November 30, 2018

Water Management Summary

This document is a brief summary of the Churchill River water management agreement, of the Quebec superior court litigation between Hydro-Québec and Churchill Falls (Labrador) Corporation Limited ("CFLCo"), (No. 500-17-078217-133 C.S.M and No. 500-09-026327-163), and of the interaction between them.

1. The 1969 Power Contract

The Churchill River contains three promising hydroelectric sites: Churchill Falls, Gull Island, and Muskrat Falls.

In 1961 the Newfoundland and Labrador legislature granted CFLCo the right to generate power from the Churchill River above Churchill Falls. To protect the value of the water rights at Gull Island and Muskrat Falls, the lease does not allow CFLCo to "interfere … with the minimum daily mean unregulated flow" of the Churchill River before hydroelectric development.

In order to develop a hydroelectric plant at Churchill Falls, CFLCo entered in 1969 into a power contract (Exhibit P-1464, p. 47) under which it sold "the Energy Payable and the Firm Capacity" of the Churchill Falls Plant to Hydro-Québec for a term running until 2016. Every week Hydro-Québec provides a schedule of its energy needs for each hour of the following week, retaining the option to reschedule its requests.

As part of the Power Contract, CFLCo also agreed to an automatic renewal contract in which it sold "the Firm Capacity and the Continuous Energy" of the Churchill Falls Plant to Hydro-Quebec until 2041. The terms of the Renewal Contract are contained in a schedule to the Power Contract (P-1464, p. 99), and any terms of the Power Contract that are not duplicated in the Renewal Contract schedule do not apply to the Renewal Contract.

The 1969 Power Contract also sets aside a 300 MW block of power that NL Hydro can request (the "Recall Block") and a 225 MW block of power in exchange for the water that formerly powered the Twin Falls power station (the "TwinCo Block").

2. Water Management and the Churchill River

The Churchill Falls Plant has a very large reservoir that allows multi-year storage. Downstream, the Gull Island and Muskrat Falls sites receive most of their water from Churchill Falls, and they do not allow for large reservoirs with long-term

storage. The energy and capacity of the Muskrat Falls and Gull Island sites is significantly affected by the timing of water releases from Churchill Falls.

In 2007, the Newfoundland and Labrador legislature amended the *Electrical Power Control Act, 1994*, adding sections 5.3, 5.4, 5.5, 5.6, and 5.7 (the "Water Management Amendments"). The Water Management Amendments allow the Public Utilities Board to order "[t]wo or more persons who have been granted rights by the province to the same body of water as a source for the production of power" to enter into a production coordination agreement. The Public Utilities Board can establish the terms of such an agreement if the parties cannot agree, but these terms cannot "adversely affect" a pre-existing power contract. The Water Management Amendments were supplemented in 2009 with *Water Management Regulations* under the *EPCA*.

In 2009 Nalcor, which had been granted the right to generate power from the Gull Island and Muskrat Falls sites, applied to the Public Utilities Board under the Water Management Amendments to have a water management agreement established between it and CFLCo for the Churchill River (Exhibit P-00032). It proposed terms that had been negotiated between it and CFLCo, but not adopted by the CFLCo Board of Directors. In response CFLCo was required by the *Water Management Regulations* to propose terms, and it proposed the same terms as Nalcor; but it did not consent to the agreement being established (Exhibit P-1465). Hydro-Québec declined to intervene before the Public Utilities Board (Exhibit P-1466).

In 2010 the Public Utilities Board established a water management agreement with the proposed terms (Exhibit P-1469). The water management agreement requires both Nalcor and CFLCo to provide a schedule of their power requirements to an independent coordinator. The independent coordinator will then set a production schedule for each facility to optimize the efficiency of the whole river. When one party provides energy for the other, the energy is "banked", and may be withdrawn later.

Nalcor proceeded to develop the Muskrat Falls hydroelectric site.

3. The 2041 Group and Nalcor's Response

Between 2010 and the sanction of the Muskrat Falls Project, the 2041 Energy Group, a group of lawyers who were skeptical of the Muskrat Falls Project, raised concerns about whether the water management agreement would be legally effective in ensuring a consistent water supply to Muskrat Falls. For example, Bernard Coffey wrote in *The Telegram* on October 20, 2012:

Because the CF(L)Co-Nalcor water management agreement explicitly acknowledges the priority of HQ's contractual rights, the "right-to-use" status of any water Nalcor was to "store" in the Churchill Falls reservoir Is unclear. What is clear is that, without HQ's consent, Nalcor has no right to "store water" in the Churchill Falls reservoir if such storage would "adversely affect" HQ's contractual rights.

Another concern related to water-management rights is HQ's contractual right to determine the timing and capacity of electrical output at Churchill Falls. HQ's decisions in that regard largely determine the water flow downstream at Muskrat Falls and, consequently, the electrical output achievable there, as the Muskrat Falls project is a run -of-the-river development with limited reservoir storage capacity of its own.

Nalcor responded to this article with an October 22 press release:

Hydro-Quebec does not control the Churchill River nor do they have the right to determine the timing and capacity of electrical output at Churchill Falls. Hydro-Quebec has contracted rights for specific output from the Churchill Falls plant which varies slightly between winter and summer seasons. How Churchill Falls meets its contractual obligations to Hydro-Quebec is at the discretion of Churchill Falls. This obligation can be met from the upper Churchill or a combination of the upper and lower Churchill developments respecting the rights of Hydro-Quebec while meeting obligations to maximize output of the river. Hydro-Quebec has not objected to this.

4. The Quebec Litigation

In 2013 Hydro-Québec applied to the Québec Superior Court for a declaratory judgment clarifying the terms of the 1969 Power Contract. The trial judgment in 2016 deals with two issues: interruptible sales and continuous energy.

4.1. Interruptible Sales Issue

Hydro-Québec's weekly schedules often request less power than the Firm Capacity of the Churchill Falls Plant. For instance, Hydro-Québec often uses Churchill Falls power to meet network reserve requirements. This leaves the Plant with unused capacity.

In 1976 CFLCo agreed to sell NL Hydro “interruptible energy from its generating facilities resulting from underutilization of Energy reserved for its existing obligations when, in the sole discretion of CFLCo, it can be made available”. In 2012 the existing Power Purchase Agreement between CFLCo and NL Hydro was amended such that CFLCo could sell unused capacity to NL Hydro as interruptible power. NL Hydro used this interruptible power to take delivery of more of the recaptured energy at peak times. CFLCo's position was that these sales did not prejudice Hydro-Quebec's rights under the Power Contract: if necessary the sale of interruptible power to NL Hydro could be cancelled immediately, i.e. interrupted, and the capacity made available to Hydro-Quebec.

At trial, Hydro-Québec presented evidence of occasions when CFLCo was unable to provide the Firm Capacity of the Churchill Falls Plant when requested, while at the same time CFLCo made interruptible power available to NL Hydro. It argued that CFLCo was not entitled to sell any power or energy from the Churchill Falls Plant apart from the Recall Block and the Twinco Block.

CFLCo argued that the 1969 Power Contract gives Hydro-Quebec certain defined rights, and that if the plant had any spare capacity once Hydro-Quebec’s requests had been met, CFLCo as the owner of the plant was entitled to sell such power. It also observed that the 1969 Power Contract contemplates that Hydro-Quebec will provide advance notice of its requests: last-minute changes can only be requested only during an emergency or for serious reasons, and if they cannot be accommodated, compensation is available.

4.2. Continuous Energy Issue

Hydro-Québec sent CFLCo regular five-year plans. In June 2012, when Hydro-Québec first predicted its post-2016 imports, it became apparent that Hydro-Québec and CFLCo had different conceptions about how the Renewal Contract worked.

CFLCo interpreted the Renewal Contract as being quite different from the original power contract. Where the 1969 Contract gave Hydro-Québec all the energy and capacity from the Churchill Falls Plant, apart from the Recall and TwinCo blocks, the Renewal Contract gave it “the Continuous Energy and the Firm Capacity” of the Churchill Falls Plant. “Continuous Energy” was defined as a certain number of kilowatts per month calculated by a formula. A provision in the original contract for sale and purchase of “such power and energy as Hydro-Quebec may request” was removed from the Renewal Contract, and no price was provided for any energy apart from the Continuous Energy and the Firm

Capacity. CFLCo concluded that the Renewal Contract limited Hydro-Québec to fixed monthly blocks of power, and that while Hydro-Québec had the flexibility to schedule production within each month, it could not reschedule production from one month to another.

Hydro-Québec interpreted "the Continuous Energy and the Firm Capacity" as meaning the same thing as "the Energy Payable and the Firm Capacity": i.e., it referred to all the energy and capacity from the Churchill Falls Plant, apart from the Recall and TwinCo blocks. It emphasized that the Renewal Contract contained operational flexibility provisions and that much of the commercial value of the Churchill Falls Plant was its ability to shift production between seasons, producing efficiently even in late winter when other hydroelectric facilities' reservoirs were low. It argued that the history of the negotiations made it extremely unlikely that Hydro-Québec would have accepted fixed monthly blocks of power. It also argued that subsequent statements and arrangements, including the Guaranteed Winter Availability Contract, reflected a mutual understanding that the Renewal Contract gave Hydro-Québec similar rights to the original term of the contract.

4.3. Trial Decision

Justice Castonguay sided with Hydro-Québec on both issues, and issued broadly worded declarations:

> [1150] **DECLARES** that pursuant to Schedule III (**Renewed Power Contract**) of the contract entered into on May 12, 1969 between Churchill Falls (Labrador) Corporation (**CF(L)Co**) and Hydro-Québec, Hydro-Québec has the exclusive right to purchase all available capacity and any power produced at the generating station of Upper Churchill, as defined in Section 1.1 of the original Power Contract and the Renewed Power Contract (in the definition for "Plant") and as maintained in accordance with subsections 4.2.4 of the original Power Contract and 4.1.4 of the Renewed Power Contract (Plant), with the exception of the capacity and power associated with [the Recall and TwinCo blocks].
>
> [1151] **DECLARES** that the rights conferred on Hydro-Québec under subsection 4.1.1 of the Renewed Power Contract, including its right to programming and planning the capacity and power, are in no way limited, circumscribed or restricted on a monthly basis to the purchase of blocks subjected to a cap the quantity of which would be established based on the notion of "Continuous Energy" provided for in the Renewed Power Contract,

and that they may be exercised in respect of all capacity available and all energy produced at the Generating Station, excluding the capacity and power associated with the 300 MW Recall Block and the Twinco Block.

[1152] **DECLARES** that pursuant to the Renewed Power Contract, Hydro-Québec is not compelled to limit its requests for power delivery to the blocks subjected to a monthly cap the quantity of which would be established based on a notion of “Continuous Energy” provided for in the Renewed Power Contract.

[1153] **DECLARES** that pursuant to the Renewed Power Contract, CF(L)Co is under the obligation to deliver to Hydro-Québec, at the latter’s request, any available capacity and any power produced at the Generating Station, with the exception of the capacity and power associated with the Twinco Block and the 300 MW Recall Block.

[1154] **DECLARES** that until August 31, 2041, CF(L)Co shall have no right over any quantity of capacity and power produced at the Generating Station with the exception of the capacity and power associated with the 300 MW Recall Block and the Twinco Block.

[1155] **DECLARES** that until August 31, 2041, CF(L)Co may not sell to a third party, including NLH, any quantity whatsoever of capacity and energy in excess of the quantities associated with the 300 MW Recall Block, and this regardless of the fact that the said sales are carried out on a firm or supposedly “interruptible” basis.

5. Quebec Court of Appeal

Both parties’ arguments on appeal largely repeat their legal arguments from trial.

CFLCo focuses on the interpretation of the Renewal Contract. It argues that the trial judge ignored the clear terms of the Renewal Contract, reading in an ambiguity where there was none. It defends its 2012–2015 interruptible sales briefly, arguing that they constituted a new energy product and their sale did not interfere with Hydro-Quebec’s rights.

CFLCo also argues that, even if the trial judge was correct on both points, his ultimate declarations were overbroad and far beyond the submissions of the parties.

Hydro-Québec stresses the value of the Churchill Falls Plant's operational flexibility to Hydro-Québec and how fixed monthly blocks of power would eliminate the Churchill Falls' reservoirs' ability to control the seasonal timing of power. It also stresses that Hydro-Québec bore much of the risk of the contract; that CFLCo's interpretation would place some hydrological risk on Hydro-Québec; and evidence that CFLCo's interpretation of the contract was formed around 2008–2009.

In response to CFLCo's argument that the trial judge's declarations were overbroad, Hydro-Québec argues that the trial judge's declarations must be read in light of his reasons, and "it is clear that he did not wish to rule on hypothetical scenarios".

6. Interaction between Decision and Water Management

How Justice Castonguay's declarations affect Nalcor's water management agreement is controversial.

Philip Raphals, the Executive Director of the Helios Centre, filed a submission to the Public Utilities Board suggesting that the Quebec decision would make the water management agreement ineffective (P-1468). He interpreted Justice Castonguay's first declaration, that "Hydro-Québec has the exclusive right to purchase all available capacity and any power produced at the generating station of Upper Churchill" as meaning that "Nalcor cannot claim deliveries of banked energy without adversely affecting a provision of the HQ Power Contract". He concluded that "the [Water Management Agreement] is like a bank account to which Nalcor can deposit, but from which it cannot withdraw".

Another perspective is that the Quebec litigation concerned two discrete issues—interruptible sales and the meaning of "continuous energy"—and has no bearing on water management. Stan Marshall, Nalcor's CEO at the time of the decision, was quoted as saying that it "will have no major impact on Muskrat Falls whatsoever" (P-1474).

Another perspective is that the interpretation of "continuous energy" will allow Hydro-Québec more flexibility in scheduling production at Churchill Falls, and thus affect the flow of water at Muskrat Falls, but that the ruling will still allow the water management agreement to operate. For example, Justice Castonguay summarized the testimony of Ed Martin, Nalcor CEO during the trial, as being that CFLCo's interpretation of the Renewal Contract "would, to a certain point, guarantee (depending on water availability of course) stability in Muskrat Falls' production." If CFLCo's interpretation is rejected on appeal, that guarantee will no longer be available.

7. Issues for the Commission

In an *in camera* hearing on November 30, 2018, the Commission will hear and consider the legal position and strategy on water management, including questions such as:

1. Why did Nalcor and the Newfoundland and Labrador government choose this water management strategy? What other strategies were available—for example, a negotiated agreement or an early constitutional reference—and what were the costs and benefits of each? Was the strategic choice reasonable?

2. What risks did this water management strategy entail? Were these risks known and communicated to senior decision-makers or the public?

3. How might the declarations in the Quebec litigation, if upheld, affect the operation of the water management agreement?

4. Practically speaking, how might the various legal possibilities affect the energy and capacity of the Muskrat Falls Generating Station?