Board Letter – July 12th, 2011

Q4: A report supporting the purchase price of Muskrat Falls energy by Hydro from Nalcor.

Answer: Nalcor, in consultation with its financial advisors, has approached the issue of electricity pricing for the Muskrat Falls (MF) hydroelectric facility in a manner structured to achieve certain key policy objectives and ratepayer benefits.

Under "cost of service" (COS) pricing, the annual revenue requirement for a utility asset would be comprised of: O&M Costs + Depreciation + Return on Rate Base (where return on rate base would be comprised on interest cost plus a regulated return on equity for a prescribed debt-equity capital structure). This annual COS would then be divided by the sold output of the asset in question to derive an average selling price (the "rate" per unit, such as per MWh). An important feature of this pricing methodology is that the revenue paid by ratepayers for a given asset is highest in the first year (that is, when the undepreciated cost of the asset is at its maximum), and declines thereafter. Another feature of this framework is that equity investors earn their regulated return each year; this return (in dollars) is also highest in the first year.

In the context of the MF development, the Island ratepayer energy requirements at the time of plant commissioning is projected to use only about 40%, or 2 TWh, of the plant's average annual production of 4.9 TWh. While the Island's energy requirements increase over time in line with economic growth, the early-year COS rate for MF power would be a significant burden for ratepayers in those years, as the required COS revenue for MF would be at its maximum and the power required by ratepayers would be at a minimum. To address this issue, an alternative approach to MF power pricing was developed which affords a number of advantages for ratepayers.

In order to derive an appropriate price for Hydro's power purchase requirements for the Island, Nalcor has undertaken a supply pricing analysis for MF assuming that Hydro is the only viable customer. The objective of this analysis is to determine the "escalating supply price" (that is, the price per MWh of power actually used by ratepayers, expressed in real dollars subject to escalation at CPI), which recovers all costs – operating costs over time, debt service costs for the debt portion (as applicable) of the capital investment, and an equity return on the equity portion of the capital investment at a defined Internal rate of Return ("IRR") over the life of the project. This escalating supply price is lower than would be indicated initially by the COS framework. It escalates evenly over time, and is applied only to power actually used by ratepayers – the early-year burden placed on ratepayers at that time is minimized. This is accomplished essentially by requiring that the equity investor "wait" for its return over the project life. It should be noted that the equity investor is not forgoing any return for waiting; it still earns its rate of return on the entire investment over the course of the term of the PPA.

Another example of this type of pricing structure is the Bruce Power lease arrangement for the Bruce nuclear generating facility.

Nalcor has calculated this escalating supply price for Hydro's purchases of MF electricity to be (which would be blended into Hydro's overall COS) based on the project's cost estimates at $76 /MWh in 2010$ and escalating at 2% annually.

The principal advantage to this pricing approach for energy is its level real-dollar supply price in dollars per MWh of power actually used by ratepayers. Hydroelectric assets are very long life assets and therefore a supply price for its output set in 2010$ constant real dollars helps to address intergenerational equity issues associated with large public expenditures on durable assets – particularly as the full output of MF is not required by ratepayers in the early years of the project.

Notwithstanding the benefits of this pricing approach for the energy supply, a cost of service approach was used for transmission investments. Since transmission service may be required by third parties, and for purposes other than serving domestic needs, the pricing model chosen for transmission is consistent with that used by other transmission providers.