

**NEWFOUNDLAND AND LABRADOR  
BOARD OF COMMISSIONERS OF PUBLIC UTILITIES**

**AN ORDER OF THE BOARD**

**P.U. 16(2025)**

1 **IN THE MATTER OF** the **Electrical Power**  
2 **Control Act, 1994**, SNL 1994, Chapter E-5.1  
3 (the “**EPCA**”) and the **Public Utilities Act**,  
4 RSNL 1990, Chapter P-47 (the “**Act**”), as  
5 amended, and regulations thereunder; and  
6

7 **IN THE MATTER OF** an application by  
8 Newfoundland and Labrador Hydro for  
9 approval of capital expenditures for the  
10 purchase and installation of a runner at  
11 the Cat Arm Hydroelectric Generating  
12 Station pursuant to section 41(3) of the  
13 **Act**.  
14  
15

16 **DECISION SUMMARY**  
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18 The application for proposed capital expenditures for the purchase and installation of a new  
19 Pelton runner for Unit 2 at Cat Arm Hydroelectric Generation Station (“Cat Arm”) located on the  
20 Northern Peninsula, in the amount of \$4,949,800 is not approved. The Board finds that Hydro has  
21 not demonstrated that the proposed project would result in power being delivered to customers  
22 at the lowest possible cost, in an environmentally responsible manner, consistent with reliable  
23 service. In particular, the Board finds that the potential refurbishment of the Unit 1 Pelton runner  
24 to be used as a replacement runner for Unit 2 has not been sufficiently investigated.  
25

26 **APPLICATION**  
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28 On February 19, 2025 Newfoundland and Labrador Hydro (“Hydro”) filed an application with the  
29 Board requesting approval of capital expenditures in the amount of \$4,949,800 (\$747,900 in  
30 2025, \$2,462,100 in 2026, and \$1,739,800 in 2027) for the purchase and installation of a new  
31 Pelton runner at Cat Arm Unit 2 (“Application”).  
32

33 The Application stated that Cat Arm houses two hydroelectric generating units, both rated with a  
34 capacity of 67.5 megawatts, for a total plant output of 680 gigawatt-hours annually. Each unit has

1 a Pelton runner installed, which has been in service since Cat Arm was synchronized in 1985.  
2 Hydro has one spare Pelton runner in its spare inventory.

3  
4 During an annual unit outage in late 2023, Hydro executed field inspections and reviews of the  
5 turbine components in Cat Arm. Hydro completed this work in consultation with the turbine  
6 original equipment manufacturer (“OEM”).<sup>1</sup> The inspections concluded that the runners on Cat  
7 Arm Unit 1 and Cat Arm Unit 2 were at the end of their life cycle and needed to be replaced due  
8 to increased operational risk caused by excessive cavitation. As the OEM was not on site for the  
9 inspections in 2023, Hydro engaged a third-party expert, GE Vernova Inc. (“Vernova”), to conduct  
10 on-site inspections in 2024. Vernova confirmed each runner was at the end of its useful life and  
11 recommended replacement of the Unit 1 runner within 12 months and replacement of the Unit 2  
12 runner by the end of 2026.

13  
14 During the 2025 annual unit outage, Hydro intends to replace the Unit 1 runner with the spare  
15 runner from its inventory under the Hydraulic In-Service Failure Program. Given that Hydro only  
16 has one spare runner in inventory and considering procurement lead times, Hydro proposed the  
17 procurement of a new replacement runner for installation on Unit 2. The proposed project  
18 schedule indicated that procurement and installation contracts be awarded in 2025 and 2026  
19 respectively with commissioning of the new runner on Unit 2 to be completed in October 2027.

20  
21 Hydro stated that it plans to apply to replenish its capital spare inventory with a Pelton runner in  
22 its 2026 Capital Budget Application. Hydro indicated that a cost-benefit analysis will be conducted  
23 on the current Unit 1 runner to determine if refurbishment or a new runner is the least-cost  
24 option for a spare.<sup>2</sup>

25

## 26 **PROCESS**

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28 The Application was copied to Newfoundland Power Inc. (“Newfoundland Power”), a group of  
29 industrial customers (the “Island Industrial Customer Group”),<sup>3</sup> a group of communities in  
30 Labrador (the “Labrador Interconnected Group”),<sup>4</sup> and the Consumer Advocate, Dennis Browne,  
31 KC.

32

33 The Board issued requests for information (“RFIs”) which Hydro answered on March 12, 2025.

34

35 On March 18, 2025 Newfoundland Power advised that it had no comment on the Application.  
36 The Board received no other comments.

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38 On March 19, 2025 Hydro requested that the Board approved the Application as filed.

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<sup>1</sup> The OEM was not on site in Cat Arm for the field inspection.

<sup>2</sup> PUB-NLH-010.

<sup>3</sup> The members of the Industrial Customer Group are Corner Brook Pulp and Paper Limited, Braya Renewable Fuels (Newfoundland) GP Inc., and Vale Newfoundland and Labrador Limited.

<sup>4</sup> The members of the Labrador Interconnected Group are the communities of Sheshatshiu, Happy Valley-Goose Bay, Wabush, and Labrador City.

**1 BOARD DECISION**

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3 The Application proposed the purchase and installation of a Pelton runner to replace the Cat Arm  
4 Unit 2 runner with commissioning of the runner scheduled for October 2027. Hydro and two  
5 external consultants, the OEM and Vernova, have concluded that the Pelton runners on both Cat  
6 Arm units have reached the end of their useful life and need to be replaced. The Board accepts  
7 the findings of Hydro and its consultants in relation to the need to replace the Pelton runners.

8

9 Hydro provided an evaluation of three alternatives for the replacement of the Pelton runner on  
10 Cat Arm Unit 2. Hydro stated that deferral was not an option and pursuing a life extension upgrade  
11 was not feasible.<sup>5</sup> Hydro proposed a like-for-like replacement by purchasing a new runner for the  
12 unit.

13

14 The Board notes that Hydro's consultant, Vernova, recommended that after removal, the Unit 1  
15 runner be sent to a workshop for repair and refurbishment, including full testing to evaluate the  
16 necessary refurbishment and a complete dimensional assessment.<sup>6</sup> However, Hydro did not  
17 propose a like-for-like replacement of the Unit 2 runner with the refurbished runner from Unit 1.

18

19 Hydro stated that the Unit 2 runner replacement was recommended to be complete by the end  
20 of 2026. Delaying the procurement of a replacement runner for Unit 2 until it could be determined  
21 if the Unit 1 runner could be refurbished was not a viable alternative given the time span for  
22 either procurement or refurbishment.<sup>7</sup> However, the Board notes that the proposed schedule  
23 indicates that the new runner will not be installed in Unit 2 until October 2027, which does not  
24 meet the consultant's recommendation to replace the Unit 2 runner by the end of 2026.

25

26 Hydro did not provide a timeline for the assessment and potential refurbishment of the Unit 1  
27 runner for use in Unit 2 and whether this could be completed (i) earlier than or in the same time  
28 frame as the procurement of a new runner for Unit 2 and (ii) at a lower cost. The Board is not  
29 satisfied that Hydro has sufficiently explored the assessment and potential refurbishment of the  
30 Unit 1 runner as a like-for-like replacement for Unit 2. The Board finds that without this evidence  
31 it is not possible to assess whether the proposed project would result in power being delivered  
32 to customers at the lowest possible cost, in an environmentally responsible manner, consistent  
33 with reliable service.

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35 The Board notes that Hydro and Vernova both stated that the condition of the Unit 2 runner was  
36 generally much better than that of Unit 1.<sup>8</sup> With the proposed replacement of the Unit 2 runner  
37 not occurring until 2027, the Board also expects that Hydro would assess the possibility of  
38 refurbishment of this asset prior to proposing the purchase of a new Pelton runner to be placed  
39 in the critical spare inventory.

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<sup>5</sup> Application, dated February 19, 2025, Schedule 1, page 6.

<sup>6</sup> PUB-NLH-007, Attachment 1, page 35.

<sup>7</sup> PUB-NLH-010.

<sup>8</sup> PUB-NLH-004; PUB-NLH-007.

1 The Board has previously requested information on Hydro’s asset management practices.<sup>9</sup> The  
2 Board notes that Hydro has been aware of the light cavitation issues with both runners since 2014  
3 and that the OEM indicated in a 2023 report that both runners needed replacement.<sup>10</sup> The Board  
4 also notes that Hydro stated that, during the 2023 annual outage, while there were no indications  
5 that the risk of failure of the runners was imminent, the risk associated with failure was elevated  
6 and that to mitigate that risk, Hydro monitored key indicators on the unit.<sup>11</sup> Hydro has determined  
7 that due to procurement times, the Unit 2 runner will now be replaced in 2027, not in 2026 as  
8 recommended by its consultant. Given the age of these assets and their service life, Hydro should  
9 have been aware that replacement would be needed and a phased approach should have been  
10 developed for replacing the runners which would permit time to assess the least cost approach  
11 for runner replacement. The Board will continue to investigate and monitor Hydro’s asset  
12 management practices.

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14 Hydro has not demonstrated in the Application that it has fully evaluated the alternative of  
15 refurbishment of the Unit 1 runner. The Board believes approval of the purchase of new  
16 replacement runner for Unit 2 is premature without an assessment of whether refurbishing the  
17 Unit 1 runner could be completed and installed in a similar time frame.

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20 **IT IS THEREFORE ORDERED THAT:**

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22 1. The proposed capital expenditures in the amount of \$4,949,800 for the purchase and  
23 installation of a new Pelton runner at Cat Arm Hydroelectric Generation Station Unit 2 is not  
24 approved.

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26 2. Hydro shall pay all expenses of the Board arising from this Application.

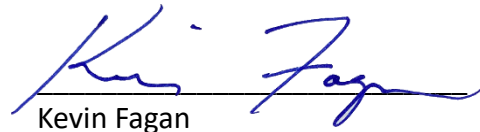
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<sup>9</sup> PUB-NLH-063, PUB-NLH-064 and PUB-NLH-065 in Hydro’s 2024 Capital Budget Application.

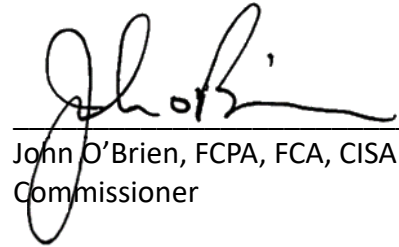
<sup>10</sup> Application, dated February 19, 2025, Schedule 1, pages 3 and 4.

<sup>11</sup> Application, Schedule 1, page 1; PUB-NLH-008.

**DATED** at St. John's, Newfoundland and Labrador, this 14<sup>th</sup> day of April 2025.



Kevin Fagan  
Chair and Chief Executive Officer



John O'Brien, FCPA, FCA, CISA  
Commissioner



Christopher Pike, LL.B., FCIP  
Commissioner



Jo-Anne Galarneau  
Executive Director and Board Secretary