

1 Q. **Reference: Request for Additional Information – Hydro’s Reply, October 16, 2025, page 2.**

2 “Despite this performance improvement, the concerns regarding the floating rim design are still
3 valid, as more frequent or longer duration overspeed events have the potential to result in
4 similar balance issues.

5 The 2004 GE Hydro Report uprate proposals included an estimate for a replacement spider
6 designed to transmit the increased power generated by the uprated runner, and with a modern
7 key system to maintain the balance during overspeed.

8 Hydro does not plan to replace the spider as part of the life extension project.”

9 a) Explain why Hydro does not plan to replace the spider as part of the life extension
10 project, including the impact on the risk profile of Unit 7 if the spider were to be
11 replaced.

12 b) Provide a budget estimate for including the spider replacement as part of the life
13 extension project.

14
15
16 A. a) Newfoundland and Labrador Hydro (“Hydro”) does not plan to replace the spider as part of
17 the Bay d’Espoir Unit 7 Life Extension Project (“Life Extension Project”) because rotor rim
18 movement has been successfully managed for close to 50 years. In the early life of the unit’s
19 operation, rebalancing was a significant issue. Following the addition of guide blocks in
20 1992, the problem became less acute, and with maintenance work in recent years,
21 rebalancing has not been necessary for a considerable time. The last major rebalancing
22 occurred in 2014. As Hydro has successfully managed the issue to date with minimal cost
23 and downtime, the significant expenditure necessary to correct it would not be in line with
24 Hydro’s mandate to provide least-cost, reliable service.

25 Inclusion of the rotor spider replacement in the Life Extension Project would extend the
26 outage for Unit 7. A new rotor cannot ship in one piece and must be welded together at the

site, followed by assembly and shrinking of the rim, installation of poles and other equipment. This would take up a large portion of the service bay and interfere with the other turbine and generator work. If the replacement of the rotor spider was added to the scope, consideration would have to be given to executing the work in stages over two distinct outage windows in multiple years, or through a single extended outage that would result in Unit 7 being unavailable through part or all of the winter readiness period.

b) Budgetary Class 5 estimated costs for the spider replacement are presented in Table 1.

Table 1: Class 5 Estimated Costs for Spider Replacement (\$)

Item	Estimated Amount
Base Cost of Spider Replacement	1,577,522
Indirect Costs Associated with Spider Replacement	590,308
Allowance for Found Work Associated with Spider Replacement	157,752
Total for Spider Replacement (Exclusive of Interest During Construction, Escalation, Contingency, and Management Reserve)	2,325,583

It is important to note that the cost estimate does not reflect the anticipated execution and constructability challenges associated with the additional proposed scope, and would require further analysis to determine the associated budget implications. For example, there is a high likelihood that the project would require construction over two distinct outage windows in 2028 and 2029, or alternatively, through a single extended outage that would continue into the winter load period, beyond the current planned October 2028 completion date.¹

There are also physical limitations at the site, including restricted handling and laydown areas, as well as limited working space. These conditions differ significantly from those assumed in the Life Extension Application and introduce material risks to the required scheduled return to service and the potential impacts to system reliability during peak demand periods.

¹ Please refer to Hydro's response to PUB-NLH-009 of this proceeding for further information on contingency planning for continuation beyond the planned completion date in 2028.

- 1 Any changes to the project execution plan or proposed construction duration identified in
- 2 the Life Extension Application would need to be investigated further to understand the full
- 3 extent of impacts to the overall project budget.