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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

Pursuant to the draft timetable for NFAT Review, the PUB and Intervenors filed First Round Information Requests of Manitoba Hydro on September 16, 2013. The Independent Consultants Information Requests followed on September 17, 2013. In total, Manitoba Hydro has received in excess of 2100 Information Requests (“IR’s”), responses to which are, in accordance with the draft schedule to be filed in five weeks time, on October 21, 2013.¹ The source of the IR’s can be roughly broken down as follows:

PUB	(21%)
Independent Consultants	(45%)
Intervenors	(34%)

Manitoba Hydro has expressed significant concern with its ability to respond to this volume of IR’s within the timelines of the draft schedule. If the number of IR’s are not drastically reduced, Manitoba Hydro will not be able to meet the October 21, 2013 deadline for filing responses, with the result that the schedule will be significantly delayed and the PUB will not be able to file its report in accordance with the deadline stipulated in the Terms of Reference. This will in turn have the effect of deferring the in-service date of Keeyask by one year, regardless of whether the PUB ultimately recommends in favour of the project.

Following a September 18, 2013 meeting with PUB Counsel, a number of strategies were identified with a view to attempting to “lighten the load”, notably Manitoba Hydro undertook to provide the PUB with a spreadsheet highlighting PUB IR’s of concern. This was provided to the PUB on September 20, 2013 and the PUB provided its response on September 21, 2013. While Manitoba Hydro appreciates the effort on the part of PUB staff and advisors to quickly respond to Manitoba Hydro’s submission, the Corporation’s assessment of the work required to respond

¹ Compare to the 2010 Risk Review where 2305 First Round IR’s were submitted. The schedule for this process provided Manitoba Hydro seven weeks to file its responses however due to the unprecedented volume of IR’s it took approximately 14 weeks until the bulk of the 1844 IR responses were filed (the totals do not correspond in part because some IR’s were amalgamated with Second Round IR’s when filed), 44 responses remaining outstanding after 14 weeks and were filed over the course of the following months).

to those IR's which the PUB staff and advisors declined to reconsider continues to be that the Corporation will not be able to meet the NFAT schedule, even if adjustments are made to allow for an extension of a few weeks to respond to IR's. The current volume of work is enormous. Unless and until the PUB drops from its agenda the IR's of concern identified by Manitoba Hydro in its September 20, 2013 correspondence, Intervenor's will follow the lead of the PUB and insist on also exploring these extraneous topics.

During the meeting with PUB Counsel, Manitoba Hydro also expressed the concern that a significant number of IR's fall outside the scope of the Terms of Reference for the NFAT Review and/or require a significant volume of work which cannot possibly be completed within the timeline contemplated for the NFAT Review. Manitoba Hydro's comments in this regard largely focused on the IR's of the Independent Consultants, not because they were the only party whose IR's fell into this category, but because of the sheer number of IR's posed by this group and the potential for immediate relief given their special access to Manitoba Hydro personnel.

Counsel for the PUB encouraged Manitoba Hydro staff to meet immediately with the Independent Consultants in an effort to better understand what is being requested, why it is considered necessary and whether there might be a more efficient means of addressing the concern under review. In this regard, staff had already initiated contact with several of the Independent Consultants for this purpose and it is expected that several will be meeting during the week of September 23, 2013. The NFAT filing provides an extensive amount of evaluation and analysis. Manitoba Hydro is confident that it contains all of the information necessary to assess its Preferred Development Plan and alternatives and appreciates the opportunity to explain how this can be accomplished without the need for additional time consuming work.

In addition, Manitoba Hydro requested a copy of the Scope of Work for the various Independent Consultants to gain an understanding of the work that they had been directed to undertake. On September 20, 2013, the Public Utilities Board provided Manitoba Hydro with a copy of its "Scope of Work for Independent Expert Consultants NFAT Review, Last Updated: September 20, 2013". Upon review of this document, Manitoba Hydro sees a significant opportunity for streamlining the IR process.

PUB direction to the Independent Consultants regarding their Scope of Work serves to provide guidance to the Independent Consultants as well as Intervenor's and is indicative of the PUB's views as to whether matters are necessary for the conduct of the NFAT review. What is good for the PUB or the Independent Consultants is good for Intervenor's, and the work multiplies (or decreases) accordingly.

The Terms of Reference for the NFAT Review, issued April 20, 2013, prescribes the scope of the review and all work associated therewith, as well as the deadline for the submission of the PUB's recommendations. The PUB's Scope of Work For Independent Expert Consultants describes tasks that exceed or are capable of an interpretation which exceeds the mandate set out in the Terms of Reference. Such tasks were not contemplated to be undertaken within the NFAT process and cannot possibly be accomplished within the timelines established in the Terms of Reference.

The goal of meeting with the Independent Consultants in the coming week is to provide required information in real time, avoiding the need to pose and respond to IR's to gain that information and to enhance understanding of Manitoba Hydro's models and processes in order to eliminate unnecessary IR's and reduce the number of IR's to a manageable level. Manitoba Hydro is concerned that the Independent Consultants will not be in a position to eliminate a large number of IR's because those IR's do in fact address a task which has been assigned them in their Scope of Work, albeit outside the Terms of Reference. Manitoba Hydro is of the view that amendment of the Consultant's Scope of Work is critical to completing the NFAT on time.

La Capra Associates

La Capra Associates is responsible for approximately 25% of all First Round IR's and 70% of those posed by the nine Independent Consultants combined. La Capra Associates has been assigned a significant number of tasks in its Scope of Work, a number of which fall outside the Terms of Reference, cannot be completed within the NFAT Review period and which would in fact take years to properly complete, without providing corresponding added value.

Power Resource Planning and Economic Evaluation

6. *Develop power resource plans and alternatives, including identifying other scenarios that could potentially compete on an economic basis with Manitoba Hydro's Preferred Development Plan.*
7. *Incorporate exports (bilateral contracts and opportunity market pricing) into power resource planning.*

Financial Modeling

1. *Development a financial model that would have the flexibility to change basic assumptions on factors affecting costs to Manitoba Hydro and MISO utility competitive market alternatives. The model should be able to quickly determine the metrics evaluating the timing and type of resources that could be in the Manitoba Hydro Development Plan, and should meet the following requirements:*
 - (a) *The model is expected to be set up within excel spreadsheets.*
 - (b) *The model will not require detailed market simulation software to be used with each alternative business cases.*
 - (c) *The model is expected to be used by La Capra Associates staff to support its independent analysis and report as well as examine cases desired by the NFAT and Intervenors.*
 - (d) *Model documentation will be prepared.*

The NFAT Terms of Reference do not direct or suggest that the creation of new models to replicate the work of Manitoba Hydro's models is in scope or necessary to perform the PUB's assignment. The Terms of Reference specifically directs that the Independent Consultants report on the "appropriateness", "accuracy", "reasonableness", "correct application of methodologies"

and “soundness” of Manitoba Hydro’s analysis. The traditional, and more reliable, approach for a Regulator to obtain specific analyses or assessments of risk is to observe and test the functionality and capability of the utilities’ model² and then make requests of the utility to conduct these sensitivity analyses in response to IRs or undertakings. Manitoba Hydro believes this remains the most effective and efficient approach to develop the PUB’s understanding of the relevant issues and results, and the only possible means of meeting the deadline set out in the Terms of Reference.

Manitoba Hydro has experience assisting outside parties in creating models that attempt to mirror the work of the Corporation’s models and can advise that such an exercise, undertaken with the full cooperation and resources of the Corporation took in excess of a year before the developing model began to approach producing reliable results. Such approach in the NFAT is not necessary given the Terms of Reference call on the PUB to test and probe Manitoba Hydro’s results, not replicate them. Further the approach is not efficient given the access being provided to the Corporation’s models and modeling staff nor is it practical given the timelines in which the review must be completed.

With respect to the requirement that La Capra produce a financial model, it is not possible that La Capra or any other consultant will be able to mimic the level of detail and assumptions MH uses internally with a single, integrated Excel financial model. Further, it is not possible for the PUB to adequately incorporate the benefits of opportunity sales and purchases vis-à-vis MISO, as La Capra’s Scope of Work expressly removes the requirement to simulate the MISO market (“The model will not require detailed market simulation software to be used with each alternative business cases.”). Given the limited amount of time and complexity of the undertaking, there is a very real risk that superficial analysis derived by offline modeling processes will lead to highly spurious results. The result of such efforts will at best be a lengthy process of reconciling the La Capra model results with those of the Manitoba Hydro model.

The requirement that La Capra develop its own power resource plans appears to be being met with creation of La Capra’s own power resource planning model. Manitoba Hydro’s models, including its power resource planning model SPLASH were thoroughly tested during the 2010 GRA including in-depth analysis by Independent Consultant’s who concluded:

I mean, we felt that the systems at Manitoba Hydro are well done. They’re run by excellent people, knowledgeable people with lots of expertise, commitment, dedication, and knowledge...³

It is not necessary to repeat the work of the Risk Review nor do the Terms of Reference

² Note that an extensive review of the functionality and capability of Manitoba Hydro’s models was undertaken as part of the 2010 Risk Review (In particular the Independent Consultants Kubursi and Magee provided detailed evidence in this regard) hence the focus in the NFAT should be familiarizing the Independent Consultants with the models capabilities to facilitate their utilizing the models’ to test Manitoba Hydro’s Preferred Development Plan and alternate plans, as opposed to having the NFAT Independent Consultants repeat the work of the Risk Review Consultants and test the models themselves.

³ May 4, 2011 testimony of Atif Kubursi and Lonnie Magee, Independent Consultants retained by the PUB in the 2010 Risk Review, transcript p. 5969, l. 1

authorize such endeavor. Manitoba Hydro has a model that works and is willing to openly share and explain its methodologies, processes and results with the Independent Consultants. La Capra's time will be better spent understanding the capabilities of SPLASH and testing its outputs.

Manitoba Hydro believes the addition of the words "Assess how Manitoba Hydro develops..." at the beginning of these task descriptions (# 1 and #6) would clarify the assignment, decrease the work to a reasonable level and facilitate the completion of the work within the timelines of the NFAT. Similar wording at the beginning of task 7 (i.e. Assess how Manitoba Hydro incorporates exports...) would also negate the need for La Capra to build its own model and facilitate the NFAT concluding on schedule.

Under the heading "Power Resource Planning and Economic Evaluation" La Capra's Scope of Work also includes:

3. Review reservoir operations of Lake Winnipeg for optimal value.

Manitoba Hydro's reservoir operating practices are independent of the Corporation's development plans. The Terms of Reference do not reference reservoir operating practices nor is the NFAT the appropriate forum for this topic.

4. Review Manitoba Hydro's NFAT filings with respect to the Lake Winnipeg and Upper Nelson River Water Regime change and the potential mitigation costs to the NFAT projects.

Environmental effects of existing projects are beyond the scope of the NFAT Terms of Reference. However, Manitoba Hydro can provide information on whether its cost estimates associated with the NFAT review include costs for mitigation of past project effects. Manitoba Hydro notes that this identical task is also assigned to MNP (task 4). The PUB was mindful of avoiding duplication of efforts when dealing with the granting of Intervenor status⁴ and Manitoba Hydro respectfully suggests the same consideration be applied to the work and evidence of the Independent Consultants.

5. Review the potential global warming impacts on water supply/river flows/lake and reservoir evaporation.

Manitoba Hydro notes that La Capra has requested all of the Corporation's data with respect to these items and it appears that La Capra intends to prepare this analysis from scratch. This represents a huge task, both for Manitoba Hydro to compile the data and for La Capra to prepare the analysis. Manitoba Hydro believes the adding of the words "assess how Manitoba Hydro" to this task description would clarify the assignment, decrease the work to a reasonable level and facilitate the completion of the work within the timelines of the NFAT.

9. Comment on the practical role of merchant trading and energy imports.

⁴ See Order 92/13 at p. 4: "In Order 67/13 the Board noted instances where identical issues were raised by more than one approved Intervenor and that it was not the Board's intention to permit duplication of evidence and process on the same issue."

Merchant trading is a commercial transaction where Manitoba Hydro sources power from a third party source, typically in the U.S. and sells the power to a different third party using transmission which is not owned by Manitoba Hydro. Merchant trading does not involve Manitoba Hydro generation or transmission assets, nor does it involve the Corporation backstopping the sale with Manitoba Hydro generation. Merchant trading is independent of the Corporation's development plans and is not a topic for the NFAT.

16. Review and assess the reasonableness and completeness of Manitoba Hydro's sensitivity analysis of alternative development plans. Perform additional sensitivity analysis as required.

As explained in Manitoba Hydro's letter of June 19, 2013, the Corporation included a wide range of Plans and Scenarios in its filing both for the purpose of demonstrating the basis for selecting the Preferred Development Plan and out of necessity given the time it takes to prepare these studies. La Capra Associates is in no better position to prepare a quality alternative development plan than Manitoba Hydro and in fact is in a worse position given it does not possess a working model of the Manitoba system and it takes years not weeks or months to properly develop same. This is not a reasonable task to request of La Capra Associates.

Manitoba Hydro recognizes the PUB rejected Manitoba Hydro's concerns regarding its ability to prepare additional plans outlined in the Corporation's June 19, 2013 correspondence however notes that the PUB did not have the benefit of having reviewed the thorough analysis provided in the NFAT filing at the time it reached its conclusion that more plans and scenarios may be required. Representatives of La Capra will be attending Manitoba Hydro this week. Manitoba Hydro suggests it canvass with La Capra what it requires to be satisfied that alternative development scenarios have been adequately tested as against the Preferred Development Plan (as opposed to performing additional sensitivity analysis itself) and report back to the PUB.

22. Review Manitoba Hydro's IRRs against prior IRR values presented in public filings.

The Scope of Work invites IRR comparisons with past hydro development projects. La Capra's IR's confirm that they interpret this as requiring comparisons with the Wuskwatim Generating Station project. The Terms of Reference specifically state that "Any past Hydro development proposals or government assessments of past development proposals, including past NFAT's" are not in the scope of the NFAT.

MNP

- 1. Perform a critical analysis of the macro environmental impacts and benefits of Manitoba Hydro's Preferred Development Plan and alternative Plans, specifically, the collective macro-economic consequences of changes to air, water, flora and fauna, including the potential significance of these changes, their equitable distribution within and between present and future generations.*

The Scope of Work, read in isolation invites MNP to perform its own analysis of the macro environmental impacts and benefits of Manitoba Hydro's Preferred Development Plan and alternative Plans. Standing alone, this language might be interpreted as a direction to prepare an Environmental Impact Statement (EIS). Manitoba Hydro's EIS is the filing before the Clean Environment Commission. The Terms of Reference clearly state that "The environmental reviews of the proposed projects that are part of the Plan, including Environmental Impact Statements" are not in the scope of the NFAT.

In Order 92/13 the PUB provided its definition of "macro-environmental" for the purpose of the NFAT review (which definition is replicated almost verbatim in MNP's above referenced Scope of Work). It is important to note that the PUB clearly did not intend that this definition to supersede the instructions contained in the Terms of Reference. To the contrary, the PUB stated:

That said, the Board's NFAT Review is not the correct forum to address the environmental issues that are properly before the CEC. Evidence for the CEC proceedings ought not be filed in the PUB NFAT Review. The Board will expect Manitoba Hydro to monitor Intervenor evidence in both proceedings and to advise the Board of any duplication. The NFAT Review will be informed by the CEC decision which is scheduled to be issued prior to the commencement of the NFAT Review oral public hearing."⁵

Manitoba Hydro is concerned that MNP's Scope of Work does not contain this qualification and as a result, it is not clear that they are not to reproduce or review the work being done at the CEC nor are they to produce an environmental assessment, which is the work under review before the CEC. A clarifying statement in the Scope of Work would assist in resolving this concern, which based on IR's received to date is a very valid concern.

Manitoba Hydro acknowledges that some informational overlap will exist between the environmental review process and the NFAT review. This is because the Keeyask environmental review is the most complete source of information regarding potential effects of that project. The challenge is to identify 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 as requested by the Minister Responsible for Manitoba Hydro. The level of detail to which the Consultants delve will be critical to effecting this distinction.

Manitoba Hydro would suggest the Consultant be directed to monitor the CEC process (which is public) so as to be in a position to assist the PUB in "being informed by the CEC decision", but not to refile or reproduce this evidence (or evidence at a similar level of detail) in the NFAT Review. Manitoba Hydro also suggests clarification that the Consultant review and comment on Manitoba Hydro's analysis as opposed to creating its own, particularly where the topic area is being reviewed in detail before the CEC.

2. Review Manitoba Hydro's NFAT filing with a focus on macro-environmental

⁵ Order 92/13 at page 12

factors that could impact the economics of the project and alternate scenarios, including:

- (c) Global impacts of Projects (including BiPole III)*
- (d) MISO wind energy expansion; and*
- (e) MISO energy mix shift away from coal.*

The reference to BiPole III in MNP 2(c) leaves the impression that the impacts of BiPole III are to be separately analyzed. The Terms of Reference explicitly exclude Bipole III from the NFAT review, which precludes any effort to isolate BiPole III information in the NFAT analysis. Further, BiPole III has received its necessary approvals and is scheduled to be in-service in 2017, whether or not the Preferred Development Plan is ultimately approved by government.

Manitoba Hydro is concerned with the rationale behind the tasks assigned in items 2(d) and (e). Assuming the rationale is to gain an understanding of the environmental impacts of Manitoba hydro-generated power to displacing these types of electricity generation in the United States, it should be understood that hydro-power does not replace wind generation, hence there is no need for further analysis (and item 2(d) can be deleted). Further, item 2(e) should be expanded to included gas (in addition to coal).

- 3. Review Manitoba Hydro's NFAT filings with respect to the need and cost for a sturgeon fishway at either Keeyask G.S. or Conawapa G.S.*

The determination of whether a sturgeon fishway is needed at Keeyask or Conawapa is within the scope of those project's environmental reviews, and therefore is beyond the scope of the NFAT. Manitoba Hydro can explain how the possible cost for fish passage is included in each project's cost for the purposes of the NFAT.

- 4. Review Manitoba Hydro's NFAT filings with respect to the Lake Winnipeg and Upper Nelson River Water Regime change and the potential mitigation costs to the NFAT projects.*

As noted under task 4 of La Capra Associates Scope of Work, environmental effects of existing projects are beyond the scope of the NFAT Terms of Reference. However, Manitoba Hydro can provide information on whether its cost estimates associated with the NFAT review include costs for mitigation of past project effects. It is not clear why two different consultants have been assigned the same task.

Typlan

- 1. Perform a critical analysis of the socio-economic impacts and benefits of Manitoba Hydro's Preferred Development Plan and alternative Plans, This should include examination of potential effects to the people of Manitoba, especially Northern and Aboriginal communities, including such things as employment, training and business opportunities, infrastructure and services, personal family and community life, and resource use, including:*
 - (a) Economic Impact assessment modeling to determine sector economic*

- impacts to provincial GDP, long term and short term induced employment opportunities;*
- (b) Determining gross provincial financial benefits by examining benefits and costs over the life of the project;*
- (c) Determining Canadian benefits;*
- (d) Northern and aboriginal community-based impacts in terms of employment opportunities, incomes, community tax base, skills development and community business opportunities; and*
- (e) Community access improvements and related health, education and cultural benefits.*

Typlan is asked to perform a critical analysis of socio-economic impacts. The CEC Review of the Keeyask Project will review similar work. The Terms of Reference provide that the NFAT is not to duplicate the work of the CEC. Similar to the comments made with respect to the work requested of MNP, Manitoba Hydro believes the likelihood of completing both the work and the NFAT schedule greatly improves if the Consultant is asked to “Review and comment on Manitoba Hydro’s analysis of the socio-economic impacts...”, rather than perform work which has already been done for the purpose of the CEC Review and which, without including a caution to not duplicate the work of the CEC, is at risk of exceeding the scope of the Terms of Reference.

Power Engineers

- 5. Provide comparable estimates of costs for each of the foregoing new transmission projects, **including Bipole III** as suggested by Manitoba Hydro’s NFAT filings.*
- 7. Review and assess the completeness and reasonableness of the technical aspects of Manitoba Hydro’s existing and proposed AC & DC transmission system.*
- 8. Define the average energy flow and transmission losses from Keeyask and Conawapa G.S. to Southern Manitoba for domestic load during peak and off-peak times with:*
 - (a) **Bipoles I and II only**; and*
 - (b) **Bipoles I II and III.***
- 9. Define the average energy flow and incremental transmission losses for exports into MISO during peak and off-peak time with:*
 - (a) **Bipoles I and II plus AC to border**; and*
 - (b) **Bipoles I, II and III plus AC to border.***

The Terms of Reference clearly state that the Bipole III transmission line and converter station project is not in the Scope of the NFAT. Bipole III has received the required approvals and will be put in service independent of the results of the NFAT review of Manitoba Hydro's Preferred Development Plan. The reference to Bipole III/DC transmission system should be removed from tasks 5 and 7.

The Request that the Consultant review average energy flow and transmission losses with and without Bipole III clearly seeks to isolate BiPole III results which contravenes the Terms of Reference. Further, as previously explained, Bipoles I and II without Bipole III is not a feasible scenario as without Bipole III, there can be no Keeyask or Conawapa. Manitoba Hydro has no objection to the Consultant pursuing this topic subject to the inclusion of Bipole III as per tasks 8(b) and 9(b). Tasks 8(a) and 9(a) should be deleted from the Consultant's Scope of Work.

Elenchus

Manitoba Hydro's preliminary assessment of the Elenchus First Round IR's is that they are generally consistent with the Terms of Reference for the NFAT Review. Manitoba Hydro remains concerned however that the Scope of Work tasked to Elenchus goes beyond that contemplated in the Terms of Reference.

DSM and Energy Efficiency

3. *Review the extent to which Manitoba Hydro has designed and implemented large utility scale Demand-Side Management and energy efficiency programs at the residential, commercial and industrial levels in a manner consistent with other North American jurisdictions where such programs have been implemented.*
4. *Comment on the proper use of Total Resource Cost (TRC) and Rate Impact Measure (RIM) evaluation tools as well as a Total Societal Costs and benefit analysis from Demand-Side Management and energy efficiency opportunities.*
5. *Comment on Manitoba Hydro's approach to measuring actual Demand-Side Management and energy efficiency savings.*
6. *Comment on the appropriateness of Manitoba Hydro's adoption of smart grid technologies for Demand-Side Management.*
7. *Comment on Manitoba Hydro's approach to determining marginal costs for measuring Demand-Side Management and energy efficiency programs.*

Manitoba Hydro is greatly concerned that forays into topics not required to assess the development plans will use valuable hearing time and result in the process failing to meet the prescribed deadline. It is strongly recommended that the NFAT be confined to consideration of the potential load reduction which may result from DSM programs, without the need to consider specific technologies (#6) programs or their design (#3, #4 & #7) (which is not information required to assess the Preferred Development Plan or alternative scenarios).

Assessment of the Preferred Development Plan in accordance with the NFAT Terms of Reference requires the PUB 2019 timeframe and beyond, in order to assess the need for the

project. It is unclear how the examination of how Manitoba Hydro has historically designed programs (#3) or measured past DSM savings (#5) aids this forward looking analysis. Elenchus tasks 3, 4, 5, 6 and 7 are superfluous to the requirements of the NFAT. Given the tight schedule combined with the volume of information that is within scope, these matters should be deferred to a future hearing.

9. *Comment on the reasonableness, thoroughness and soundness of Manitoba Hydro's Demand-Side Management and conservation forecasts.*

5. *Critically assess Manitoba Hydro's DSM Potential Study.*

See also (under the heading Load Forecasting):

5. *Review the extent to which Manitoba Hydro has used appropriate scenario planning to examine the potential impact of changes in the industry, the Manitoba and Canadian economies, available technology (generation and loads) and energy efficiency measures (costs and cost effectiveness).*

Manitoba Hydro submits that consistent with item 2e of the Terms of Reference,⁶ the assessment of the DSM potential study should be from the perspective of whether the business case associated with the Preferred Development Plan remains reasonable and continues to support the Plan under circumstances of increased DSM activity. Manitoba Hydro cautions against straying into the detail of the DSM Potential Study and the technologies identified therein. Such review while perhaps interesting, is not required for the purpose of the NFAT and puts at risk the NFAT report deadline.

Similarly, Manitoba Hydro is concerned with the inclusion of the term "cost and cost effectiveness" in task 5. The Terms of Reference do not reference costs and cost effectiveness, rather it speaks to assessing the business case based on the reasonableness of Hydro's interpretation of the most likely future outcomes as a result of...domestic load fluctuations. This is assessed through the analyses exploring the attractiveness of the Preferred Development Plan under increased levels of DSM or reduced domestic load requirements. The cost of effectiveness of DSM initiatives is irrelevant, particularly given the Preferred Development Plan's performance only improves under increased DSM.

Knight Piesold Consulting

7. *Provide a historical perspective on the construction cost components of other Lower Nelson River hydraulic generating stations (Limestone/Long Spruce/Kettle) and analyze the major components of direct cost, including:*

⁶ 2. An assessment as to whether the Plan is justified as superior to potential alternatives that could fulfill the need. The assessment will take the following factors into consideration:

...

e. The reasonableness of the scope and evaluation of risks and the benefits proposed to arise from the development and the reasonableness and reliability of Hydro's interpretation of the most likely future outcomes as a result of ...domestic load fluctuations'... (NFAT Terms of reference 2.e.)

- (a) *Spillways/dams/dikes;*
 - (b) *Powerhouses; and*
 - (c) *Turbines and generators;*
- and compare these to the Keeyask and Conawapa G.S. costs for these components.*

Manitoba Hydro is very concerned with time required to compile this information relative to its value in assessing the Preferred Development Plan. Limestone, Long Spruce and Kettle were built decades ago under very different economic circumstances. Even if one completes the considerable work to adjust for economic circumstances, it is impossible to adjust for the vastly different designs used in these generating stations, which were built under very different construction market and regulatory regimes. Comparisons will not be valid or useful. Manitoba Hydro believes better use can be made of this consulting resource and the limited NFAT review time. Task 7 should be deleted from Knight Piesold Consulting's Scope of Work.

Conclusion

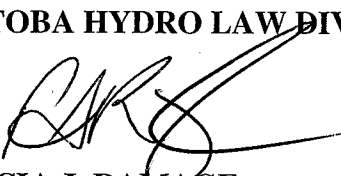
There is opportunity to comply with the NFAT timetable however it will require reducing the total number of IR's posed. Manitoba Hydro will attempt to address this problem in part at the September 30, 2013 motions day. Another means is to reduce the number of tasks assigned to the Independent consultants to a manageable level and redefining other tasks for consistency with the Terms of Reference and for general efficiency purposes. Such action will have the dual impact of reducing the number of IR's required by the Consultants to complete their work and also reduces the risk that the Consultants will be late with their reports (also a very real risk given the broad scope of work with which they are currently tasked combined with Manitoba Hydro's limited ability to respond to the associated volume of Information Requests generated thereby).

The NFAT is at a critical juncture. Unless there is strict adherence to the scope and intent of the NFAT Terms of Reference, the Information Request process will take much longer than contemplated and the PUB will be unlikely to meet the June 20, 2014 deadline for submission of its report to government. As has been clearly communicated many times, a delay in the commencement of Keeyask construction later than July 2014 will delay the Keeyask In Service date by one year.

Yours truly,

MANITOBA HYDRO LAW DIVISION

Per:



PATRICIA J. RAMAGE

Barrister and Solicitor

PJR/

cc: Robert Peters