

This newsletter has been prepared by the Manitoba Industrial Power Users Group (“MIPUG”) as part of the Commercial and Industrial Customer Communication Initiative. MIPUG is participating as an intervener in the Public Utilities Board (“PUB”) review of the Need For and the Alternatives To (“NFAT”) Manitoba Hydro’s current development plans.

The PUB NFAT process is ongoing, and new information is being provided continually. Parties can test Hydro’s evidence and file their own submissions. No final PUB decisions will be made until the public hearing is concluded. The PUB is to report in June 2014.

Hydro’ NFAT submission is available at:

www.hydro.mb.ca/projects/development_plan

What is the ‘NFAT’?

Manitoba Hydro is seeking approval to implement its Preferred Development Plan (“PDP”) comprised of \$15-\$20 billion of investment in new hydroelectric generation, transmission lines to the U.S., and contracts for power exports and imports, covering key decisions over the next 20 years.

The Minister Responsible for Manitoba Hydro has asked the PUB to carry out a public review of Hydro’s plan. The PUB is to provide a report with recommendations to the Government of Manitoba on the needs for Hydro’s PDP, and an assessment as to whether or not the Plan is in the best interest of Manitoba compared to alternatives (known as the Needs for and Alternatives To or “NFAT” Review).

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Who is ‘MIPUG’?

MIPUG is a group of 10 industrial customers operating in Manitoba. MIPUG’s intervention in the NFAT is focused on maintaining predictable and stable domestic rates in the short- and long-term, and ensuring Hydro’s long-term planning promotes the interests of all domestic rate payers.

NFAT Commercial Customer Communication Initiative

The NFAT Communication Initiative is being undertaken by MIPUG to communicate to other business customers in Manitoba about the ongoing progress and key facts and conclusions coming out of the PUB review of Hydro’s NFAT. MIPUG was also encouraged by the PUB to help disseminate this information and help other businesses share their views.

This newsletter is the first in what is planned as a series of communication initiatives to help distribute NFAT hearing-related information that is likely to be of interest to all commercial and industrial customers.

Manitoba Hydro's Development Plan

The NFAT is reviewing approaches to developing power resources in Manitoba.

While there are many different possible developments that can be pursued, Hydro has proposed a specific Preferred Development Plan ("PDP") which involves spending commitments between \$15 to \$20 billion over the next 15 years. Hydro also presents 15 alternative plans in the NFAT, but according to Hydro the alternative plans do not provide as large a benefit to ratepayers, and to the province in general, as the PDP.

Commitments

Under the PDP, Hydro is seeking government approval to make the following commitments in June 2014:

- Start construction on the 695 MW Keeyask generating station (G.S.) for a 2019 in-service date (ISD).
- Proceed with a 250 MW export agreement with Minnesota Power (MP) from 2020 to 2035.
- Proceed with a 750 MW U.S. transmission interconnection for 2020.
- Proceed with a 100 MW export agreement with Wisconsin Public Service (WPS) for 2021-2029.
- Proceed with trying to secure a further 300 MW export agreement with WPS for 2014-2040.



Graphic of Keeyask G.S. from Hydro's NFAT Business Case filing

Other Actions

Hydro's PDP also includes the following actions:

- Continue all planning necessary to protect the ability to proceed with Conawapa G.S., 1485 MW, with an earliest ISD of 2026. Decisions on whether and when to construct Conawapa are not required now (first major decision point for construction occurs around 2018).
- Prepare annual Power Smart plans, comprising all economic Demand Side Management ("DSM") for both energy and peak capacity.
- Continue monitoring and economic assessment of wind generation or other technologies (including gas) either in combination with Conawapa, or as components of a future alternative to Conawapa.
- Explore new firm exports and/or export extensions for all dependable energy.
- Continually monitor the benefits and costs of protecting Conawapa ISDs considering updated DSM levels, load forecast, export negotiations, wind costs, energy prices, etc.

Development Planning Principles

Power planning requires long-term forecasts of Manitoba power needs.

The resources used to construct Hydro's PDP, and the many alternative development plans presented, can be viewed as a mix of three components; System Building Blocks, Flexible Supply Sources and Natural Gas.

SYSTEM BUILDING BLOCKS:

Major commitments such as hydroelectric generation, new transmission, and large export and import contracts have to be planned well in advance of delivery. These are difficult projects with many uncertainties that must be resolved in the planning process (e.g., community support, environmental licences, capital costs that are very customized to the site, or contract negotiations with U.S. utilities). Therefore these components require the longest lead-times and also significant investment to resolve uncertainties.

Due to their long and complex nature, the NFAT is primarily about System Building Block types of resources.

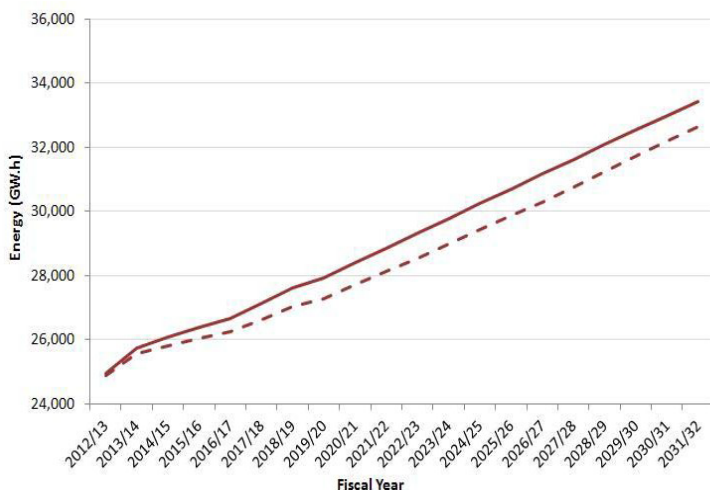


Figure 4.17 from Hydro's NFAT Filing depicting Manitoba Forecast Load Growth (top line) effects of DSM (dashed line)

FLEXIBLE SUPPLY SOURCES:

Resources like wind or gains in energy efficiency (DSM) can also secure additional power. It is fairly certain that these supply options can be implemented when/if needed, but they may not always be the most cost-effective. Also, the role of these resources is more limited than the reliable dispatchable "building block" supplies. These sources are also addressed in the NFAT, but it is not necessary today to have perfect information or to make firm commitments for these options, as they can be implemented in a relatively short time frame as the need or opportunity evolves. It is also important to stay flexible with these resources, as new technologies may be developed that could improve the costs or scale of these sources, while at the same time Hydro cannot rely on future hypothetical technological advances.

NATURAL GAS:

Natural gas presents a mix of the above two characteristics - it is dispatchable and can be as large as the building block resources, but it can also be a flexible resource, as the technology and capital costs are well known and lead times are relatively quick. Plans that include natural gas have the flexibility to adapt to other sources (such as more wind, or DSM, or imports, or customer generation) and to modify the gas requirements in an iterative manner.

Other sources, such as coal and nuclear, are ruled out by Hydro due such factors as potential adverse impacts on the economy (rates), the environment, regulatory challenges, and GHG emission tariffs.

The Need

Major new generation is expected to be required as Manitoba's energy requirements grow.

Under Hydro's planning criteria, a commitment must be made to build new supplies that come on-line to correspond with the expected future date where energy or capacity shortfalls could start to arise. These shortfalls are measured based on the ability to meet the load in a potential drought year. This analysis of shortfalls must incorporate (a) the most up to date energy and demand forecasts, and (b) forecasts for the scale of DSM and other supply options that may be pursued (e.g., wind, imports, customer based generation or interruptible loads).

Hydro currently forecasts that its current sources will be unable to meet Manitoba demand by 2023/24, but this could be delayed or advanced by consumption or resource changes (like differing levels of DSM, or load changes).

Based on Hydro's current forecast shortfall, and the lead-times required for new projects, a commitment to Keeyask generation would need to be made by no later than 2018/19, or alternatively a decision to proceed with natural gas could be made up to about 2 years later (about 2020/21). The date of this shortfall/need can change. The NFAT filing considers possibilities where shortfalls may not arise until 2030/31 or could arise sooner than 2023/24 if load grows more than expected.

*Graphic of Hydro Transmission Line from the
NFAT Business Case Filing*



The Alternatives

Hydro has presented the NFAT as choosing between broad “pathways” more than between fixed “plans”. The concept is that only certain decisions need to be made today, while other decisions will evolve over time; however, today’s decisions may enhance or preclude certain future options. The key development plan choices presented by Hydro are as follows:

- 1) **Gas or hydroelectric first?** If gas, commitments do not need to be made for a number of years (potentially up to 6 years or more from now) and the long-term pathways could still permit development of some gas generation first, followed by a hydroelectric plant like Keeyask or Conawapa in the future. If the next major resource is decided to be hydroelectric, then it must be the Keeyask G.S., as no other hydroelectric generation plants are advanced enough in planning and permitting to be in-service in time to meet expected demand.

Hydro concludes that Keeyask is better than gas as the next major electrical resource in Manitoba.

- 2) **If hydroelectric, should the date be advanced:** The potential exists to develop Keeyask for 2019/20 instead of 2023/24 such that the excess energy can be sold in firm export agreements, along with building a new transmission line to the U.S.? If not, then decisions to construct Keeyask can be put off for up to 4 years.

Hydro concludes that the new transmission line and exports bring sufficient benefits and revenues that they should be pursued, therefore Keeyask should be advanced to 2019. Advancement also helps deal with load forecast uncertainty.

- a) **Scale of Transmission and exports:** If Keeyask is being advanced, along with new export sales to the United States, should a smaller transmission line be pursued (250 MW, needed to serve the 250 MW MPS sale) or a larger line (750 MW, in order to serve the MPS sale and also permit a potential 300 MW sale to WPS, plus significantly greater integration into the U.S. energy market)?

Hydro concludes that the larger line should be pursued, but not based solely on the known economics. Most known economic benefits can be secured with the smaller line (especially if Conawapa is delayed), but the larger line brings more future potential such as, for example, better ability to import during droughts, export more at times of high prices (rather than being forced to export during low price periods), future export contracts that have yet to be negotiated, and better integration with U.S. wind power.

- b) **Transmission Line Contingency:** If the larger 750 MW line is selected, should it still be pursued even if the extra 300 MW WPS sale is not successful and Hydro must make a larger financial contribution towards the U.S. line?

Hydro concludes that the larger line is still better for the reasons set out above, but a plan involving the smaller line and a delay of Conawapa is almost equally beneficial.

Hydro has filed significant amounts of evidence, and there is much more to come. MIPUG will not have a position on the issues in the NFAT until it can review the evidence and fully participate in the hearing.

At this time, there are a number of issues that MIPUG may pursue, such as the following:

1) **Need versus Opportunity:** MIPUG expects that ongoing load growth will drive the need for new Manitoba generation at some point. Most of Hydro's PDP, however, is not based on this concept of need. An NFAT focused on fulfilling Manitoba's power needs would be primarily about the target date for new resources, risks surrounding this forecast, and the role that sources like DSM, customer generation, or interruptible loads, can play in delaying this need and saving capital dollars. Hydro's plan is instead heavily based on what it views as a time-limited opportunity with the U.S. (primarily related to the potential new transmission line). For this reason, Hydro's NFAT ends up analyzing many potential local resources only in regard to how these resources may affect the key decision regarding the PDP opportunity.

In the past, MIPUG has generally been supportive of Hydro's basic business model of developing generation before it is strictly needed for local supply, as it provides better flexibility to deal with uncertainties (like load growing faster than expected) and can provide benefits in the form of confirmed revenues to help fund the projects. However, Hydro has not previously proposed investment anywhere near this scale under the "advancement" business model.

MIPUG Observations To Date

- 2) **Rate Impacts:** The PDP is portrayed by Hydro as the best long-term option from the perspective of economics and rates. However, Hydro's financial analysis shows that this benefit is indeed very long-term. The PDP has the highest rate impacts for the first 20 years (3.95% rate increases per year) and the benefits to ratepayers arise entirely after year 20. The simpler plans involving all natural gas have lower rate impacts for the first 17 years (increases of 3.43% per year) and a significant percentage of these rate increases in the gas scenario may only be needed to effectively pay off all the investment that has occurred on Keeyask and Conawapa to date (approaching \$800 million). MIPUG is seeking more information on these rate impacts.
- 3) **Magnitude of the Plan:** The PDP involves committing upwards of \$20 billion to new projects, funded largely by debt which is guaranteed by the Province of Manitoba. This scale of spending exceeds anything Hydro or the Province have taken on in the past. Even if the PDP is the best long-term investment option, is it advisable for Hydro and ratepayers to take on this scale of debt and the unavoidable attendant risks to ratepayers (and potentially, under certain circumstances, taxpayers)?

MIPUG Observations *(Cont'd)*

4) **Benefit Sharing:** Hydro's PDP potentially provides the largest benefits to ratepayers in the very long-term compared to the other plans. But the PDP also provides a very significant amount of benefits to the Provincial treasury in both the shorter and longer-term, through fees charged by the government such as water rental fees, debt guarantee fees, capital taxes and more. Hydro's analysis indicates these could well exceed 1.5 times the benefits that ratepayers see. The transfers to the Province come at the expense of ratepayers - they are ongoing costs that must be paid through electricity rates each year.

In addition, the Province is already receiving financial benefits during the current PDP planning, and these will grow markedly as soon as Keeyask is in service.

Finally, the benefits to the Province from these payments are guaranteed to occur, unlike ratepayers who will bear significant short-term rate increases, and risks as to when or if they will see any benefits. For example, if export prices are low, or interest rates rise more than expected (i.e. revenues are lower than expected or cost are higher) then ratepayers will pay higher electricity rates and see less benefits (if any) from the PDP, but the large Provincial payments are unchanged. Further, if the projects go over budget, Hydro will have to raise domestic power rates higher and borrow larger amounts of funds, but the "fee" charged by the Province for guaranteeing Hydro's debt actually increases (as it's calculated as 1% of Hydro's total long-term debt).

The skewing effect of this benefit sharing on the selection of the best plan for rate payers must be properly tested and addressed in the NFAT, including potential recommendations to the Government of Manitoba to amend its charges for the projects in the PDP, if it proceeds.

*Graphic of Conawapa G.S.
from Hydro's NFAT Business
Case filing*



NFAT Schedule and Process

The PUB review is scheduled to continue through May 2014. There are five interveners in the process representing industry, consumers, environmental groups and aboriginal peoples. In addition, the PUB has commissioned subject-specific reports from eight Independent Expert Consultants (IECs).

It is expected that during the period from now until December 2013, Hydro will be providing additional analysis and materials in response to questions from interveners and the IECs. In December, the IECs will deliver their reports, followed by experts hired by the interveners in January.

The public hearing is expected to occur between February 2014 and early May 2014 in Winnipeg. In addition, there is likely to be days for Community Hearings for public presentations in other locations in Manitoba.

The PUB must submit a report with recommendations by no later than June 20, 2014.

HOW TO PARTICIPATE

There are three ways for interested Manitoba commercial customers to keep up-to-date or be involved in the NFAT:

1) MIPUG will be maintaining a Commercial Customer Communication Initiative throughout the process. This newsletter is the first in a proposed series. Briefings are also expected with the Manitoba Chambers of Commerce.

2) Manitoba Hydro schedules periodic workshops for their large commercial and industrial customers on various issues of concern. At this time, Hydro is tentatively planning for meetings in early December in Brandon and Winnipeg to address NFAT topics. Customers interested in these sessions should be in contact with Hydro.

3) Customers who want to express their views directly to the Public Utilities Board can provide written materials or in-person presentations. Written materials are being accepted throughout the process. Customers wanting to present in person at the hearing (expected to be between February 2014 to early May 2014), or at the as-yet unscheduled community meetings, are required to schedule a time with the PUB staff.

Customers who wish to share their views with MIPUG, for consideration as MIPUG develops its positions, can contact the group as follows:

MIPUG CONTACT INFORMATION

Phone: (204) 942-0654 **Fax:** (204) 943-3922

E-Mail: MIPUG@INTERGROUP.CA