

1 Q. **Reference: RRAS, 2022 Update, Vol. I, page 32 (56 pdf)**

2 Citation:

3 As noted in the 2018 Filing, the assessment of the firm plant output of the
4 Muskrat Falls Hydroelectric Generating Facility will continue to be analyzed as it
5 continues to operate. ⁸³ If it is determined that the Muskrat Falls Hydroelectric
6 Generating Facility is proven capable of rated output (i.e., 824 MW) through the
7 winter, the operational reserve requirements will increase from 296.5 MW to
8 309 MW.⁸⁴

9 a) Please confirm that, as the Muskrat Falls Hydroelectric Generating Facility (MFHGS) has very
10 limited storage, its production at any given time depends largely on actual inflows into the
11 MFHGS.

12 b) Please confirm that, for the MFHGS to provide its rated output of 824 MW through the
13 winter, the physical output of the plant will have to be supplemented during many hours by
14 energy provided from the Churchill Falls Hydroelectric Generating Facility (CFHGS) as
15 provided for under the Water Management Agreement between Nalcor and CFLCo. If not
16 confirmed, please explain in full.

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19 A. a) The Muskrat Falls Hydroelectric Generating Facility is a run-of-river hydroelectric facility,
20 which means that production depends largely on inflows to the reservoir; however, the
21 Muskrat Falls reservoir has sufficient storage to optimize daily production around periods of
22 high and low electricity demand. The Muskrat Falls Hydroelectric Generating Facility can
23 draw upon the usable storage to temporarily increase production above what would be
24 possible from inflows alone during hours of peak electricity demand. Production can be
25 decreased during periods of low electricity demand to refill the reservoir. The Muskrat Falls
26 reservoir will typically draw down and return to full storage within a 24-hour period while
27 operating in this manner but these cycles will vary depending on electricity demand.

28 b) The Muskrat Falls Hydroelectric Generating Facility is not reliant on the Churchill Falls
29 Hydroelectric Generating Facility to supplement its production. The Muskrat Falls

1 Hydroelectric Generating Facility can draw upon its reservoir storage to temporarily increase
2 production above what would be possible from inflows alone during hours of peak
3 electricity demand, up to its rated output of 824 MW. Production can be decreased during
4 periods of low electricity demand to refill the reservoir. The Water Management Agreement
5 allows the Churchill Falls and Muskrat Falls Hydroelectric Generating Facilities to meet the
6 other's delivery requirements for the primary benefit of optimizing the use of water on the
7 Churchill River. The Water Management Agreement allows the Muskrat Falls Hydroelectric
8 Generating Facility to reduce spill releases when it has excess water by generating electricity
9 to meet Churchill Falls Delivery Requirement. That creates a positive balance of banked
10 energy belonging to Muskrat Falls in the Churchill Falls reservoir. Churchill Falls can then
11 generate electricity (subject to the amount of banked energy and the quantity of capacity
12 available at Churchill Falls that is not contractually committed) to meet Muskrat Falls
13 Delivery Requirements when opportunities to use the energy become available.