Muskrat Falls: Why We Need a Regulatory Review – Part One

Commentary, Energy, Frontier CentreJanuary 17, 2013

PART ONE

The Prime Minister, when announcing the loan guarantee for the Muskrat Falls project in Goose Bay-Happy Valley on Friday, November 30, 2012 said that the risk to the federal government is zero or close to zero. The reason for this is that the main risk falls on ratepayers in this province. The "term sheet" places an obligation on the government of NL to ensure that electricity rates are high enough to recover all costs from the Muskrat Falls project components and for new legislation and agreements "to the Guarantor's satisfaction" to put into legally binding effect Schedule A, which demands that power costs be recovered over the term of the power purchase agreement.

In order to ensure that the Muskrat Falls project will generate sufficient revenue to repay its capital cost, currently estimated at $7.7 B, the legislature of NL enacted new legislation to strengthen the monopoly power of Nalcor Energy, a provincial Crown Corporation, and its wholly owned subsidiary, NL Hydro. Bill 61 was introduced just a few days before the Christmas recess and was given Royal Assent without change, despite a marathon filibuster by the Liberal Opposition and the NDP.

Bill 61 confers upon NL Hydro "the exclusive right to supply, distribute and sell electrical power or energy to a retailer or an industrial customer", on the island portion of the province, subject to certain exceptions. This will limit the ability of energy consumers to take advantage of lower cost power outside the province, to buy "unbundled" power and to transport power onto the Island, using Nalcor's transmission lines and the Emera-owned Maritime Link.

It will also restrict the construction of new local generation sources. This represents a barrier to free trade in energy across jurisdictions but also within the province. The new legislation is extremely regressive. It will limit the powers of the PUB, even to the point of dictating when they can hold a hearing and it will undermine its ability to protect consumers. Regulated rates of return on invested capital will be set by Cabinet and not by the PUB.

With the enactment of such regressive and anti-competitive legislation, how can Nalcor expect to be welcomed as a player in the North American energy market? On the one hand it is asking US regulators to grant it open access under FERC rules but it is not prepared to allow energy suppliers outside NL to use Nalcor's transmission lines to supply customers in this province? Any new entrants must deal with Nalcor or its subsidiaries and will not be able to sell directly to its customers.

The federal loan guarantee will deny NL ratepayers many of the benefits of interconnection with the rest of North America and will deprive them of rate reductions that would otherwise be a benefit of interconnection. While creating a physical link, the Muskrat Falls loan guarantee, by virtue of the new legislation, will further entrench the currently existing monopolistic structure. The removal of the Muskrat Falls project from the oversight of the PUB will perpetuate the monopolistic behaviour of our utilities, aided and abetted by our national and provincial governments.

The loan guarantee will be capped at $6.3 B, leaving our province exposed to cost overruns. An independent review by credit rating agencies is still required before the federal government signs off on the Muskrat Falls project. The federal loan guarantee depends on the participation of Nova Scotia. There are a large number of conditions precedent to the completion of the loan guarantee, yet to be fulfilled, including the filing of independent reviews of the borrowing companies by credit rating agencies, along with a review of the DG3 Capital Cost Estimates by the "Independent Engineer" appointed on behalf of the Federal Government (the Guarantor) and the Lenders.

Until "financial close", when all agreements will be finalized, which is expected toward the end of 2013, the province will be required to assume responsibility for 100% of the financing, which will be injected in the form of equity. Because of the recently announced deteriorating financial situation the Minister of Finance has disclosed that we will have to borrow a portion of the equity contribution, which will further increase the burden on the taxpayer. The province must assume a large number of other obligations, including provision of a guarantee to complete the project if non-completion results from a failure of the province and its crown corporations to meet commitments spelled out in the loan guarantee. While the loan guarantee will reduce borrowing cost it will also impose some additional costs, particularly through the requirement to hold a high level of liquid assets to meet payment obligations.

The term sheet leaves our province exposed to additional risk because of its imprecise language. Section 4.4 provides a "non-exhaustive" list of Events of Default which could terminate the guarantee. Section 4.19 refers to "customary affirmative and negative covenants to be provided by the Borrowers". Who knows what this means?

The loan guarantee document ("term sheet") is noteworthy for the deference given to the Nova Scotia Utilities and Review Board, whose decisions will impact on the financial arrangements. For example the financial performance targets required by the loan guarantee are linked for the Maritime Link with the rate of return on equity set by the NSUARB. No such deference is given to the NL PUB in the term sheet.

Ratepayers need the protection of the Public Utilities Board because of the monopoly power exercised by Nalcor and its subsidiary, Newfoundland and Labrador Hydro. In other jurisdictions, industries which had hitherto been monopoly-controlled public utilities are now enjoying the benefits of increased competition. This is the case with electric power generation, while the transmission of electricity has remained largely within the framework of a regulated monopoly. No such increased competition and expanded choice of service providers has taken place in our electric power generation industry. This is in contrast with the communications industry, another traditional public utility, where there is significantly more competition and where consumers are offered the benefit of choice among multiple providers of telephone, television and internet services.

One of the risks associated with the project is that demand may fall. This could happen once the Island is interconnected and Island customers can shop around for other suppliers of electric energy. With the unbundling of energy cost from the cost of transmission access consumers in NL may choice to source their power from suppliers outside the province. If rates are not competitive then Nalcor and its subsidiaries could lose their customer base.

The Muskrat Falls project will be taken out of the regulatory jurisdiction of the PUB. Hydro will sign a long term, take-or-pay contract with Nalcor for Muskrat Falls power and neither the PUB nor the ratepayers will have any voice in setting the rates. The largest single source of electric energy (apart from Churchill Falls), namely the 824 MW Muskrat Falls project, will be placed outside of the regulatory protection for consumers offered by the PUB And the taxpayer will have no confirmation from a public review that this is a worthwhile public investment. To make matters worse, Nalcor will be allowed a rate of return comparable to that of a regulated utility, without being subject to regulatory oversight. An enviable position for Nalcor, but not for the ratepayer!

The Tobin administration exempted Muskrat Falls (and Gull Island) by Order-in-Council from the jurisdiction of the PUB. This was done because the power was to be exported and not to be consumed by NL ratepayers. When the Williams administration decided in November 2010 to undertake Muskrat Falls to produce energy mainly for domestic consumption, rather than for export, it did not rescind this exemption and restore the lawful jurisdiction of the PUB, as it should have done. Nor did it advise the public of the exemption. Only when they were pressed by the undersigned to reinstate the jurisdiction of the PUB did they respond, in June 2011, by asking the Board for an advisory opinion, through a reference under the Electrical Power Control Act (EPCA). This advisory reference was a far cry from the review which the PUB would have conducted had its hands not been tied by the exemption.

In June of 2011, the PUB was asked to advise government as to which of two options was lower in cost, Muskrat Falls or the Isolated Island Option. Nalcor did not make its submission until November 2011. The Board had requested the information be filed no later than June 30, 2011 to allow it to report by December 31, 2011 (later extended to March 31, 2012), as required by government. The PUB requested government for an extension to June 30, 2012 and this was denied.

The PUB concluded on March 30, 2012 that:

> *The information provided by Nalcor in the review is not detailed, complete or current enough to allow the Board to determine whether the Interconnected Option represents the least cost option to Island Interconnected customers over the period 2011-2067, as compared to the Isolated Island Option.*

The PUB took this position because they were not given access to revised cost estimates and updated load growth projections. The 2010 DG2 information, based on only 10% of engineering design, with which they had to work, was too imprecise for them to reach a conclusion. Government itself reached the same conclusion, on the inadequacy of the DG2 estimates, and waited until the DG3 numbers, based on 50% of engineering design, and revised load growth projections were available.

Contrary to government's assertion that the PUB refused to answer the reference question the fact of the matter is that they could not because they did not have the updated cost and load information. They were not defying government but simply discharging their statutory duties.

Government refused to give the PUB the time needed to perform its statutory duty under section 3 of the Electrical Power Control Act, to implement a power policy, among other things, "that would result in power being delivered to consumers in the province at the lowest possible cost consistent with reliable service". Yet there is no pressing emergency. Government itself waited for the new DG3 numbers. The Nova Scotia Utility and Review Board has yet to receive an application under the Maritime Link regulations and its review, while limited to 180 days, will be robust and not confined to two options only. Nor will it be limited to the Maritime Link but will encompass (Maritime Link Regulations, section 5(d)):

> *capital and operating cost estimates for Muskrat Falls, Labrador transmission assets and the Labrador Island link, together with supporting engineering and design evidence.*

Instead of referring the new numbers back to the PUB, Government commissioned a number of studies by consultants, without disclosing their terms of reference or degree of independence from the proponent. These studies include the second MHI report of October 2012, based on the new cost estimates, new load projections, a study on wind power, another on natural gas, one on mining and others. Can such studies substitute for PUB review? What value would the PUB add? Government has argued that the studies themselves negate the need for regulatory review. The answer is that the PUB would allow citizens and ratepayers, as well as experts, to challenge and to test the assumptions and would force the consultants to defend their work in an open public hearing. This is not happening. There is no provision for the studies to be reviewed and tested by, or on behalf of, ratepayers.

The PUB process is grounded in the concept of transparency, allowing citizens to ask questions and empowering members of the public who wish to ask questions, contribute information, options and potential solutions. The PUB has the authority to bring forward expertise on all aspects of the issue: engineering, economic, financial and social. It has no axe to grind; no vested interest to protect, other than that of consumers. When its technical conference was aborted, due to government's denial of an extension to the March 31, 2012 deadline, the province lost the benefit of vital information that it might have obtained from Newfoundland Power and other experts.

Without PUB review we are left with untested conclusions; government will make the largest public policy decision in the province's history based on such untested evidence. Not only has the public been denied the opportunity to challenge the assumptions used by the consultants; we have not even seen the terms of reference for their studies. Nor do we really know how much government, as the client, has interfered in the process by imposing its preconceived conclusions on its hired agents. There are many issues on which the public is left uninformed, including the critically important issue of rates.

We do not yet know how much the power will cost. Based on the DG2 evidence from the PUB hearing, the cost of Muskrat Falls power in 2017 was estimated at 23.9 cents per kilowatt hour (*CA-KPL-Nalcor 27, rev. 1*), with the cost of generation at 9.2 cents and transmission at 14.7 cents. To this must be added the cost of distribution by Newfoundland Power, bringing the retail cost per kilowatt hour close to 30 cents. We don't have comparable information based on the new DG3 cost estimates, which raised the project cost from $6.2 Billion to at least $7.7 Billion (including $1.5 B for the Maritime Link), not including allowance for funds used during construction (AFUDC), estimated under DG2 to be more than $1.0 Billion, and bringing the total to more than $8.7 Billion. We also know that the cost of generation, 9.2 cents, based on DG2 numbers, will escalate by 2% each year of the period 2017-66, under the proposed Power Purchase Agreement.

The question arises: if demand for electricity falls short of projections, who will bear the cost? Nalcor has said that this cost will be borne by the ratepayers. The ratepayers will not benefit from export revenues. We have not been told why ratepayers are exposed to downside risk but are denied the benefit of offsetting revenues. Who will bear the cost if capital costs escalate beyond the estimates? The answer is, of course, the ratepayer.

In a Part Two of this article we will pose questions on the viability of the project, on the impact of Muskrat Falls upon the reliability of power, on fundamental changes in the world energy markets and on other aspects of the project.

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Part Two

Viability of the project

Taxpayers need to know if the Muskrat Falls project is viable and whether it would be financeable without a federal loan guarantee. The term sheet for the loan guarantee (section 3.5 A (i) calls for "indicative credit ratings" confirmed by credit rating agencies on a "non-guaranteed basis". We also need to know whether our rates will continue to be competitive with the rest of North America. Evidence (e. g., see CE 64 R1Public) filed with the PUB showed that the project could not cover the interest on debt in the early years without a large up-front infusion of taxpayers' money. The project cannot stand up to normal "cost of service rate setting" evaluation but instead rests upon a new rate setting paradigm which is untested in this jurisdiction and which has not been readily adopted in other jurisdictions. Nalcor has admitted that the rates would be very high if standard cost of service rules were followed and would cause "rate shock". The term of the guarantee, for Muskrat Falls and Labrador Transmission Assets (the lines between Muskrat Falls and Churchill Falls) will be 35 years (section 3.2 (i)), and not the 50 years used in the DG2 estimates. Will this mean higher rates than originally planned?

Under normal cost of service accounting the generation component of the wholesale electricity rate in the first year would more than double, from 9.2 (using Power Purchase Rate methodology) cents to 21.4 cents per kilowatt hour (see *PUB-Nalcor-46* and *CA-KPL-Nalcor 27, rev. 1*). Adding the 21.4 cents to the transmission cost of 14.7 cents brings the 2017 wholesale rate to 36.1 cents per kilowatt hour. Nalcor therefore made the decision to transfer more of the costs to future generations than it would under traditional cost of service accounting. The questions remain: is this project financially viable? Is it really the lowest cost alternative? Is the enormous risk worth it? Will we our rates be excessive compared with those paid by other North American ratepayers?

The claim is made that this project is unlike the building of a hospital or road and that it will stand on its own merit, generating its own revenues and creating an extremely valuable asset and that it will not detract from the capacity of the province to make other financial commitments. Such a claim ignores the likelihood that demand for power may not increase as projected and the valuable asset may end up as a white elephant, producing power that will have to be sold below cost, due to changes in energy markets. We are a small province, without a diversified economy. We are dependent on commodity prices and highly vulnerable to global fluctuations, as we have recently learned with the decline of oil and mineral royalties and their adverse effect on our financial position. The fact of the matter is that the disposable income of our citizens is finite and so is the potential to raise taxes, or to finance a large energy megaproject on the backs of ratepayers, who are one and the same as taxpayers. The uncomfortable truth is that, if Muskrat Falls is sanctioned, its financial burden will impose real limits on funds available for health care (e.g., the long delayed Corner Brook hospital), education, transportation and other public services.

This project will make ratepayers reliant on power from a remote location and on 1100 km of new high voltage direct current (HVDC) transmission lines, including a subsea crossing, through inaccessible terrain and subject to extreme weather conditions. Holyrood, on the other hand, is located close to the major population centre. The first MHI report noted the need for a higher transmission line construction standard than Nalcor had proposed, a standard where the likelihood of power disruption was once in 150 years, rather than once in 50 years, as had been proposed by Nalcor. In higher elevations MHI proposed a standard of once in 500 years. The MHI report of October 2012 says "Outage periods up to one month or greater in remote locations are possible." We need to know how reliable our power will be after Holyrood is decommissioned. We still don't know if the reliability standards recommended in the first MHI report have been accepted by Nalcor.

Nalcor has touted the advantage of access to emergency power from Nova Scotia. Emera has almost two years to decide whether to participate in the Muskrat Falls project. What will happen if they decide not to participate?

Is there any compelling need for this project, in light of the fact that overall electricity demand has remained level over the past 20 years? The new load growth projections call for the total island peak to increase by 21 MW per year over the next 20 years. While there has been an increase in household electricity use, industrial demand has declined significantly, largely because of the loss of two pulp and paper mills and the availability to the Island grid of electrical energy previously used in the paper industry.

The evidence is that household electricity use is likely to decline in the long run, due to reduced substitution of electricity for other energy sources and to the long term demographic trends of fewer people in the age groups related to household formation with more people in the older age groups who are interested in downsizing and moving to more compact spaces. It is also the case that electricity use per household in Canada and in the United States has been declining (Natural Resources Canada, Office of Energy Efficiency, *Residential Sector, Energy Use Analysis 1990 to 2009,* 2011, and US Energy Information Administration: *Annual Energy Outlook, with projections to 2035*, June 2012). It is not clear to us why this trend should be different in NL. There is no energy crisis and no galloping energy demand. Nor is Muskrat Falls appropriately sized to meet the modest increase in energy demand projected. Why would we not build capacity on an incremental basis to match demand rather than overbuilding with this high risk megaproject?

Why has Nalcor not taken conservation and energy efficiency more seriously? Other jurisdictions are aggressively moving to restrain domestic demand, including Nova Scotia. Why are we not promoting more efficient forms of space heating such as geothermal and ambient air heat pumps, rather than subsidizing the use of electric heat by pricing it below the cost of production? Why are we not responding with new energy policy initiatives to the fact that 85% of new homes are installing inefficient electric space heating?

Why has Churchill Falls not been part of the analysis? The 2007 Energy Plan correctly pivots around 2041 when the infamous power contract comes to an end and Upper Churchill Power becomes available. The Government has recently raised Quebec's minority interest in CFLCO as inhibiting our ability to access Upper Churchill power in 2041. That argument is wrong. One thing we know for certain is that we will have the right, once the contract comes to an end, to take full control of the water rights, the power plant, the reservoirs and the transmission lines within our Province, ensuring that the Quebec minority interest is extinguished. That is why our energy policy should be based on taking the steps necessary to allow us to take advantage of that fact rather than undertaking a massive and extremely risky mega-project which has the potential to bankrupt the Province.

Why is government perpetuating the fallacy that Muskrat Falls, with its two costly sub-marine crossings, and its Maritime Link with the Nova Scotia, represents a solution to the impasse with Quebec? The transmission lines, towers and sub-sea cables have limited redundancy. They are not large enough for Gull Island power or recaptured energy from Churchill Falls in 2041. Nalcor itself admits that the export of Gull Island power requires access to transmission lines through Quebec to achieve minimum transmission cost to markets in the US and the rest of Canada. By building Muskrat Falls we are substituting high cost energy for the lower cost energy that will be available to us from Churchill Falls and burdening future generations with this high cost.

Why is government ignoring the fundamental changes that have taken place in the North American electrical energy market? Questions dealing with energy markets have been answered by Nalcor with information dealing with short term markets and spot prices. Spot prices will not recover the full cost of Muskrat Falls power. We need medium to long term markets and these are not available because of the shale gas revolution and the conversion of coal and oil fired thermal electric plants to the use of natural gas feedstock, at a cost below that of Muskrat Falls power. Why are we unwilling to recognize this and to consider seriously the potential of natural gas for the conversion of the Holyrood plant?

The spectre of rising oil prices is one of the major drivers for Muskrat Falls. There have been a series of recent studies and articles which argue that the global oil market is not as supply constrained as had been assumed. A recent study from the Harvard Kennedy School by Leonardo Maugeri (*Oil: The Next Revolution*, Discussion Paper 2012-10, Belfer Center for Science and International Affairs, Harvard Kennedy School, June 2012, page 6) concludes that:

> *Oil is not in short supply. From a purely physical point of view, there are huge volumes of conventional and unconventional oils still to be developed, with no "peak-oil" in sight. The real problems concerning future oil production are above the surface, not beneath it, and relate to political decisions and geopolitical instability. ...*
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> *The shale/tight oil boom in the United States is not a temporary bubble, but the most important revolution in the oil sector in decades. It will probably trigger worldwide emulation over the next decades that might bear surprising results – given the fact that most shale/tight oil resources in the world are still unknown and untapped. What's more, the application of shale extraction key-technologies (horizontal drilling and hydraulic fracturing) to conventional oilfield could dramatically increase world's oil production.*

These emerging developments in the world energy market suggest the wisdom of an incremental approach to meeting our energy needs until 2041, as compared with the commitment to a major megaproject whose viability is dependent on escalating world oil prices. Muskrat Falls is a large megaproject in relationship to the small population and fragile, resource-based economy of Newfoundland and Labrador, one which imposes significant risk. An energy strategy which emphasizes conservation and energy efficiency, combined with smaller projects built on an incremental basis, as needed, will reduce financial risk to the province. Just as the Federal Government has pushed the reset button on the F-35 purchase our Government needs to do the same on Muskrat Falls. Let's take advantage of time provided by the Nova Scotia regulatory review and bring Muskrat Falls back to our own Public Utilities Board. It's not too late to do the right thing.

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