>:

<u>KPMG Response</u>:

KPMG developed a conceptual framework to guide it in its external quality review of Manitoba Hydro, as detailed in Section 1.2. In applying this conceptual framework, KPMG carried out a detailed review of the Consultant's Reports and other documents to group the NYC's assertions into the Issues and Themes as presented in the KPMG report.

CAC/MSOS/MH/RISK-8

Reference: **NYC Public Document, June 2010**
KPMG Report, page 1

b) **Please provide a schedule that sets out the issues identified in the NYC Public Document which are not addressed by KPMG and, in each case, explain why.**

ANSWER:

KPMG Response:

In assessing the Issues, we took the approach that our work would not necessarily result in a total concurrence with or rejection of the assertions underlying an Issue; in some instances, we have found that we concur with some elements of an assertion and reject other elements. Accordingly, we would suggest that readers of this report focus on the analysis of the Issues as well as any recommendations that relate to the Issues, rather than focusing on whether we concur with or reject any particular assertion.

<u>CAC/MSOS/MH/RISK-9</u>

Reference: **KPMG - Manitoba Hydro - External Quality Review, Chapter**

Preamble: **KPMG uses the following terms: "dependable energy", "dependable supply" and "dependable supply energy".**

a) **Please confirm that "dependable energy", "dependable supply" and "dependable supply energy" are synonymous.**

b) **If the confirmation sought in (a) above, is not provided, please provide separate definitions that distinguish each term from the other two.**

<u>ANSWER</u>:

<u>KPMG Response</u>:

The terms noted are synonymous.

<u>CAC/MSOS/MH/RISK-10</u>

Reference: KPMG Report, pages 28 - 29

a) Please provide Manitoba Hydro's current plans for model development as noted in the second last bullet on page 28.

<u>ANSWER</u>:

As indicated in the second last bullet on page 28 of the KPMG Report, Manitoba Hydro is continually enhancing its generation planning and operating models. Specific model development plans are currently under review by Manitoba Hydro, and therefore are not available to be provided at this time.

<u>CAC/MSOS/MH/RISK-10</u>

Reference: KPMG Report, pages 28 - 29

b) Does Manitoba Hydro intend to develop more formal model documentation, as recommended by KPMG (page 29)? If so, what specifically are Manitoba Hydro's plans and the timeframe for accomplishing them?

<u>ANSWER</u>:

Manitoba Hydro intends to enhance its modeling documentation for both HERMES and SPLASH. A specific plan has yet to be developed and approved with associated timeframes and resource requirements.

CAC/MSOS/MH/RISK-11

Reference: KPMG Report, pages 45, 50, 52 and 53

a) Given KPMG's comments about the value of independent and periodic reviews as well as peer reviews of the model, does Manitoba Hydro have any plans to initiate such reviews? If yes, please outline. If no, why not?

ANSWER:

Manitoba Hydro is in the process of assessing the recommendations from KPMG including their applicability, cost and potential implementation timeframe. Manitoba Hydro is not in a position at this time to provide information on this specific recommendation.

CAC/MSOS/MH/RISK-11

Reference: KPMG Report, pages 45, 50, 52 and 53

b) What is Manitoba Hydro's response to KPMG's recommendation that it develop more formal documentation of the HERMES model?

ANSWER:

Please see Manitoba Hydro's response to CAC/MSOS/MH/RISK-10(b) which discusses more formal documentation of models.

AC/MSOS/MH/RISK-12

Reference: KPMG Report, pages 36 and 41

a) On page 41, KPMG states that Manitoba Hydro does not make forward opportunity sales unless it has sufficient firm capacity and energy resources to serve load 95% of the time. However, on page 36, the report states that the output of HERMES is a single outcome for a single set of assumptions as opposed to a range of outcomes. How does Manitoba Hydro establish the 95% probability values given the deterministic output from HERMES?

ANSWER:

HERMES includes a capacity availability simulation module that uses the hourly historic weather record since 1953 to determine the probability distribution of Manitoba Hydro's surplus capacity from which the 95% probability level can be selected. In order to ensure that firm energy resources are available, HERMES is run under the assumption of water supplies at the 5% probability level.

<u>CAC/MSOS/MH/RISK-13</u>

Reference: KPMG Report, pages 42 - 43

a) Please explain further the basis for the D.R.S. Is it based on a one-year drought (i.e. the inflow for 1940/41)? Exactly at what point in time – looking forward – is the low flow assumed to start?

<u>ANSWER</u>:

The Drought Reserve Storage requirement is based on 1940/41 inflow condition which is assumed to start on April 1st of the fiscal year following the "operating horizon." Manitoba Hydro plans its operations through the operating horizon such that the energy in reservoir storage at the end of the horizon exceeds the DRS. The operating horizon ends on March 31st and is extended in the fall to include the second year; hence the operating horizon is generally between 5 and 17 months in duration.

<u>CAC/MSOS/MH/RISK-13</u>

Reference: KPMG Report, pages 42 - 43

b) On page 43, the KPMG report states that the implementation of a production schedule, in practice, involves a commitment for only the next week of the planning horizon. On page 36 the Report states that EMMA produces forecasts for a time horizon of up to one year. Based on the output from a particular HERMES/EMMA run, how far into the future will Manitoba Hydro make commitments for export sales (as opposed to production)?

<u>ANSWER</u>:

HERMES is used to evaluate Manitoba Hydro's short term energy and capacity position and the economics of a particular opportunity transaction based upon current and a range of future conditions based on conservative assumptions.

Given the highly variable nature of the water supply, term sales are generally limited to three months with the vast majority of term sales being made for the prompt month.

<u>CAC/MSOS/MH/RISK-14</u>

a) **MH has embarked on a series of studies to understand better the probabilities of drought at a given level. What statistical methodologies are being used for these studies? Is more than one statistical methodology being considered?**

<u>ANSWER</u>:

Manitoba Hydro supported post graduate research projects which derived the statistical correlation between streamflows in the various basins providing water supply to the Manitoba Hydro system and also derived the serial correlation of streamflows in each month of the year. These statistical correlations were then utilized to generate long-term sequences of synthetic system monthly streamflows by utilizing the Monte Carlo technique. The synthetic sequences were analyzed for drought periods of various severity and duration in order to assess the probability of historic drought periods.

<u>CAC/MSOS/MH/RISK-15</u>

Reference: KPMG Report, pages 63-64

a) Under "general observations" KPMG notes a number of recent improvements in management of data inputs to HERMES. Please indicate the specific timeframe over which these improvements were implemented and whether or not they were all in place prior to the use of the models in preparing IFF09-1. If some improvements were not in place prior to AFF09-1, please indicate which ones.

<u>ANSWER</u>:

The improvements discussed in this section of the KPMG report involved the frequency of market forecasting and the calibration to the MISO Day 2 Market, which were implemented prior to IFF09-1.

CAC/MSOS/MH/RISK-16

Reference: KPMG Report, pages 64-65

a) Did KPMG look at the degree to which the modelling of future prices and price differentials influences decisions regarding the sale of surplus power in Day Ahead and Real Time markets and the impact of the assertions made by the NYC? If yes, what were the conclusions? If not, why not?

ANSWER:

KPMG Response:

KPMG analyzed the impact of future price forecasts on MH production decisions and, hence, on the availability of power for sale in Day Ahead and Real Time markets, in Section 3.8. As noted on page 108, different price forecasts result in only a limited impact on overall financial results.

CAC/MSOS/MH/RISK-17

Reference: KPMG - Manitoba Hydro - External Quality Review, Chapter 3, page 68

Preamble: The capital costs and associated debt charges as a result of new generation are fixed in advance.

a) Please elaborate on what is generally meant by capital costs of new generation are "fixed in advance".

b) Please elaborate on what is meant by associated debt charges of new generation are "fixed in advance". Please explain how.

c) Please identify and describe, that KPMG is aware, each of the methods by which a utility could fix, in advance, the capital costs of new generation.

d) Please identify and describe, that KPMG is aware, each of the methods by which a utility could fix, in advance, the associated debt charges of new generation.

e) Please clarify how, in the context of Manitoba Hydro, how it has fixed, fixes or plans to fix (in advance) its capital costs of new generation.

f) Please provide examples of each of the items described in (e) above.

g) Please clarify how, in the context of Manitoba Hydro, how it has fixed, fixes or plans to fix (in advance) its associated debt charges of new generation.

h) Please provide examples of each of the items described in (g) above.

i) Please provide copies of contracts or hedges used by Manitoba Hydro to fix, in advance, its capital charges and associated debt charges.

j) Please provide the description in the notes to the audited financial statements that KPMG relies on to make, or support, the statement quoted in the above passage.

ANSWER:

KPMG Response:

When Manitoba Hydro embarks upon the construction of a new generating facility, the costs of that facility can be estimated with a reasonable degree of accuracy. Similarly, financing charges can be forecast with a reasonable degree of accuracy based on financial market conditions. Once the facility has been completed, capital costs are known with certainty. Financing charges are also likely to have been fixed. In contrast, the values associated with future market prices remain uncertain right up until the point at which an energy sale is made. Further, in contrast to a fossil-fuelled facility, the variable operating costs for a hydro-electric station are small. Hence, capital charges reflect a much larger proportion of a hydro-electric station's revenue requirement than they do for a fossil-fuelled plant. For a fossil-fuel plant, the price of input fuel represents a significant component of the costs that must be recovered from electricity sales. These input fuel costs will vary widely with energy market conditions throughout the generating plant's operating life.

CAC/MSOS/MH/RISK-18

Reference: KPMG Report, pages 74-75

a) Why is it more appropriate to calculate correlations using monthly as opposed to hourly data when, as noted earlier in the same section, purchases and sales can be limited to only a few hours in month.

ANSWER:

KPMG Response:

For the purpose of Exhibit 3-10, we examined correlations on a monthly basis because our understanding of NYC's allegations was that they related to monthly inputs to the HERMES system for the purpose of generating pricing assumptions within this system.

It is reasonable to calculate correlations on a monthly basis for an analysis of price inputs to HERMES because futures contracts are quoted for monthly time intervals. Similarly, the price forecasts purchased by MH are provided on a monthly basis. Hence, the data available with respect to future price levels are monthly rather than hourly in nature.

CAC/MSOS/MH/RISK-18

Reference: KPMG Report, pages 74-75

b) Did KPMG investigate the correlation based on hourly data and, if so, what was the result?

ANSWER:

KPMG Response:

KPMG did not analyze correlations on an hourly basis.

<u>CAC/MSOS/MH/RISK-19</u>

Reference: KPMG Report, page 108

a) What is KPMG's estimate as to a reasonable value for the impact of using inaccurate prices in HERMES?

<u>ANSWER</u>:

<u>KPMG Response</u>:

KPMG's analysis of the potential impact of using inaccurate or stale prices is outlined in Section 3.8. This section outlines our views as to the potential magnitude of impacts in the event that inaccurate prices were used.

CAC/MSOS/MH/RISK-19

Reference: KPMG Report, page 108

b) Is the use of inaccurate or stale prices still an ongoing issue or has it been addressed through the changes noted on page 63 (Section 3.7.3)?

ANSWER:

KPMG Response:

Based on our review, we do not believe that the use of inaccurate or stale prices is an issue at MH. The changes noted on page 63 reflect an ongoing process of improvement, as would be expected for an organization operating in a changing environment.

<u>CAC/MSOS/MH/RISK-20</u>

Reference: KPMG Report, pages 115 - 116

a) Can Manitoba Hydro confirm KPMG's understanding that the company does not commit all of the system's dependable energy to long-term contracts as set out in the last paragraph of page 115. If so, how does Manitoba Hydro determine how much of the forecast dependable energy it will commit?

<u>ANSWER</u>:

Manitoba Hydro is not in a position to confirm KPMG's understanding on this issue. Please see Manitoba Hydro's responses to CAC/MSOS/MH/RISK-21(c), (d) and (e).

CAC/MSOS/MH/RISK-20

Reference: KPMG Report, pages 115 - 116

b) For each of the last two Power Resource Plans, please provide a schedule that sets out the percentage of available dependable energy that is required to service forecast domestic load and long-term exports in each year of the plan.

ANSWER:

The following table sets out the percentage of dependable energy required to service forecast domestic load and long-term exports in each year of the 2008/09 and 2009/10 power resource plans.

	2008/09 Power Resource Plan			2009/10 Power Resource Plan		
	MB Load	LT Sales	Total	MB Load	LT Sales	Total
2008/09	85%	13%	98%			
2009/10	87%	13%	100%	84%	13%	97%
2010/11	89%	12%	101%	85%	12%	97%
2011/12	90%	11%	101%	83%	11%	94%
2012/13	88%	11%	99%	83%	10%	93%
2013/14	88%	10%	98%	84%	10%	94%
2014/15	89%	10%	99%	86%	10%	96%
2015/16	89%	7%	96%	89%	5%	94%
2016/17	89%	7%	96%	90%	4%	94%
2017/18	89%	7%	96%	90%	4%	94%
2018/19	85%	8%	94%	85%	6%	91%
2019/20	83%	10%	94%	83%	8%	91%
2020/21	83%	12%	95%	83%	10%	93%
2021/22	84%	13%	97%	84%	10%	94%
2022/23	78%	16%	94%	78%	13%	91%
2023/24	74%	15%	89%	74%	13%	87%
2024/25	75%	15%	90%	75%	13%	88%
2025/26	80%	10%	90%	78%	9%	87%
2026/27	81%	9%	90%	79%	9%	88%
2027/28	82%	9%	91%	80%	9%	89%

	2008/09 Power Resource Plan			2009/10 Power Resource Plan		
	MB Load	**LT Sales**	**Total**	**MB Load**	**LT Sales**	**Total**
2028/29	83%	9%	92%	82%	9%	91%
2029/30	83%	9%	92%	83%	9%	92%
2030/31	86%	7%	93%	85%	7%	92%
2031/32	87%	6%	93%	86%	6%	92%
2032/33	90%	4%	93%	89%	4%	93%
2033/34	90%	3%	94%	90%	3%	93%
2034/35	91%	4%	95%	91%	3%	94%
2035/36	92%	-	92%	93%	1%	94%
2036/37	93%	-	93%	94%	-	94%
2037/38	94%	-	94%	95%	-	95%
2038/39	95%	-	95%	96%	-	96%
2039/40	96%	-	96%	97%	-	97%
2040/41	97%	-	97%	98%	-	98%
2041/42	98%	-	98%	99%	-	99%
2042/43	99%	-	99%	99%	-	99%
2043/44	100%	-	100%	99%	-	99%
2044/45				99%	-	99%

CAC/MSOS/MH/RISK-20

Reference: KPMG Report, pages 115 - 116

c) What is Manitoba Hydro's response to KPMG's recommendation (page 116) for a comprehensive review of the SPLASH model?

ANSWER:

Manitoba Hydro is in the process of assessing the recommendations from KPMG including their applicability, cost and potential implementation timeframe. Manitoba Hydro is not in a position at this time to provide information on this specific recommendation.

CAC/MSOS/MH/RISK-21

Reference: **KPMG - Manitoba Hydro - External Quality Review, Chapter 3, page 115**

Preamble: **KPMG states:**

Our understanding is that MH does not usually commit all of the system's dependable energy to serving Manitoba load or long-term contracts. MH tries to maintain some surplus dependable energy to deal with uncertainty in the rate of domestic load growth or in other factors.

a) Please confirm surplus dependable energy is the firm energy available from hydro and non-hydro generation that is not required for Manitoba domestic load or long term export contracts.

b) If the confirmation in (a) cannot be provided, please provide the correct definition for "surplus dependable energy"

ANSWER:

KPMG Response:

We confirm that surplus dependable energy is the firm energy available from hydro and non-hydro generation and contracted imports that is not required for Manitoba's domestic load or long term export contracts.

<u>CAC/MSOS/MH/RISK-21</u>

Reference: **KPMG - Manitoba Hydro - External Quality Review, Chapter 3, page 115**

Preamble: **KPMG states:**

Our understanding is that MH does not usually commit all of the system's dependable energy to serving Manitoba load or long-term contracts. MH tries to maintain some surplus dependable energy to deal with uncertainty in the rate of domestic load growth or in other factors.

c) **Provide the amount of surplus dependable energy maintained by MH to deal with the uncertainty in rate of domestic load growth for each year 2000 to 2012.**

<u>ANSWER</u>:

<u>KPMG Response</u>:

KPMG is not in possession of the requested information.

CAC/MSOS/MH/RISK-21

Reference: **KPMG - Manitoba Hydro - External Quality Review, Chapter 3, page 115**

Preamble: **KPMG states:**

Our understanding is that MH does not usually commit all of the system's dependable energy to serving Manitoba load or long-term contracts. MH tries to maintain some surplus dependable energy to deal with uncertainty in the rate of domestic load growth or in other factors.

d) Please describe each of the "other factors", as used by KPMG in the above quote.

ANSWER:

KPMG Response:

Other factors that suggest that some surplus dependable energy should be maintained include uncertainty in the quantity of dependable energy available and in the effectiveness of demand management strategies.

<u>CAC/MSOS/MH/RISK-21</u>

Reference: **KPMG - Manitoba Hydro - External Quality Review, Chapter 3, page 115**

Preamble: **KPMG states:**

Our understanding is that MH does not usually commit all of the system's dependable energy to serving Manitoba load or long-term contracts. MH tries to maintain some surplus dependable energy to deal with uncertainty in the rate of domestic load growth or in other factors.

e) **For each of the "other factors identified in (d) above, please, provide the amount of surplus dependable energy maintained by MH to deal with the uncertainty in rate of domestic load growth for each year 2000 to 2012.**

<u>ANSWER</u>:

<u>KPMG Response</u>:

KPMG is not in possession of the requested information.

<u>CAC/MSOS/MH/RISK-22</u>

Reference: KPMG Report, page 123

a) Reference is made in the second bullet of section 4.2 to Manitoba Hydro developing reference prices based on two methodologies "described above". Please indicate where this description can be found. If redacted, please provide a general explanation of each methodology. In particular, please describe the nature of the "premium" noted in the third bullet.

<u>ANSWER</u>:

Section 4.6, *Pricing of Power Sold under Long-term Contract* describes the two methodologies in detail. The methods are summarized in the last paragraph of Section 4.6 as follows:

"MH policy considers these uncertainties as follows. First, a price based on the average of price forecasts purchased from multiple power price forecasting consultants is calculated. A premium is then added to this result. Second, the MH policy calls for the calculation of the avoided cost of the potential counterparties as a benchmark against the long-term price forecast. Pricing a contract using a counterparty's avoided cost is a well established pricing methodology in the utility industry. Developing these two price estimates provides an indication of the potential range of a contract's price."

The premium is the negotiated amount as described at the beginning of Section 4.6. It "reflects the allocation of risk under the contract as well as the value received by each party. Both parties to the contract will enter into the agreement only if they both perceive that there are "gains" (financial and non-financial) from trade,…".

<u>CAC/MSOS/MH/RISK-23</u>

Reference: **KPMG - Manitoba Hydro - External Quality Review**

Preamble: **KPMG states:**

> **The amount of power thus freed up from long-term contract commitments would instead need to be sold on a short term, or spot basis, leading MH to be exposed to spot market price fluctuations in years when such surplus energy is available.**

a) Please elaborate on what KPMG means by "leading MH to exposed to spot market price fluctuations".

<u>ANSWER</u>:

<u>KPMG Response</u>:

This reference means that MH would face uncertainty, or risk, with respect to the amount of revenues that these spot market sales would generate.

CAC/MSOS/MH/RISK-23

Reference: KPMG - Manitoba Hydro - External Quality Review

Preamble: KPMG states:

The amount of power thus freed up from long-term contract commitments would instead need to be sold on a short term, or spot basis, leading MH to be exposed to spot market price fluctuations in years when such surplus energy is available.

b) Confirm that surplus energy is energy that will be generally available in anything other than a low-flow year. (page 126)

ANSWER:

KPMG Response:

Surplus energy is energy that will generally be available in anything other than a low-flow year.

CAC/MSOS/MH/RISK-23

Reference: **KPMG - Manitoba Hydro - External Quality Review**

Preamble: **KPMG states:**

The amount of power thus freed up from long-term contract commitments would instead need to be sold on a short term, or spot basis, leading MH to be exposed to spot market price fluctuations in years when such surplus energy is available.

c) Given its current operations, would not MH normally be exposed to the spot market for surplus energy? Explain.

ANSWER:

KPMG Response:

As noted in limb (c) of the question, MH is already normally exposed to spot market fluctuations with respect to its surplus energy. Hence, it is desirable to increase the amount of surplus energy that can be sold through fixed price long term contracts in order to reduce the revenue volatility arising from price fluctuations for the surplus energy sold on a spot basis.

CAC/MSOS/MH/RISK-24

Reference: KPMG Report, page 134

a) Would the revenue from short-term sales to the US also be in US dollars? If yes, please explain why long term as opposed to short term sales act as a foreign exchange risk hedge.

ANSWER:

Revenues from short term sales to the US are denominated in US dollars.

In discussing the foreign exchange risk hedge through the use of long term contracts in Section 4.5.1.1, the KPMG report on page 134 stated that the "revenue derived from long-term sales contracts is US dollar denominated. It thus serves as a natural hedge to the foreign exchange risk arising from the portion of MH's long-term debt that is US dollar denominated." The aforementioned discussion did not state that short term sales are excluded as a part of the foreign exchange risk natural hedge.

Both long and short term export revenues in US dollars are considered as part of the natural hedge with US dollar expenses. Given that the majority of Manitoba Hydro's US dollar interest expense arises from fixed rate USD financing, in order to establish a stable base for the natural hedge, the dependable nature of long term US dollar sales contracts is beneficial in the mitigation of foreign exchange risk.

CAC/MSOS/MH/RISK-25

Reference: KPMG Report, page 137

a) Please identify any instances in the past ten years where Manitoba Hydro has been unable to deliver energy from its own resources to meet export contract requirements and needed to purchase energy to meet its obligations. Please briefly describe the circumstances associated with each and whether the cost of replacement power exceeded the contracted sale price.

ANSWER:

Manitoba Hydro has never in the past ten years been unable to deliver energy from its own resources (including those available under Seasonal Diversity contracts) to meet its load requirements and its planning reserve obligations.

At times, Manitoba Hydro has elected to purchase energy to serve its obligation rather than to use its more expensive resources. On occasion, Manitoba Hydro has elected to continue serving an export commitment with a purchase when it was economic to do so, even though Manitoba Hydro had the right to curtail.

<u>CAC/MSOS/MH/RISK-26</u>

Reference: **KPMG - Manitoba Hydro - External Quality Review, Chapter 4, page 137, footnote 7**

Preamble: **KPMG states:**

For long-term firm power sales, our understanding is that MH does not enter agreements above the level of dependable energy it has calculated for the system.

KPMG refers, a number of times, to a Dependable Energy Criteria Policy that it has relied on in the development of its report.

a) Exclusive to anything filed on the record to date, please provide a copy of each document on which KPMG relied on for this understanding.

<u>ANSWER</u>:

<u>KPMG Response</u>:

KPMG's understanding was based on discussions with management at MH and the estimates of dependable energy in Manitoba Hydro's 2009/10 Power Resource Plan. Further, please refer to Exhibit 4-1 and the analysis in section 4.10 and section 4.11.

CAC/MSOS/MH/RISK-26

Reference: **KPMG - Manitoba Hydro - External Quality Review, Chapter 4, page 137, footnote 7**

Preamble: **KPMG states:**

For long-term firm power sales, our understanding is that MH does not enter agreements above the level of dependable energy it has calculated for the system.

KPMG refers, a number of times, to a Dependable Energy Criteria Policy that it has relied on in the development of its report.

b) TO MH: Please confirm this is an MH policy for entering contracts.

ANSWER:

Manitoba Hydro confirms that the Management Control Plan referenced in CAC/MSOS/MH/RISK-26(a) is the policy for entering into contracts for export sales.

CAC/MSOS/MH/RISK-26

Reference: KPMG - Manitoba Hydro - External Quality Review, Chapter 4, page 137, footnote 7

Preamble: KPMG states:

For long-term firm power sales, our understanding is that MH does not enter agreements above the level of dependable energy it has calculated for the system.

KPMG refers, a number of times, to a Dependable Energy Criteria Policy that it has relied on in the development of its report.

c) TO MH: If the confirmation sought in (b) is not provided, explain why it is not an MH policy.

ANSWER:

Please see Manitoba Hydro's response to CAC/MSOS/MH/RISK-26(b).

CAC/MSOS/MH/RISK-26

Reference: **KPMG - Manitoba Hydro - External Quality Review, Chapter 4, page 137, footnote 7**

Preamble: **KPMG states:**

For long-term firm power sales, our understanding is that MH does not enter agreements above the level of dependable energy it has calculated for the system.

KPMG refers, a number of times, to a Dependable Energy Criteria Policy that it has relied on in the development of its report.

d) **TO MH: Exclusive of anything filed on the record to date, please provide a copy of its internal document which confirms KPMG's understanding.**

ANSWER:

Please see Manitoba Hydro's response to CAC/MSOS/MH/RISK-26(a).

<u>CAC/MSOS/MH/RISK-26</u>

Reference: **KPMG - Manitoba Hydro - External Quality Review, Chapter 4, page 137, footnote 7**

Preamble: **KPMG states:**

For long-term firm power sales, our understanding is that MH does not enter agreements above the level of dependable energy it has calculated for the system.

KPMG refers, a number of times, to a Dependable Energy Criteria Policy that it has relied on in the development of its report.

e) TO MH: Please confirm that an internal document exists entitled Dependable Energy Criteria Policy or there exists an internal document that contains a Dependable Energy Criteria Policy.

<u>ANSWER</u>:

Manitoba Hydro confirms that there exists an internal document that contains the criteria related to dependable energy. It is labelled as the "Corporate Policy Statement on Generation Planning (No. G195)" and is found as Appendix A of the attachment to information request RCM/TREE/MH I-30(a).

CAC/MSOS/MH/RISK-26

Reference: **KPMG - Manitoba Hydro - External Quality Review, Chapter 4, page 137, footnote 7**

Preamble: **KPMG states:**

For long-term firm power sales, our understanding is that MH does not enter agreements above the level of dependable energy it has calculated for the system.

KPMG refers, a number of times, to a Dependable Energy Criteria Policy that it has relied on in the development of its report.

f) TO MH: Please provide a copy of the internal document entitled Dependable Energy Criteria Policy or contains the Dependable Energy Criteria Policy.

ANSWER:

Please see Manitoba Hydro’s response to CAC/MSOS/MH/RISK-26(e).

<u>CAC/MSOS/MH/RISK-27</u>

Reference: KPMG Report, pages 139-140

a) The KPMG discussion implies that acquiring firm transmission access for purposes of export to the US automatically grants Manitoba Hydro transmission access for imports. Is this actually the case? If yes, are the transmission paths into the US for purposes of export the same as those that would be used for imports – except in reverse?

<u>ANSWER</u>:

Access rights and reservations in either direction use the same physical transmission infrastructure, but operational usage needs to be distinguished from the underlying physical asset. Acquiring firm transmission access for purposes of export does not automatically grant Manitoba Hydro transmission access for imports. Firm transmission access for import from or export into the U.S. relies on ownership of firm transmission reservations that have a directional path. Separate reservations have to be applied for each direction and may differ based on Manitoba Hydro's operational needs, transmission system constraints and other existing or proposed transmission reservations.

CAC/MSOS/MH/RISK-28

Reference: KPMG Report, page 145

a) The KPMG asserts that export energy under contract should receive a higher price than energy from spot market sales. Did KPMG undertake any analysis to "prove" that this has been the case? If so, please outline the nature of the analysis and the results.

ANSWER:

KPMG Response:

In the long-term, energy sold under contract should receive a higher price than spot market sales because it allows the buying utility to defer the addition of in-house generating capacity and it provides a more "firm" product.

<u>CAC/MSOS/MH/RISK-28</u>

Reference: KPMG Report, page 145

b) What is the basis for the statement that the presence of long-term contracts facilitates MH's ability to get external debt financing? Is it KPMG's assertion that debt financing would be more expensive and/or unavailable without long term contracts and, if so, what is this assertion based on?

<u>ANSWER</u>:

<u>KPMG Response</u>:

The presence of long-term contracts facilitates MH's ability to get external debt financing because they provide for a more stable revenue stream. Lenders are generally concerned about borrowers' ability to repay debt, and their ability to repay debt is enhanced by secure off-take agreements. This can be readily seen in the project finance market: electricity generating facilities that have long-term off-take or tolling agreements can obtain more debt, and at lower cost, than facilities that operate on a merchant basis, all else being equal.

CAC/MSOS/MH/RISK-29

Reference: KPMG Report, pages 148 - 149

a) Is the average long term contract price shown in Exhibit 4-11 a simple average of the contract prices or is it weighted by the volumes associated with each contract? If a simple average, what was the weighted average price over the historic period covered?

ANSWER:

KPMG Response:

The average long term contract price shown in Exhibit 4-11 is weighted by the volumes associated with each contract.

<u>CAC/MSOS/MH/RISK-29</u>

Reference: KPMG Report, pages 148 - 149

b) What is the time frame covered by the proposed contracts shown in Exhibit 4-12? (Note: Data is not required on each contract rather only the time frame covered by one or more of the contracts)

<u>ANSWER</u>:

Please refer to Appendix H, Page H-2 of the KPMG report for the start and end dates of the proposed contracts shown in Exhibit 4-12.

CAC/MSOS/MH/RISK-29

Reference: KPMG Report, pages 148 - 149

c) What is the expected export (market) price (in levelized 2009 $) over this period based on Manitoba Hydro's High and Low Export Price scenarios?

ANSWER:

The information requested is trade secret and confidential.

<u>CAC/MSOS/MH/RISK-30</u>

Reference: KPMG Report, pages 152 - 154

a) Did KPMG compare the most recent avoided cost benchmarks prepared by Manitoba Hydro with its current (reference) Electricity Export Price Forecast? If so, please indicate the relative results of the comparison (e,g,, which was higher and by roughly what percentage).

<u>ANSWER</u>:

<u>KPMG Response</u>:

KPMG compared the most recent avoided cost benchmarks prepared by Manitoba Hydro with the long term contract pricing being negotiated by Manitoba Hydro. KPMG understands that disclosure of the results of this comparison in the public domain would be commercially harmful to Manitoba Hydro in its ongoing negotiations with export counterparties and is hence considered commercially confidential information by Manitoba Hydro.

CAC/MSOS/MH/RISK-31

Reference: KPMG Report, page 162

a) Did KPMG look at Manitoba Hydro's policies and practices for entering into firm import contracts? If yes, what were its conclusions? If not, why not?

ANSWER:

KPMG Response:

KPMG did look at MH's policies and practices for entering into Diversity contracts. These contracts are an important component of MH's supply of Dependable Energy and they play a role in the securing of cross-border transmission capacity and as a component of MH's general export strategy. Our conclusions on these matters are outlined in Chapters 3 and 4 of our report.

CAC/MSOS/MH/RISK-31

Reference: KPMG Report, page 162

b) Did KPMG look into the reasonableness of the pricing arrangements in Manitoba Hydro's current firm import contracts? If yes, what were its conclusions? If not, why not?

ANSWER:

KPMG Response:

KPMG did look into the reasonableness of the pricing arrangements in MH's current Diversity contracts. Our conclusions on MH's pricing arrangements are outlined in Chapter 4 of the report.

<u>CAC/MSOS/MH/RISK-32</u>

Reference: KPMG Report, page 163 – last paragraph

a) Please provide more details regarding the studies Manitoba Hydro is embarking on to help better understand the probabilities of drought of a given level. When are the studies expected to be completed? Please provide any initial conclusions that are available.

<u>ANSWER</u>:

The statistical studies to date have been projects by post graduate researchers investigating methods of evaluating joint probability of concurrent multi-year drought in Manitoba Hydro's major sub-basins. The research projects have had limited success in reproducing the mean and variance of the parent record, due in part to lack of streamflow records in several of the sub-basins in Manitoba Hydro's watershed. The Nelson-Churchill water supply is complex and spatially diverse, comprised of inflow from four major river systems in four different climatic regions and three different physiographic regions. Consequently, the joint probability of concurrent droughts in each major watershed is still not well understood. Therefore, the confidence in the predicted return period of droughts of varying duration and severity is quite low.

Manitoba Hydro also supported post-graduate research projects investigating paleo-climatic data such as tree-rings and lake sediments as indicators of past drought events in a number of sub-basins within the Nelson-Churchill watershed. These studies were intended to investigate whether paleo-climatic data could provide information about past climate extremes (both flood and drought), which could be used by Manitoba Hydro to reconstruct basin-wide droughts in past centuries. While some inference of past extreme droughts was evident in some of the regions studied, in most cases the correlation between tree-rings or lake sediments and streamflow was poor and would not provide enough data to represent past streamflow for the entire basin on a continuous basis. In addition, it was found that tree-rings in the Prairie region don't respond well to winter precipitation, making this type of information difficult to use in drought probability analyses.

Since results to date have been inconclusive on probabilities of drought, Manitoba Hydro will continue studies and participate in collaborative research work in this area. Therefore, the date by which Manitoba Hydro expects to complete these studies is undetermined.

<u>CAC/MSOS/MH/RISK-33</u>

Reference: **KPMG - Manitoba Hydro - External Quality Review, Chapter 4, page 164**

Preamble: **KPMG states:**

If the buyer is seeking a long-term resource to serve anticipated load obligations and the seller is seeking to sell surplus sales and finance a new generation· project, then the contract form needs to match these objectives. [emphasis added]

a) Is it KPMG's view that the Manitoba Hydro export customers and counterparties are seeking a long term resource to serve anticipated load obligations? If not, explain and explain the inclusion of this hypothetical in its report.

<u>ANSWER</u>:

<u>KPMG Response</u>:

As noted in Section 4.8 of our report, we are not in a position to state the intent of MH's counterparties in entering into long term contracts with MH. However, we understand from discussions with MH that MH's export customers and counterparties are, in general, seeking a long-term resource to serve anticipated load obligations.

<u>CAC/MSOS/MH/RISK-33</u>

Reference: **KPMG - Manitoba Hydro - External Quality Review, Chapter 4, page 164**

Preamble: **KPMG states:**

If the buyer is seeking a long-term resource to serve anticipated load obligations and the seller is seeking to sell surplus sales and finance a new generation· project, then the contract form needs to match these objectives. [emphasis added]

b) **Is it KPMG's view that Manitoba Hydro is seeking to sell surplus sales and finance a new generation project? If not, explain and explain the inclusion of this hypothetical in its report.**

<u>ANSWER</u>:

<u>KPMG Response</u>:

KPMG's understanding is that MH is seeking to sell surplus energy in order to facilitate the construction of new generation. This new generation will ultimately be required to serve MH domestic load.

CAC/MSOS/MH/RISK-33

Reference: **KPMG - Manitoba Hydro - External Quality Review, Chapter 4, page 164**

Preamble: **KPMG states:**

> **If the buyer is seeking a long-term resource to serve anticipated load obligations and the seller is seeking to sell surplus sales and finance a new generation· project, then the contract form needs to match these objectives. [emphasis added]**

c) **If the responses to (a) and (b) are to the affirmative, then please indicate whether, the contract form (in Manitoba Hydro's export sale arrangements), in KPMG's view, matches these objectives.**

d) **Please summarize the provisions of the contracts which serve to meet the objectives referred to by KPMG.**

e) **Please identify and describe each component of the contracts which serve to meet the objectives referred to by KPMG.**

ANSWER:

KPMG Response:

KPMG is of the view that MH's contract form matches MH's objectives as well as the objectives of the counterparties because both parties entered into these long-term purchase agreements. Refer to Section 4.8 of our report for more details in this regard.

KPMG understands that there are confidentiality concerns by MH with releasing the specific details requested. Accordingly, KPMG is not in a position to discuss in detail the specific provisions of the agreements. Our review of key contract terms is provided in Section 4.9 of the report.

<u>CAC/MSOS/MH/RISK-34</u>

Reference: **KPMG - Manitoba Hydro - External Quality Review, Chapter 4, page 164**

Preamble: **KPMG states:**

The original long-term contracts which had been employed by MH had limited curtailment rights, while the new form of contracts have more curtailment provisions. While such provisions clearly reduce risk for MH, they do so by either making the contract riskier for the counterparty or changing the nature of the product (i.e., purchasing energy without firm capacity). Without knowing how counterparties value MH's curtailment rights, it is difficult to know whether such provisions are cost-effective or not. [emphasis added]

a) **Has KPMG reviewed regulatory applications submitted by Manitoba Hydro counterparties to their respective regulators seeking approval of contracts with Manitoba Hydro?**

b) **From the above quoted passage, please clarify from whose perspective KPMG is commenting on whether "such provisions are cost effective or not". Please elaborate with an example.**

<u>ANSWER</u>:

<u>KPMG Response</u>:

In the passage quoted above, KPMG is commenting on the effectiveness of the curtailment rights from MH's perspective. The issue of cost effectiveness can be thought of as follows: does the reduction in risk associated with curtailment provisions result in a reduction in the price received under these contracts that more than offsets the benefit gained by the reduction in risk Inevitability, this is a question that is difficult to answer in practice. Counterparties' perspectives on risk are difficult to ascertain with certainty. They may have a commercial interest in not disclosing their true or underlying preferences with respect to particular contract provisions. Public filings may shed some light on these preferences, but such evidence is unlikely to be conclusive. KPMG has not conducted an in-depth review of regulatory applications submitted by MH counterparties to their respective regulators seeking approval of contracts with MH.

CAC/MSOS/MH/RISK-35

Reference: **KPMG - Manitoba Hydro - External Quality Review, Chapter 4, page 165**

Preamble: **KPMG makes reference to three proposed long term contracts and term sheets in Appendix H which are essentially completely redacted.**

a) **Please update all changes in status of the "proposed" long term contracts since the date of the KPMG report.**

ANSWER:

The NSP System Participation and Diversity Exchange Agreements have since been executed and are undergoing the review/approval process at the Minnesota Public Utilities Commission.

The start date for the WPS System Participation Agreement has been revised from 06/01/2018 to 06/01/2019.

<u>CAC/MSOS/MH/RISK-36</u>

Reference: **KPMG - Manitoba Hydro - External Quality Review, Chapter 4, page 165**

Preamble: **KPMG states:**

Curtailment rights should a drought of severity outside of the historical record occur. [sic]

The above quoted passage is difficult to understand. There appear to be a missing word or words.

a) Please correct or summarize what is intended to be conveyed by this passage.

<u>ANSWER</u>:

<u>KPMG Response</u>:

There is a typographical error as the phrase should end in a colon rather than in a period, i.e. "Curtailment rights should a drought of severity outside of the historical record occur:". This phrase was intended to serve as an introductory heading. We are simply conveying the fact that the curtailment rights discussed in the associated paragraph are those that apply in the event that a drought occurs that is within the historical record in terms of its magnitude. This is in contrast to the curtailment rights discussed in the next paragraph, which are those that apply in the event that a drought occurs that is larger than that which has been observed within the historical record.

<u>CAC/MSOS/MH/RISK-37</u>

Reference: **KPMG - Manitoba Hydro - External Quality Review, Chapter 4, page 165**

Preamble: **In Section 4.9 KPMG provides a three bullet summary of volume mitigation matters. However, there does not appear to be a description of any *quid pro quo* for those volume offsets.**

a) Please summarize all of the conditions that Manitoba Hydro could curtail firm energy volumes in these contracts.

<u>ANSWER</u>:

The curtailment terms and conditions in the contract are trade secret and confidential.

However, please see Appendix 57 – Attachment 5 (slides 12 to 16) from the Manitoba Hydro workshop presentation, "Manitoba Hydro's Export Markets" for a general description of Manitoba Hydro curtailment rights in addition to the summary provided in Section 4.9 of the KPMG report.

<u>CAC/MSOS/MH/RISK-37</u>

Reference: **KPMG - Manitoba Hydro - External Quality Review, Chapter 4, page 165**

Preamble: **In Section 4.9 KPMG provides a three bullet summary of volume mitigation matters. However, there does not appear to be a description of any *quid pro quo* for those volume offsets.**

b) **Please summarize all of the incremental costs, charges or burdens to Manitoba Hydro (benefits to the counterparties) under the exercise of each of the curtailment conditions/opportunities described in (a) above.**

<u>ANSWER</u>:

Please see Manitoba Hydro's response to CAC/MSOS/MH/RISK-37(a).

CAC/MSOS/MH/RISK-38

Reference: KPMG Report, pages 165 - 171

a) Are all of the contractual provisions listed in section 4.9 (pages 165-166) present in all of the proposed long-term contracts? If not, why not?

ANSWER:

In general terms, Manitoba Hydro has similar rights to curtail energy deliveries under the proposed long term contracts including the NSP Sale Agreements during adverse water conditions. The specifics of each contract are trade secret and confidential.

<u>CAC/MSOS/MH/RISK-38</u>

Reference: KPMG Report, pages 165 - 171

b) In the event the redacted material on pages 166-167 is not made public, please describe in general terms the principles underlying the "embedded call option".

<u>ANSWER</u>:

In general terms, the embedded call option is a contractual provision that permits Manitoba Hydro to financially settle an energy obligation or to purchase additional imported energy based on the price of natural gas multiplied by a specified heat rate in lieu of the fixed price specified in the contract. Manitoba Hydro would only exercise this option when economical to do so and during adverse water conditions.

<u>CAC/MSOS/MH/RISK-38</u>

Reference: KPMG Report, pages 165 - 171

c) Are the pricing arrangements in the three Diversity Agreements symmetric, i.e., is the basis on which the prices paid by Manitoba Hydro are established the same as the basis used to establish the prices to be paid by the counter-parties? If not, in KPMG's view, which party to each agreement has the preferential pricing arrangements?

<u>ANSWER</u>:

<u>KPMG Response</u>:

The pricing arrangements are not necessarily symmetric. Pricing terms reflected a variety of factors of relevance at the time that the agreements were signed or amended, some of which resulted in the pricing provisions being different.

CAC/MSOS/MH/RISK-38

Reference: KPMG Report, pages 165 - 171

d) Does the 500 MW Energy Service Agreement with NSP provide firm energy to Manitoba Hydro or just ensure Manitoba Hydro's access to firm transmission service for purposes of imports?

ANSWER:

The 500 MW Energy Service Agreement with NSP provides both firm energy and firm transmission access to Manitoba Hydro.

<u>CAC/MSOS/MH/RISK-39</u>

Reference: **KPMG - Manitoba Hydro - External Quality Review, Chapter 4, pages 171 – 173**

Preamble: **KPMG states:**

As indicated in Exhibit 4-18, a five-year drought at expected prices results in a $2.764 billion reduction in Retained Earnings. [Exhibit 4-18 not reproduced]

These analyses are not new, and have been the subject of significant deliberation at the PUB. Analyses of drought costs, in particular, have influenced the development of MH's financial targets for the ratio of debt to equity and for required Retained Earnings as a buffer or risk capital reserve for drought risk. [emphasis added]

a) Please provide a summary of the previous analyses referred to above in a similar fashion to Exhibit 4-18 for each year from 2000 to 2008 (for the prices used in the analyses, i.e. expected prices, high prices, etc).

<u>ANSWER</u>:

The impact of the 5-year drought is summarized for the years 2000 to 2008 in the table on the following page. The forecast year represents the fiscal year in which the generation estimate forecast was made. The onset of drought represents the start year for the 5-year drought which encompasses flow years 1987/88 to 1991/92 and the 7-year drought which encompasses flow years 1936/37 to 1942/43. The following data does not include the analysis using high prices, nor does it include the cumulative impact on retained earnings due to additional financing costs as this information is not available for years prior to forecast year 2006.

Forecast Year	Onset of Drought	Total Reduction in Net Income Expected Prices 5-Year Drought	 Expected Prices 7-Year Drought
		(Billions of Cdn $)	(Billions of Cdn $)
2000/01	2002	0.717	0.883
2001/02	2003	0.981	1.161
2002/03	2004	1.006	1.356
2003/04	2005	1.062	1.478
2004/05	2006	1.233	1.645
2005/06	2007	1.354	1.707
2006/07	2008	1.693	2.149
2007/08	2009	1.743	2.238
2008/09	2010	2.213	2.880

CAC/MSOS/MH/RISK-40

Reference: KPMG Report, pages 173-174

a) Did KPMG make any determination as to whether the "No Sale Scenario" was the most cost effective development sequence assuming no new export contracts? If yes, please provide the conclusions. If not (or if the "No Sale Scenario" is not the most cost effective sequence), why is it reasonable to use the No Sale Scenario as the alternative in assessing various drought scenarios.

ANSWER:

KPMG Response:

Our analysis in section 4.10.1 that the question refers to addresses the issue that long-term contracts could be uneconomic under certain scenarios, even if they do not result in undue risk of financial stress. Thus the appropriate comparison is to test the Sale Scenario to a scenario that does not contain the long term contracts (as explained in section 4.10.1), i.e., the "No Sale Scenario". It is our further understanding is the "No Sale Scenario" is the most cost effective development sequence assuming no new export contracts. Hence, it is the appropriate basis of comparison to use when assessing various drought scenarios.

CAC/MSOS/MH/RISK-41

Reference: KPMG Report, pages 175-176

a) Do the "Low" results reported in each of the three cases represent low export prices combined with low natural gas prices? Similarly, do the "High" results represent high export prices combined with high natural gas prices?

ANSWER:

Manitoba Hydro confirms that export prices and natural gas prices are consistent in that both are "low" or "high" in each scenario.

CAC/MSOS/MH/RISK-41

Reference: KPMG Report, pages 175-176

b) Please discuss the likelihood that export prices (and import prices) are independent of the drought conditions experienced by Manitoba.

ANSWER:

As discussed in response to CAC/MSOS/MH I-62(g): "The MISO footprint, consisting of approximately 138,000 MW of generation capacity owned by many suppliers, is currently very large relative to the Manitoba Hydro system. Manitoba Hydro's firm transmission import capacity of about 700 MW from the MISO market represents less than 1% of the peak MISO market load. Hence, in most hours up to 700 MW of imports from the MISO market has a relatively minor effect on the MISO market, assuming no transmission constraints within the market."

As further described in CAC/MSOS/MH I-62(g), transmission constraints can cause congestion pricing which may be aggravated during severe drought in the Manitoba Hydro system when large quantities of imports are required. However, congestion pricing is expected to have less of an effect on Manitoba Hydro import prices compared to shortage pricing prior to 2005.

While a drought is a significant event for Manitoba, in the context of the large size of the MISO market, it is not such a significant event. Therefore, overall MISO market prices are largely independent of drought conditions in Manitoba.

The 2000 MW of export capacity from Manitoba Hydro also has a relatively minor effect on the MISO market for the same reasons as described above for import.

CAC/MSOS/MH/RISK-42

Reference: KPMG Report, pages 180-182

a) Were the assumptions regarding future domestic rate increases the same for all cases? If yes, what was the assumption? If not, how does the assumption differ across the various cases?

ANSWER:

Projected annual average rate increases for the drought cases were held constant at the IFF09/20 Year Financial Outlook projected rate increases.

CAC/MSOS/MH/RISK-43

Reference: **KPMG - Manitoba Hydro - External Quality Review, Chapter 6, pages 245 & 247**

Preamble: **In the above noted pages KPMG refers to five year drought risk exposure of $2.2 billion - $2.5 billion and separately as $2.5 billion. On page 173 of Chapter 4 (including Exhibit 4-18), KPMG refers to five year drought risk exposure of $2.764 billion.**

a) **Please clarify the amount of the drought risk exposure that KPMG is assuming for the purpose of its analysis in its report.**

ANSWER:

KPMG Response:

Various estimates of drought expense have been provided by MH in its public filings, and this is reflected in the different numbers quoted in the KPMG report. Differences between the estimates reflect differences in market outlook and system conditions at the time the various estimates were prepared. KPMG's analysis does not rest on a specific number for the value of drought risk exposure.

CAC/MSOS/MH/RISK-44

Reference: **KPMG - Manitoba Hydro - External Quality Review, Chapter 6, pages 258 & 259 - 260**

Preamble: **KPMG states:**

Another gap in MH's limit structure is the absence of a concentration limit. From December 2006 through June 30, 2009, MH's greatest exposure lies within the BBB credit rating as highlighted in Exhibit 6-7.

And,

• MH should consider establishing counterparty concentration limits. Historically, the probability of counter party default is very low. However, management should consider establishing concentration limits in order to manage and monitor portfolio concentrations in certain credit ratings (e.g., BBB).

In various passages in the KPMG report KPMG refers to qualitative assessment of "very low" probability of counter party default or "high" credit rating.

a) Explain why data for Exhibit 6-7 ended at June 30, 2009 and is not more up-to-date considering the April 15, 2010 date of the KPMG report.

ANSWER:

KPMG Response:

As part of KPMG's independent assessment, two historical periods were selected for analysis; December 31, 2006 and June 30, 2009. As KPMG was retained in November 2009, the historical analysis in Exhibit 6-7 was based on historical and current year data.

CAC/MSOS/MH/RISK-44

Reference: **KPMG - Manitoba Hydro - External Quality Review, Chapter 6, pages 258 & 259 - 260**

Preamble: **KPMG states:**

Another gap in MH's limit structure is the absence of a concentration limit. From December 2006 through June 30, 2009, MH's greatest exposure lies within the BBB credit rating as highlighted in Exhibit 6-7.

And,

• MH should consider establishing counterparty concentration limits. Historically, the probability of counter party default is very low. However, management should consider establishing concentration limits in order to manage and monitor portfolio concentrations in certain credit ratings (e.g., BBB).

In various passages in the KPMG report KPMG refers to qualitative assessment of "very low" probability of counter party default or "high" credit rating.

b) Please provide the source of the term "very low" in the second quoted passage above.

ANSWER:

KPMG Response:

The term "very low" is commonly used. No specific source was referenced.

CAC/MSOS/MH/RISK-44

Reference: **KPMG - Manitoba Hydro - External Quality Review, Chapter 6, pages 258 & 259 - 260**

Preamble: **KPMG states:**

Another gap in MH's limit structure is the absence of a concentration limit. From December 2006 through June 30, 2009, MH's greatest exposure lies within the BBB credit rating as highlighted in Exhibit 6-7.

And,

• MH should consider establishing counterparty concentration limits. Historically, the probability of counter party default is very low. However, management should consider establishing concentration limits in order to manage and monitor portfolio concentrations in certain credit ratings (e.g., BBB).

In various passages in the KPMG report KPMG refers to qualitative assessment of “very low” probability of counter party default or “high” credit rating.

c) Please provide KPMG’s definition of “very low” in the context of the above quoted passage.

ANSWER:

KPMG Response:

The context of the term “very low” was to characterize the probability of counterparty default to be toward the bottom of a range of potential results.

CAC/MSOS/MH/RISK-44

Reference: **KPMG - Manitoba Hydro - External Quality Review, Chapter 6, pages 258 & 259 - 260**

Preamble: **KPMG states:**

Another gap in MH's limit structure is the absence of a concentration limit. From December 2006 through June 30, 2009, MH's greatest exposure lies within the BBB credit rating as highlighted in Exhibit 6-7.

And,

• MH should consider establishing counterparty concentration limits. Historically, the probability of counter party default is very low. However, management should consider establishing concentration limits in order to manage and monitor portfolio concentrations in certain credit ratings (e.g., BBB).

In various passages in the KPMG report KPMG refers to qualitative assessment of "very low" probability of counter party default or "high" credit rating.

d) **Please provide measures or ratings commonly used financial industry for counterparty risk.**

ANSWER:

KPMG Response:

Ratings commonly used for counterparty risk are the external ratings provided by credit rating agencies such as Moody's Investors Service, or Standard and Poor's (S&P). S&P, as a credit rating agency (CRA), issues credit ratings for the debt of public and private corporations. It is one of a number of CRAs that have been designated a Nationally Recognized Statistical Rating Organization by the U.S. Securities and Exchange Commission.

<u>CAC/MSOS/MH/RISK-44</u>

Reference: **KPMG - Manitoba Hydro - External Quality Review, Chapter 6, pages 258 & 259 - 260**

Preamble: **KPMG states:**

Another gap in MH's limit structure is the absence of a concentration limit. From December 2006 through June 30, 2009, MH's greatest exposure lies within the BBB credit rating as highlighted in Exhibit 6-7.

And,

• MH should consider establishing counterparty concentration limits. Historically, the probability of counter party default is very low. However, management should consider establishing concentration limits in order to manage and monitor portfolio concentrations in certain credit ratings (e.g., BBB).

In various passages in the KPMG report KPMG refers to qualitative assessment of "very low" probability of counter party default or "high" credit rating.

e) **Please provide a table of concordance between KPMG's use of terminology, including "very low" and the measures used in the financial industry.**

<u>ANSWER</u>:

<u>KPMG Response</u>:

S&P rates borrowers on a scale from AAA to D. Intermediate ratings are offered at each level between AA and CCC (i.e., BBB+, BBB and BBB-). S&P associates each successively higher rating category with the ability to withstand successively more stressful economic environmenst. For higher ratings, S&P has determined there is less likelihood (lower probability) of default. The following table is a summary of S&P's ratings rank ordered by probability of default (from very low to high):

Probability of Default

Very Low

High

S&P Rating	Illustrative Description
AAA	the best quality borrowers, reliable and stable
AA	quality borrowers, a bit higher risk than AAA
A	economic situation can affect finances
BBB	medium class borrowers, which are satisfactory at the moment
BB	more prone to changes in the economy
B	financial situation varies noticeably
CCC	currently vulnerable and dependent on favorable economic conditions to meet its commitments
CC	highly vulnerable, very speculative debt instruments
C	highly vulnerable, perhaps in bankruptcy or in arrears but still continuing to pay out on obligations
D	has defaulted on obligations and S&P believes that it will generally default on most or all obligations

CAC/MSOS/MH/RISK-44

Reference: **KPMG - Manitoba Hydro - External Quality Review, Chapter 6, pages 258 & 259 - 260**

Preamble: **KPMG states:**

Another gap in MH's limit structure is the absence of a concentration limit. From December 2006 through June 30, 2009, MH's greatest exposure lies within the BBB credit rating as highlighted in Exhibit 6-7.

And,

• MH should consider establishing counterparty concentration limits. Historically, the probability of counter party default is very low. However, management should consider establishing concentration limits in order to manage and monitor portfolio concentrations in certain credit ratings (e.g., BBB).

In various passages in the KPMG report KPMG refers to qualitative assessment of "very low" probability of counter party default or "high" credit rating.

f) Please provide a copy of all of KPMG reports, studies, analysis conducted by it or used by it to determine the probability of counterparty default.

ANSWER:

KPMG Response:

Individual reports or studies are not specifically sourced and referenced. Standard and Poor's has published a document titled; Guide To Credit Rating Essentials. This document can not be distributed without prior written permission but is available on Standard and Poor's website:
http://www2.standardandpoors.com/spf/pdf/fixedincome/SP_CreditRatingsGuide.pdf

CAC/MSOS/MH/RISK-44

Reference: **KPMG - Manitoba Hydro - External Quality Review, Chapter 6, pages 258 & 259 - 260**

Preamble: **KPMG states:**

Another gap in MH's limit structure is the absence of a concentration limit. From December 2006 through June 30, 2009, MH's greatest exposure lies within the BBB credit rating as highlighted in Exhibit 6-7.

And,

• MH should consider establishing counterparty concentration limits. Historically, the probability of counter party default is very low. However, management should consider establishing concentration limits in order to manage and monitor portfolio concentrations in certain credit ratings (e.g., BBB).

In various passages in the KPMG report KPMG refers to qualitative assessment of "very low" probability of counter party default or "high" credit rating.

g) Please confirm that a preponderance of Manitoba Hydro's export business is with counterparties or customers that are rated BBB.

ANSWER:

All of Manitoba Hydro's export business is with customers who satisfy Manitoba Hydro creditworthiness requirements, whether rated or unrated entities. All rated entities must be at least investment grade.

CAC/MSOS/MH/RISK-44

Reference: **KPMG - Manitoba Hydro - External Quality Review, Chapter 6, pages 258 & 259 - 260**

Preamble: **KPMG states:**

Another gap in MH's limit structure is the absence of a concentration limit. From December 2006 through June 30, 2009, MH's greatest exposure lies within the BBB credit rating as highlighted in Exhibit 6-7.

And,

• MH should consider establishing counterparty concentration limits. Historically, the probability of counter party default is very low. However, management should consider establishing concentration limits in order to manage and monitor portfolio concentrations in certain credit ratings (e.g., BBB).

In various passages in the KPMG report KPMG refers to qualitative assessment of "very low" probability of counter party default or "high" credit rating.

h) If the confirmation sought in (g) above is not provided, explain.

ANSWER:

Please see Manitoba Hydro's response to CAC/MSOS/MH/RISK-44(g).

CAC/MSOS/MH/RISK-44

Reference: **KPMG - Manitoba Hydro - External Quality Review, Chapter 6, pages 258 & 259 - 260**

Preamble: **KPMG states:**

Another gap in MH's limit structure is the absence of a concentration limit. From December 2006 through June 30, 2009, MH's greatest exposure lies within the BBB credit rating as highlighted in Exhibit 6-7.

And,

• MH should consider establishing counterparty concentration limits. Historically, the probability of counter party default is very low. However, management should consider establishing concentration limits in order to manage and monitor portfolio concentrations in certain credit ratings (e.g., BBB).

In various passages in the KPMG report KPMG refers to qualitative assessment of "very low" probability of counter party default or "high" credit rating.

i) Please confirm that Manitoba Hydro is conducting its most of its export business with parties which retain credit rating lower than that of Manitoba Hydro.

ANSWER:

Confirmed.

CAC/MSOS/MH/RISK-44

Reference: **KPMG - Manitoba Hydro - External Quality Review, Chapter 6, pages 258 & 259 - 260**

Preamble: **KPMG states:**

Another gap in MH's limit structure is the absence of a concentration limit. From December 2006 through June 30, 2009, MH's greatest exposure lies within the BBB credit rating as highlighted in Exhibit 6-7.

And,

• MH should consider establishing counterparty concentration limits. Historically, the probability of counter party default is very low. However, management should consider establishing concentration limits in order to manage and monitor portfolio concentrations in certain credit ratings (e.g., BBB).

In various passages in the KPMG report KPMG refers to qualitative assessment of "very low" probability of counter party default or "high" credit rating.

j) **Please provide the most recent default studies conducted by DBRS, S&P and Moody's, such as the DBRS Corporate Default Study, which set out the historical level of credit defaults for rated issuers of the various credit ratings.**

ANSWER:

The most recent default study by DBRS Limited dated March 2010 is provided in Appendix 72 and is correct as of the time of issuance.

The most recent default study by Moody's Investors Service data February 2010 is provided in Appendix 73.

Manitoba Hydro is unable to provide the most recent default study prepared by S&P to the interveners or other parties without executing a permissions agreement, the terms of which are onerous and not acceptable to the Corporation.

CAC/MSOS/MH/RISK-44

Reference: **KPMG - Manitoba Hydro - External Quality Review, Chapter 6, pages 258 & 259 - 260**

Preamble: **KPMG states:**

Another gap in MH's limit structure is the absence of a concentration limit. From December 2006 through June 30, 2009, MH's greatest exposure lies within the BBB credit rating as highlighted in Exhibit 6-7.

And,

• MH should consider establishing counterparty concentration limits. Historically, the probability of counter party default is very low. However, management should consider establishing concentration limits in order to manage and monitor portfolio concentrations in certain credit ratings (e.g., BBB).

In various passages in the KPMG report KPMG refers to qualitative assessment of "very low" probability of counter party default or "high" credit rating.

k) Please explain that the "historical probability of counterparty default" is from time periods in the past and not a current or future probability of counterparty default (as suggested by the word "is", at the top of page 260).

l) If the confirmation sought in (k) above, is not provided, please explain.

ANSWER:

KPMG Response:

Historical probability of counterparty default is based on default rates from previous time periods.

<u>CAC/MSOS/MH/RISK-44</u>

Reference: **KPMG - Manitoba Hydro - External Quality Review, Chapter 6, pages 258 & 259 - 260**

Preamble: **KPMG states:**

Another gap in MH's limit structure is the absence of a concentration limit. From December 2006 through June 30, 2009, MH's greatest exposure lies within the BBB credit rating as highlighted in Exhibit 6-7.

And,

• MH should consider establishing counterparty concentration limits. Historically, the probability of counter party default is very low. However, management should consider establishing concentration limits in order to manage and monitor portfolio concentrations in certain credit ratings (e.g., BBB).

In various passages in the KPMG report KPMG refers to qualitative assessment of "very low" probability of counter party default or "high" credit rating.

m) **Please provide the quarterly historical data used by KPMG contained in Exhibit 6-7 and/or used to arrive at the conclusion documented in the first sentence on page 260.**

<u>ANSWER</u>:

<u>KPMG Response</u>:

The data for exhibit 6-7 is based on data belonging to Manitoba Hydro that we understand to be confidential.

CAC/MSOS/MH/RISK-45

Reference: **KPMG - Manitoba Hydro - External Quality Review, Chapter 7, page 281**

Preamble:

> **…there is no material risk that Manitoba Hydro is facing bankruptcy as a direct consequence of Manitoba Hydro's export sales practices;**

KPMG refers to "bankruptcy" in its report. However, unlike many other key terms which were defined, it appears that KPMG did not provide a definition for bankruptcy.

It is noted that, in the *Bankruptcy and Insolvency Act,* a bankruptcy entails a person who has made an assignment or against whom a bankruptcy order has been made or the legal status of that person. "bankruptcy" means the state of being bankrupt or the fact of becoming bankrupt[1].

a) **In assessing the NYC report, including its associated concerns and allegations, please provide KPMG's understanding of use of the term "bankruptcy" contained in the NYC reports examined by KPMG.**

b) **Does KPMG's report contemplate a bankruptcy order in its definition of "bankruptcy"? Please provide KPMG's definition of bankruptcy as contemplated in its report.**

c) **To the extent the understanding in (a) differs from the statutory definition noted above, please provide explain the distinction.**

d) **To the extent the definition provided in (b) differs from the statutory definition noted above, please provide explain the distinction.**

e) **Please provide a summary of all safeguards which may exist to protect against Manitoba Hydro bankruptcy, including its status as a crown corporation.**

f) **If, in KPMG's view, there are no safeguards against Manitoba Hydro bankruptcy, as a crown corporation, please provide reasons for that view.**

g) **Is KPMG aware of any provincial crown corporation ever becoming bankrupt? If so please provide a list of those together with the relevant dates of bankruptcy.**

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1 http://laws.justice.gc.ca/eng/StatutesByTitle/B.html http://laws.justice.gc.ca/PDF/Statute/B/B-3.pdf

h) **Would you agree that the KPMG report does not address the risks that a significant erosion of export markets could result in a material reduction of the interest coverage ratios?**

i) **If KPMG does not agree with the proposition in (g) please identify, with precise references, where it has dealt with that issue in its report.**

j) **Would you agree that the KPMG report does not address the risks that a significant erosion of export markets could make it difficult for Manitoba Hydro to make debt service payments on debt used to finance major new generation and transmission projects?**

k) **If KPMG does not agree with the proposition in (g) please identify, with precise references, where it has dealt with that issue in its report.**

ANSWER:

KPMG Response:

KPMG's use of the term 'bankruptcy' is not meant to be in complete alignment with any one statutory definition of 'bankruptcy' but rather meant to be in alignment with the generic use of the term 'bankruptcy' and essentially refers tos being in a "state of utter ruin, failure, depletion or the like". Manitoba Hydro, as a crown corporation, has many safeguards against bankruptcy, including the presence of an experienced management team with fiduciary responsibilities who are expected to discharge their duties to the best of their abilities to the satisfaction of the shareholder, the Government of Manitoba. KPMG's scope did not include an assessment of the various safeguards in place to protect against a potential bankruptcy; the specific reference above is to Manitoba Hydro's export sales practices. Chapter 4 contains KPMG's assessment of Manitoba Hydro's strategy of utilising the export markets, both by way of long term contracts and through export sales, to help finance major new generation projects. This Chapter also addresses the impacts of this strategy with respect to MH's financial performance.

CAC/MSOS/MH/RISK-46

Reference: **KPMG - Manitoba Hydro - External Quality Review, Appendix E, page E-18**

Preamble: **KPMG has undertaken its own case studies. In respect of Hydro Quebec, it states:**

> **In addition, the company generally does business with counterparties that have a high credit rating.**

a) **Please provide the source of the term “high credit rating”.**
b) **Please provide KPMG’s definition of “high credit rating”.**
c) **Please provide measures commonly used financial industry for credit rating.**
d) **Please provide a table of concordance between KPMG’s use of terminology, including “high credit rating” and the measures used in the financial industry.**

ANSWER:

KPMG Response:

Please refer to the response to question CAC/MSOS/MH/RISK-44 for our response to the request for information sought in this question CAC/MSOS/MH/RISK-46.

CAC/MSOS/MH/RISK-47

Reference: **KPMG - Manitoba Hydro - External Quality Review, Appendix J**

Preamble: **KPMG provides a number of bar and line charts, some of which are difficult to quantify, given the scale of the charts.**

a) **For greater clarity, please provide a file with tables for containing the data underlying each of the charts in Appendix J.**

ANSWER:

The number and bar line charts presented in Appendix J were created by KPMG. While Manitoba Hydro provided information at the request of KPMG, it does not have the specific files that contain the charts or the specific data used to prepare the charts.

<u>CAC/MSOS/MH/RISK-48</u>

Reference: **KPMG - Manitoba Hydro - External Quality Review, Chapter 4, Section 4.11 and Appendix J**

Preamble: **KPMG states:**

This appendix presents the results of the detailed runs conducted by MH at our behest of various drought scenarios, including five, ten and fifteen year low flow years to understand their impact on the key MH financial metrics.

And,

As previously stated, the Sale Scenario provides MH with improved Retained Earnings and Debt Ratios compared to the No Sale Scenario. The improved Retained Earnings and Debt Ratios are due primarily to the increased surplus export sales associated with the new generation and US transmission interconnection capabilities.

Also, KPMG provides charts and table depictions out to various time horizons (from endpoints of 2022 in some charts to endpoints of 2042 in others.

a) **With respect to the detailed runs from MH, used by KPMG to arrive at its conclusions with respect to certain financial metrics, please provide a table of all input assumptions common to all scenarios including assumptions with respect to interest rates, exchange rates, capital investment, etc.**

ANSWER:

The assumptions used in the KPMG analysis are consistent with those used in the 2009 Capital Expenditure Forecast (Appendix 6.1) and IFF09-1 with respect to capital investments, interest rates, and exchange rates. Following is a summary of key assumptions:

Canadian Long-Term Interest	7.6%
Canadian Long-term inflation	2.0%
Long-term Currency Exchange	$1.10 Cdn/US$
Weighted Average Cost of Capital	8.35%

CAC/MSOS/MH/RISK-48

Reference: **KPMG - Manitoba Hydro - External Quality Review, Chapter 4, Section 4.11 and Appendix J**

Preamble: **KPMG states:**

This appendix presents the results of the detailed runs conducted by MH at our behest of various drought scenarios, including five, ten and fifteen year low flow years to understand their impact on the key MH financial metrics.

And,

As previously stated, the Sale Scenario provides MH with improved Retained Earnings and Debt Ratios compared to the No Sale Scenario. The improved Retained Earnings and Debt Ratios are due primarily to the increased surplus export sales associated with the new generation and US transmission interconnection capabilities.

Also, KPMG provides charts and table depictions out to various time horizons (from endpoints of 2022 in some charts to endpoints of 2042 in others.

b) Please describe all assumptions with respect to U.S. energy policy that are inherent in the modeling conducted by KPMG or by MH for KPMG, including specific references to emission requirements in the U.S.

ANSWER:

The U.S. energy policies inherently assumed in the modelling for KPMG are based on a consensus of views derived from five external consultants that provided energy price forecasts to Manitoba Hydro. The consultants had a variety of perspectives on future energy policies, with the implications embedded in each market price forecast. The consensus view is derived from a blend of the individual price forecasts. The specific energy policy assumptions, including levels of emission constraints, are commercially sensitive and can not be provided publicly since it may harm Manitoba Hydro in export contract negotiations.

CAC/MSOS/MH/RISK-48

Reference: **KPMG - Manitoba Hydro - External Quality Review, Chapter 4, Section 4.11 and Appendix J**

Preamble: **KPMG states:**

This appendix presents the results of the detailed runs conducted by MH at our behest of various drought scenarios, including five, ten and fifteen year low flow years to understand their impact on the key MH financial metrics.

And,

As previously stated, the Sale Scenario provides MH with improved Retained Earnings and Debt Ratios compared to the No Sale Scenario. The improved Retained Earnings and Debt Ratios are due primarily to the increased surplus export sales associated with the new generation and US transmission interconnection capabilities.

Also, KPMG provides charts and table depictions out to various time horizons (from endpoints of 2022 in some charts to endpoints of 2042 in others.

c) Clarify what, if any, sensitivity analysis was performed relative to the assumptions in (a) above.

ANSWER:

Manitoba Hydro was not requested to provide information to KPMG consisting of a sensitivity analysis relative to interest rates, exchange rates or capital investments as part of their assessment of the impacts of drought for the two development plans.

CAC/MSOS/MH/RISK-48

Reference: **KPMG - Manitoba Hydro - External Quality Review, Chapter 4, Section 4.11 and Appendix J**

Preamble: **KPMG states:**

This appendix presents the results of the detailed runs conducted by MH at our behest of various drought scenarios, including five, ten and fifteen year low flow years to understand their impact on the key MH financial metrics.

And,

As previously stated, the Sale Scenario provides MH with improved Retained Earnings and Debt Ratios compared to the No Sale Scenario. The improved Retained Earnings and Debt Ratios are due primarily to the increased surplus export sales associated with the new generation and US transmission interconnection capabilities.

Also, KPMG provides charts and table depictions out to various time horizons (from endpoints of 2022 in some charts to endpoints of 2042 in others.

d) **Please provide the results of KPMG's tables redone for a 1.00% (100 basis point) differential (both higher and lower) than the interest rates for new debt issues during the period of analysis.**

ANSWER:

The requested analysis would require eighteen alternative IFF's to be produced and cannot be completed within the time allotted for responding to these Information Requests. However, the +/-1% interest rate increase sensitivities provided in IFF09 would provide the directional impact of a change in the interest rates. The projected financial statements supporting the +/-1% interest rate increase sensitivities was provided in Appendix 14.

<u>CAC/MSOS/MH/RISK-48</u>

Reference: **KPMG - Manitoba Hydro - External Quality Review, Chapter 4, Section 4.11 and Appendix J**

Preamble: **KPMG states:**

This appendix presents the results of the detailed runs conducted by MH at our behest of various drought scenarios, including five, ten and fifteen year low flow years to understand their impact on the key MH financial metrics.

And,

As previously stated, the Sale Scenario provides MH with improved Retained Earnings and Debt Ratios compared to the No Sale Scenario. The improved Retained Earnings and Debt Ratios are due primarily to the increased surplus export sales associated with the new generation and US transmission interconnection capabilities.

Also, KPMG provides charts and table depictions out to various time horizons (from endpoints of 2022 in some charts to endpoints of 2042 in others.

e) **Please confirm that a major construction projects / capital investments may be required that are not depicted (above the "planned capital expenditures") during the time horizons captured in the tables and charts provided by KPMG.**

<u>ANSWER</u>:

The study undertaken for KPMG includes the major construction projects and capital investments required to be consistent with IFF09 and the 2009 Capital Expenditure Forecast included in Appendix 6.1. There are sufficient major generation and transmission resources in the development plans to meet the expected load forecast to the end of the study period to 2042. In addition, provision has been made for ongoing system refurbishment and other capital expenditures based on current information for factors such as asset aging cycles and load growth. However, it is almost certain that those assumptions will change over time but such future expenditures can only be predicted with the best information at the time of the forecast. Therefore, Manitoba Hydro confirms that there is some uncertainty that all major capital expenditures up to 2042 have been identified.

<u>CAC/MSOS/MH/RISK-48</u>

Reference: **KPMG - Manitoba Hydro - External Quality Review, Chapter 4, Section 4.11 and Appendix J**

Preamble: **KPMG states:**

This appendix presents the results of the detailed runs conducted by MH at our behest of various drought scenarios, including five, ten and fifteen year low flow years to understand their impact on the key MH financial metrics.

And,

As previously stated, the Sale Scenario provides MH with improved Retained Earnings and Debt Ratios compared to the No Sale Scenario. The improved Retained Earnings and Debt Ratios are due primarily to the increased surplus export sales associated with the new generation and US transmission interconnection capabilities.

Also, KPMG provides charts and table depictions out to various time horizons (from endpoints of 2022 in some charts to endpoints of 2042 in others.

f) If the confirmation sought in (b) above, is not provided, please explain.

<u>ANSWER</u>:

It is assumed that the information request should refer to CAC/MSOS/MH/RISK-48(e) and not 48(b). Please refer to the response to CAC/MSOS/MH/RISK-48(e) which confirms that there is some uncertainty that all major capital expenditures up to 2042 have been identified.

<u>CAC/MSOS/MH/RISK-48</u>

Reference: **KPMG - Manitoba Hydro - External Quality Review, Chapter 4, Section 4.11 and Appendix J**

Preamble: **KPMG states:**

This appendix presents the results of the detailed runs conducted by MH at our behest of various drought scenarios, including five, ten and fifteen year low flow years to understand their impact on the key MH financial metrics.

And,

As previously stated, the Sale Scenario provides MH with improved Retained Earnings and Debt Ratios compared to the No Sale Scenario. The improved Retained Earnings and Debt Ratios are due primarily to the increased surplus export sales associated with the new generation and US transmission interconnection capabilities.

Also, KPMG provides charts and table depictions out to various time horizons (from endpoints of 2022 in some charts to endpoints of 2042 in others.

g) Given the future time horizon of 12 to 32 years, provide a table summarizing the major capital projects of the past 20 years.

<u>ANSWER</u>:

The following table provides the data requested for the period 1997-2010.

$ millions

Capital Projects	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Bipole III							1	1	1	1	1	2	18	28
Brandon Combustion Turbine				14	62	87	27	(3)	1					
Brandon Combustion Turbine Pipeline Upgrade														4
Conawapa - Generation								3	8	18	33	34	33	35
Demand Side Management									22	29	37	37	35	32
Dorsey - US Border New 500 kV Transmission Line														1
Grand Rapids G.S. Rehabilitation	13	6	6	2	11	10	2	7	8					
Herblet Lake - The Pas 230 kV Transmission												4	10	35
Keeyask - Generation							23	31	33	32	36	43	54	57
Kelsey Improvements & Upgrades									7	18	30	31	44	47
Kettle Improvements & Upgrades													1	8
Northern AC Transmission System Requirements							1	9	19	9	4			
Planning Study Costs	4	2	5	19	29	39	7	3	4	6	6	5	3	
Point du Bois Improvements & Upgrades												9	13	11
Pointe du Bois - Transmission												1	2	6
Riel 230/500kV Station							1					2	2	25
Thermal G.S. Assurance	8	3	4	3	2									
Wind Generation								2	1					
Wuskwatim - Generation							20	30	36	36	77	149	175	310
Wuskwatim - Transmission												58	79	58
Seven Sister Improvements & Upgrades	2	3	7	2										
Total	**27**	**14**	**22**	**40**	**104**	**136**	**82**	**83**	**140**	**149**	**224**	**375**	**469**	**657**

CAC/MSOS/MH/RISK-49

Reference: NYC Public Document, Issues #2 - #4 and Issues #5 - #6
KPMG Report

a) **With respect to Issues #2 - #4, please provide KPMG's interpretation of the concern that the pricing of contracts is "no longer consistent or competitive with deregulation prices".**
b) **With respect to Issues #5 - #6, please provide KPMG's understanding of the alleged deficiencies with the current "pricing formulae".**
c) **If not already noted, please indicate specifically where in the KPMG Report these concerns are addressed**

ANSWER:

KPMG Response:

The NYC has raised numerous issues / assertions regarding Manitoba Hydro in a variety of reports and time periods. KPMG developed a conceptual framework to guide it in its external quality review of Manitoba Hydro, as detailed in Section 1.2. In applying this conceptual framework, KPMG carried out a detailed review of the Consultant's Reports and other documents to group the NYC's assertions into the Issues and Themes as presented in the KPMG report. In assessing the Issues, we took the approach that our work would not necessarily result in a total concurrence with or rejection of the assertions underlying an Issue; in some instances, we have found that we concur with some elements of an assertion and reject other elements. Accordingly, we would suggest that readers of this report focus on the analysis of the Issues as well as any recommendations that relate to the Issues, rather than focusing on whether we concur with or reject any particular assertion.

<u>CAC/MSOS/MH/RISK-50</u>

Reference: NYC Public Document, Issues #20 - #23, #25, #86 and #138
KPMG Report

a) If not already noted, please indicate specifically where the KPMG report deals with the topics of Risk Capital and the allocation of reserves against retained earnings as risk management practices.

<u>ANSWER</u>:

<u>KPMG Response</u>:

Please refer to Chapter 1 and Chapter 4 of our report for a discussion on risk capital reserves in the context of Manitoba Hydro's operational context including its exposure to drought risk.

<u>CAC/MSOS/MH/RISK-51</u>

Reference: **NYC Public Document, Issue #27**
KPMG Report

a) **Please provide KPMG's understanding as to the basis for the calculation of the losses referenced here.**

b) **If not already noted, please indicate specifically where the KPMG report deals with valuation of losses and this particular issue.**

<u>ANSWER</u>:

<u>KPMG Response</u>:

KPMG reviews the benefit of MH's long-term contracting approach in Chapter 4. Please also see our response to CAC/MSOS/MH/RISK-49.

CAC/MSOS/MH/RISK-52

Reference: **NYC Public Document, Issue #31**
KPMG Report

a) **Please provide KPMG's understanding as to the basis for the claim that the current cost/benefit analysis used by Manitoba Hydro is "incorrect".**

b) **If not already noted, indicate specifically where the KPMG report deals with the appropriateness of Manitoba Hydro's cost/benefit analysis.**

ANSWER:

KPMG Response:

SPLASH, which is the model used to calculate long-term costs and benefits, is reviewed in detail in Section 3.10 of the KPMG report. Please also see our response to CAC/MSOS/MH/RISK-49.

<u>CAC/MSOS/MH/RISK-53</u>

Reference: **NYC Public Document, Issues #32 - #34 and #36 - #37**
KPMG Report

a) **Please provide KPMG's understanding as to the basis for the claim that the long-term contracts are over sold.**
b) **If not already noted, indicate specifically where the KPMG report deals with the issue of overselling.**

<u>ANSWER</u>:

<u>KPMG Response</u>:

KPMG analyses the potential impact of drought events in Section 4.10 of our report. Please see our response to CAC/MSOS/MH/RISK-49.

<u>CAC/MSOS/MH/RISK-54</u>

Reference: **NYC Public Document, Issue #38**
KPMG Report

a) Please provide KPMG's understanding as to what the reference to "Dependable" refers to? Is it Dependable Energy?

b) Please provide KPMG's understanding as to the basis for the conclusion that the Dependable Computation is "fundamentally flawed".

c) If not already noted, indicate specifically where the KPMG report deals with the issue of the Dependable Computation.

<u>ANSWER</u>:

<u>KPMG Response</u>:

The nature of the alleged deficiencies associated with the definition of Dependable Energy is not clear from the wording of Issue #38. KPMG's conclusions with respect to MH's definition of Dependable Energy are found in Section 4.7.1 Please also see our response to CAC/MSOS/MH/RISK-49.

CAC/MSOS/MH/RISK-55

Reference: NYC Public Document, Issues #42 and #87
KPMG Report

a) Please provide KPMG's understanding as to what factors the NYC considers as possibly leading to a "misstatement in projected rate increases of over 3X multiples".

b) If not already noted, indicate specifically where the KPMG report deals with this issue.

ANSWER:

KPMG Response:

Given the limited context provided by NYC for Issue #42, we are not clear on the factors that lead to an assertion of misstatement. Please also see our response to CAC/MSOS/MH/RISK-49.

CAC/MSOS/MH/RISK-56

Reference: NYC Public Document, Issue #50
KPMG Report

a) Please provide KPMG's understanding as to the basis for the claim that past contracts have generated negative returns, economic value loss and self-incurred drought risk.

b) If not already noted, indicate specifically where the KPMG report deals with these issues.

ANSWER:

KPMG Response:

KPMG analyzes the benefit of past contracts in Section 4.6 of our Report. Please also see our response to CAC/MSOS/MH/RISK-49.

CAC/MSOS/MH/RISK-57

Reference: NYC Public Document, Issues #52, #53, #58 and #59
KPMG Report

a) These issues appear to relate to the fact Manitoba Hydro's contract are heavily concentrated with one counter party. Please confirm whether or not this is KPMG's understanding.

b) If not already noted, indicate specifically where the KPMG report deals with this issue.

ANSWER:

KPMG Response:

KPMG addresses risks related to long-term contracting in Chapter 4 of our report. Please also see our response to CAC/MSOS/MH/RISK-49.

CAC/MSOS/MH/RISK-58

Reference: **NYC Public Document, Issues #61 and #72**
KPMG Report

a) **This issue contends there is an asymmetry in the contracts Manitoba Hydro as with at least one counter party. If not already noted, indicate specifically where the KPMG report deals with this issue.**

ANSWER:

KPMG Response:

KPMG analyzes the benefits of long-term contracts in Section 4.11 of our report. Please also see our response to CAC/MSOS/MH/RISK-49.

CAC/MSOS/MH/RISK-59

Reference: NYC Public Document, Issues #63
KPMG Report

a) Please provide KPMG's understanding – in general terms that do not get into the specific values in the contract – what the concerns are regarding the risks Manitoba Hydro will be exposed to and the deficiencies with the pricing/volume terms of the current "contract".

b) If not already noted, indicate specifically where the KPMG report deals with this issue.

ANSWER:

KPMG Response:

Issues related to contract structure are addressed in Section 4.8 of our report. Please also see our response to CAC/MSOS/MH/RISK-49.

CAC/MSOS/MH/RISK-60

Reference: NYC Public Document, Issues #68
KPMG Report

a) Please provide KPMG's understanding as to the claimed deficiencies of the current Diversity Contracts.

b) If not already noted, indicate specifically where the KPMG report deals with this issue.

ANSWER:

KPMG Response:

The role of Diversity Contracts is discussed in Section 4.9.3 of our report. Please see our response to CAC/MSOS/MH/RISK-49.

<u>CAC/MSOS/MH/RISK-61</u>

Reference: NYC Public Document, Issues #70 and #137
KPMG Report

a) Please provide KPMG's understanding as to the claimed deficiencies with the pending Contracts.

b) If not already noted, indicate specifically where the KPMG report deals with this issue.

<u>ANSWER</u>:

<u>KPMG Response</u>:

Pending contracts are discussed in Section 4.10.1 of the KPMG report. Please also see our response to CAC/MSOS/MH/RISK-49.

<u>CAC/MSOS/MH/RISK-62</u>

Reference: NYC Public Document, Issues #75 and #140
KPMG Report

a) Please provide KPMG's understanding as to the claimed deficiencies in the assessment of contracts by the Front Office.

b) If not already noted, indicate specifically where the KPMG report deals with this issue.

<u>ANSWER</u>:

<u>KPMG Response</u>:

KPMG analyzes management review of proposed export contracts in Chapter 5. Please also see our response to CAC/MSOS/MH/RISK-49.

<u>CAC/MSOS/MH/RISK-63</u>

Reference: NYC Public Document, Issues #96 - #104
KPMG Report

a) Please provide KPMG's understanding as to the claimed shortcomings in Manitoba Hydro's use of transmission.

b) If not already noted, indicate specifically where the KPMG report deals with this issue.

<u>ANSWER</u>:

<u>KPMG Response</u>:

The role of transmission in MH's long-term contracting strategy is discussed in Section 4.5.2 of our report. Please also see our response to CAC/MSOS/MH/RISK-49.

CAC/MSOS/MH/RISK-64

Reference: NYC Public Document, Issue #110
KPMG Report

a) Please provide KPMG's understanding as to the basis for the $4.2 B and $7-9.5 B values quoted and the claims as to how Long Term contracts could be changed to mitigate such risks.

b) If not already noted, indicate specifically where the KPMG report deals with this issue.

ANSWER:

KPMG Response:

Please see our response to CAC/MSOS/MH/RISK-49 and to CAC/MSOS/MH/RISK-58.

<u>CAC/MSOS/MH/RISK-65</u>

Reference: NYC Public Document, Issues #111 - #112
KPMG Report

a) Please provide KPMG's understanding as to the basis for the claim that export contracts and retail load will have to be supplied from expensive MISO imports under low flow conditions.

b) If not already noted, indicate specifically where the KPMG report deals with this issue.

<u>ANSWER</u>:

<u>KPMG Response</u>:

KPMG undertook an extensive analysis of the potential impact of drought events on MH's financial performance, in the presence of export contracts, in Section 4.10. Please also see our response to CAC/MSOS/MH/RISK-49.

<u>CAC/MSOS/MH/RISK-66</u>

Reference: NYC Public Document, Issues #113 - #114 and #118
KPMG Report

a) Please provide KPMG's understanding as to the argument underlying the claim that export contracts are over sold.

b) Please provide KPMG's interpretation of the argument/analysis underlying the claim by the NYC that the true firm energy available for exports is less than 100 MW and in some years even negative.

c) If not already noted, indicate specifically where the KPMG report deals with this issue.

<u>ANSWER</u>:

<u>KPMG Response</u>:

Please see our response to CAC/MSOS/MH/RISK-49.

CAC/MSOS/MH/RISK-67

Reference: NYC Public Document, Issue #120
KPMG Report

a) Please provide KPMG's understanding as to what "oversights" and "Trojan horse deals" are being referred to in this issue.

b) If not already noted, indicate specifically where the KPMG report deals with this issue.

ANSWER:

KPMG Response:

Please see our response to CAC/MSOS/MH/RISK-49.

CAC/MSOS/MH/RISK-68

Reference: **NYC Public Document, Issue #121**
KPMG Report

a) **Please provide KPMG's understanding as to the basis for the claim that Manitoba Hydro will have no available energy to commit as firm sales until after 2022.**

b) **If not already noted, indicate specifically where the KPMG report deals with this issue.**

ANSWER:

KPMG Response:

KPMG analyzes the financial benefit of long-term export contracts in Section 4.11 of our report. Please see our response to CAC/MSOS/MH/RISK-49.

<u>CAC/MSOS/MH/RISK-69</u>

Reference: **NYC Public Document, Issue #124**
KPMG Report

a) **Please provide KPMG's understanding as to the basis for the claim that Manitoba Hydro's legal provisions for liquidated damages in the structuring of Long Term Contracts are not sufficient.**

b) **If not already noted, indicate specifically where the KPMG report deals with this issue.**

<u>ANSWER</u>:

<u>KPMG Response</u>:

Issues related to contract structure and specific terms and conditions with respect to long-term power sales are addressed in Sections 4.8 and 4.9 of our report. Please also see our response to CAC/MSOS/MH/RISK-49.

CAC/MSOS/MH/RISK-70

Reference: NYC Public Document, Issue #129
KPMG Report

a) **Please provide KPMG's understanding as to the basis for the claim that export practices are based on "price speculation".**

b) **If not already noted, indicate specifically where the KPMG report deals with this issue.**

ANSWER:

KPMG Response:

Long-term contracts serve to hedge future price risk, and thus avoid "price speculation". This is addressed in Section 4.4 of our report. Please also see our response to CAC/MSOS/MH/RISK-49.

<u>CAC/MSOS/MH/RISK-71</u>

Reference: NYC Public Document, Issues #130 - #131
KPMG Report

a) Please provide KPMG's understanding as to the basis for the claim that the current drought risk is "self-imposed" and the risk to ratepayers "unnecessary".

b) If not already noted, indicate specifically where the KPMG report deals with this issue.

<u>ANSWER</u>:

<u>KPMG Response</u>:

The rationale for long-term contracting is discussed extensively in Chapter 4 our report. Please also see our response to CAC/MSOS/MH/RISK-49.

<u>CAC/MSOS/MH/RISK-72</u>

Reference: **NYC Public Document, Issue #133**
KPMG Report

a) Please provide KPMG's understanding as to the basis for the claim that the rate increases were inflated.

b) If not already noted, indicate specifically where the KPMG report deals with this issue.

<u>ANSWER</u>:

<u>KPMG Response</u>:

Please see our response to CAC/MSOS/MH/RISK-49, CAC/MSOS/MH/RISK-58, and CAC/MSOS/MH/RISK-71.

<u>CAC/MSOS/MH/RISK-73</u>

Reference: NYC Public Document, Issues #158 and #159
KPMG Report

a) Please provide KPMG's understanding as to the basis for the claimed $1 B in savings over 5 years attributed to using weather insurance.

b) If not already noted, indicate specifically where the KPMG report deals with this issue.

<u>ANSWER</u>:

<u>KPMG Response</u>:

The potential use of weather insurance and/or derivatives is analyzed in detail in Section 4.5.1.3 of our report. Please also see our response to CAC/MSOS/MH/RISK-49.

<u>CAC/MSOS/MH/RISK-74</u>

Reference: NYC Public Document, Issue #167
KPMG Report

a) **Please provide KPMG's understanding of the premise upon which the risk numbers have been calculated that has resulted in faulty numbers such that the 20 year projections are misleading as to the economic viability of capital expenditures.**

b) **If not already noted, indicate specifically where the KPMG report deals with this issue.**

<u>ANSWER</u>:

<u>KPMG Response</u>:

Risk management practices are addressed in Chapter 6 of our report. Please also see our response to CAC/MSOS/MH/RISK-49.

CAC/MSOS/MH/RISK-75

Reference: NYC Public Document, Issue #178
KPMG Report

a) Please provide KPMG's understanding as to the basis for the claimed billion dollars in errors in the generation estimate and IFF.

b) If not already noted, indicate specifically where the KPMG report deals with this issue.

ANSWER:

KPMG Response:

Issues related to the operation of HERMES and SPLASH, and their use in support of the IFF process, are discussed in Section 3.4. Please also see our response to CAC/MSOS/MH/RISK-49.

<u>CAC/MSOS/MH/RISK-76</u>

Reference: **NYC Public Document, Issues #192 and #196**
KPMG Report

a) **Please provide KPMG's understanding as to the basis for the claimed $500 M in errors in PRISM.**

b) **If not already noted, indicate specifically where the KPMG report deals with this issue.**

<u>ANSWER</u>:

<u>KPMG Response</u>:

KPMG addresses issues related to the PRISM model in Section 3.11 of the report. Please also see our response to CAC/MSOS/MH/RISK-49.

CAC/MSOS/MH/RISK-77

Reference: **NYC Public Document, Issues #201, #203, #205, #206, #207 and #209 KPMG Report**

a) Please provide KPMG's understanding as to the basis for the claim that the $2.4 B value overstates or understates the "reliable" risk of a 5 year drought and explain why.

b) If not already noted, indicate specifically where the KPMG report deals with this issue.

ANSWER:

KPMG Response:

KPMG addresses estimates of drought costs in a variety of sections in our report, including Sections 3.7.11, 3.10.2.2, and 4.10. Please also see our response to CAC/MSOS/MH/RISK-49.

<u>CAC/MSOS/MH/RISK-78</u>

Reference: NYC Public Document, Issue #212
KPMG Report

a) Please provide KPMG's understanding as the basis for this issue, i.e., "the notion that the current five year drought number is "conservative" was found to be inaccurate".

b) If not already noted, indicate specifically where the KPMG report deals with this issue.

<u>ANSWER</u>:

<u>KPMG Response</u>:

KPMG addresses estimates of drought costs in a variety of sections in our report, including Sections 3.7.11, 3.10.2.2, and 4.10. Please also see our response to CAC/MSOS/MH/RISK-49.

<u>CAC/MSOS/MH/RISK-79</u>

Reference: **NYC Public Document, Issue #225**
KPMG Report

a) **The issue description (and also that of subsequent issues) appears to suggest that the use of Hermes for weekly position optimization has resulted in material errors. Please confirm if this is KPMG's understanding of the "issue" and, if so, provide KPMG's understanding as to the nature and basis of claimed errors.**

b) **If not already noted, indicate specifically where the KPMG report deals with this issue.**

<u>ANSWER</u>:

<u>KPMG Response</u>:

KPMGs analysis of the role of HERMES in production scheduling is provided in Section 3.4 of our report. Please also see our response to CAC/MSOS/MH/RISK-49.

CAC/MSOS/MH/RISK-80

Reference: NYC Public Document, Issues #257 and #258
Appendix 12.2, (ICF Report), page 18
KPMG Report

a) The ICF Report states that Manitoba Hydro is not involved in merchant non-arbitrage transactions. Please reconcile this statement with Issues #257 and #258 raised by the NYC.

b) If not already noted, indicate specifically where the KPMG report deals with this issue.

ANSWER:

KPMG Response:

Please see our response to CAC/MSOS/MH/RISK-49.

CAC/MSOS/MH/RISK-81

Reference: NYC Public Document, Issues #262 and #263

a) In various Issue descriptions (such as those indicated) reference is made to a PSO Staff Report. Please provide a copy.

ANSWER:

See Appendix B and C in PUB Board Order 95/10.

CAC/MSOS/MH/RISK-82

Reference: NYC Public Document, Issues #268 and #270
KPMG Report

a) Please provide KPMG's understanding of these issues and the basis for the claims.

b) If not already noted, indicate specifically where the KPMG report deals with this issue. If not addressed in the KPMG Report, please explain why and provide a response.

ANSWER:

KPMG Response:

KPMG addresses issues related to the benefits of long-term contracts in Chapter 4 of our report. Please see our response to CAC/MSOS/MH/RISK-49.

<u>CAC/MSOS/MH/RISK-83</u>

Reference: KPMG Report, pages (viii) and 42

a) The Report states that following a draw down, water storage levels will be replenished at the first opportunity, including from opportunity sales and other non-firm sources. Please describe more fully Manitoba Hydro' practices in the this regard and, particular, whether Manitoba Hydro's approach to weighing the cost of replenishing water storage levels relative to the future risk of inadequate supply.

<u>ANSWER</u>:

Maintaining energy security is one of Manitoba Hydro's highest operating priorities. In order to ensure adequate energy supplies for drought as well as other contingencies Manitoba Hydro maintains hydraulic energy reserves in its storage reservoirs adequate to meet its projected needs during severe conditions, consistent with its energy security operating criteria. If in planning its operations it is necessary to draw into its hydraulic reserves projected at the end of the planning period, rather than curtail supply before that time, Manitoba Hydro will draw from those reserves first. Should conditions subsequently improve, Manitoba Hydro will re-establish these planning reserves first prior to reducing other supply plans.

Please also refer to Manitoba Hydro's operating priorities in Attachment 1 to PUB/MH I-147(a)(ii).

CAC/MSOS/MH/RISK-84

Reference: KPMG Report, pages (ix) and 24

a) With respect to the second last bullet on the page, please clarify whether, in KPMG's view, there are/were actual data inconsistencies between the Generation Estimate report and HERMES. If yes, what are KPMG's recommendations to avoid such issues in the future?

ANSWER:

KPMG Response:

KPMG found no inconsistencies between the Generation Estimate and HERMES.

<u>CAC/MSOS/MH/RISK-85</u>

Reference: KPMG Report, pages (xi), 25 and 78

a) What would be the impact on Manitoba Hydro's estimated value for overall system Dependable Energy and Median Energy (for 2010/11) if the period prior to 1942 was excluded? Please contrast with the current values used by Manitoba Hydro.

<u>ANSWER</u>:

Manitoba Hydro has not undertaken a comprehensive analysis of the impact that a shortened historic flow period may have on system dependable energy. Such an analysis would be new work that cannot be undertaken in the timeframe allotted for responses to information requests. However, an approximation can be made by comparing energy generation for the lowest two-year flow period in the shortened record (1988/89 to 1989/90) to that in the long record (1939/40 to 1940/41). This approximation indicates that hydraulic dependable energy in the system may increase by approximately 5% or about 1000 GW.h due to utilizing flow records since 1942.

An analysis of the energy production potential utilizing flow records since 1942 indicates that the median hydraulic energy would increase by about 2.5% or about 750 GW.h relative to the record beginning in 1912.

CAC/MSOS/MH/RISK-86

Reference: KPMG Report, pages (xii) and 26

a) In the second last bullet KPMG states that estimates as to the impact of the various factors could be calculated and communicated to users if material. In KPMG's view, is this "estimation" something that Manitoba Hydro should do?

ANSWER:

KPMG Response:

The bullet point referenced in the question is in the context of the "perfect foresight" issue that KPMG examined and made a recommendation on. Please refer to Chapter 7 for KPMG's recommendations.

<u>CAC/MSOS/MH/RISK-87</u>

Reference: KPMG Report, page (xxii) page 123-124

a) Please describe KPMG's understanding as to how Manitoba Hydro provides for a level of risk capital against it projected risk drought.

b) What is KPMG's understanding as to the level of risk capital provided for in this regard and the basis on which KPMG has concluded that it is appropriate?

<u>ANSWER</u>:

<u>KPMG Response</u>:

Please refer to Chapter 1, Chapter 4 and specifically section 4.11, and Appendix J for a detailed discussion of these issues.

<u>CAC/MSOS/MH/RISK-88</u>

Reference: KPMG Report, pages (xxiii) and 124

a) KPMG's findings do not appear to address the merits of the specific risk concerns raised by the NYC regarding long-term contracts. Please summarize KPMG's findings as to relevance of the specific risk concerns raised by the NYC.

<u>ANSWER</u>:

<u>KPMG Response</u>:

KPMG developed a conceptual framework to guide it in its external quality review of Manitoba Hydro, as detailed in Section 1.2. In applying this conceptual framework, KPMG carried out a detailed review of the NYC Consultant's Reports and other documents to group the NYC's assertions into the Issues and Themes as presented in the KPMG report. In assessing the Issues, we took the approach that our work would not necessarily result in a total concurrence with or rejection of the assertions underlying an Issue; in some instances, we have found that we concur with some elements of an assertion and reject other elements. Accordingly, we would suggest that readers of this report focus on the analysis of the Issues as well as any recommendations that relate to the Issues, rather than focusing on whether we concur with or reject any particular assertion. Further, section 4.2 details KPMG's findings in this regard as related to the page reference in the question.

CAC/MSOS/MH/RISK-89

Reference: KPMG Report, pages (xxiii) and 124

a) With respect to the second last bullet, for each of the risk concerns raised by the NYC (apart from hydrological variation which is discussed on page 164), please explain why KPMG considers Manitoba Hydro to be in a better position to assess and/or manage the risk.

ANSWER:

KPMG Response:

In various sections of chapter 4, KPMG examines the NYC assertions regarding potential novel terms that could be included in long term contracts for Manitoba Hydro's benefit; for example refer to section 4.8 for a discussion on contract structure and Manitoba Hydro being in a better position to assess and/or manage the risk related to these novel terms being suggested by the NYC.

CAC/MSOS/MH/RISK-89

Reference: KPMG Report, pages (xxiii) and 124

b) In KPMG's view does Manitoba Hydro's pricing methodology with respect to export contracts adequately compensate it for retaining these risks?

c) If the response to part (b) is yes, what is the basis for this conclusion? In particular, please provide any assessment KPMG has undertaken to quantify the risks and/or determine the premium included in the contract prices to compensate for these risks.

ANSWER:

KPMG Response:

Please refer to section 4.6 that examines Manitoba Hydro's pricing of power sold under long-term contract including KPMG's views on the appropriateness of the pricing methodology being used by Manitoba Hydro for this purpose.

<u>CAC/MSOS/MH/RISK-90</u>

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, page xxxiii and 208**

Preamble: **KPMG has chosen to comment on "optimal capital structure" stating:**

Manitoba Hydro is planning a major capital expansion to its generation and transmission system. Manitoba Hydro is also in the process of improving its risk management practices. Both of these may affect its optimal capital structure. Accordingly, Manitoba Hydro's capital structure should continue to be formally reviewed on a regular basis.

a) **Please quantify the minimum threshold and the index that causes a capital expansion become "major".**

<u>ANSWER</u>:

<u>KPMG Response</u>:

The KPMG report does not make mention that "Manitoba Hydro is planning a major capital expansion to its generation and transmission system". The only reference that ties MH's capital structure and its expansion plans is on page xxxiii where the reference is to "substantial capital expansion plans". This reference was intended to highlight the importance to the various stakeholders of regularly reviewing capital structure particularly when planning of substantial capital expenditures. Nevertheless, there is no hard and fast rule to quantify the minimum threshold and the index that causes a capital expansion to become "major" or "substantial". It would be hard to argue though that Manitoba Hydro's planned multi-billion dollar expenditures on new hydro generation are not "major" in nature.

<u>**CAC/MSOS/MH/RISK-90**</u>

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, page xxxiii and 208**

Preamble: **KPMG has chosen to comment on “optimal capital structure” stating:**

Manitoba Hydro is planning a major capital expansion to its generation and transmission system. Manitoba Hydro is also in the process of improving its risk management practices. Both of these may affect its optimal capital structure. Accordingly, Manitoba Hydro's capital structure should continue to be formally reviewed on a regular basis.

b) **Please discuss how “major capital expansion” impacts the “optimal capital structure” for MH, with regard to the concept of debt equity ratios, interest coverage ratios, or other financial ratios.**

<u>**ANSWER**</u>**:**

<u>KPMG Response</u>:

A major capital expansion requires substantial expenditures that have to be financed. This expenditure(s) would be expected to materially affect debt equity ratios, interest coverage ratios, or other financial ratios. These are all factors that must be considered in arriving at a capital structure decision for any corporation, including Manitoba Hydro.

<u>CAC/MSOS/MH/RISK-90</u>

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, page xxxiii and 208**

Preamble: **KPMG has chosen to comment on "optimal capital structure" stating:**

Manitoba Hydro is planning a major capital expansion to its generation and transmission system. Manitoba Hydro is also in the process of improving its risk management practices. Both of these may affect its optimal capital structure. Accordingly, Manitoba Hydro's capital structure should continue to be formally reviewed on a regular basis.

c) **In light of the possible threat to the optimal capital structure of a major capital expansion, would KPMG recommend that the owner reduce its guarantee fee or possible future dividends to bolster the equity layer? Explain.**

<u>ANSWER</u>:

<u>KPMG Response</u>:

This is a matter of policy between Manitoba Hydro, its shareholder, and the PUB and is outside the current mandate of KPMG with Manitoba Hydro.

CAC/MSOS/MH/RISK-90

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, page xxxiii and 208**

Preamble: **KPMG has chosen to comment on "optimal capital structure" stating:**

> **Manitoba Hydro is planning a major capital expansion to its generation and transmission system. Manitoba Hydro is also in the process of improving its risk management practices. Both of these may affect its optimal capital structure. Accordingly, Manitoba Hydro's capital structure should continue to be formally reviewed on a regular basis.**

d) **Please discuss how the current MH "risk management practices" impact the "optimal capital structure" for MH, with regard to the concept of debt equity ratios, interest coverage ratios, and other financial ratios.**

ANSWER:

KPMG Response:

In general, the greater an organization's ability to manage, risk, the greater its ability to withstand its exposure to risk. Accordingly, effective risk management is critical in successfully implementing any major capital expansion, since major capital expansions inherently involve considerable risk. Major capital expansions require substantial expenditures that have to be financed and so affect debt equity ratios, interest coverage ratios, or other financial ratios. As these are all factors that must be considered in arriving at a capital structure decision for any corporation, including Manitoba Hydro, risk management practices thus play a role in capital structure decisions. For example, a risk may be managed financially by keeping a monetary reserve (e.g., some form of equity) to pay for the adverse consequences of the risk arising or a risk may be actively managed to reduce its probability of occurrence and/or mitigate the negative consequences of the risk. The former method of risk management would naturally be a consideration in the overall capital structure decision.

<u>CAC/MSOS/MH/RISK-90</u>

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, page xxxiii and 208**

Preamble: **KPMG has chosen to comment on "optimal capital structure" stating:**

Manitoba Hydro is planning a major capital expansion to its generation and transmission system. Manitoba Hydro is also in the process of improving its risk management practices. Both of these may affect its optimal capital structure. Accordingly, Manitoba Hydro's capital structure should continue to be formally reviewed on a regular basis.

e) **Please discuss how "the process of improving its risk management practices" impacts the "optimal capital structure" for MH, with regard to the concept of debt equity ratios, interest coverage ratios, and other financial ratios.**

<u>ANSWER</u>:

<u>KPMG Response</u>:

Please refer to the answer in limb (d) above. Since risk management has an affect on capital structure decisions, it stands to reason that improvements in Manitoba Hydro's risk capital management practices would have bearings on Manitoba Hydro's capital structure decisions.

<u>CAC/MSOS/MH/RISK-90</u>

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, page xxxiii and 208**

Preamble: **KPMG has chosen to comment on “optimal capital structure” stating:**

Manitoba Hydro is planning a major capital expansion to its generation and transmission system. Manitoba Hydro is also in the process of improving its risk management practices. Both of these may affect its optimal capital structure. Accordingly, Manitoba Hydro's capital structure should continue to be formally reviewed on a regular basis.

f) **Please discuss how the improvements in “its risk capital management practises” would result in a change in the capital structure.**

<u>ANSWER</u>:

<u>KPMG Response</u>:

Same answer as in limb (e) above.

CAC/MSOS/MH/RISK-90

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, page xxxiii and 208**

Preamble: **KPMG has chosen to comment on "optimal capital structure" stating:**

Manitoba Hydro is planning a major capital expansion to its generation and transmission system. Manitoba Hydro is also in the process of improving its risk management practices. Both of these may affect its optimal capital structure. Accordingly, Manitoba Hydro's capital structure should continue to be formally reviewed on a regular basis.

g) **Having regard to the above noted reference to major capital expansions and reviews, how frequently should the capital structure be reviewed?**

ANSWER:

KPMG Response:

Please refer to answer in limb (c) above.

CAC/MSOS/MH/RISK-90

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, page xxxiii and 208**

Preamble: **KPMG has chosen to comment on "optimal capital structure" stating:**

Manitoba Hydro is planning a major capital expansion to its generation and transmission system. Manitoba Hydro is also in the process of improving its risk management practices. Both of these may affect its optimal capital structure. Accordingly, Manitoba Hydro's capital structure should continue to be formally reviewed on a regular basis.

h) **When the currently planned expansions and recommended reviews are completed and risks have been mitigated, how frequently should the capital structure be reviewed?**

ANSWER:

KPMG Response:

Same answer as in limb (g) above.

CAC/MSOS/MH/RISK-91

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, pages 1-2, 8 and Appendix B**

Preamble: **On pages 1 and 2 of its report, KPMG outlines the "Scope of the Review"**

In particular, KPMG states:

1.1.1 Scope of the Review
The scope of the Review is as follows:

- **review the assertions that have been made by the Consultant and the reports and services provided by the Consultant.**

- **identify the positions of Manitoba Hydro staff on each of the assertions and the services provided by the Consultant.**

- **perform a review and validation study of the merits of the Consultant's assertions and services.**

- **prepare a report summarizing KPMG's findings. [emphasis added]**

Appendix B of the KPMG report states:

The allegations that are within the scope of our work are those involving:
- Processes
- Tools
- Documentation
- Decision making

KPMG also states:

…after having already completed a detailed review of the Consultant's Reports and other documents, were confident that we understood sufficiently the assertions made by the Consultant to be able to carry out

a high quality review, we made the decision not to initiate communication with the Consultant. (page 8) [emphasis added]

a) Please confirm that "the Consultant" as referred to in the KPMG report is equivalent to the "New York Consultant" or the "NYC" as referred to on the evidentiary record of this proceeding.

ANSWER:

KPMG Response:

KPMG's understanding is that "the Consultant" that is referred to in its report is synonymous to the "NYC" or "New York Consultant" as referred to by the Manitoba PUB.

CAC/MSOS/MH/RISK-91

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, pages 1-2, 8 and Appendix B**

Preamble: **On pages 1 and 2 of its report, KPMG outlines the "Scope of the Review"**

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- **perform a review and validation study of the merits of the Consultant's assertions and services.**

- **prepare a report summarizing KPMG's findings. [emphasis added]**

Appendix B of the KPMG report states:

The allegations that are within the scope of our work are those involving:
- Processes
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KPMG also states:

…after having already completed a detailed review of the Consultant's Reports and other documents, were confident that we understood sufficiently the assertions made by the Consultant to be able to carry out

a high quality review, we made the decision not to initiate communication with the Consultant. (page 8) [emphasis added]

b) Please confirm that the "assertions" referred to by KPMG are the same as those 286 individually outlined "Issues" in a document dated Jun 2010 entitled "NYC Consultant - GRA Hearing 2010-2011 - Risk Management Reports".

c) If the confirmation sought in (b) is not correct, please explain how the assertions referred to by KPMG in the above passage differ from those contained in the document referred to in (b).

d) Please confirm that KPMG did not report, individually, its findings on each of the assertions/issues provided by the Consultant or NYC in the report identified in (b) above.

e) Why did KPMG consider it necessary to qualify the scope with respect to "allegations that are within the scope of our work".

f) Please identify which "allegations" of the NYC were not considered within scope of the KPMG report and provide a table which lists each of those allegations not in scope.

g) Please identify which of the NYC assertions that KPMG did not deal with due to issues of priorities or otherwise.

ANSWER:

KPMG Response:

KPMG developed a conceptual framework to guide it in its external quality review of Manitoba Hydro, as detailed in Section 1.2. In applying this conceptual framework, KPMG carried out a detailed review of the Consultant's Reports (as defined in Appendix A) and other documents to group the NYC's assertions into the Issues and Themes as presented in the KPMG report (which is dated April 15, 2010, a number of weeks before the document referred to in (b) above, which has not been reviewed by KPMG). In assessing the Issues, we took the approach that our work would not necessarily result in a total concurrence with or rejection of the assertions underlying an Issue; in some instances, we have found that we concur with some elements of an assertion and reject other elements. Accordingly, we would suggest that readers of this report focus on the analysis of the Issues as well as any recommendations that relate to the Issues, rather than focusing on whether we concur with or reject any particular assertion. In utilizing the approach of grouping related assertions into Issues and then addressing the Issues, our scope in certain instances extends beyond the specific matters addressed by the assertions. In general, we applied this general approach for the following two reasons:

1. To appropriately address an Issue: Our analysis in certain circumstances had to consider the overall context of the matter in question in order to appropriately address an Issue. For example, if an Issue addresses certain aspects of MH’s middle office and if the appropriate analysis of that Issue requires examination of selected aspects of both the front office and the back office, we would examine those selected aspects for both the front office and the middle office. This general approach is designed to allow us to address the root causes of an Issue rather than just its consequential or symptomatic aspects.

   This general approach has been applied to the analysis of an Issue and also to the development of our recommendations; and

2. To add value for MH in instances where it was efficient to do so.

<u>CAC/MSOS/MH/RISK-92</u>

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, Pages 2, 19, 68 and Appendix L**

Preamble: **KPMG outlines the scope of its report on pages 1 and 2. KPMG limits its scope of a review of risk management practices of MH that do not apply to "other business products such as its natural gas operations, or to areas such as environmental and safety issues."**

Appendix L includes a number of definitions in reference to various matters of risk, but does not include a reference to or a definition of interest rate risk.

KPMG further states:

In the context of a hydroelectric utility, key components of overall risk include:

- **regulatory risk;**
- **volume risk (both resource and load);**
- **market risk;**
- **credit risk;**
- **operational risk; and**
- **financial risk**

These key components do not appear to directly coincide with the list of risks in Appendix L. For example, Appendix L does not include "financial risk", nor does financial risk appear to be defined for the purposes of this report, elsewhere in the KPMG report.

KPMG makes numerous references to debt and debt equity ratios.

KPMG states:

While MH has met its debt to equity ratio target, a deterioration of that ratio is expected with the planned debt financing of the construction of new generation and transmission projects

And

The capital costs and associated debt charges as a result of new generation are fixed in advance. This suggests that a portion of the revenue should also be fixed in advance.

a) Please confirm that KPMG did not address interest rate risk to Manitoba Hydro in the context of the scope of its report.

b) If the confirmation sought in (a) is not provided, please provide the specific passages and precise references to where the analysis of interest rate risk to Manitoba Hydro can be found in the report.

ANSWER:

KPMG Response:

Interest rate risk is typically considered a financial risk and has been considered by KPMG, as and where appropriate.

CAC/MSOS/MH/RISK-92

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, Pages 2, 19, 68 and Appendix L**

Preamble: **KPMG outlines the scope of its report on pages 1 and 2. KPMG limits its scope of a review of risk management practices of MH that do not apply to "other business products such as its natural gas operations, or to areas such as environmental and safety issues."**

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And

The capital costs and associated debt charges as a result of new generation are fixed in advance. This suggests that a portion of the revenue should also be fixed in advance.

c) **Please confirm that KPMG did not address the matching or mismatching of contracts with financing and capital programs over the respective lives of each.**

d) **If the confirmation sought in (c) is not provided, please provide the passages, data, computations and precise references from the KPMG report which contains the analysis of matching or mismatching of contracts with financing and capital programs over the respective lives of each.**

ANSWER:

KPMG Response:

KPMG has considered this as and where appropriate. For example, please refer to section 4.5.1.1 that discusses stability and matching of cash flows.

<u>CAC/MSOS/MH/RISK-92</u>

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, Pages 2, 19, 68 and Appendix L**

Preamble: **KPMG outlines the scope of its report on pages 1 and 2. KPMG limits its scope of a review of risk management practices of MH that do not apply to "other business products such as its natural gas operations, or to areas such as environmental and safety issues."**

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KPMG makes numerous references to debt and debt equity ratios.

KPMG states:

While MH has met its debt to equity ratio target, a deterioration of that ratio is expected with the planned debt financing of the construction of new generation and transmission projects

And

The capital costs and associated debt charges as a result of new generation are fixed in advance. This suggests that a portion of the revenue should also be fixed in advance.

e) In building new generation and transmission for export, confirm that risks associated with hydrology may give rise to unintended consequences and could dramatically alter NPV analyses regarding construction and export. If not confirmed, please explain.

ANSWER:

KPMG Response:

It is not clear what 'unintended consequences' the question refers to. However, as with any major capital expansion program, Manitoba Hydro's planned new hydro generation involves various risks that if not managed properly may lead to adverse consequences to the organization, such as cost overruns.

<u>CAC/MSOS/MH/RISK-92</u>

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, Pages 2, 19, 68 and Appendix L**

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These key components do not appear to directly coincide with the list of risks in Appendix L. For example, Appendix L does not include "financial risk", nor does financial risk appear to be defined for the purposes of this report, elsewhere in the KPMG report.

KPMG makes numerous references to debt and debt equity ratios.

KPMG states:

While MH has met its debt to equity ratio target, a deterioration of that ratio is expected with the planned debt financing of the construction of new generation and transmission projects

And

The capital costs and associated debt charges as a result of new generation are fixed in advance. This suggests that a portion of the revenue should also be fixed in advance.

f) **Please confirm that the KPMG report does not contain a definition for financial risk.**

g) **If the confirmation sought in (f) above is not provided, please provide the passage and precise reference in the KPMG report where financial risk is defined.**

ANSWER:

KPMG Response:

Risk definitions reflect the organization's unique business model and core activities. For purposes of KPMG's report, it was necessary to define PS&O risks upfront to facilitate a consistent understanding of our observations and recommendations, and we have done so in Appendix L – Risk Definitions. Appendix L does not contain a definition for financial risk per se and further, as we have noted, there is little industry consensus on definitions for each risk category mentioned.

CAC/MSOS/MH/RISK-93

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, page 13**

Preamble: **In various locations in its report, KPMG makes reference to scenarios, conditions, circumstances and so on that "would be" of benefit or harm to ratepayers. In addition, KPMG asserts that "entering into long term contracts can provide net benefits to MH and therefore lower rates to Manitoba ratepayers." [emphasis added] However, KPMG does not appear to comment on whether the existing MH strategy is superior to that advocated by the NYC or whether in fact the existing MH strategy is optimal.**

KPMG also makes reference to Section 2 of the Manitoba Hydro Act in setting out the legislative mandate of MH.

a) Please confirm that, in performing its risk analysis and the resulting impact on Manitoba ratepayers, KPMG considers that it should only or primarily have regard for "section 2" of the Manitoba Hydro Act.

b) If the confirmation in (a) is not provided, please provide passages and precise references in the KPMG report which refers to the other sections of the Manitoba Hydro Act and why they are relevant to risk analysis and the resulting impact on Manitoba ratepayers.

ANSWER:

KPMG Response:

According to Section 2 of the *Manitoba Hydro Act*, C.C.S.M. c. H190, the Mandate of MH is to:

> "provide for the continuance of a supply of power adequate for the needs of the province, and to engage in and to promote economy and efficiency in the development, generation, transmission, distribution, supply and end-use of power and, in addition, are:
>
> (a) to provide and market products, services and expertise related to the development, generation, transmission, distribution, supply and end-use of power, within and outside the province; and

(b) to market and supply power to persons outside the province on terms and conditions acceptable to the board."

Key aspects of this Mandate are:

1. It provides a focus on the continuance of a supply of power adequate for the needs of the province;
2. It requires MH to promote economy and efficiency in its activities; and
3. It contemplates exporting of power to users outside the province.

These key aspects were all considered by KPMG in the preparation of our Report.

Given the economics of power generation facilities and the need to plan for future demand, MH has built, and expects to continue to build new hydro generation and transmission facilities to provide capacity beyond immediate need in the province. This excess energy can then marketed outside the province. A detailed analysis of the strategies used by MH in this regard is contained in Chapter 4.

CAC/MSOS/MH/RISK-94

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, pages 15, 18 & 19**

Preamble: **CAC/MSOS observe that the quoted passage below may have a qualitative logic of a number of steps and CAC/MSOS wishes to better understand the concept advanced by KPMG. In the second quoted passage below, KPMG focuses on equity rather than cash.**

KPMG states:

The impacts of the 2002-2004 drought period adversely impacted extraprovincial sales and net income, particularly in 2002/03 and 2003/04. (page 15)

And,

Without sufficient equity, MH would have had to turn to the Government of Manitoba as its shareholder and/or its ratepayers to cover the large loss in 2003/04. (page 18)

And,

In summary, the level of equity and debt to equity ratio provides an important context for a review of risk issues. (page 19)

a) **Please confirm that, during 2003/04, MH was able to meet its cash obligations as they came due.**

ANSWER:

Confirmed.

CAC/MSOS/MH/RISK-94

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, pages 15, 18 & 19**

Preamble: **CAC/MSOS observe that the quoted passage below may have a qualitative logic of a number of steps and CAC/MSOS wishes to better understand the concept advanced by KPMG. In the second quoted passage below, KPMG focuses on equity rather than cash.**

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And,

In summary, the level of equity and debt to equity ratio provides an important context for a review of risk issues. (page 19)

b) **If the confirmation sought in (a) above, is not provided, please provide a detailed accounting of the cash obligations MH was unable to fulfill and completely discharge.**

ANSWER:

Not applicable.

<u>CAC/MSOS/MH/RISK-94</u>

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, pages 15, 18 & 19**

Preamble: **CAC/MSOS observe that the quoted passage below may have a qualitative logic of a number of steps and CAC/MSOS wishes to better understand the concept advanced by KPMG. In the second quoted passage below, KPMG focuses on equity rather than cash.**

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And,

In summary, the level of equity and debt to equity ratio provides an important context for a review of risk issues. (page 19)

c) **Please confirm that all creditors were paid in cash (or cash equivalent) as opposed to equity.**

<u>ANSWER</u>:

Confirmed.

CAC/MSOS/MH/RISK-94

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, pages 15, 18 & 19**

Preamble: **CAC/MSOS observe that the quoted passage below may have a qualitative logic of a number of steps and CAC/MSOS wishes to better understand the concept advanced by KPMG. In the second quoted passage below, KPMG focuses on equity rather than cash.**

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And,

In summary, the level of equity and debt to equity ratio provides an important context for a review of risk issues. (page 19)

d) If the confirmation sought in (c) above, is not provided, please describe how amounts owed to creditors were paid out of equity.

ANSWER:

Not applicable.

CAC/MSOS/MH/RISK-95

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, pages 17 & 134**

Preamble: **In Exhibit 2-2 on page 17, KPMG provides the "MH Equity Ratios 2000 to 2009", ranging from .13 to .25.**

In reference to the losses in 2003/04, KPMG states:

Without sufficient equity, MH would have had to turn to the Government of Manitoba as its shareholder and/or its ratepayers to cover the large loss in 2003/04.

The CAC/MSOS observe that KPMG makes reference to a "liquidity event" and KPMG provides an example.

KPMG states:

Said differently, having a relatively predictable and steady revenue stream reduces MH's revenue volatility which, in a capital intensive industry, is an especially desirable outcome to pursue in that it can reduce the risk of having "liquidity events" (e.g., severe drought leading to cash flow dropping below debt service requirements).

a) Please provide KPMG's definition for "liquidity event".

ANSWER:

KPMG Response:

There is no one universally accepted definition for a liquidity event. KPMG generally views liquidity events to be events similar to the one it provides as an example in its report.

<u>CAC/MSOS/MH/RISK-95</u>

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, pages 17 & 134**

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The CAC/MSOS observe that KPMG makes reference to a "liquidity event" and KPMG provides an example.

KPMG states:

Said differently, having a relatively predictable and steady revenue stream reduces MH's revenue volatility which, in a capital intensive industry, is an especially desirable outcome to pursue in that it can reduce the risk of having "liquidity events" (e.g., severe drought leading to cash flow dropping below debt service requirements).

b) **Please confirm that when MH equity ratio dropped from 20% in 2003 to 13% in 2004, it did so without MH suffering from a liquidity event.**

<u>ANSWER</u>:

Confirmed. Manitoba Hydro's financing liquidity risk during this period remained low as the Corporation's ability to access short and long term financing was not impaired during this time.

CAC/MSOS/MH/RISK-95

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, pages 17 & 134**

Preamble: **In Exhibit 2-2 on page 17, KPMG provides the "MH Equity Ratios 2000 to 2009", ranging from .13 to .25.**

In reference to the losses in 2003/04, KPMG states:

Without sufficient equity, MH would have had to turn to the Government of Manitoba as its shareholder and/or its ratepayers to cover the large loss in 2003/04.

The CAC/MSOS observe that KPMG makes reference to a "liquidity event" and KPMG provides an example.

KPMG states:

Said differently, having a relatively predictable and steady revenue stream reduces MH's revenue volatility which, in a capital intensive industry, is an especially desirable outcome to pursue in that it can reduce the risk of having "liquidity events" (e.g., severe drought leading to cash flow dropping below debt service requirements).

c) **If the confirmation sought in (b) above, is not provided, please provide the details of the liquidity event (in the context of cash flow dropping below debt service requirements).**

ANSWER:

Not applicable.

<u>CAC/MSOS/MH/RISK-95</u>

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, pages 17 & 134**

Preamble: **In Exhibit 2-2 on page 17, KPMG provides the "MH Equity Ratios 2000 to 2009", ranging from .13 to .25.**

In reference to the losses in 2003/04, KPMG states:

Without sufficient equity, MH would have had to turn to the Government of Manitoba as its shareholder and/or its ratepayers to cover the large loss in 2003/04.

The CAC/MSOS observe that KPMG makes reference to a "liquidity event" and KPMG provides an example.

KPMG states:

Said differently, having a relatively predictable and steady revenue stream reduces MH's revenue volatility which, in a capital intensive industry, is an especially desirable outcome to pursue in that it can reduce the risk of having "liquidity events" (e.g., severe drought leading to cash flow dropping below debt service requirements).

d) Please confirm that the preponderance of Manitoba Hydro's long term debt is provided from the Province of Manitoba. Provide the percentage of long term debt provided by the Province of Manitoba.

<u>ANSWER</u>:

Confirmed.

The percentage of long term debt advanced by the Province of Manitoba was 88% at March 31, 2004 and 96% at March 31, 2009.

CAC/MSOS/MH/RISK-95

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, pages 17 & 134**

Preamble: **In Exhibit 2-2 on page 17, KPMG provides the "MH Equity Ratios 2000 to 2009", ranging from .13 to .25.**

In reference to the losses in 2003/04, KPMG states:

Without sufficient equity, MH would have had to turn to the Government of Manitoba as its shareholder and/or its ratepayers to cover the large loss in 2003/04.

The CAC/MSOS observe that KPMG makes reference to a "liquidity event" and KPMG provides an example.

KPMG states:

Said differently, having a relatively predictable and steady revenue stream reduces MH's revenue volatility which, in a capital intensive industry, is an especially desirable outcome to pursue in that it can reduce the risk of having "liquidity events" (e.g., severe drought leading to cash flow dropping below debt service requirements).

e) **If the confirmation sought in (d) above is not provided, please explain.**

ANSWER:

Not applicable.

CAC/MSOS/MH/RISK-95

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, pages 17 & 134**

Preamble: **In Exhibit 2-2 on page 17, KPMG provides the "MH Equity Ratios 2000 to 2009", ranging from .13 to .25.**

In reference to the losses in 2003/04, KPMG states:

Without sufficient equity, MH would have had to turn to the Government of Manitoba as its shareholder and/or its ratepayers to cover the large loss in 2003/04.

The CAC/MSOS observe that KPMG makes reference to a "liquidity event" and KPMG provides an example.

KPMG states:

Said differently, having a relatively predictable and steady revenue stream reduces MH's revenue volatility which, in a capital intensive industry, is an especially desirable outcome to pursue in that it can reduce the risk of having "liquidity events" (e.g., severe drought leading to cash flow dropping below debt service requirements).

f) **Please confirm that the Province of Manitoba was able to maintain financing at terms that were acceptable it throughout the period noted in KPMG Exhibit 2-2 (2000 – 2009).**

ANSWER:

During 2000-2009, the Province of Manitoba was able to maintain financing at terms which would be considered acceptable given market conditions at that time of issuance.

<u>CAC/MSOS/MH/RISK-95</u>

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, pages 17 & 134**

Preamble: **In Exhibit 2-2 on page 17, KPMG provides the "MH Equity Ratios 2000 to 2009", ranging from .13 to .25.**

In reference to the losses in 2003/04, KPMG states:

Without sufficient equity, MH would have had to turn to the Government of Manitoba as its shareholder and/or its ratepayers to cover the large loss in 2003/04.

The CAC/MSOS observe that KPMG makes reference to a "liquidity event" and KPMG provides an example.

KPMG states:

Said differently, having a relatively predictable and steady revenue stream reduces MH's revenue volatility which, in a capital intensive industry, is an especially desirable outcome to pursue in that it can reduce the risk of having "liquidity events" (e.g., severe drought leading to cash flow dropping below debt service requirements).

g) If the confirmation sought in (f) is not provided, please explain.

<u>ANSWER</u>:

Not applicable.

CAC/MSOS/MH/RISK-95

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, pages 17 & 134**

Preamble: **In Exhibit 2-2 on page 17, KPMG provides the "MH Equity Ratios 2000 to 2009", ranging from .13 to .25.**

In reference to the losses in 2003/04, KPMG states:

Without sufficient equity, MH would have had to turn to the Government of Manitoba as its shareholder and/or its ratepayers to cover the large loss in 2003/04.

The CAC/MSOS observe that KPMG makes reference to a "liquidity event" and KPMG provides an example.

KPMG states:

Said differently, having a relatively predictable and steady revenue stream reduces MH's revenue volatility which, in a capital intensive industry, is an especially desirable outcome to pursue in that it can reduce the risk of having "liquidity events" (e.g., severe drought leading to cash flow dropping below debt service requirements).

h) Please explain how a "liquidity event" can be tied to equity.

ANSWER:

Cash flow from operations dropped below the debt servicing requirements in 2003/04 and Manitoba Hydro increased its financing activities during this period of time in order to provide the Corporation with sufficient liquidity for business continuity. The capital coverage ratio dropped from 1.10 at March 31, 2003 to (0.32) at March 31, 2004. The net loss of $436 million in 2003/04 significantly impacted the interest coverage ratio which dropped to 0.17 at March 31, 2004. The net loss also decreased retained earnings by $436 million from $1,170 million at March 31, 2003 to $734 million at March 31, 2004.

As indicated on page 56 of the 53rd Annual Report for the year ended March 31, 2004, while the net loss in 2003/04 was significant, it was not unexpected. Manitoba Hydro's long-term financial forecasts take into account that drought conditions will typically occur about once every 10 years and that such conditions will have negative financial consequences. The risk of drought was one of the primary drivers behind the significant build-up in retained earnings over the decade prior to 2003/04. The build-up in retained earnings was achieved mainly through sales of surplus energy on export markets in non-drought years.

When water conditions improved the following year, surplus electricity was again available for sale on the export markets and the borrowings in the short term market were repaid with the increased cash flow from operations generated from these surplus energy sales. By March 31, 2005 the debt/equity ratio had improved, and the interest and capital coverage ratios had strengthened to 1.25 and 1.20 respectively.

<u>CAC/MSOS/MH/RISK-95</u>

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, pages 17 & 134**

Preamble: **In Exhibit 2-2 on page 17, KPMG provides the "MH Equity Ratios 2000 to 2009", ranging from .13 to .25.**

In reference to the losses in 2003/04, KPMG states:

Without sufficient equity, MH would have had to turn to the Government of Manitoba as its shareholder and/or its ratepayers to cover the large loss in 2003/04.

The CAC/MSOS observe that KPMG makes reference to a "liquidity event" and KPMG provides an example.

KPMG states:

Said differently, having a relatively predictable and steady revenue stream reduces MH's revenue volatility which, in a capital intensive industry, is an especially desirable outcome to pursue in that it can reduce the risk of having "liquidity events" (e.g., severe drought leading to cash flow dropping below debt service requirements).

i) Please explain how a liquidity event can be rectified by equity.

<u>ANSWER</u>:

In circumstances with elevated levels of liquidity risk, the financial impact and future rate stability can be cushioned by maintaining sufficient equity.

Manitoba Hydro's debt is deemed to be self-supporting by all of the credit rating agencies and it is important for Manitoba Hydro to maintain its key financial targets in order to maintain this status. Not maintaining key financial targets could result in negative implications to the Province of Manitoba's credit ratings.

As stated in Note 17 of the Manitoba Hydro's audited financial statements for the fiscal year ended March 31, 2009, "Manitoba Hydro manages its capital structure to ensure sufficient equity to enable the Corporation to absorb the financial effects of adverse circumstances and to ensure continued access to stable low-cost funding for the Corporation's capital projects and its ongoing operational requirements. The Corporation monitors its capital structure on the basis of its equity ratio. Manitoba Hydro's current target is to maintain a minimum equity ratio of 25%."

Please also see Manitoba Hydro's response to CAC/MSOS/MH/RISK-95(h).

CAC/MSOS/MH/RISK-96

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, page 18**

Preamble: **KPMG states:**

> **Without sufficient equity, MH would have had to turn to the Government of Manitoba as its shareholder and/or its ratepayers to cover the large loss in 2003/04.**

a) In the case of a crown corporation, please distinguish between in funding a loss from the shareholder from funding a loss from a domestic ratepayer.

ANSWER:

When Manitoba Hydro's cash flow from operations dropped below the debt servicing requirements in 2003/04, Manitoba Hydro increased its financing activities during this period of time in order to provide the Corporation with sufficient liquidity for business continuity. Cash advances received from the Province of Manitoba for these financing activities were in the form of long term debt, and not equity. The debt servicing requirements associated with long term debt advances are Manitoba Hydro's obligations, and sufficient cash provided from operating activities (primarily domestic and extraprovincial customers) is required to meet these obligations as they become due.

Manitoba Hydro's debt is deemed to be self-supporting by all of the credit rating agencies. An equity cash injection by the Province of Manitoba in order to meet a liquidity requirement would erode Manitoba Hydro's self-supporting status and may have negative implications to the Province of Manitoba's credit ratings. Alternatively in this circumstance, additional cash may be provided through sharply escalated rates. To avert the likelihood of these actions, it is important for Manitoba Hydro to be in a strong financial position.

<u>CAC/MSOS/MH/RISK-96</u>

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, page 18**

Preamble: **KPMG states:**

> **Without sufficient equity, MH would have had to turn to the Government of Manitoba as its shareholder and/or its ratepayers to cover the large loss in 2003/04.**

b) Please confirm that, at the time of the 2003/04 fiscal year MH had one, or more, lines of credit.

<u>ANSWER</u>:

Confirmed.

CAC/MSOS/MH/RISK-96

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, page 18**

Preamble: **KPMG states:**

> **Without sufficient equity, MH would have had to turn to the Government of Manitoba as its shareholder and/or its ratepayers to cover the large loss in 2003/04.**

c) **If the confirmation sought in (b) is not provided, please explain.**

ANSWER:

Not applicable.

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, page 18**

Preamble: **KPMG states:**

Without sufficient equity, MH would have had to turn to the Government of Manitoba as its shareholder and/or its ratepayers to cover the large loss in 2003/04.

d) Please provide the MH lines of credit limits in 2003/04 and in 2009/10.

ANSWER:

During 2003/04, Manitoba Hydro had the following lines of credit:

Financial Institution	Credit Facility #1	Credit Facility #2	Credit Facility #3
Bank of Montreal	**$25,000,000**	**$150,000,000**	**$25,000,000**
	Uncommitted, demand, revolving operating available in USD or CAD equivalent through overdrafts or direct advances.	Money market facility available in CAD or USD to provide for sale of CAD or USD Promissory Notes.	Foreign Exchange Forward Contract facility to provide for risk liability associated with purchase and sale of foreign currencies.
CIBC	**$175,000,000**	**$1,000,000**	
	Uncommitted operating loan facility available in USD or CAD equivalent through demand loans or overdrafts.	Letters of Credit in USD or CAD equivalent.	
RBC Apr 2003 - Jan 2004	**$25,000,000**	**$125,000,000**	**$6,500,000**
	Uncommitted, operating facility available in USD or CAD equivalent through overdrafts.	Money Market facility available in USD or CAD equivalent to provide for sale of CAD or USD Promissory Notes	Foreign Exchange facility to provide for risk liability associated with purchase and sale of foreign currencies
RBC Feb 2004 - Mar 2004	**$202,500,000**		
	Uncommitted, operating loan facility available in USD or CAD equivalent through RBC Prime based loans and overdrafts, Letters of Credit, and Letters of Guarantee.		

The lines of credit available to Manitoba Hydro at March 31, 2004 have remained the same through to present, with the exception of the CIBC Credit Facility #2 which was increased in November 2005 to $3,000,000 Letters of Credit; USD or CAD equivalent.

<u>CAC/MSOS/MH/RISK-96</u>

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, page 18**

Preamble: **KPMG states:**

> **Without sufficient equity, MH would have had to turn to the Government of Manitoba as its shareholder and/or its ratepayers to cover the large loss in 2003/04.**

e) **Please explain why MH could not use a line of credit to assist in covering, in whole or in part, the large loss in 2003/04.**

<u>ANSWER</u>:

Manitoba Hydro's $500 million limit for temporary short term borrowings includes all lines of credit and the Corporation's Commercial Paper Program. As Manitoba Hydro can issue promissory notes payable within its Commercial Paper Program at rates less than the Prime or Base Rates, Manitoba Hydro typically issues promissory notes instead of relying on bank overdrafts to meet its temporary cash requirements.

See also see Manitoba Hydro's response to CAC/MSOS/MH/RISK-96(a).

CAC/MSOS/MH/RISK-96

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, page 18**

Preamble: **KPMG states:**

> **Without sufficient equity, MH would have had to turn to the Government of Manitoba as its shareholder and/or its ratepayers to cover the large loss in 2003/04.**

f) **Please confirm that the KPMG report is written with the context that the Province of Manitoba is the party which obtains financing from the capital markets.**

g) **If the confirmation sought in (f) is not provided, please explain.**

h) **Please confirm that the KPMG report is written with the context that the Province of Manitoba is the party which obtains financing from the capital markets.**

i) **If the confirmation sought in (h) is not provided, please explain.**

ANSWER:

KPMG Response:

The KPMG Review was conducted in the context of its scope and approach as outlined in Chapter 1 of our report. KPMG recognizes that the sole shareholder of Manitoba Hydro is the Government of Manitoba.

CAC/MSOS/MH/RISK-97

Reference: KPMG Report, page 44

a) With respect to the last bullet, did KPMG review the techniques used by Manitoba Hydro to consider/incorporate uncertainties regarding future conditions? If so what are they and, in KPMG's view, are they adequate? If not, why not?

ANSWER:

KPMG Response:

A key approach used by MH to account for uncertainty is to test a suggested water release schedule, which is based on the expected water flow scenario, under a more adverse "low flow" scenario. This is discussed further in Section 3.7.1.1. This is a reasonable approach to addressing reliability objectives.

HERMES has recently been upgraded to allow MH to use particular water flow scenarios in its forecasting process. This facilitates the evaluation of the impact of different water flows on financial results. This is discussed in Section 3.7.1.3 of our report.

We also note that MH is contemplating the implementation of a new approach to addressing uncertainty in the management process. This is the development of a stochastic "tree" model, as discussed in Section 3.6.4. This will enhance MH's ability to identify economically optimal production schedules.

Overall, we are satisfied that MH is using sound techniques to consider uncertainty.

<u>CAC/MSOS/MH/RISK-98</u>

Reference: KPMG Report, page 84

a) The last paragraph states that the errors are small and have been significantly reduced over time. Is it KPMG's expectation that these errors will continue to be small and/or reduce further over time? If yes, what is the basis for this expectation? If not, is this an issue that Manitoba Hydro needs to address?

<u>ANSWER</u>:

<u>KPMG Response</u>:

Based on the reduction in errors that has occurred over the past several years, KPMG believes that it is reasonable to assume that these errors will continue to be small. Given the inconsequential size of the most recent error estimate, we note that the potential for further reductions is limited. Our view is that this is not an issue that MH needs to address.

CAC/MSOS/MH/RISK-99

Reference: KPMG Report, page 94

a) At the top of the page KPMG notes that EMMA will produce a more accurate estimate of the value of storage than SPLASH. Did KPMG undertake any analysis to determine:

- **The potential size of the differences between the two estimates and/or**
- **Whether the differences were systematically positive or negative.**
- **If so, what were the results?**

ANSWER:

KPMG Response:

KPMG did not undertake any analysis to determine the potential size of differences between the two estimates and/or whether the differences were systematically positive or negative.

CAC/MSOS/MH/RISK-99

Reference: KPMG Report, page 94

b) Has Manitoba Hydro undertaken any such analysis and, if so, what were the results?

ANSWER:

Manitoba Hydro has not undertaken any analysis of storage value differences between SPLASH and HERMES.

CAC/MSOS/MH/RISK-100

Reference: KPMG Report, page 103

a) If the prices used in the optimization process can influence the total production during the year, please explain more fully why the analysis undertaken by KPMG was constrained so as not allow for this? Isn't this likely to also impact the financial implications of using an inaccurate price forecast?

ANSWER:

KPMG Response:

As noted on page 103, if ending lake levels were not constrained to be the same, then differences in financial results recorded during the year would reflect differences in the total amount of energy produced within the year, as well as timing differences in when the energy production occurred.

In other words, the ending lake level constraint was adopted in order to allow the analysis to be done within a one-year horizon. In the event that lake levels were not constrained, we would need an additional process to estimate differences in future financial results that would result as a consequence of entering future periods with more or less water in storage.

In essence, keeping ending lake levels the same was a means of keeping the process of comparison manageable. The constraint will affect our estimates of the financial implications of using an inaccurate price forecast, but that the impact is likely to be relatively small. In particular, we note that it is very difficult to forecast both water flows and prices over the next year, let alone more than one year into the future. Hence, the ability to successfully optimize over longer periods is, in practice, limited.

CAC/MSOS/MH/RISK-101

Reference: KPMG Report, page 113

a) KPMG states that it would be desirable to have a more formal demonstration that perfect foresight does not limit SPLASH's usefulness as a ranking tool. Does Manitoba Hydro plan on undertaking any analysis to address this issue? If yes, what is the planned scope of the analysis and the timeline? If not, why not?

ANSWER:

Manitoba Hydro intends to assess the potential impact of assuming perfect foresight of future inflows on the water management decisions and resulting system operating costs and revenues provided by the SPLASH model. A specific plan has yet to be developed and approved with associated timeframes and resource requirements.

<u>CAC/MSOS/MH/RISK-102</u>

Reference: KPMG Report, page 114

a) KPMG recommends that Manitoba Hydro should quantify the extent to which SPLASH may underestimate operating losses during the drought period. Was it KPMG's view that this analysis should be limited to the higher operating costs discussed in the second last paragraph on page 113 or also include the offsetting savings due to the ability to purchase non-firm energy as discussed on page 114?

<u>ANSWER</u>:

<u>KPMG Response</u>:

KPMG's view is that this analysis should take into account all relevant factors, including both the higher operating costs discussed in the second last paragraph on page 113 and also the offsetting savings due to the ability to purchase non-firm energy as discussed on page 114.

CAC/MSOS/MH/RISK-102

Reference: KPMG Report, page 114

b) KPMG's report appears to suggest that the lower energy replacement cost through the use of non-firm purchases will only partially offset the higher operating costs identified on page 113. What is the basis for this and why is it not plausible that the savings through use of non-firm purchases could more than offset these higher costs?

ANSWER:

KPMG Response:

The wording in our report is not intended to suggest that lower energy replacement costs through the use of non-firm purchases will only partially offset the higher operating costs identified on page 113. We agree that it is plausible that the savings through the use of non-firm purchases could more than offset these higher costs.

CAC/MSOS/MH/RISK-102

Reference: KPMG Report, page 114

c) Does Manitoba Hydro plan on adopting KPMG's recommendations as set out at the bottom of page 114?

ANSWER:

Please see Manitoba Hydro's response to PUB/MH/RISK-135.

CAC/MSOS/MH/RISK-103

Reference: KPMG Report, page 115

a) Could Manitoba Hydro please confirm whether or not KPMG's understanding that the Corporation does not commit all of the system's dependable energy to serving load and long-term contracts is correct? In doing so, please indicate what are viewed as long term contracts for purposes of HERMES.

ANSWER:

Please refer to Manitoba Hydro's response to RCM/TREE/MH/RISK-5(a).

Manitoba Hydro's operational planners include all signed contracts in the analysis undertaken in HERMES. Those contracts that are sold from dependable energy resources and accredited capacity (long term contracts) are the same ones included in Manitoba Hydro's Supply and Demand Tables which are listed in Tab 8, Tables 1 and 2 of the Application.

CAC/MSOS/MH/RISK-103

Reference: KPMG Report, page 115

b) If confirmed, please describe how Manitoba Hydro determined the amount of system dependable energy to "hold in reserve" and not commit to serving load or long term contracts.

ANSWER:

Please refer to Manitoba Hydro's response to RCM/TREE/MH/RISK-5(a).

<u>CAC/MSOS/MH/RISK-104</u>

Reference: KPMG Report, page 123-124

a) Where in the report does KPMG specifically identify/address the concerns of the NYC regarding the Risk Capital and whether Manitoba Hydro has i) properly identified and quantified the risks associated with entering into long-term contracts and ii) established a sufficient amount of risk capital? There does not appear a sub-section in Section 4 dealing specifically with this issue.

<u>ANSWER</u>:

<u>KPMG Response</u>:

KPMG developed a conceptual framework to guide it in its external quality review of Manitoba Hydro, as detailed in Section 1.2. In applying this conceptual framework, KPMG carried out a detailed review of the Consultant's Reports and other documents to group the NYC's assertions into the Issues and Themes as presented in the KPMG report. In assessing the Issues, we took the approach that our work would not necessarily result in a total concurrence with or rejection of the assertions underlying an Issue; in some instances, we have found that we concur with some elements of an assertion and reject other elements. Accordingly, we would suggest that readers of this report focus on the analysis of the Issues as well as any recommendations that relate to the Issues, rather than focusing on whether we concur with or reject any particular assertion. Chapter 4 in its totality deals with the matters listed in limb (i) and (ii) of CAC/MSOS/MH/RISK-104.

CAC/MSOS/MH/RISK-105

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, page 124**

Preamble: **In various locations in its report, KPMG makes reference to scenarios, conditions, circumstances and so on that "would be" of benefit or harm to ratepayers. In addition, KPMG asserts that "entering into long term contracts can provide net benefits to MH and therefore lower rates to Manitoba ratepayers." [emphasis added] However, KPMG does not appear to comment on whether the existing MH strategy is superior to that advocated by the NYC or whether in fact the existing MH strategy is optimal.**

KPMG states:

In many cases, however, MH would generally be in a better position to assess and/or manage the risk than the counterparty, and would therefore generally be better off in the long run if it retained the risk (e.g., by being compensated for retaining the risk or avoiding the costs associated with transferring the risk).

a) **Please confirm that KPMG's conclusion regarding MH's position to manage risk associated with the export market is, in part, due to MH's ability to leverage off the infrastructure, operations and customers of the domestic base of MH.**

b) **If the confirmation sought in (a) is not provided, please explain why KPMG considers it not to be the case that MH's position to manage risk associated with the export market is, in part, due to MH's ability to leverage off the infrastructure, operations, cash flow and customers of the domestic base of MH.**

ANSWER:

KPMG Response:

In various sections of chapter 4, KPMG examines the NYC assertions regarding potential novel terms that could be included in long term contracts for Manitoba Hydro's benefit; for example refer to section 4.8 for a discussion on contract structure and the basis of KPMG's finding that in many cases, Manitoba Hydro would generally be in a better position to assess and/or manage a risk than a counterparty.

CAC/MSOS/MH/RISK-106

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, page 135**

Preamble: **KPMG states:**

> **Were all of MH's surplus energy sold in short-term increments, the price received for that power would be highly uncertain and volatile, thus exposing the Manitoba ratepayer to potential rate shock in low export price periods.**

a) **Please clarify whether KPMG considers that any party was advancing a proposition that "all of MH's surplus energy sold in short-term increments".**

b) **If the response to (a) is to the affirmative, please provide the name of the party and the precise reference in the document in which this proposition is advanced.**

ANSWER:

KPMG Response:

The statement made in section 5.5.1.2 regarding all surplus energy sales in short-term increments is made in the context of examining the strategy laid out in the first bullet point under section 4.5 on page 131.

CAC/MSOS/MH/RISK-106

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, page 135**

Preamble: **KPMG states:**

> **Were all of MH's surplus energy sold in short-term increments, the price received for that power would be highly uncertain and volatile, thus exposing the Manitoba ratepayer to potential rate shock in low export price periods.**

c) **Please provide KPMG's definition of "rate shock" in the context of the above quoted passage.**

d) **Please provide the minimum threshold of a rate increase that KPMG considers would constitute rate shock.**

ANSWER:

KPMG Response:

There is no one universally accepted decision of rate shock and may be used in the context of an out of ordinary course and/or sudden and/or higher than normal rate increase (for the entity being regulated).

CAC/MSOS/MH/RISK-107

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, page 145**

Preamble: **In various locations in its report, KPMG makes reference to scenarios, conditions, circumstances and so on that "would be" of benefit or harm to ratepayers. In addition, KPMG asserts that "entering into long term contracts can provide net benefits to MH and therefore lower rates to Manitoba ratepayers." [emphasis added] However, KPMG does not appear to comment on whether the existing MH strategy is superior to that advocated by the NYC or whether in fact the existing MH strategy is optimal.**

KPMG states:

Another element of MH's rationale for entering into long-term contracts is that they generate economic returns that will benefit Manitoba ratepayers, through lower rates.

And

Energy under contract should receive a higher price than energy from spot market sales. This reflects the value of firm supplies and price certainty to potential contract counterparties.

And,

We note that in the electric industry, fixed price contracts of the form entered into by MH are a relatively common structure.

a) **Please confirm that there are risks associated with entering any one of fixed long term contracts, short term contracts and spot trading.**

ANSWER:

KPMG Response:

Confirmed.

CAC/MSOS/MH/RISK-107

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, page 145**

Preamble: **In various locations in its report, KPMG makes reference to scenarios, conditions, circumstances and so on that "would be" of benefit or harm to ratepayers. In addition, KPMG asserts that "entering into long term contracts can provide net benefits to MH and therefore lower rates to Manitoba ratepayers." [emphasis added] However, KPMG does not appear to comment on whether the existing MH strategy is superior to that advocated by the NYC or whether in fact the existing MH strategy is optimal.**

KPMG states:

Another element of MH's rationale for entering into long-term contracts is that they generate economic returns that will benefit Manitoba ratepayers, through lower rates.

And

Energy under contract should receive a higher price than energy from spot market sales. This reflects the value of firm supplies and price certainty to potential contract counterparties.

And,

We note that in the electric industry, fixed price contracts of the form entered into by MH are a relatively common structure.

b) **If the confirmation sought in (a) above, is not provided, please clarify which term of energy sales arrangements do not involve risks.**

ANSWER:

KPMG Response:

See answer in (a) above.

CAC/MSOS/MH/RISK-107

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, page 145**

Preamble: **In various locations in its report, KPMG makes reference to scenarios, conditions, circumstances and so on that "would be" of benefit or harm to ratepayers. In addition, KPMG asserts that "entering into long term contracts can provide net benefits to MH and therefore lower rates to Manitoba ratepayers." [emphasis added] However, KPMG does not appear to comment on whether the existing MH strategy is superior to that advocated by the NYC or whether in fact the existing MH strategy is optimal.**

KPMG states:

Another element of MH's rationale for entering into long-term contracts is that they generate economic returns that will benefit Manitoba ratepayers, through lower rates.

And

Energy under contract should receive a higher price than energy from spot market sales. This reflects the value of firm supplies and price certainty to potential contract counterparties.

And,

We note that in the electric industry, fixed price contracts of the form entered into by MH are a relatively common structure.

c) **Please provide the passages and precise references from the KPMG report where KPMG addresses, compares and concludes on the relative risks of each type of export energy sales arrangement.**

ANSWER:

KPMG Response:

Please refer to chapter 4 in its entirety and in particular to Section 4.5

CAC/MSOS/MH/RISK-107

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, page 145**

Preamble: **In various locations in its report, KPMG makes reference to scenarios, conditions, circumstances and so on that "would be" of benefit or harm to ratepayers. In addition, KPMG asserts that "entering into long term contracts can provide net benefits to MH and therefore lower rates to Manitoba ratepayers." [emphasis added] However, KPMG does not appear to comment on whether the existing MH strategy is superior to that advocated by the NYC or whether in fact the existing MH strategy is optimal.**

KPMG states:

Another element of MH's rationale for entering into long-term contracts is that they generate economic returns that will benefit Manitoba ratepayers, through lower rates.

And

Energy under contract should receive a higher price than energy from spot market sales. This reflects the value of firm supplies and price certainty to potential contract counterparties.

And,

We note that in the electric industry, fixed price contracts of the form entered into by MH are a relatively common structure.

d) **Please confirm that the long term contracts are not tied to any spot price or reference price.**

ANSWER:

The large majority of Manitoba Hydro's existing long-term export contracts (those supplied from dependable resources and accredited capacity) have pricing provisions for "must take" energy that are not related to the spot or market price. Pricing in one contract is tied to market. In addition, most contracts allow customers to purchase additional energy under the capacity provided for in the contract beyond the "must-take" volumes at market prices.

As the Term Sheets with MP and WPS are bound by confidentiality agreements, Manitoba Hydro cannot comment on the specific pricing provisions therein.

<u>CAC/MSOS/MH/RISK-107</u>

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, page 145**

Preamble: **In various locations in its report, KPMG makes reference to scenarios, conditions, circumstances and so on that "would be" of benefit or harm to ratepayers. In addition, KPMG asserts that "entering into long term contracts can provide net benefits to MH and therefore lower rates to Manitoba ratepayers." [emphasis added] However, KPMG does not appear to comment on whether the existing MH strategy is superior to that advocated by the NYC or whether in fact the existing MH strategy is optimal.**

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We note that in the electric industry, fixed price contracts of the form entered into by MH are a relatively common structure.

e) **If the confirmation sought in (d) is not provided, please provide the details of how long term contracts are tied to spot prices and/or reference prices, together with the passages and precise in the KPMG report where those details are outlined.**

ANSWER:

Please refer to Manitoba Hydro’s response to CACMSOS/MH/RISK-107(d).

<u>CAC/MSOS/MH/RISK-107</u>

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, page 145**

Preamble: **In various locations in its report, KPMG makes reference to scenarios, conditions, circumstances and so on that "would be" of benefit or harm to ratepayers. In addition, KPMG asserts that "entering into long term contracts can provide net benefits to MH and therefore lower rates to Manitoba ratepayers." [emphasis added] However, KPMG does not appear to comment on whether the existing MH strategy is superior to that advocated by the NYC or whether in fact the existing MH strategy is optimal.**

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And,

We note that in the electric industry, fixed price contracts of the form entered into by MH are a relatively common structure.

f) **Please confirm that long term contracts could have pricing fixed (subject to escalators, if others please describe) such that, in future years (say 5 or 10 years after execution), the pricing in that long term contract may, in fact, be lower than the spot price at that later time in the future.**

ANSWER:

Manitoba Hydro confirms there may be times in which spot prices exceed the fixed price of the long term contract during the contract term.

CAC/MSOS/MH/RISK-107

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, page 145**

Preamble: **In various locations in its report, KPMG makes reference to scenarios, conditions, circumstances and so on that "would be" of benefit or harm to ratepayers. In addition, KPMG asserts that "entering into long term contracts can provide net benefits to MH and therefore lower rates to Manitoba ratepayers." [emphasis added] However, KPMG does not appear to comment on whether the existing MH strategy is superior to that advocated by the NYC or whether in fact the existing MH strategy is optimal.**

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And,

We note that in the electric industry, fixed price contracts of the form entered into by MH are a relatively common structure.

g) **If the confirmation sought in (f) above, is not provided, explain how long term contracts used by MH would make it impossible for subsequent spot prices to be higher than the pricing in those long term contracts.**

ANSWER:

Please refer to Manitoba Hydro's response to CACMSOS/MH/RISK-107(f).

CAC/MSOS/MH/RISK-107

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, page 145**

Preamble: **In various locations in its report, KPMG makes reference to scenarios, conditions, circumstances and so on that "would be" of benefit or harm to ratepayers. In addition, KPMG asserts that "entering into long term contracts can provide net benefits to MH and therefore lower rates to Manitoba ratepayers." [emphasis added] However, KPMG does not appear to comment on whether the existing MH strategy is superior to that advocated by the NYC or whether in fact the existing MH strategy is optimal.**

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And,

We note that in the electric industry, fixed price contracts of the form entered into by MH are a relatively common structure.

h) **Please confirm that KPMG did not perform an analysis to determine the extent of the upside of an alternate approach that MH is giving up by not undertaking more intensive long term contracts.**

ANSWER:

KPMG Response:

KPMG is unclear as to the meaning of the question. To respond, KPMG would need to understand what a more ‘intensive’ long term contract is and what precisely the ‘alternate approach’ consists of.

CAC/MSOS/MH/RISK-107

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, page 145**

Preamble: **In various locations in its report, KPMG makes reference to scenarios, conditions, circumstances and so on that "would be" of benefit or harm to ratepayers. In addition, KPMG asserts that "entering into long term contracts can provide net benefits to MH and therefore lower rates to Manitoba ratepayers." [emphasis added] However, KPMG does not appear to comment on whether the existing MH strategy is superior to that advocated by the NYC or whether in fact the existing MH strategy is optimal.**

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And,

We note that in the electric industry, fixed price contracts of the form entered into by MH are a relatively common structure.

i) **If the confirmation sought in (h) above, is not provided, please provide the passages, computations and precise references in the KPMG report where KPMG performed an analysis to determine the extent of the upside of an alternate approach that MH is giving up by not undertaking more intensive long term contracts.**

<u>ANSWER</u>:

<u>KPMG Response</u>:

Please see answer (h) above.

<u>CAC/MSOS/MH/RISK-107</u>

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, page 145**

Preamble: **In various locations in its report, KPMG makes reference to scenarios, conditions, circumstances and so on that "would be" of benefit or harm to ratepayers. In addition, KPMG asserts that "entering into long term contracts can provide net benefits to MH and therefore lower rates to Manitoba ratepayers." [emphasis added] However, KPMG does not appear to comment on whether the existing MH strategy is superior to that advocated by the NYC or whether in fact the existing MH strategy is optimal.**

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And,

We note that in the electric industry, fixed price contracts of the form entered into by MH are a relatively common structure.

j) **Please confirm that KPMG did not quantify the extent of the upside of alternate approaches that MH is giving up by not undertaking *greater* portion of long term contracts of long term contracts in its portfolio of export sales.**

ANSWER:

KPMG Response:

KPMG is unclear as to the meaning of the question. . To respond, KPMG would need to understand what "undertaking *greater* portion of long term contracts of long term contracts in its portfolio of export sales" means.

<u>CAC/MSOS/MH/RISK-107</u>

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, page 145**

Preamble: **In various locations in its report, KPMG makes reference to scenarios, conditions, circumstances and so on that "would be" of benefit or harm to ratepayers. In addition, KPMG asserts that "entering into long term contracts can provide net benefits to MH and therefore lower rates to Manitoba ratepayers." [emphasis added] However, KPMG does not appear to comment on whether the existing MH strategy is superior to that advocated by the NYC or whether in fact the existing MH strategy is optimal.**

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And,

We note that in the electric industry, fixed price contracts of the form entered into by MH are a relatively common structure.

k) **If the confirmation sought in (j) above, is not provided, please provide the passages, computations and precise references in the KPMG report where KPMG computations which show the extent of the upside of an alternate approach that MH is giving up by not undertaking more a greater portion of long term contracts.**

<u>ANSWER</u>:

<u>KPMG Response</u>:

Please see answer to (j) above.

<u>CAC/MSOS/MH/RISK-107</u>

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, page 145**

Preamble: **In various locations in its report, KPMG makes reference to scenarios, conditions, circumstances and so on that "would be" of benefit or harm to ratepayers. In addition, KPMG asserts that "entering into long term contracts can provide net benefits to MH and therefore lower rates to Manitoba ratepayers." [emphasis added] However, KPMG does not appear to comment on whether the existing MH strategy is superior to that advocated by the NYC or whether in fact the existing MH strategy is optimal.**

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And,

We note that in the electric industry, fixed price contracts of the form entered into by MH are a relatively common structure.

l) **Please confirm that KPMG did not quantify the extent of the upside of an alternate approach that MH is giving up by not undertaking *lesser* portion of long term contracts of long term contracts in its portfolio of export sales.**

ANSWER:

KPMG Response:

KPMG is unclear as to the meaning of the question. To respond, KPMG would need to understand what “undertaking *lesser* portion of lon*g term* contracts of long term contracts in its portfolio of export sales” means.

CAC/MSOS/MH/RISK-107

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, page 145**

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And,

We note that in the electric industry, fixed price contracts of the form entered into by MH are a relatively common structure.

m) **If the confirmation sought in (l) above, is not provided, please provide the passages, computations and precise references in the KPMG report where KPMG computations which show the extent of the upside of an alternate approach that MH is giving up by not undertaking a lesser portion of long term contracts.**

ANSWER:

KPMG Response:

Please see answer to (l) above.

CAC/MSOS/MH/RISK-108

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, page 145**

Preamble: **In various locations in its report, KPMG makes reference to scenarios, conditions, circumstances and so on that "would be" of benefit or harm to ratepayers. In addition, KPMG asserts that "entering into long term contracts can provide net benefits to MH and therefore lower rates to Manitoba ratepayers." [emphasis added] However, KPMG does not appear to comment on whether the existing MH strategy is superior to that advocated by the NYC or whether in fact the existing MH strategy is optimal.**

KPMG states:

The presence of long-term contracts facilitates MH's ability to get external debt financing. This financing is likely to be available in more quantity and/or at lower cost than in the absence of long-term contracts. This may improve the economic case for a new hydroelectric dam, in addition to improving MH's ability to fund the project and/or advance its construction relative to an alternative scenario in which contracts are not established.

CAC/MSOS understands that the 2010-11 Manitoba Provincial Budget anticipated expenditures in excess of $13 billion and, with a forecast deficit of over $500 million, would result in net debt of nearly $14 billion. [See page 2 of Manitoba Budget 2010, http://www.gov.mb.ca/finance/budget10/papers/budget.pdf and page 2 of the TD Bank Financial Group analysis of the Manitoba Budget http://www.td.com/economics/budgets/mb10.pdf]

CAC/MSOS understands that most of the long term debt provided to MH from the province is provided at the Province's cost of funds plus the Provincial guarantee fee.

a) Please provide KPMG's definition of external debt financing.

ANSWER:

KPMG Response:

External debt financing is debt that Manitoba Hydro raises from outside of its internally generated source of funds.

<u>CAC/MSOS/MH/RISK-108</u>

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, page 145**

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CAC/MSOS understands that most of the long term debt provided to MH from the province is provided at the Province's cost of funds plus the Provincial guarantee fee.

b) **Please confirm that, in absence of the major capital construction programs that would serve export markets, the incremental debt burden would be lower.**

<u>ANSWER</u>:

Manitoba Hydro’s debt is included in the consolidated debt of the Province. However, the question implies that Manitoba Hydro’s major capital construction programs are being undertaken solely to serve export markets. This is not the case. Manitoba Hydro’s proposed capital construction program is the preferred option for Manitoba Hydro to meet its mandate “to provide for the continuance of a supply of power adequate for the needs of the province …” Manitoba Hydro’s major capital construction program will be thoroughly reviewed at an upcoming “needs for and alternatives to” (NFAT) review.

CAC/MSOS/MH/RISK-108

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Preamble: **In various locations in its report, KPMG makes reference to scenarios, conditions, circumstances and so on that "would be" of benefit or harm to ratepayers. In addition, KPMG asserts that "entering into long term contracts can provide net benefits to MH and therefore lower rates to Manitoba ratepayers." [emphasis added] However, KPMG does not appear to comment on whether the existing MH strategy is superior to that advocated by the NYC or whether in fact the existing MH strategy is optimal.**

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CAC/MSOS understands that most of the long term debt provided to MH from the province is provided at the Province's cost of funds plus the Provincial guarantee fee.

c) If the confirmation sought in (b) above, is not provided, please explain.

ANSWER:

Please see Manitoba Hydro's response to CAC/MSOS/MH/RISK-108(b).

CAC/MSOS/MH/RISK-108

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Preamble: **In various locations in its report, KPMG makes reference to scenarios, conditions, circumstances and so on that "would be" of benefit or harm to ratepayers. In addition, KPMG asserts that "entering into long term contracts can provide net benefits to MH and therefore lower rates to Manitoba ratepayers." [emphasis added] However, KPMG does not appear to comment on whether the existing MH strategy is superior to that advocated by the NYC or whether in fact the existing MH strategy is optimal.**

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CAC/MSOS understands that most of the long term debt provided to MH from the province is provided at the Province's cost of funds plus the Provincial guarantee fee.

d) Please confirm that the preponderance of MH's financing is obtained from, its owner, the government of Manitoba.

ANSWER:

Confirmed.

CAC/MSOS/MH/RISK-108

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Preamble: **In various locations in its report, KPMG makes reference to scenarios, conditions, circumstances and so on that "would be" of benefit or harm to ratepayers. In addition, KPMG asserts that "entering into long term contracts can provide net benefits to MH and therefore lower rates to Manitoba ratepayers." [emphasis added] However, KPMG does not appear to comment on whether the existing MH strategy is superior to that advocated by the NYC or whether in fact the existing MH strategy is optimal.**

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CAC/MSOS understands that most of the long term debt provided to MH from the province is provided at the Province's cost of funds plus the Provincial guarantee fee.

e) If the confirmation sought in (c) above, is not provided, please explain.

ANSWER:

Not applicable.

CAC/MSOS/MH/RISK-108

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, page 145**

Preamble: **In various locations in its report, KPMG makes reference to scenarios, conditions, circumstances and so on that "would be" of benefit or harm to ratepayers. In addition, KPMG asserts that "entering into long term contracts can provide net benefits to MH and therefore lower rates to Manitoba ratepayers." [emphasis added] However, KPMG does not appear to comment on whether the existing MH strategy is superior to that advocated by the NYC or whether in fact the existing MH strategy is optimal.**

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CAC/MSOS understands that most of the long term debt provided to MH from the province is provided at the Province's cost of funds plus the Provincial guarantee fee.

f) In light of the relatively small proportion of MH revenue of $1.6 billion (MH 59th Annual Report, page 53) to the total provincial revenue of approximately $13 billion, please discuss the relevance of the equity layer of MH to the cost of borrowing of the Province.

ANSWER:

Manitoba Hydro's debt is deemed to be self-supporting by all of the credit rating agencies and it is important for Manitoba Hydro to maintain its key financial targets in order to maintain this status. Not maintaining key financial targets could result in negative implications to the Province of Manitoba's credit ratings and the cost of borrowing of the Province of Manitoba.

CAC/MSOS/MH/RISK-108

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Preamble: **In various locations in its report, KPMG makes reference to scenarios, conditions, circumstances and so on that "would be" of benefit or harm to ratepayers. In addition, KPMG asserts that "entering into long term contracts can provide net benefits to MH and therefore lower rates to Manitoba ratepayers." [emphasis added] However, KPMG does not appear to comment on whether the existing MH strategy is superior to that advocated by the NYC or whether in fact the existing MH strategy is optimal.**

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CAC/MSOS understands that most of the long term debt provided to MH from the province is provided at the Province's cost of funds plus the Provincial guarantee fee.

g) Please describe how KPMG confirmed with the Province, that long-term contracts were a requirement of the Province in advancing additional long-term debt to its subsidiary, Manitoba Hydro.

ANSWER:

KPMG Response:

KPMG has not stated anywhere in its report "that long-term contracts were a requirement of the Province in advancing additional long-term debt to its subsidiary, Manitoba Hydro".

CAC/MSOS/MH/RISK-108

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, page 145**

Preamble: **In various locations in its report, KPMG makes reference to scenarios, conditions, circumstances and so on that "would be" of benefit or harm to ratepayers. In addition, KPMG asserts that "entering into long term contracts can provide net benefits to MH and therefore lower rates to Manitoba ratepayers." [emphasis added] However, KPMG does not appear to comment on whether the existing MH strategy is superior to that advocated by the NYC or whether in fact the existing MH strategy is optimal.**

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CAC/MSOS understands that the 2010-11 Manitoba Provincial Budget anticipated expenditures in excess of $13 billion and, with a forecast deficit of over $500 million, would result in net debt of nearly $14 billion. [See page 2 of Manitoba Budget 2010, http://www.gov.mb.ca/finance/budget10/papers/budget.pdf and page 2 of the TD Bank Financial Group analysis of the Manitoba Budget http://www.td.com/economics/budgets/mb10.pdf]

CAC/MSOS understands that most of the long term debt provided to MH from the province is provided at the Province's cost of funds plus the Provincial guarantee fee.

h) **Given that KPMG suggests that the presence of long-term contracts facilitates MH's ability to get external debt financing, please provide the following:**

   i. **Please confirm that the future capital program of MH is approved by the Province, rather than the PUB, and that these approvals occur before the export contracts are in place. If this is not confirmed, explain**

   ii. **Please provide the relative timeline for the following three events: 1) the timing of when the province approves major capital projects (generation and transmission), 2) the approval of debt financing for those projects and 3) the timing of the when long term export contracts are entered into.**

ANSWER:

Manitoba Hydro's future capital program will be the subject of an upcoming "needs for and alternatives to" (NFAT) review and will require regulatory approvals before proceeding. The timing of the approval process will be addressed as part of the NFAT review which has yet to be scheduled.

Manitoba Hydro's authority to issue debt for new capital borrowing purposes is provided for through The *Manitoba Hydro Act*, The *Loan Act*, and The *Financial Administration Act*. The Loan Act is approved each year by the Province of Manitoba and grants Manitoba Hydro borrowing authority to meet the Corporation's projected financing requirements. Authority granted under the Loan Act is for new investment requirements. Refunding authority to refinance maturing long term debt is provided through the *Financial Administration Act*.

CAC/MSOS/MH/RISK-108

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Preamble: **In various locations in its report, KPMG makes reference to scenarios, conditions, circumstances and so on that "would be" of benefit or harm to ratepayers. In addition, KPMG asserts that "entering into long term contracts can provide net benefits to MH and therefore lower rates to Manitoba ratepayers." [emphasis added] However, KPMG does not appear to comment on whether the existing MH strategy is superior to that advocated by the NYC or whether in fact the existing MH strategy is optimal.**

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CAC/MSOS understands that the 2010-11 Manitoba Provincial Budget anticipated expenditures in excess of $13 billion and, with a forecast deficit of over $500 million, would result in net debt of nearly $14 billion. [See page 2 of Manitoba Budget 2010, http://www.gov.mb.ca/finance/budget10/papers/budget.pdf and page 2 of the TD Bank Financial Group analysis of the Manitoba Budget http://www.td.com/economics/budgets/mb10.pdf]

CAC/MSOS understands that most of the long term debt provided to MH from the province is provided at the Province's cost of funds plus the Provincial guarantee fee.

i) **Please quantify the proportion of annual revenue under an MH export contract to the approximately $13 billion of annual provincial government revenues, and discuss the implications of the presence or absence of an incremental export contract on the Provincial financing cost.**

<u>ANSWER</u>:

The proportion of Manitoba Hydro's annual revenues under an export contract to the Province of Manitoba 2010/11 Summary Budget is not a relevant determinant of the Province of Manitoba's existing cost of borrowing.

Manitoba Hydro's debt is deemed to be self-supporting by all of the credit rating agencies and it is important for Manitoba Hydro to maintain its key financial targets in order to maintain this status. Each of the credit rating agencies that provide an opinion on Manitoba Hydro's creditworthiness (DBRS, Moody's, and S&P), conduct due diligence on Manitoba Hydro's operations and future plans, as well as the status of the long term sales contracts. Not maintaining key financial targets could result in negative implications to the Province of Manitoba's credit ratings and the cost of borrowing of the Province of Manitoba.

Evidence from recent credit opinions on Manitoba Hydro supports the positive view that rating agencies place upon Manitoba Hydro's strategy of securing long term sales contracts in advance of the construction of large scale hydro-electric development. For example:

- **Moody's Investor Service**,
  Credit Opinion: Manitoba Hydro Electric Board, February 8, 2010 (page 3):

  > "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."

- **DBRS**,
  Rating Report: The Manitoba Hydro Electric Board, February 12, 2009 (page 3):
  "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."

CAC/MSOS/MH/RISK-108

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, page 145**

Preamble: **In various locations in its report, KPMG makes reference to scenarios, conditions, circumstances and so on that "would be" of benefit or harm to ratepayers. In addition, KPMG asserts that "entering into long term contracts can provide net benefits to MH and therefore lower rates to Manitoba ratepayers." [emphasis added] However, KPMG does not appear to comment on whether the existing MH strategy is superior to that advocated by the NYC or whether in fact the existing MH strategy is optimal.**

KPMG states:

The presence of long-term contracts facilitates MH's ability to get external debt financing. This financing is likely to be available in more quantity and/or at lower cost than in the absence of long-term contracts. This may improve the economic case for a new hydroelectric dam, in addition to improving MH's ability to fund the project and/or advance its construction relative to an alternative scenario in which contracts are not established.

CAC/MSOS understands that the 2010-11 Manitoba Provincial Budget anticipated expenditures in excess of $13 billion and, with a forecast deficit of over $500 million, would result in net debt of nearly $14 billion. [See page 2 of Manitoba Budget 2010, http://www.gov.mb.ca/finance/budget10/papers/budget.pdf and page 2 of the TD Bank Financial Group analysis of the Manitoba Budget http://www.td.com/economics/budgets/mb10.pdf]

CAC/MSOS understands that most of the long term debt provided to MH from the province is provided at the Province's cost of funds plus the Provincial guarantee fee.

j) Please provide an example in which the presence of a MH export contract, increased the quantity of debt available to the Province and through it to MH, thereby "facilitates MH's ability to get external debt financing".

<u>ANSWER</u>:

Please see Manitoba Hydro's response to CAC/MSOS/RISK-108(i).

CAC/MSOS/MH/RISK-108

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, page 145**

Preamble: **In various locations in its report, KPMG makes reference to scenarios, conditions, circumstances and so on that "would be" of benefit or harm to ratepayers. In addition, KPMG asserts that "entering into long term contracts can provide net benefits to MH and therefore lower rates to Manitoba ratepayers." [emphasis added] However, KPMG does not appear to comment on whether the existing MH strategy is superior to that advocated by the NYC or whether in fact the existing MH strategy is optimal.**

KPMG states:

The presence of long-term contracts facilitates MH's ability to get external debt financing. This financing is likely to be available in more quantity and/or at lower cost than in the absence of long-term contracts. This may improve the economic case for a new hydroelectric dam, in addition to improving MH's ability to fund the project and/or advance its construction relative to an alternative scenario in which contracts are not established.

CAC/MSOS understands that the 2010-11 Manitoba Provincial Budget anticipated expenditures in excess of $13 billion and, with a forecast deficit of over $500 million, would result in net debt of nearly $14 billion. [See page 2 of Manitoba Budget 2010, http://www.gov.mb.ca/finance/budget10/papers/budget.pdf and page 2 of the TD Bank Financial Group analysis of the Manitoba Budget http://www.td.com/economics/budgets/mb10.pdf]

CAC/MSOS understands that most of the long term debt provided to MH from the province is provided at the Province's cost of funds plus the Provincial guarantee fee.

k) **Please provide an example in which the presence of a hydro export contract, reduced the cost of debt available to the Province and through it to MH.**

ANSWER:

Please see Manitoba Hydro's response to CAC/MSOS/RISK-108(i).

<u>CAC/MSOS/MH/RISK-109</u>

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, pages 145 & 165**

Preamble: **In various locations in its report, KPMG makes reference to scenarios, conditions, circumstances and so on that "would be" of benefit or harm to ratepayers. In addition, KPMG asserts that "entering into long term contracts can provide net benefits to MH and therefore lower rates to Manitoba ratepayers." [emphasis added] However, KPMG does not appear to comment on whether the existing MH strategy is superior to that advocated by the NYC or whether in fact the existing MH strategy is optimal.**

KPMG states:

Another element of MH's rationale for entering into long-term contracts is that they generate economic returns that will benefit Manitoba ratepayers, through lower rates.

And

In assessing this aspect of MH's rationale for entering into long-term contracts, KPMG concurs with MH's view that entering into long-term contracts can provide net benefits to MH and therefore lower rates to Manitoba ratepayers.

a) **Please provide copies of KPMG's quantitative analysis, work papers and other evidence that it used, at the time, to conclude from the premise of net benefits to MH would thereby translate into lower rates to Manitoba ratepayers.**

b) **If this analysis requested in (a) above, was not performed by KPMG, please explain why it was not performed.**

c) **Please clarify what is intended by KPMG when it references "lower rates to Manitoba ratepayers" by making the distinction of "lower" in comparison to what and please references to where in the report KPMG makes this comparison and provides quantitative analysis.**

d) Please provide the copies of KPMG's analysis and work papers which showed the quantitative analysis of the ratio of i) the net benefit to MH; to ii) the resulting impact of lower rates to Manitoba ratepayers.

e) If this analysis requested in (d) was not performed by KPMG, please explain why it was not performed.

ANSWER:

KPMG Response:

Please refer to section 4.10, section 4.11 and Appendix J for details on KPMG's analysis in this regard.

CAC/MSOS/MH/RISK-109

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, pages 145 & 165**

Preamble: **In various locations in its report, KPMG makes reference to scenarios, conditions, circumstances and so on that "would be" of benefit or harm to ratepayers. In addition, KPMG asserts that "entering into long term contracts can provide net benefits to MH and therefore lower rates to Manitoba ratepayers." [emphasis added] However, KPMG does not appear to comment on whether the existing MH strategy is superior to that advocated by the NYC or whether in fact the existing MH strategy is optimal.**

KPMG states:

Another element of MH's rationale for entering into long-term contracts is that they generate economic returns that will benefit Manitoba ratepayers, through lower rates.

And

In assessing this aspect of MH's rationale for entering into long-term contracts, KPMG concurs with MH's view that entering into long-term contracts can provide net benefits to MH and therefore lower rates to Manitoba ratepayers.

f) **Please confirm that KPMG did not perform an analysis to determine the approach, methods, portfolio of power sales arrangements in use by Manitoba Hydro is actually lower rates than under the approach recommended by the NYC.**

<u>ANSWER</u>:

<u>KPMG Response</u>:

KPMG developed a conceptual framework to guide it in its external quality review of Manitoba Hydro, as detailed in Section 1.2. In applying this conceptual framework, KPMG carried out a detailed review of the NYC Consultant's Reports and other documents to group the NYC's assertions into the Issues and Themes as presented in the KPMG report. In assessing the Issues, we took the approach that our work would not necessarily result in a total concurrence with or rejection of the assertions underlying an Issue; in some instances, we have found that we concur with some elements of an assertion and reject other elements. Accordingly, we would suggest that readers of this report focus on the analysis of the Issues as well as any recommendations that relate to the Issues, rather than focusing on whether we concur with or reject any particular assertion.

CAC/MSOS/MH/RISK-109

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, pages 145 & 165**

Preamble: **In various locations in its report, KPMG makes reference to scenarios, conditions, circumstances and so on that "would be" of benefit or harm to ratepayers. In addition, KPMG asserts that "entering into long term contracts can provide net benefits to MH and therefore lower rates to Manitoba ratepayers." [emphasis added] However, KPMG does not appear to comment on whether the existing MH strategy is superior to that advocated by the NYC or whether in fact the existing MH strategy is optimal.**

KPMG states:

Another element of MH's rationale for entering into long-term contracts is that they generate economic returns that will benefit Manitoba ratepayers, through lower rates.

And

In assessing this aspect of MH's rationale for entering into long-term contracts, KPMG concurs with MH's view that entering into long-term contracts can provide net benefits to MH and therefore lower rates to Manitoba ratepayers.

g) **If the confirmation sought in (f) is not provided, please provide the passage and references in the KPMG report where KPMG performed an qualitative analysis and quantitative analysis to determine, and conclude that, the approach, methods, portfolio of power sales arrangements in use by Manitoba Hydro is superior to the approach recommended by the NYC for minimizing rates for Manitoba ratepayers. Also, please provide the quantification of the difference of the rate impact between the MH approach and the NYC approach, together with the calculations that led to that quantification.**

<u>ANSWER</u>:

<u>KPMG Response</u>:

Please see answer (f) above.

CAC/MSOS/MH/RISK-109

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, pages 145 & 165**

Preamble: **In various locations in its report, KPMG makes reference to scenarios, conditions, circumstances and so on that "would be" of benefit or harm to ratepayers. In addition, KPMG asserts that "entering into long term contracts can provide net benefits to MH and therefore lower rates to Manitoba ratepayers." [emphasis added] However, KPMG does not appear to comment on whether the existing MH strategy is superior to that advocated by the NYC or whether in fact the existing MH strategy is optimal.**

KPMG states:

Another element of MH's rationale for entering into long-term contracts is that they generate economic returns that will benefit Manitoba ratepayers, through lower rates.

And

In assessing this aspect of MH's rationale for entering into long-term contracts, KPMG concurs with MH's view that entering into long-term contracts can provide net benefits to MH and therefore lower rates to Manitoba ratepayers.

h) **Please confirm that KPMG did not perform an analysis to determine the approach, methods, portfolio of power sales arrangements in use by Manitoba Hydro is optimal for minimizing rates for Manitoba ratepayers.**

ANSWER:

KPMG Response:

KPMG's analysis examines the appropriateness of Manitoba Hydro's current power export practices.

<u>CAC/MSOS/MH/RISK-109</u>

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, pages 145 & 165**

Preamble: **In various locations in its report, KPMG makes reference to scenarios, conditions, circumstances and so on that "would be" of benefit or harm to ratepayers. In addition, KPMG asserts that "entering into long term contracts can provide net benefits to MH and therefore lower rates to Manitoba ratepayers." [emphasis added] However, KPMG does not appear to comment on whether the existing MH strategy is superior to that advocated by the NYC or whether in fact the existing MH strategy is optimal.**

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And

In assessing this aspect of MH's rationale for entering into long-term contracts, KPMG concurs with MH's view that entering into long-term contracts can provide net benefits to MH and therefore lower rates to Manitoba ratepayers.

i) **If the confirmation sought in (h) is not provided, please provide the passage and reference in the KPMG report where KPMG performed an qualitative analysis and quantitative analysis to determine, and conclude that, the approach, methods, portfolio of power sales arrangements in use by Manitoba Hydro is optimal for minimizing rates for Manitoba ratepayers. Also, please provide the quantification of the difference of the rate impact between the MH approach and the optimal approach, together with the calculations that led to that quantification.**

ANSWER:

KPMG Response:

See response to (h) above.

<u>CAC/MSOS/MH/RISK-109</u>

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, pages 145 & 165**

Preamble: **In various locations in its report, KPMG makes reference to scenarios, conditions, circumstances and so on that "would be" of benefit or harm to ratepayers. In addition, KPMG asserts that "entering into long term contracts can provide net benefits to MH and therefore lower rates to Manitoba ratepayers." [emphasis added] However, KPMG does not appear to comment on whether the existing MH strategy is superior to that advocated by the NYC or whether in fact the existing MH strategy is optimal.**

KPMG states:

> **Another element of MH's rationale for entering into long-term contracts is that they generate economic returns that will benefit Manitoba ratepayers, through lower rates.**

And

> **In assessing this aspect of MH's rationale for entering into long-term contracts, KPMG concurs with MH's view that entering into long-term contracts can provide net benefits to MH and therefore lower rates to Manitoba ratepayers.**

j) **Please confirm that KPMG did not perform an analysis to determine the approach, methods, portfolio of power sales arrangements in use by Manitoba Hydro is appropriate for minimizing rates for Manitoba ratepayers.**

<u>ANSWER</u>:

<u>KPMG Response</u>:

KPMG's analysis examines the appropriateness of Manitoba Hydro's current power export practices with one outcome of MH's strategy being lower rates for Manitoba ratepayers.

<u>CAC/MSOS/MH/RISK-109</u>

Reference: **KPMG Report, April 15, 2010, redacted September 29, 2010, pages 145 & 165**

Preamble: **In various locations in its report, KPMG makes reference to scenarios, conditions, circumstances and so on that "would be" of benefit or harm to ratepayers. In addition, KPMG asserts that "entering into long term contracts can provide net benefits to MH and therefore lower rates to Manitoba ratepayers." [emphasis added] However, KPMG does not appear to comment on whether the existing MH strategy is superior to that advocated by the NYC or whether in fact the existing MH strategy is optimal.**

KPMG states:

Another element of MH's rationale for entering into long-term contracts is that they generate economic returns that will benefit Manitoba ratepayers, through lower rates.

And

In assessing this aspect of MH's rationale for entering into long-term contracts, KPMG concurs with MH's view that entering into long-term contracts can provide net benefits to MH and therefore lower rates to Manitoba ratepayers.

k) **If the confirmation sought in (j) is not provided, please provide the passage and reference in the KPMG report where KPMG performed an qualitative analysis and quantitative analysis to determine, and conclude that, the approach, methods, portfolio of power sales arrangements in use by Manitoba Hydro is appropriate for minimizing rates for Manitoba ratepayers. Also, please provide the quantification of the difference of the rate impact between the MH approach and the appropriate approach, together with the calculations that led to that quantification.**

ANSWER:

KPMG Response:

Please see answer to (j) above.

CAC/MSOS/MH/RISK-110

Reference: KPMG Report, page 157

a) Manitoba Hydro has indicated that it considers its price forecast to be a "proxy" for their counter-party's avoided cost. If this is the case, why would it not be appropriate to estimate their counter-party's avoided costs as one way of "testing" the reasonableness of the price forecast itself?

ANSWER:

Manitoba Hydro performs avoided cost analysis in evaluating the reasonableness of the price contained in proposals to export customers. As each customer is unique, testing a general market forecast against one customer's unique situation would not be reasonable.

CAC/MSOS/MH/RISK-111

Reference: **KPMG Report, page 162**

Preamble: **KPMG claims that Manitoba Hydro is likely to pay less for its back-up generation by outsourcing it than by building it locally.**

a) **In making drawing this conclusion has KPMG taken into account the specific concerns of the NYC regarding the possibility of high market prices during drought periods?**

ANSWER:

KPMG Response:

KPMG developed a conceptual framework to guide it in its external quality review of Manitoba Hydro, as detailed in Section 1.2. In applying this conceptual framework, KPMG carried out a detailed review of the NYC Consultant's Reports and other documents to group the NYC's assertions into the Issues and Themes as presented in the KPMG report. In assessing the Issues, we took the approach that our work would not necessarily result in a total concurrence with or rejection of the assertions underlying an Issue; in some instances, we have found that we concur with some elements of an assertion and reject other elements. Accordingly, we would suggest that readers of this report focus on the analysis of the Issues as well as any recommendations that relate to the Issues, rather than focusing on whether we concur with or reject any particular assertion.

CAC/MSOS/MH/RISK-111

Reference: **KPMG Report, page 162**

Preamble: **KPMG claims that Manitoba Hydro is likely to pay less for its back-up generation by outsourcing it than by building it locally.**

b) Please provide any analysis KPMG has undertaken to support this claim.

ANSWER:

KPMG Response:

Please refer to the analyses in Chapter 4 and Appendix J which specifically examine high price scenarios.

CAC/MSOS/MH/RISK-112

Reference: KPMG Report, page 163 – third paragraph

a) KPMG's rationale for not adopting a lower definition of dependable energy is that is would lead to more spot market sales with increased price volatility. Is it KPMG's view that such a rationale can be used to justify not lowering the value of dependable energy even when such an adjustment has been demonstrated to be appropriate?

ANSWER:

KPMG Response:

KPMG is of the view that Manitoba Hydro's definition of dependable energy is appropriate and is not aware of instances of "not lowering the value of dependable energy even when such an adjustment has been demonstrated to be appropriate".

CAC/MSOS/MH/RISK-113

Reference: Appendix B, MH's March 2007 Comments re: NYC Report, page 8

a) The last paragraph of section 2.5 makes reference to the development of the PRISM model and its ability to simulate a various outcomes and their probabilities. Based on IFF09-1 and its associated inputs what is:

- **i. the mean net export revenue for the first five years of the IFF**
- **ii. the 95% confidence interval for this value, and**
- **iii. the value of the five year worst case outcome and its probability.**

ANSWER:

The PRISM tool is currently under development and is not being used operationally. Therefore Manitoba Hydro is unable to provide the requested information.

PRISM is being developed as a screening tool for comparative rather than absolute purposes for below average flow conditions. Any absolute analysis for the purposes such as the IFF would continue to be done using Manitoba Hydro's other forecasting models.

The Appendix B report cited above, references a study done utilizing PRISM that offered only preliminary numbers and was intended to identify the potential magnitude of looking at the combined consequence of multiple risks for a severe drought.

Please see the attachment to RCM/TREE/MH I-38 entitled, "Risk Analysis Using PRISM".

CAC/MSOS/MH/RISK-114

Reference: Appendix B, MH's March 2007 Comments re: NYC Report, page 18
KPMG Report, Section 3.7.11.1

a) The KPMG report concludes there is positive serial correlation in annual water flows over time. Given this conclusion, why is it reasonable for the IFF to assume median inflows for the first two years (per Appendix B)?

ANSWER:

With respect to water volume forecast for the current year of the IFF, Manitoba Hydro uses a supply forecast that reflects current reservoir storage levels plus inflows with a 50% chance of exceedence. This forecast is Manitoba Hydro's best estimate. So in this regard, it is inaccurate to state that inflows for the first year of the IFF are median, and divorced from the knowledge of current conditions. For the second year's water volume, inflows used are median but are combined with any carry forward of reservoir storage from the first fiscal year.

Manitoba Hydro agrees with KPMG that annual hydraulic energy from inflows has a low level of positive lag one auto correlation. However the IFF is prepared in the summer or early fall, i.e. in the first half of the water year, hence the complete first year annual water supply volume is not yet known with enough certainty to rely on for predicting the second year based upon serial correlation between water years.

<u>CAC/MSOS/MH/RISK-115</u>

Reference: Appendix B, MH's March 2007 Comments re: NYC Report, page 38

a) The last paragraph makes reference to Manitoba Hydro developing a flow forecast strategy for the SPLASH model. Please describe the current status of such developments and what changes, if any, were made to the SPLASH model as used for purposes of IFF09-1.

<u>ANSWER</u>:

No changes were made to the SPLASH model as used for purposes of IFF09-1. Manitoba Hydro has not completed the implementation and testing of a new methodology that eliminates perfect foresight and instead incorporates uncertainty in future flow conditions in the decision making for reservoir management. This technique would utilize the known flow from the historic record for the first simulated month with a gradual increase in uncertainty for each subsequent monthly time step that is considered in the decision process for water management. This change in methodology results in a dramatic increase in computer run time and it is expected that this version of the model may not be used for all applications of SPLASH.

Manitoba Hydro intends to assess the potential impact of perfect foresight on the results of the SPLASH model. A specific plan has yet to be developed and approved with associated timeframes and resource requirements.

<u>CAC/MSOS/MH/RISK-116</u>

Reference: Appendix B, MH's March 2007 Comments re: NYC Report, page 46

a) What is the current status of Manitoba Hydro's plans to possibly implement stochastic analysis in HERMES and SPLASH?

<u>ANSWER</u>:

As indicated in the second last bullet on page 28 of the KPMG Report, Manitoba Hydro is continually enhancing its generation planning and operating models. Specific model development plans are currently under review by Manitoba Hydro, and therefore are not available to be provided at this time.

Reference: Appendix B, MH's March 2007 Comments re: NYC Report, page 46

b) Item 6.3 references PSO preparing recommendations to address the discontinuity between the second and third year's generation estimates in the IFF. Please outline what the recommendations were, whether they were implemented and specifically what changes/impacts they have on IFF09-1.

ANSWER:

The discontinuity in the generation estimates between Year 2 and Year 3 is due to the methodology differences in arriving at net export revenues. Year 2 net export revenues are based on a single production run using a median inflow scenario, where 50 percent of the time inflows will be higher and 50 percent of the time inflows will be lower than this case. For year 3 and later, generation estimates reflect the average of net export revenues and generation and purchase costs based on multiple production runs using Manitoba Hydro's official historical flow record.

The discontinuity between the two years due to this methodology difference is both understood and accepted. There have been no changes with respect to the use of median flows in Year 2 (for budgeting) and average net export revenues based on multiple flow sequences commencing in Year 3.

CAC/MSOS/MH/RISK-117

Reference: Appendix C, MH's May 2007 Comments re: NYC Report, Section 5.0

a) The second paragraph states that long term contracts provide assured market for surplus power, and in particular provides a firm transmission path for physical delivery of power. Please confirm whether the reference to "surplus" is with regard to surplus dependable energy or surplus energy in excess of dependable energy.

ANSWER:

The reference to "surplus" is in regards to any energy whether dependable or not.

CAC/MSOS/MH/RISK-117

Reference: Appendix C, MH's May 2007 Comments re: NYC Report, Section 5.0

b) Please confirm that the purchaser of a long term contract would provide transmission for the quantity under contract which would be sourced out of Manitoba Hydro's dependable energy. Furthermore, please confirm that this transmission capacity can not be relied on to export surplus energy available in excess of dependable energy committed under long term contracts.

ANSWER:

Historically, all of Manitoba Hydro's counter parties provided firm transmission service on the US side of the border that matched the capacity quantity associated with the firm sale. After the MISO Day 2 Market arrived in 2005, Manitoba Hydro began acquiring rights to some of these firm transmission reservations in the US. Manitoba Hydro may now use these rights to serve long term contract obligations.

As transmission rights do not vary by time of day, Manitoba Hydro may use the firm transmission to export surplus energy when the transmission is not needed to serve a contract obligation (subject to making appropriate arrangements with the US counter party that holds the US rights to firm transmission).

CAC/MSOS/MH/RISK-118

Reference: **Appendix D, MH's October 2008 Middle Office Review of the NYC's Reports, page 1**

Preamble: **The last bullet on page 1 states that the Export Power Risk Management Committee "may have to consider engaging an independent third party with requisite hydraulic management and modeling expertise to review the NYC's work product …".**

a) **Was the KPMG engagement meant to address this conclusion? If yes, please confirm that the KPMG team had the requisite expertise outlined, particularly in the area of hydraulic management.**

ANSWER:

A review of the NYC's modelling, and specifically as it related to modelling optimization of the hydraulic system, was not included in the scope of the KPMG review.

CAC/MSOS/MH/RISK-118

Reference: **Appendix D, MH's October 2008 Middle Office Review of the NYC's Reports, page 1**

Preamble: **The last bullet on page 1 states that the Export Power Risk Management Committee "may have to consider engaging an independent third party with requisite hydraulic management and modeling expertise to review the NYC's work product …".**

b) **If not, was an independent third party engaged? If yes, please indicate who, outline their requisite expertise and provide the results of their review.**

ANSWER:

Manitoba Hydro did not pursue having a 3rd party with requisite hydraulic management and modeling expertise review the NYC's work product.

Manitoba Hydro notes that the NYC has never provided to Manitoba Hydro a substantive written description of the methodology used in its analysis, nor the key assumptions that were used in its analysis, nor any discussion of limitations of the analysis that led to the conclusions made by NYC.

CAC/MSOS/MH/RISK-119

Reference: **Appendix D, MH's October 2008 Middle Office Review of the NYC Reports, page 2**

Preamble: **The recommendations call for a risk profile to be developed for any new long-term contract prior to approval.**

a) **Have such profiles been prepared for all of the long term contracts Manitoba Hydro is currently considering? If not, why not?**

ANSWER:

Manitoba Hydro is in the process of preparing a risk profile for the MP and WPS contracts. As of yet, this profile has not received Corporate review and approval.

CAC/MSOS/MH/RISK-119

Reference: **Appendix D, MH's October 2008 Middle Office Review of the NYC Reports, page 2**

Preamble: **The recommendations call for a risk profile to be developed for any new long-term contract prior to approval.**

b) **If yes, please undertake the following (without revealing the specific counter-party):**

- **Outline the types of risks generally identified,**
- **Note those risks with the higher quantified values,**
- **Note approaches taken to manage/mitigate the risk.**

ANSWER:

Please see Manitoba Hydro's response to CAC/MSOS/MH/RISK-119(a).

CAC/MSOS/MH/RISK-120

Reference: **Appendix D, MH's October 2008 Middle Office Review of the NYC Reports, page 4**

a) **Please provide a copy of the export sales criterion resulting from the generation planning policy review.**

ANSWER:

The export sales criterion referenced in the report is not available as Manitoba Hydro generation planning policy review has not yet been completed.

CAC/MSOS/MH/RISK-120

Reference: Appendix D, MH's October 2008 Middle Office Review of the NYC Reports, page 4

b) Please provide the plans and strategies developed by the Drought Financial Management Strategy Working Group related to the financial management of a drought.

ANSWER:

The efforts of the Drought Financial Management Strategy Working Group to date have been focused on identifying drought management strategies available to Manitoba Hydro and on validating the accuracy of the model used to evaluate these strategies. A formal plan and strategy for financial management of a drought has not yet been documented.

CAC/MSOS/MH/RISK-121

Reference: **Appendix E, MH's October 2008 Middle Office Comments on the NYC's Long Term Contracts Risk Report, page 1**

a) **The second bullet refers to an anticipated "dependable energy criterion". Was this new dependable energy criterion completed and, if so, how does it differ from the one set out in Appendix C of this document?**

ANSWER:

A review of the dependable energy criterion has commenced and to date this review supports the current criterion.

<u>CAC/MSOS/MH/RISK-121</u>

Reference: Appendix E, MH's October 2008 Middle Office Comments on the NYC's Long Term Contracts Risk Report, page 1

b) Are the Policy and Procedures for Long Term Contract Sales as set out it Appendix A currently in effect or have they been revised since October 2008. If changed, please provide a copy of the current Policy and Procedures.

<u>ANSWER</u>:

The synopsis of the Current Approved Policy and Procedures for Long Term Contract Sales contained in Appendix A of Appendix E (MH's October 2008 Middle Office Comments on the NYC's Long Term Contracts Risk Report) are currently in effect.

CAC/MSOS/MH/RISK-122

Reference: Appendix G, MH's December 2008 Export Power Sales Risk Management Issues, Appendix 3 – Report on Risks Faced by Manitoba Hydro in Power Exports

a) Can Manitoba Hydro indicate its views (and follow up actions) regarding the findings and recommendations of this report, particularly those with respect to hedging/trading?

ANSWER:

Manitoba Hydro's views in regards to the findings in the section titled "Hedging or Trading" are as follows:

Manitoba Hydro's virtual transactions and FTR transactions are associated with the Corporation's expected export volumes into the market and are used to hedge price risks faced by the Corporation. These transactions are not entered for speculation or trading purposes.

Manitoba Hydro does not intend to increase the amount of market arbitrage merchant transactions in the foreseeable future. Therefore, there is no need to pursue the creation of a subsidiary at this time.

The energy volume commitments within the Corporation's long term sales contracts are conservative since they are made from energy supplies that are available under a recurrence of dependable water flow conditions. In addition, the long-term contracts provide price diversification for Manitoba Hydro's exports and secure firm transmission service that provides Manitoba Hydro market access. The KPMG Report reviewed the energy volumes being committed by Manitoba Hydro in its long term sales and reached the following conclusions:

> "MH's current approach to forecasting and to calculating dependable energy appears reasonable and is consistent with practices at other North American hydroelectric utilities" (KPMG Report – 3.13)

“We see no evidence that MH is over committing its firm dependable energy production through the proposed export contracts” (KPMG Report - 4.7.1).

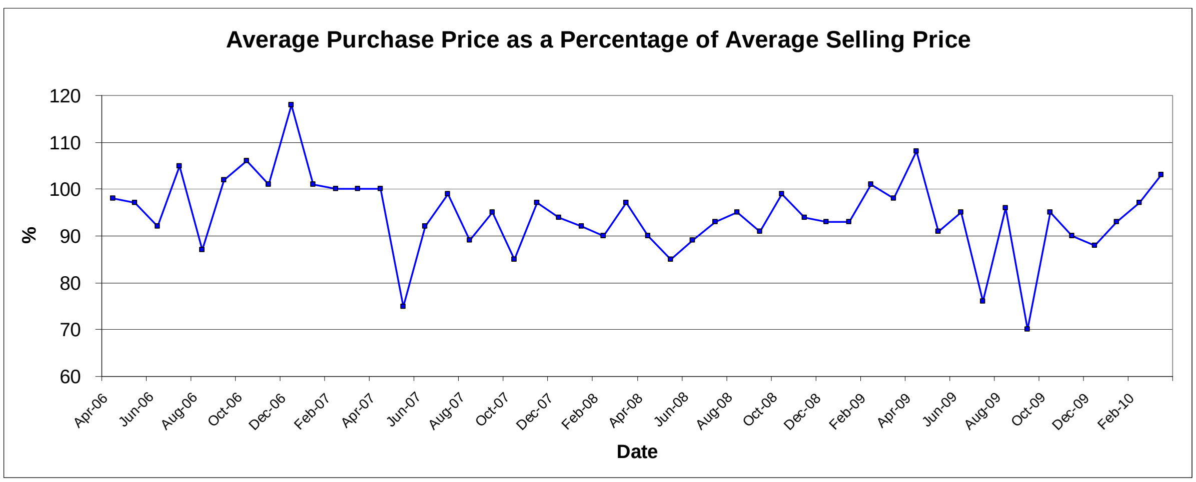
CAC/MSOS/MH/RISK-122

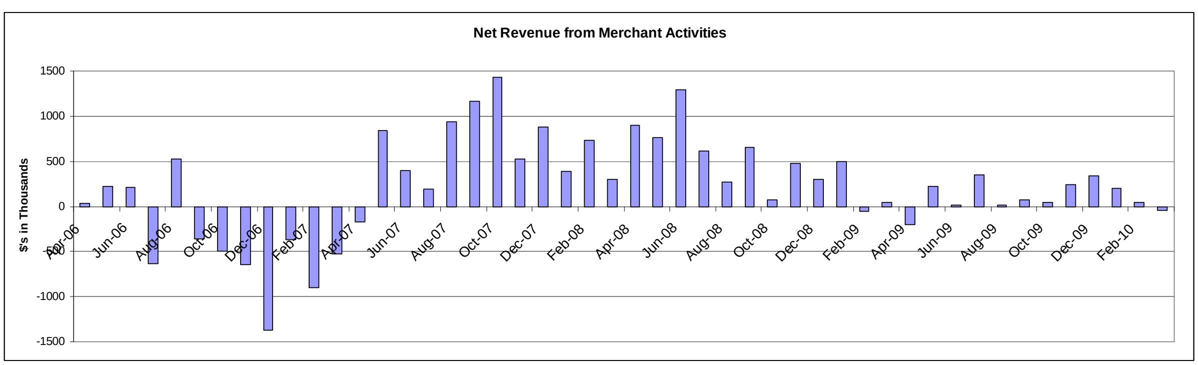
Reference: **Appendix G, MH's December 2008 Export Power Sales Risk Management Issues, Appendix 3 – Report on Risks Faced by Manitoba Hydro in Power Exports**

b) With respect to Appendix B (Analysis of Hedging), please update Figures 6 and 8 for actual data post March 2007.

ANSWER:

Manitoba Hydro could not reconcile the values contained in Figures 6 and 8 of the Bhattacharyya report with its figures. Manitoba Hydro has therefore prepared the following charts for the cumulative time period based on Manitoba Hydro's merchant activity reports (excluding any prior period adjustments by MISO for the April 2006 to March 2010 period). Cumulative merchant profits from April 2006 to March 2010 are $10 Million, net of all costs.





CAC/MSOS/MH/RISK-123

Reference: Appendix G, MH's December 2008 Export Power Sales Risk Management Issues, Appendix 4 – Power Sales and Operations MISO Day II – Phase II Power Trading and Settlement Processes Follow-Up of Phase I Audit

a) Please provide a copy of page 3 of the Appendix.

ANSWER:

Manitoba Hydro confirms that page 3 of Appendix 4 has been provided in Appendix G.

<u>CAC/MSOS/MH/RISK-123</u>

Reference: **Appendix G, MH's December 2008 Export Power Sales Risk Management Issues, Appendix 4 – Power Sales and Operations MISO Day II – Phase II Power Trading and Settlement Processes Follow-Up of Phase I Audit**

b) With respect to page 5, please provide copies of:

- **The Power Sales Risk Policy**
- **The Middle Office Terms of Reference**
- **Details regarding the risk limits developed and the risk reporting regime.**

<u>ANSWER</u>:

The Management Control Plan provided in Attachment 1 of RCM/TREE/MH I-30(a) continues to be the policy document governing Manitoba Hydro's power related transactions. The draft Power Sales Risk Policy referenced in the audit report has not been completed and approved.

A copy of the Middle Office Terms of Reference is provided in Attachment 1 to this response.

Manitoba Hydro utilizes the limits contained within the Management Control Plan and the authorization process required by the EPRMC approved Authority for Power Related Transactions to manage Manitoba Hydro's risk. Manitoba Hydro has a number of reporting requirements and these requirements were reviewed in the KPMG Report. Section 6.7 of the KPMG Report reviewed Manitoba Hydro's Risk Reporting and concluded that "MH reporting is generally consistent with leading practice except in the area of "Exposure vs Limits" reports. Manitoba Hydro is in the process of developing the Corporation's position and schedule for addressing the recommendations contained within the KPMG report.

EXPORT POWER MIDDLE OFFICE TERMS OF REFERENCE

The middle office will be a review and advisory function reporting to the Export Power Risk Management Committee under the direction of the Vice President of Finance and Administration and Chief Financial Officer. The middle office will be responsible for:

- Assessing whether potential risk exposures for export power strategies are identified.

- Evaluating risk treatment mitigation activities.
  - Reviewing all formal policy and procedure documents to identify gaps or weaknesses in risk treatment and provide recommendations to improve risk mitigation.
  - Reviewing established risk tolerances to determine whether they provide direction in electric export power activities and operations are within the established limits.

- Evaluating the accuracy of risk exposure / measurement information.
  - Assessing the quantitative methodologies and systems in place to measure risk exposures.
  - Testing methodologies and systems to ensure accuracy and adherence to stated objectives and logic.
  - Determining that measurement information is accurately calculated, prepared in a timely manner and clearly communicated.
  - Performing stress and back testing and when appropriate scenario analysis on risk exposures.

- Monitoring export power activities for adherence to established policy, procedure and guideline and assessing the effectiveness of controls.
  - Reviewing export power activities on an ongoing basis and where possible incorporating exception reporting into those systems used for tracking and reporting of trading activities.
  - Reporting on weaknesses and all non compliance issues.

- Reviewing all new products to confirm that the risks around these new products have been identified and report the results of the review.