



P.O. Box 815 • Winnipeg Manitoba Canada • R3C 2P4  
Street Location for DELIVERY: 22<sup>nd</sup> floor - 360 Portage Avenue  
Telephone / N° de téléphone: (204) 360-3468 • Fax / N° de télécopieur: (204) 360-6147  
mboyd@hydro.mb.ca

September 24, 2013

Mr. H. Singh  
The Public Utilities Board  
400 - 330 Portage Avenue  
WINNIPEG, Manitoba R3C 0C4

Dear Mr. Singh:

**RE: MANITOBA HYDRO NFAT**  
**Notice of Motion regarding First Round Information Requests**

In Order 92/13 dated August 9, 2013 the PUB established a preliminary schedule which specified September 30, 2013 as the Motion Day on which Manitoba Hydro was to raise its objections to Information Requests filed by parties. Although the PUB has not specified a procedure for the hearing of motions, Manitoba Hydro has suggested that the Rules of Procedure requiring 6 days notice for a party to bring a motion, with parties intending to respond filing their written response by 2:00 pm two days before the motion is to be heard.

Although the timetable has not yet been finalized, in anticipation of the September 30, 2013 motion day proceeding as currently scheduled, Manitoba Hydro hereby gives notice that it views the following Information Requests to be objectionable. For ease of reference, we have grouped Information Requests submitted by various parties by reasons for objection, and provide our comments with respect to each general area where possible.

**Information Requests which Cannot be Completed within the Allotted Time**

Manitoba Hydro objects to responding to Information Requests which will require re-running of models and the creation of scenarios outside of those included in the filing. These items cannot be completed within the time allotted for this process, and in some cases would take many months beyond what is allotted in the process, without adding significant value to the review. Manitoba Hydro notes that if the requirement to respond to these information remains, this will result in a delay in the hearing process such that Manitoba Hydro will not be in a position to commence construction in time to preserve the 2019 in-service date for the Keeyask Generating Station. Further, such a delay would render it impossible for the PUB to complete the hearing process in time to meet the deadline for its report to the Province of Manitoba as required by the Terms of Reference.

Question No.	Question Posed	MH Comments
CAC-0120b	Please recalculate the NPV for this "Plan 16" using real discount rates of 8% and 10%.	As noted above, this cannot be completed in the time allotted for this process
CAC-0121a	Please calculate the NPVs for Plans 2, 4, 5, 6, 7, 10, 11,12,13,14 and 15 using 8% and 10% real discount rates. Please provide	As noted above, this cannot be completed in the time allotted for this process

	the associated Economic Summary tables similar to those in Appendix 9.3, Table 001.	
CAC/GAC-0007c	Specify by how much GWh the Economic potential would have increased had the same level of non-energy benefits been included in EnerNOC's TRC calculations	This question relates to the DSM Potential Study and the requested alternative scenarios are outside of the scope of the consultant's work and would require more time to complete than is available in this process.
CAC/GAC-0011b and c	Using the same inputs, provide the same results (economic, market, achievable) assuming Manitoba Hydro was instead attempting to maximize savings at the same cost as avoided costs, i.e. so that the portfolio as a whole scored a B/C ratio of 1; Same as above, but for a total B/C ratio of 1.25.	These questions relate to the DSM Potential Study and the requested alternative scenarios are outside of the scope of the consultant's work and would require more time to complete than is available in this process.
MMF-0047	Provide similar information to that contained in Table 12.5 for the 2013 Assumptions for discount rates of 6%, 6.5%, 7%, 7.5% and 8%.	This would require redoing economic analysis with a new discount rate and cannot be completed in the time allotted.
PUB-0003 PUB-0004a	Please re-file this table which shows weather adjustments (W.A.) to 2011/12 and a 2012/13 updated version. Explain and define the W.A. factors involved for residential (standard and all-electric), general service lighting, distribution losses and transmission losses; Please re-file the chart on Winnipeg average degree day heating (DDH) updated to include 2011/12 and 2012/13 and explain the downward trend for 10/25 year averages.	Manitoba Hydro will file the existing information requests and provide explanations as requested, but is not able to complete updated versions of the previous Information Requests.
PUB-0030	Please provide MH's impact analysis of a 5 year drought and 7 year drought occurring: - Pre new generation - With Keeyask in place - With both Keeyask and Conawapa in place - With a 400 MW CCCT instead of Keeyask G.S. in the PRP	This would require new analysis, and cannot be completed within the time allotted for this process. Impact analysis of 5 and 7 year droughts pre-new generation has been previously provided (see for example the references cited in Information Request PUB-0035a.
PUB-0035b	Please re-file the MIPUG/MH I-36(a) & (b) calculation for a 5 year drought beginning in 2013/14	This would require new analysis which cannot be completed within the time allotted and would offer little substantive value given the dates suggested and current water levels.
PUB-0062 a through d	Based on the preferred development plan being executed, please provide an update of Exhibit #25 from the 2010 GRA providing the in-service revenue requirement amount for each of Keeyask and Conawapa based on the low capital cost, expected capital cost and high capital cost scenarios; Please provide a similar analysis for each of the 15 alternative development plans based on low capital costs, expected capital costs and high capital cost scenarios; Please provide the in-service year dependable energy unit cost for each of the above scenarios (a) & (b); Please provide the Levelized unit cost in nominal dollars for each of the above scenarios (a) & (b).	The information sought in these information requests will require new work be undertaken with a methodology that Manitoba Hydro has previously identified as inappropriate. Manitoba Hydro has provided levelized costs for resources based on industry standard methodology. Additional annual revenue requirements for each plan are indicated on the pro-formas filed in Appendix 11.4 for each development plan based on the rate-setting approach utilized.
PUB-0075a and b	Please file the response to CAC/MH I-15 from the 2012 GRA updated to include IFF12-1; Please file a similar analysis to (a) for each of the Keeyask and Conawapa G.S. for the first year of planned in-service for each station;	The updating of this material and the additional analysis requested will require time to complete, and reflects a request for work to be undertaken with a methodology that Manitoba Hydro has previously identified as inappropriate, as discussed in the response to PUB-0062 above.

PUB-0098a and c PUB-0099c PUB-0100b	Please file updated responses to the above referenced questions from the 2012 GRA; Please provide an update of the detailed calculations of MH's marginal cost estimate utilized in the NFAT filing and comment on any differences between that provided at the 2012 GRA; Please provide an update to the response to MH Exhibit #85 used in the NFAT filing. Please provide an update to (a) for information used in the NFAT filing. Please provide any detailed supporting calculations	Updating information which is relatively current in the context of considering development options which are several years in the future is not warranted in the circumstances.
PUB-0107	Please re-file this IR showing incremental in-service revenue requirements updated to include CEF 12 capital estimates for Bipole III, Keeyask and Conawapa G.S.(s).	The updating of this material and the additional analysis requested will require time to complete, and reflects a request for work to be undertaken with a methodology that Manitoba Hydro has previously identified as inappropriate, as discussed in the response to PUB-0062 above.
PUB-0111 PUB-0118c PUB-122a and b	Please provide a comparable analysis (to the above) for a CCGT only All-Gas Scenario involving two-308 MW CCGT G.S.(s) in 2022/23 and another two 308 MW CCGT G.S. in 2041/42 (each having an average annual output of about 1700 GWh – 7x16 operations); Please provide an alternative scenario that would use 600-700 MW of CCGT in 2022 and a 2nd 600-700 MW of CCGT in 2026 so as to defer Conawapa G.S. beyond 2030, at the same time maximizing exports to the limit of peak tie-line capacity; Please provide MH's version of the following tabulation of MH's average export sales from 2019/20 to 2039/40 under the following headings: Please confirm (or re-state) that MH anticipates increasing average yearly use of thermal generation and imports combined approximately as follows: 2019/20 2024/25 2029/30 2034/35 2039/40	The response to this Information Request would require significant analysis and cannot be completed in the time allotted. The All Gas Plan included in the filing is an optimized gas plan which includes a combination of SCGT and CCGT based on capacity and energy needs (as shown in Chapter 8, Figure 8.1 of the submission)
PUB-0167 PUB-0172a PUB-0173 PUB-0175 PUB-0194a – d PUB-0195a – d PUB-0199 PUB_0206d PUB-0207	Please refile the economic evaluation of the Preferred Development Plan and Alternatives based on a high interest rate of 9%, reference interest rate of 7%, and low interest rate of 4%; Please refile the comparison of economic summaries (starting at Appendix 9.3 Page 492) and related figures 1.2, 2.7.1, 2.7.2, 2.7.3, 2.7.4, 2.7.5, and 2.7.6 based on the assumption that any excess dependable hydro-electric energy not sold or anticipated to be sold is assumed to be marketed as spot market sales rather than as firm sales in the future; Please run the economic evaluation in Section 2.7 - Probabilistic Analysis [Figures 2.7.1 to 2.7.24] assuming a reference discount rate of 7% while leaving the energy cost and construction cost assumptions unchanged; Please provide an updated Table 10.4 and related analysis utilizing optimized combined cycle gas turbines as described in PUB-111 as the reference case.	The responses to these Information Requests would require significant analysis and cannot be completed in the time allotted. The All Gas Plan included in the filing is an optimized gas plan which includes a combination of SCGT and CCGT based on capacity and energy needs (as shown in Chapter 8, Figure 8.1 of the submission)

	<p>supported by imports; Please refile the Impact on Reference Scenario NPV of the five-year drought Table 10.8, and figure 10.23 utilizing a 6.1% discount rate As the reference discount rate; Please refile the Impact on Reference Scenario NPV The five-year drought Table 10.8 and figure 10.23 assuming no carbon adder in the reference energy price. Provide commentary on the results; Please run the impact on reference scenario NPV The five-year drought Table 10.8 and Figure 10.23 assuming no carbon adder in the reference energy price used in probabilistic analysis. Provide commentary on the results; Please run the impact on reference scenario NPV The five-year drought Table 10.8 and Figure 10.23 assuming 50% of the value of a carbon adder that is currently used in the reference energy price used in probabilistic analysis. Please provide commentary on results; Please refile Table 10.9 and Table 10.10 assuming 50% of the value of a carbon adder that is currently used in the reference energy price; Please refile Table 10.9 and Table 10.10 utilizing a 7.0% discount rate As the reference discount rate; Please refile 10.9 and Table 10.10 assuming no carbon adder in the reference energy price; Please provide the pro forma financial statements (all scenarios) for an all gas – optimized CCCT as described in PUB-111 and incorporate that into the analysis in Chapter 11; Please add an optimized CCCT to the comparative analysis in (a) (b) &amp; (c); Please provide a similar table as in part (a) &amp; (b) including the analysis of an optimized CCCT.</p>	
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### **Information Requests which Seek Information Beyond the Scope of the NFAT**

The following Information Requests are objected to by Manitoba Hydro on the grounds that the information requested to be provided is beyond the scope of the hearing as outlined in the Terms of Reference:

<b>Question No.</b>	<b>Question Posed</b>	<b>MH Comments</b>
CAC-0037a	Please confirm that the data provided in Appendix 11.3 of the current application regarding the unit export revenues is similar to that provided by Manitoba Hydro in its submission to the CEC regarding Wuskwatim. If not, what is the difference?	This question is attempting to elicit a response which will permit comparison to information provided in the Wuskwatim CEC hearing. This is not germane to this proceeding.
CAC-0185 through CAC-0193	These questions request detailed information which, according to the preamble is requested "To determine low income rate impact "	While the Terms of Reference provide for consideration of "the impact on domestic electricity rates over time", the particular impact to low-income customers at this level of detail is beyond the scope of this proceeding. The detailed level of load forecast information sought has been requested in prior GRA's, and in some cases is not available. It is not an appropriate use of resources in this proceeding

		for CAC to attempt to determine rate impacts specific to low-income customers. The impact on domestic rates presented by Manitoba Hydro will provide information as to rate impacts for all customers, without the need to consider breakdowns or explore interrelationships between housing types, customer income levels, and home ownership.
CAC-0195	What level of cost contingency is build into the capital cost estimate used for Bipole III (e.g. is it P50)?	The Terms of Reference specify that Bipole III is excluded from the Terms of Reference.
CAC-0220	Please provide an analysis of the desirability of the forecasted end-uses of electricity, and how these end-uses may lead to positive socio-economic outcomes while avoiding adverse effects.	The Terms of Reference do not contemplate consideration of the desirability of forecasted end-uses of electricity.
CAC-0224a (i-iv)	Please provide a preliminary analysis of what demand reduction could reasonably be anticipated; Please provide a preliminary analysis of what DSM/Power Smart and efficiency improvement initiatives could be included in a package that as a whole could have an average cost equal to the corporation's marginal cost value; Please provide a preliminary analysis of how such an approach may promote technological and social innovation in Manitoba Please provide a preliminary analysis of what implications that would have for the need for the proposed generation and transmission projects..	These questions relate to the Province's Clean Energy Strategy and are directed at debating specific programs, rather than considering the overall level of DSM. The impact of DSM has been addressed by presenting sensitivities of 1.5 and 4 times DSM. Manitoba Hydro has also indicated it will use its best efforts to run an additional scenario with increased DSM, provided that the number of Information Requests does not preclude this work from being completed.
CAC-IR-237 b)	Can Manitoba Hydro confirm that the US environmental protection agency tolerable daily intake limit is one half the Canadian limit?	Environmental reviews of proposed projects which are part of the Plan are specifically excluded from the NFAT. This question is more properly within the scope of the CEC hearings. A comparison of US and Canadian environmental standards is not relevant to the NFAT proceeding.
GAC-0023 and GAC-0024	Please provide, in electronic format, hourly grid-connected demand in Manitoba over at least the last five years. Please exclude exports, and demand in remote communities served by isolated diesel generators. Please specify whether the data provided is at the customer level or the system level - i.e., before or after transmission and distribution losses. No breakdown by geographic area or by customer types is required. Please provide, in electronic format, the hourly load shape or shapes used to model Manitoba electricity demand. The data may be normalized or scaled, as the focus of this IR is on variability and seasonality, not on absolute levels of demand.	These requests are not designed to test the reasonableness of Manitoba Hydro's material, but rather to attempt to create separate models of MH information. Such undertakings are not within the scope of this proceeding.
GAC-0030 – GAC-0066	These questions seek detailed breakdowns of forecasts from the end use model related to fuel switching	The requested information is beyond what is reasonably required to test fuel switching assumptions in the load forecast. Manitoba Hydro proposes to respond to these questions by filing a description of its assumptions, together with a table to illustrate it. The information requested in GAC-0034 and GAC-0041, without live spreadsheets will be provided. Manitoba Hydro is not able to provide responses to GAC-0035 and GAC-0042 as these would require substantial new work which cannot be completed in the time allotted.
MMF-0027	For each prior and existing contract, provide a comparison of the contract prices and actual market prices during the contract period and assess the extent to which the existing and historic contracts were properly priced to gain maximum	There are hundreds of documents which would be included in such a response and do not relate to the issues at hand. There is no available market price benchmark pricing for long-term contracts to make the requested comparison. In addition, the process by which prices are established were reviewed in the 2010/11 GRA and Risk Review.

	available benefits for Manitoba's hydroelectric resources.	
MMF-062	Describe the nature and scope of the ongoing environmental effects of the reservoirs and operating regimes established by the development of upstream hydroelectric projects on which Keeyask and Conawapa would depend for flow regulation.	The Terms of Reference exclude any consideration of historic environmental costs.
MIPUG-034d	Please indicate whether Hydro has completed ELG rates that would be applicable to Wuskwatim generating station. If so, please provide.	Wuskwatim depreciation information is not relevant. Information related to reasonableness of depreciation expense for Keeyask and Conawapa will be provided in response to MIPUG-034a-c
PUB-0032a and b PUB-0033	Please provide an updated version of this IR for the period 1978 to 2012 showing monthly hydraulic generation/river flows by watershed; Please also provide an updated graphical illustration of Lake Winnipeg monthly mean levels; Please provide an updated version of the IR for the 1912 to 2012 period showing annual system flows, annual hydraulic generation, annual net revenues and annual revenue variations from average.	This subset of historic operational information is not relevant to the consideration of future generation requirements and the small number of additional data points requested are outside the flow record used in the NFAT analysis.
PUB-0034	Please provide the referenced IR along with the annual updates for 2010/11, 2011/12, 2012/13 inclusive.	This information was updated in the 2012/2013 GRA (the referenced IR in the question is the 2010 GRA) and a copy of that response will be provided, however, this historic operational information is not relevant to the consideration of future generation requirements some of which is beyond the timeframe included in the NFAT.
PUB-0041 a and b	Please provide the top 50 peak winter and top 50 peak summer hourly demand (as available) historically and currently to illustrate MH's system capacity needs; Please define the corresponding peak demands on MH's HVDC system and on the Lower Nelson River Generating Stations.	The requested information is not relevant to this proceeding. MH's future generation requirements are based on the load forecast for the period in question, not upon the current PCOSS and the top 50 peak demands.
PUB-0105a through c	Please confirm that the lower Nelson River dependable energy output from existing plants utilizes about 50% of the maximum Bipole I and II output; Please confirm that the additional dependable energy output of 7,450 GWh from Keeyask and Conawapa G.S.(s) will utilize about 45% of the incremental maximum output of 17,500 GWh gained from Bipole III; Please indicate and explain the appropriate level of incremental costs for Bipole III, Keeyask and Conawapa that should be allocated to the non-dependable energy output from these additions to the Lower Nelson River Power Resource.	These questions seek to obtain information regarding the existing system in order to examine the merits of Bipole III which is specifically excluded from the scope of this proceeding by the Terms of Reference. In addition, cost allocation (as referenced in part c of this Information Request) is beyond the scope of this proceeding.

### **Information Requests to be Addressed in Environmental Hearings**

The following questions are objected to by Manitoba Hydro as they are specifically excluded from consideration in this proceeding by the Terms of Reference which specify that "The environmental reviews of the proposed projects that are part of the Plan, including Environmental Impact Statements (these will be conducted through individual processes by the Manitoba Clean Environment Commission ("CEC"), and where possible the impacts of the matters to be considered by the CEC are included in the costs of the projects that are part of the Plan)" are not in the scope of the NFAT. The following are information requests posed in the

NFAT which have been addressed in the Environmental Impact statement (“EIS”) for the Keeyask project, or will be included in the EIS for Conawapa or future transmission development. The following list of questions or the information sought therein have or will be addressed in environmental proceedings. Manitoba Hydro is presently compiling a table of concordance which will assist in detailing the location of such information where proceedings have already commenced. Further, the questions below are attempting to elicit information, and at a level of detail which is beyond that contemplated by the Terms of Reference and the Board’s findings in Order 92/13, at pages 12 and 13 wherein the Board noted that:

“The Board’s NFAT Review is not the correct forum to address the environmental issues properly before the CEC. Evidence before the CEC proceedings ought not be filed in the PUB NFAT Review. The Board will expect Manitoba Hydro to monitor Intervener evidence in both proceedings and to advise the Board of any duplication.”

The Keeyask environmental review is the most complete source of information regarding potential effects of that project. A reasonable distinction between the requirements of the environmental review under *The Environment Act* (Manitoba) and the *Canadian Environmental Assessment Act* and the NFAT review must be established. Simply put, the environmental review will be a detailed examination of the potential effects of the Keeyask Project, while the NFAT review will be a critical examination that compares the macro effects of the Preferred Development Plan (with its emphasis on two major hydroelectric generating stations) and alternative plans (i.e. gas turbines and wind generation). As a macro-level comparison, the NFAT process should refrain from getting into the level of detail appropriate for the environmental review. Similarly, there will be processes for other components of the Preferred Development Plan, such as Conawapa and the transmission projects.

The table below notes the question posed in the NFAT which Manitoba Hydro objects to responding to. By way of general comment, which applies to each of these questions, the subject matter and level of detail sought is beyond the scope of what is reasonably required for consideration in this proceeding, and goes beyond the scope of the Terms of Reference and the Board Order. Duplication of material in two proceedings is inefficient and will result in the same subjects being re-canvassed in the NFAT after having been examined in the CEC proceeding.

NFAT No.	NFAT Question
CAC-0231a)	Please provide a more complete description of the possible effects of, and range of possible consequences for lake sturgeon, recognizing and addressing the concerns raised by interveners in the EIS process.
CAC-0234	Please provide the two most recent evaluations of Manitoba Hydro performance under the ISO 14001 Standard.
CAC-0237 a)	Can Manitoba Hydro confirm that its HHRA (Human Health Risk Assessment) in the Keeyask EIS suggested a post-impoundment risk that is more than 14 fold above the Health Canada tolerable daily intake? If this cannot be confirmed, please provide Manitoba Hydro’s interpretation of the post-impoundment risk associated with Keeyask. (referenced CEC R1 20, CAC R1 0024a, CEC R1 0019).
CAC-0238 a)	Can Manitoba Hydro point to any peer-reviewed articles concluding that stocking of Lake Sturgeon has been a proven mitigation method relative to Hydro-electric development? If so, please provide them.

CAC-0238 b)	Please provide electronic links to all learned articles relied upon in concluding that "stocking is a proven technique for increasing sturgeon populations."
CAC-0238 c)	Does Manitoba Hydro agree that potential construction effects on Lake Sturgeon from Keeyask are: Mortality or injury may result from stranding during cofferdam dewatering, exposure to blasting, entrainment on intake pipes, and increased harvest by workers. Health could be negatively affected by decreases in water quality resulting from instream construction or accidental spills. Disruption of spawning in Gull Rapids due to disturbance by construction activities and habitat loss/alteration. Increased noise and rapid changes in water levels and velocities may cause individuals from Gull Lake to emigrate upstream or downstream. Sediment deposition in Stephens Lake may alter sub-adult and young-of-the-year habitat.
CAC-0238 d)	Does Manitoba Hydro agree that potential operation effects on Lake Sturgeon from Keeyask are: Complete loss of spawning habitat in Gull Rapids. Potential for fish to become stranded in isolated pools after spillway operation. The generating station will act as a barrier to upstream movements. Changes in downstream movements due to the presence of the generating station. Habitat alterations may reduce the amount of suitable spawning and young-of-the-year habitat in the reservoir. The amount of foraging habitat in the reservoir will increase in the long term. Increased harvest due to increased access to the area.
CAC-0239 a)	Please indicate whether any of the Keeyask Partner First Nations have suggested that there are additional boreal woodland caribou other than the recognized population ranges near Thompson which might be affected by the project.
CAC-0239 b)	Assuming that the hypotheses that the summer resident caribou are boreal woodland caribou, does Hydro agree that it is likely this group of animals would be defined by Environment Canada as Not Self-sustaining?
CAC-0251 a)	Given that most adult lake sturgeon will be in the 800 to 1200mm range (considerably larger than 500 mm), please provide an evidence based estimate of the survival rate of lake sturgeon in the 800 to 1200 mm range. Please provide any peer reviewed studies relied upon for that estimate.
CAC-0251 b)	Does Manitoba Hydro agree that no experimental studies have been conducted that examine the incidents of injury and mortality for lake sturgeon passing through turbines? If Hydro does not agree, please provide electronic references to any studies identified.
MMF-0003	Explain how Manitoba Hydro will manage access issues, especially increased pressure on land and resources as a result of increased use caused by changed access, particularly as these effects may be experienced by the Métis.
MMF-0062	Describe the nature and scope of the ongoing environmental effects of the reservoirs and operating regimes established by the development of upstream hydroelectric projects on which Keeyask and Conawapa would depend for flow regulation.

### **Information Requests which are Not Relevant to the NFAT Review**

The following questions are objected to by Manitoba Hydro as they are not relevant to the subject matter of the NFAT. The specific bases for the objections are noted in the MH Comments column of the table below.

Question No.	Question Posed	MH Comments
GAC-0068	Please provide the justification documents for the largest five Centra Gas expansions into planned or existing residential areas.	Gas expansion projects are reviewed and approved by the PUB. There is no merit in considering such expansions in the context of the NFAT.
MMF-0044	Determine the date in the future at which a program of aggressive DSM (i.e. all DSM with a lower LUEC than real rates) results in an increase in real rates (i.e. when DSM is no longer less expensive than the levelized value of the avoided cost).	The purpose of the NFAT is to explore alternatives – there is no need to assess the particular programs which may be implemented or feasible, but rather to explore the level of DSM overall which will impact development plans. The requested information is not required to make that assessment.
PUB-0044	Please file an updated table showing monthly on-peak and off-peak sales going from April 2004 to June 2013.	Manitoba Hydro is prepared to file the existing exhibit, but notes that this information is not relevant to a consideration of future generation alternatives. Historic operational information relates to historic loads and water conditions, and is not related to future hydraulic generation and load conditions that are projected by the load forecast for future periods.
PUB-0052 PUB-0053a and b	Please file the referenced documents from the 2010 and 2012 GRAs; Please file MH06-1, MH07-1, MH08-1 MH09-1, MH10-1, MH10-2, MH11, MH11-2, MH12 and MH13 in similar format to Exhibit # MH-29 from the 2010 GRA including a description of key assumption comparisons with prior forecast; Please provide a table indicating all significant	The requested historical information is not relevant to consideration of future generation alternatives. The analysis required to complete the information requested will require substantial time to complete and will not offer value to this process.



	assumptions utilized in each of the above forecasts for over 20 years, including interest rates, US Canada exchange rate, average US export price, volume of export sales, volume and cost of import purchase power, and domestic load growth																																																																
PUB-0059a and b	Please identify the external consultants that MH has relied on in defining electricity export price forecasts and indicate which consultant provided MISO region specific forecasts as opposed to broad market forecasts for the 2010 GRA, 2012 GRA and NFAT filing; Please file the respective forecasts used at the 2010 , 2012 GRA and NFAT filing.	The requested information related to the 2010 GRA and 2012 GRA is not relevant. Further, Manitoba Hydro has not obtained the consents of its forecasters to provide such information for those two proceedings. The requested information has been or will be provided in confidence to the PUB as it relates to the NFAT filing.																																																															
PUB-0103a	Please explain how transmission limitations impacted MH's exports into MISO during 5 x16 peak and off-peak periods with particular reference to the following years:  <div style="text-align: center;">                     Peak (5 x 16) (1)    Off-Peak                      Total                      (GWh)                      (GWh)                 </div> <table> <tr> <td>2005/06</td><td>7186</td><td>5737</td></tr> <tr> <td>12923</td><td></td><td></td></tr> <tr> <td>2006/07</td><td>5626</td><td></td></tr> <tr> <td>3905</td><td>9531</td><td></td></tr> <tr> <td>2007/08</td><td>6133</td><td>4406</td></tr> <tr> <td>10539</td><td></td><td></td></tr> <tr> <td>2008/09</td><td>5889</td><td></td></tr> <tr> <td>3820</td><td>9709</td><td></td></tr> <tr> <td>2009/10</td><td>5760</td><td></td></tr> <tr> <td>4727</td><td>10487</td><td></td></tr> <tr> <td>2010/11</td><td>5645</td><td></td></tr> <tr> <td>3794</td><td>9439</td><td></td></tr> <tr> <td>2011/12</td><td>5694</td><td></td></tr> <tr> <td>3664</td><td>9358</td><td></td></tr> <tr> <td>2012/13</td><td></td><td></td></tr> <tr> <td>8690</td><td></td><td></td></tr> <tr> <td>(2)</td><td></td><td></td></tr> <tr> <td>2013/14</td><td></td><td></td></tr> <tr> <td>8163</td><td></td><td></td></tr> <tr> <td>2014/15</td><td></td><td></td></tr> <tr> <td>6538</td><td></td><td></td></tr> </table>	2005/06	7186	5737	12923			2006/07	5626		3905	9531		2007/08	6133	4406	10539			2008/09	5889		3820	9709		2009/10	5760		4727	10487		2010/11	5645		3794	9439		2011/12	5694		3664	9358		2012/13			8690			(2)			2013/14			8163			2014/15			6538			This information is not relevant to consideration of future generation alternatives. Updating a small number of data points about historic exports provides no indication of future exports and congestion. During the period covered by the NFAT the Manitoba load will be significantly higher and the available supply will be different and new export interconnections will be in place. In that context the requested information will not assist the Board in considering the matters before it in this proceeding.
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PUB-0280	Please provide a tabulation of MH's IFF09-1 and IFF12 perceptions of export contract activities as initially announced and as updated or as finalized with specific details on Term Sheets as they evolved and final contract conditions.	Information and assumptions included in IFF09 are outside the scope of this proceeding. The requested information is not relevant to consideration of future generation alternatives. Finalized information is included in the contracts, which have been provided to the PUB in confidence. Consideration of matters which were discussed during negotiations and subsequently changed have no bearing on this proceeding.																																																															

Below is a table of questions which Manitoba Hydro objects to responding to, including the basis for the objection, which objections do not fall within the categories above.

Question No.	Question Posed	MH Comments
CAC-0171	Please explain why the annual electricity consumption growth forecast for Manitoba (1.6%) exceeds the annual electricity consumption growth forecast for the U.S. (0.9%) despite similar population growth forecasts in Manitoba and the U.S. and higher GDP growth forecasts for the U.S. compared to Manitoba.	There is no source cited for the US forecast contained in this question. Manitoba Hydro cannot comment on this apparent difference without understanding the basis of the forecast.
CAC-0222	Please define what "substantial investment in DSM/Power Smart and efficiency	Manitoba Hydro cannot comment of what the Province of Manitoba may have intended in using particular terms. For the purpose of the

	improvements to existing generation" entails, with attention to what DSM/Power Smart and efficiency improvement initiatives are included (assumed) in the preferred option, which potential DSM/Power Smart and efficiency improvement initiatives were considered but not included, and the rationale for those decisions.	NFAT review, the overall level of DSM is relevant, but an analysis of particular programs included or excluded is not. These variations are captured in the sensitivity analyses.
GAC-0015	Please provide the workpapers for the wind integration cost estimates used in the NFAT filing and specify the basis and source of all assumptions used.	The response to this Information Request would require production of commercially sensitive information.
GAC-0016	Please provide the data relied upon and the workpapers developed for this analysis.	Wind data from St. Leon and St. Joseph windfarms is not Manitoba Hydro information and is specified as confidential by contract.
MPA-0016a-c	Please provide the IRRs associated with each development plan, as shown in figure 9.2. Please provide the equivalent of the "Probabilistic Analysis Quilt" as shown in figure 10.4, except substituting IRRs for NPVs in each cell of the quilt. Please provide the equivalent of Figures 2.7.7, 2.7.8, and 2.7.9 that appear in Appendix 9.3, except substituting IRRs for NPV on the x-axis.	As discussed in the Technical Conference, IRRs were not used in the evaluation or comparison of plans. To recreate the quilt and Figures as requested will require a significant amount of time, and will not provide value in considering the issues at hand.
PUB-0069 through PUB-0071	Please file a copy of the redacted and unredacted report prepared by ICF called "Independent Review of Manitoba Hydro Export Power Sales and Associated Risks", September 11, 2009; Please file a copy of all the related Net Present Value analysis prepared by ICF and or Manitoba Hydro referred to in the report; Please file all assumptions used in the Net Present Value analysis; Please comment on how the assumptions and approach used in the ICF analysis compare with those utilized in the base case in the NFAT; Please file Mr. Judah Rose's Direct Testimony PowerPoint presentation dated February 22, 2011; Please file the referenced exhibits from the 2010 GRA in this proceeding	These Information Requests seek the production of material which was thoroughly tested at the 2010/11 GRA and Risk Review. Manitoba Hydro does not intend to retain ICF for the purposes of the NFAT, and no new work has been undertaken by ICF with respect to the subject matter of this material since that time. Manitoba Hydro notes that the ICF report endorsed Manitoba Hydro's methodologies which have not changed since the 2010/11 GRA and Risk Review.
PUB-0076	Please file a copy of MH Exhibit #108 from the 2012 GRA.	This material is, in Manitoba Hydro's view, not relevant and ought not be considered in the NFAT as it references a methodology which Manitoba Hydro has previously identified as inappropriate.
PUB-0079a through c PUB-0151a and b	Please file the MH#56 dated 2011-02-18 as a document to this proceeding; Please file the IRR estimates for Gull/Keeyask and Conawapa presented at the Wuskwatim NFAT proceeding and comment on the returns versus the hurdle rate at that time; Please provide the IRR and IRR analysis for each of the Preferred Development Scenarios and Alternative Development Scenarios. Including detailed calculations; Please provide copy of all internal rate of return calculations and analysis against hurdle rates used by MH that was undertaken for Keeyask, Conawapa and other resource options in its CEC submission; Please provide an update to the IRR analysis prepared internally since 2003 for the Keeyask, Conawapa and other resource	Information related to the Wuskwatim NFAT is specifically excluded by the Terms of Reference. Manitoba Hydro has, during the recent Technical Conference explained that IRRs were not used in the evaluation or comparison of plans including the reasons for this determination.

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Please note that as contemplated by the process, Manitoba Hydro is currently meeting with the Independent Experts with a view to providing information directly such that there will not be a need to supply the detailed information requested in some information requests. In the event that this matter cannot be resolved satisfactorily by way of meetings, a further motion may be required with respect to some of the Information Requests posed by Independent Experts.

In addition, Manitoba Hydro notes that its review of Information Requests is ongoing and as such, it may be necessary for Manitoba Hydro to provide additional items which it objects to responding to on or prior to September 30, 2013. Manitoba Hydro has noted some instances where information requests posed by Intervenor seeks disclosure of commercially sensitive information. As Intervenor counsel have declined to sign Undertakings to allow access to commercially sensitive information, this information will not be filed. As Manitoba Hydro continues to work through Information Requests, additional instances of confidential information may be noted. Where possible, Manitoba Hydro will provide a response with publicly available information, or redact a small portion of the response.

If you have any questions regarding this submission, please contact the writer at (204) 360-3468. We would appreciate the PUB providing direction to all parties as to the timing of submissions for parties who intend to reply to Manitoba Hydro's motion. As noted at the outset, Manitoba Hydro has suggested that parties should be required to comply with Rule 22(4) which requires parties intending to respond to file their written response by 2:00 pm two days before the motion is to be heard.

Yours truly,

**MANITOBA HYDRO LAW DIVISION**

Per:



**MARLA D. BOYD**

Barrister and Solicitor

MDB/

cc: R.F. Peters, Fillmore Riley LLP  
Intervenors of Record