



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) 360-3946 • Fax / N° de télécopieur : (204) 360-6147  
pjramage@hydro.mb.ca

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June 19, 2013

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

Dear Mr. Singh:

**RE: MANITOBA HYDRO NFAT  
PROCEDURAL ORDER 67/10**

Manitoba Hydro is in receipt of the Public Utilities Board's (PUB) Order 67/10 - NFAT Procedural Order On Intervenor Status. While this Order primarily deals with the granting of Intervenor status in the upcoming Needs For and Alternatives To (NFAT) proceeding, it also contains a section outlining a number of Alternate Scenarios the PUB has requested be presented as part of Manitoba Hydro's filing. Manitoba Hydro is confident that the information that will be provided in its August 16, 2013 filing, as described below, will meet the PUB's needs.

**A. Manitoba Hydro to include an alternative plan that is premised on incorporating more wind energy in conjunction with a combined cycle gas turbine**

Manitoba Hydro can provide an additional Plan which will include over 1000MW of wind in conjunction with natural gas generation. The most cost effective gas turbine type will be used and the filing will contain an explanation of how this determination was made. Manitoba Hydro can apply the 27 Scenarios to this Plan.

The PUB should be aware that the basis for Manitoba Hydro proposing to evaluate a wind based Plan using only the reference Scenario and not the full 27 Scenarios was because the economics of the wind plan were so significantly unfavorable that it was clear that evaluating this Plan with the full 27 Scenarios would also result in a negative economic indication. However, in response to the PUB request, the wind plan economics will be presented in the submission utilizing the full 27 Scenarios. MH will be able to provide economics evaluations but not financial evaluations due to insufficient time available to complete such financial evaluations.

**B. Manitoba Hydro to address the consequences of deferring or delaying the implementation of each Plan**

Manitoba Hydro's filing intends to address generally for each Plan the modification of the Plan to account for unfolding circumstances, including deferring or delaying the implementation of each plan.

**C. Manitoba Hydro to include in its analysis the detailed calculations of the Operating Statement ‘In–Service Energy Costs and Revenues’ for each added generation source. Detailed calculations of the ‘Marginal Costs and Marginal Revenues’ for each added generation source are also to be included.**

It is expected that the addition of a single new generation source into the Manitoba system will alter how the system as a whole operates including how other generation sources (hydro and thermal) operate and how imports and exports over the interconnections are managed. As such, a new generation source’s operating revenue cannot be meaningfully isolated from the rest of the generation system for the purposes of evaluating the proposed resource.

In the specific situation of the NFAT, the main plans being evaluated involve a package arrangement of new generation, new long term export contracts and new import/export interconnection capacity. This further makes an attempt to determine costs and revenues for an individual new generation project even less feasible and meaningful. By way of example, in the Preferred Development Plan the addition of Keeyask not only enables more energy production from the Keeyask Generating Station itself but also enables the addition of the new interconnection in 2020. Without Keeyask the interconnection would not be added. As such, in this circumstance Keeyask can only be evaluated by including the operational impacts and benefits associated with the new interconnection. Furthermore, Keeyask alone will not be sufficient to supply Manitoba domestic load growth and the new export sales required to justify a new 750MW interconnection. Conawapa (or some other new generation) is also required. Thus the operational costs and benefits of Keeyask cannot be meaningfully determined in isolation.

It is significant that Manitoba Hydro is both the developer and the operator/owner of the electrical system in the province. Manitoba Hydro acknowledges that a methodology which is focused on individual projects costs and revenues could be applicable to a situation where an Independent Power Producer (IPP) company is evaluating whether to proceed with a project or to select between different project possibilities. The IPP project revenues can be clearly identified as payments to the IPP from its PPA with the purchaser and does not need to consider any revenue and cost impacts from the project that would result in the rest of the generation and transmission system.

It should be recognized that adding generation is not a discretionary investment for Manitoba Hydro. Manitoba Hydro has an obligation to serve the domestic load. Projected load growth demands the addition of new supply for the time frame in question. As such, there is no “do nothing” option available and all options have an associated impact on costs and revenues.

The appropriate methodology to evaluate the plans presented in the context of the NFAT is to evaluate a sequence of development such as the Preferred Plan by comparing its costs and revenues to an alternative sequence of development. This is standard industry practice. It is the methodology used consistently by Manitoba Hydro to evaluate all forms of generation whether hydro, thermal or wind. It has been used and tested by Manitoba Hydro in all the related regulatory forums and accepted by the regulators including the PUB 1990 Capital Plans review and CEC Wuskwatim Review.

Manitoba Hydro will respond to the Order in the best manner it can by providing in-service costs and revenues and marginal costs and revenues for each of the Plans (and applicable Scenarios) associated with the new generation projects. The Natural Gas Plan would be used as the comparison plan. The submission will also include levelized unit energy costs for each new generation plant option.

**D. Manitoba Hydro to provide the Integrated Financial Forecasts (“IFF”) (in a form similar to that used by Manitoba Hydro in the General Rate Applications) and all underlying IFF assumptions and inputs for each Plan and Scenario.**

Manitoba Hydro’s financial evaluation will analyze the results of at least 162 separate Cases: 6 resource development Plans under 27 different assumption Scenarios. The IFF Projected Operating Statement, Balance Sheet and Cash Flow Statement will be available for the approximate 50 line items over the 50 year study horizon for each Case resulting in over 400,000 data points. Manitoba Hydro will also provide the relevant assumptions underlying each resource development plan and scenarios increasing the total number of data points.

Manitoba Hydro cautions that the forecasts underlying the financial evaluations for NFAT differ from the forecast which support a rate application. The NFAT forecasts provide a long-term directional indication of customer rates of each resource plan relative to all others. In order to achieve that comparability, the Corporation removes the smoothing rate-setting principle it employs in deriving revenue requirement for rate application purposes by applying an objective, mechanistic approach to calculating rate adjustments. The rate adjustments assumed for NFAT purposes are derived to achieve interest coverage of 1.20 times in each year of the forecast horizon and can result in erratic rate changes from year to year, particularly in the shorter term. As a consequence, absolute values for forecast rate adjustments are of limited use in predicting future rates that may be proposed in rate applications, but rather, provide meaningful information regarding customer impacts by analyzing the changes between the forecasts.

**E.1 Manitoba Hydro to provide a “Decision Matrix” that compares and contrasts all Plans and Scenarios by the factors utilized by Manitoba Hydro. The factors, the weighting of such factors and Manitoba Hydro’s explanation for such weightings and resulting assessments by Manitoba Hydro need to be provided for the Board’s review.**

Manitoba Hydro’s filing will provide matrices comparing the plans under various scenarios and provide the probabilistic weightings assigned to the scenarios.

**E.2 Further alternative plans and scenarios may be requested by the Board, independent experts or intervenor consultants**

Manitoba Hydro is of the view that the wide range of Plans & Scenarios intended to be included in its August 16, 2013 filing will provide ample opportunities for consideration of the Plans. As such Manitoba Hydro does not anticipate a need for additional studies. Manitoba Hydro’s decision to include a broad range of studies at the outset was not only to provide numerous

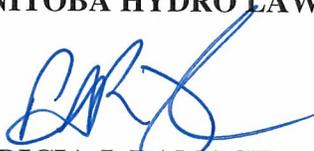
comparisons demonstrating the basis for selecting the Preferred Development Plan but also out of necessity given the time it takes to prepare these studies. The analytical work associated with the Plans and Scenarios is extremely time consuming and cannot be completed within the time frames of the hearing schedule. Manitoba Hydro has repeatedly indicated that the Plans and Scenarios must be completed at the outset of the NFAT process so as to accommodate their detailed review during the time allotted for the NFAT process.<sup>1</sup> The utility is very concerned with the suggestion that it may be expected to develop additional studies once the process is underway.

Manitoba Hydro expects the PUB will concur with its assessment of the sufficiency of information provided once it has had the benefit of reviewing the Corporation's NFAT filing. Manitoba Hydro felt however it prudent to remind the PUB of its capacity to deal with additional Plans and Scenarios in an effort to ensure expectations in this regard are realistic. Should the PUB have any comments with respect to the foregoing, please do not hesitate to contact Ms Boyd or myself.

Yours truly,

**MANITOBA HYDRO LAW DEPARTMENT**

Per:



**PATRICIA J. RAMAGE**

Barrister and Solicitor

PJR/

cc: R.F. Peters, Fillmore Riley LLP  
Registered Intervenors

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<sup>1</sup> For example, Mr. Wojczynski explained during the May 16, 2013 Pre-Hearing Conference (transcript page 36), 2012 assumptions were used because these studies take many, many months to complete and Manitoba Hydro simply could not wait for 2013 data if it intended to submit the study in this process. Ms Flynn indicated that it can take as long as two to four weeks to analyze a single case (transcript p. 56 - 57).