

1 Q. **Re: RRAS, 2019 Update, Vol. III, page 43-44 (159-160 pdf)**

2 Citation 1 (Vol. 1, page 4):

3 From an energy perspective, Hydro completed an assessment of its ability to meet firm energy
4 requirements in consideration of firm hydraulic energy sequences.

5 Citation 2 (Vol. III, page 43):

6 7.3 Energy Criteria

7 The proposed energy criterion is that there must be adequate firm generation on the system to
8 supply firm load on an annual basis.

9 Energy: The Newfoundland and Labrador Interconnected System should have sufficient
10 generating capacity to supply all of its firm energy requirements with firm system capability.

11 a) Please confirm that Hydro has no energy reliability criterion for either the IIS or the LIS.

12 b) Please explain how Hydro carries out energy planning for these two regions, taking into
13 account their separate status with respect to cost-of-service studies and rates.

14 c) Please confirm that Hydro does not evaluate energy reliability on a sub-annual basis, or
15 explain how it does.

16 d) Please explain how Hydro takes reservoir storage and limitations into account in its energy
17 planning.

18 e) Please indicate where in the RRAS (and its update) the following elements can be found or,
19 if they are not included, please provide :

20 i. The 10-year energy balance (indicating supply and demand, year by year) for the IIS;

21 ii. The 10-year energy balance for the LIS; and

22 iii. The 10-year energy balance for the NLIS.

1 A. a) It is not confirmed that Newfoundland and Labrador Hydro (“Hydro”) has no energy
2 reliability criterion for either the Island Interconnected System or the Labrador
3 Interconnected System.

4 In the current system, Hydro’s energy planning criteria specifies that the Island
5 Interconnected System should have sufficient generating capacity to supply all of its firm
6 energy requirements with firm system capability. For the future system, Hydro has proposed
7 that this criterion be extended to cover the entire Newfoundland and Labrador
8 Interconnected System. There is no requirement for sub-regional energy planning criteria, as
9 discussed in Hydro’s response to LAB-NLH-003.

10 b) Energy planning is conducted using Vista Decision Support System (“Vista”). Vista is a
11 software program used to provide medium- to long-term water storage and energy
12 generation management that guides water operations, hydrothermal generation, and
13 energy transactions. The energy requirements of the load forecasts and the hydraulic record
14 are used by the Vista model to generate a forecast of hydraulic generation which is then
15 used in the reliability model, as described in Volume I, Section 1.3 of Hydro’s 2018 Filing, to
16 develop operating parameters for hydraulic generation.

17 As discussed in Hydro’s response to LAB-NLH-006, other regulatory mechanisms including
18 the cost-of-service studies and establishment of rates do not have bearing on system
19 planning exercises.

20 c) Hydro does evaluate energy reliability on a sub-annual basis through establishment of
21 minimum storage limits. Please refer to Hydro’s response to IC-NLH-003 for additional detail
22 on how minimum storage limits are established.

23 d) Please refer to Hydro’s response to part c).

24 e) Hydro does not conduct energy planning on a sub-regional basis and as such has not
25 prepared energy balance information in response to parts i. and ii. With respect to part iii.,
26 as presented by Nalcor Energy in response to Requests for Information as part of the Rate
27 Mitigation Options and Impacts Reference, annual exports are forecast to exceed 3 TWh

1 through the study period.¹ Given the significant surplus of energy on the system after
2 Muskrat Falls is in service, and the energy surplus is sufficient to supply system demand and
3 contracted sales, the energy balance was not explicitly studied as a part of the Reliability
4 and Resource Adequacy Study, rather modelling exercises were undertaken to ensure all
5 customer and system requirements were satisfied through the study period.

¹ <http://www.pub.nl.ca/2018ratemitigation/responses/PUB-Nalcor-063.pdf>