

NLH-LAB-015. Re: “Newfoundland and Labrador Hydro’s Proposed Network Addition Policy and Transmission Expansion Study”, Section 4.5, page 55.

“However, the TES as filed is inadequate to support the NAP because:

- 1) While the Baseline Coincident Peak forecast is clearly set out (in Table 3 on page 11 of the TES), the “various load growth scenarios” called for in the definition of the Transmission Expansion Plan are not clearly set out;
 - 2) The Transmission Upgrades required to serve various load growth scenarios are not clearly set out in the TES, nor are their costs.”
- a) Please provide a detailed description of an improved methodology for the establishment of ranges of load growth scenarios beyond the baseline forecast. Please include how Newfoundland and Labrador Hydro should define the capacity and energy requirements of speculative unknown customers.
 - b) Please provide a detailed description of an improved methodology for the completion of system impact studies for speculative loads beyond the baseline load forecast. Descriptions should define how Newfoundland and Labrador Hydro should perform system analysis, identify transmission system upgrade requirement, develop detailed cost estimates, and determine existing customer impacts for the interconnection of unknown customers at undefined locations.
 - c) Please provide commentary of the number of such studies that should be carried out for Labrador East and Labrador West to clearly set out load growth scenarios to allow for the development of a Transmission Expansion Study that is adequate to support the Network Additions Policy.

RESPONSE:

Mr. Raphals states:

Hydro appears to have misunderstood the referenced passage, which concerned not the transmission planning methodology but rather the relationship between the Labrador Transmission Expansion Study (TES) filed on Oct. 31, 2018 (and revised on Nov. 5, 2018) and the Transmission Expansion Plan referenced in the NAP.

Since Hydro states in NAP that, “Hydro filed its Transmission Expansion Plan for the LIS on October 31, 2018”²⁴, it appears to consider the TES to be the Transmission Expansion Plan. However, the NAP defines the

²⁴ NAP, Appendix B, page 18 of 23.

Transmission Expansion Plan as follows:

The Transmission Expansion Plan identifies Transmission Upgrades required to serve various load growth scenarios and the estimated costs to implement each upgrade.

I have been unable to locate a clear statement in the TES of these “various load growth scenarios”, or of the estimated costs to implement the upgrades required to meet each scenario.

Furthermore, nothing in the TES suggests that it will be updated annually, as required by Appendix B of the NAP:

Hydro performs an annual assessment of the previous Transmission Expansion Plan for the LIS based on its current demand forecast. This assessment allows for the determination of the timing of transmission system additions and modifications necessary to ensure safe, reliable, and economical long-term operation. On this basis, a new Transmission Expansion Plan is developed.

It is for these reasons that I concluded that “the TES as filed is inadequate to support the NAP”.

- a) See LAB-NLH-013.
- b) N/A
- c) N/A

ATTACHMENT 1

Policy on Network Upgrades (excerpt)

Direct Testimony of Judy W. Chang

On Behalf of Hydro-Québec TransÉnergie

APRIL 30, 2014

20 **II. General Principles Used in Network Upgrade Policies in the U.S.**
21 **Centers on Open Transmission Access and Protecting**
22 **Transmission Customers from Undue Cost Burdens**

23 Transmission providers typically recover the costs of network upgrades that result from
24 customers' transmission service requests through charges that are either: a) "rolled-in" with
25 existing transmission costs that all customers pay over time; or b) assigned to and paid for by

1 the requesting transmission customer, or group of customers, in the form of direct
2 “contributions” or incremental rates. Using these two methods allows transmission providers
3 to distinguish between the costs that are shared across all customers and those assigned to
4 specific users.

5 The network upgrade policies in the U.S. center on protecting existing transmission
6 customers from excess costs induced by network upgrades associated with customers
7 requesting transmission services. This section describes the high-level principles.

8 As a part of U.S. electricity industry restructuring in the 1990s, FERC outlined its
9 transmission pricing policy. FERC indicated a desire to ensure that its “transmission pricing
10 policies promote economic efficiency, fairly compensate utilities for providing transmission
11 services, reflect a reasonable allocation of transmission costs among transmission users, and
12 maintain the reliability of the grid.”³ More specifically, FERC identified five principles for
13 evaluating transmission pricing proposals. In a 1995 Order to clarify its 1994 transmission
14 pricing policy, FERC stated the following:

15 The first principle is that transmission pricing should conform to the traditional
16 embedded cost revenue requirement. However, the Commission also provided
17 procedures whereby utilities can propose rates that do not conform to the
18 traditional revenue requirement and thus do not meet the first principle, i.e., non-
19 conforming proposals. The second principle requires that any new transmission
20 pricing proposal, conforming or non-conforming, must meet the Commission's
21 comparability standard. The remaining three principles (concerning economic
22 efficiency, fairness, and practicality) reflect goals that an applicant must try to
23 meet, but that may need to be balanced against one another in the Commission's
24 determination of whether the proposed rates are just and reasonable.⁴

25 At the time of restructuring, FERC’s primary policy objective was to ensure that transmission
26 providers offered non-discriminatory open access to the transmission network, particularly

³ See Policy Statement, FERC, Docket No. RM93-19-000, October 26, 1994, pp. 1-2.

⁴ See Order on Reconsideration and Clarifying Policy Statement, FERC Docket No. RM93-19-001, May 22, 1995, pp.1-2, footnote omitted.

1 for customers that were not traditional native load. However, since native load customers,
2 prior to restructuring, had funded (and were going to continue to fund) the infrastructure
3 that made the delivery of power to them possible, FERC also wanted to ensure that existing
4 transmission users would not be unduly harmed by costs imposed by customers requesting
5 transmission service involving network upgrades that could increase the embedded costs of
6 the system. Thus, FERC's initial "higher of" policy was designed to ensure that existing (and
7 growing) native load was protected, while the wholesale market developed, allowing new
8 customers to interconnect to the existing transmission network that was predominantly
9 funded by existing native load. In a policy statement in the mid-1990s, FERC stated that one
10 of the goals of its new pricing policy was "to hold native load customers harmless."⁵

11 Under the FERC's "higher of" policy, a transmission customer's service request that requires
12 transmission upgrades would pay the higher of the "embedded cost" or "incremental cost" of
13 the upgrade. As part of its Order No. 890, FERC clarified its position expressed in the earlier
14 restructuring Order No. 888 by stating:

15 Under the Commission's "higher of" pricing policy, when the requested
16 transmission service requires network upgrades, the transmission provider should
17 calculate a monthly incremental cost transmission rate using the revenue
18 requirement associated with the required upgrades and compare this to the
19 monthly embedded cost transmission rate, including the expansion costs. This
20 incremental rate should be established by amortizing the cost of the upgrades over
21 the life of the contract.⁶

22 The FERC transmission policy regarding cost recovery for network upgrades is that a
23 transmission provider can charge a customer, either a new or an existing customer requesting

⁵ See Policy Statement, FERC Docket No. RM93-19-000, October 26, 1994, footnote 7 where the FERC referenced prior decisions that articulated three of its goals governing requests for firm transmission service: (1) to hold native load customers harmless, (2) to provide the lowest reasonable cost-based price to third-party firm transmission customers, and (3) to prevent the collection of monopoly rents by transmission owners and promote efficient transmission decisions.

⁶ FERC Order No. 890, February 16, 2007, paragraph 870, pp. 508-509, footnotes omitted.

1 additional transmission service, the higher of the incremental cost of transmission or the
2 embedded cost, but not both.⁷ This means that if the incremental cost transmission rate is
3 greater than the embedded cost transmission rate (including upgrade costs), the transmission
4 provider has the option to charge the requesting customer the incremental cost of the
5 upgrade. If the incremental cost transmission rate is less than the embedded cost
6 transmission rate (including the upgrade cost), the transmission provider can charge the
7 embedded cost transmission rate.

8 Overall, FERC’s “higher of” policy aims to balance the interest of all transmission customers
9 because if the incremental transmission cost of the upgrade is lower than the embedded cost,
10 then the customer requesting the transmission service would pay the same rate for
11 transmission service as all other customers, while reducing the average rate and benefitting
12 all customers. On the other hand, if the incremental transmission cost of the upgrade is
13 greater than the embedded cost of transmission, then the transmission provider could require
14 the customer requesting the transmission service to pay more than the embedded-cost rate,
15 and thereby cover the incremental cost and, thus, protectZ the interest of all other customers.

⁷ See Policy Statement, ERC, Docket No. RM93-19-000, October 26, 1994, p. 5.