

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

AN ORDER OF THE BOARD

NO. P.U. 22(2026)

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

IN THE MATTER OF an application by Newfoundland and Labrador Hydro for approval of capital expenditures for section replacement and weld refurbishment of Penstock 3 at the Bay d’Espoir Hydroelectric Generating Facility, pursuant to section 41 of the **Act**.

DECISION SUMMARY

The Board approves capital expenditures proposed by Newfoundland and Labrador Hydro for section replacement and weld refurbishment of Penstock 3 at the Bay d’Espoir Hydroelectric Generating Facility in the amount of \$77,462,128. The Board finds that the Penstock 3 refurbishment will reduce the likelihood of outages at the generating facility and support maintaining reliable service to customers. The Board directs Newfoundland and Labrador Hydro to file updates on the Penstock 3 life extension project in accordance with subsequent direction of the Board.

APPLICATION

On March 13, 2026 Newfoundland and Labrador Hydro (“Hydro”) filed an application seeking approval of supplemental capital expenditures in the amount of \$77,462,128 for section replacement and weld refurbishment of Penstock 3 at the Bay d’Espoir Hydroelectric Generating Facility (“Bay d’Espoir”) over a three-year period (the “Application”).¹ The Application stated that Penstock 3 urgently needs service life-extending work following the identification of additional cracking in welds previously refurbished in 2018. The Application also requested early approval of capital expenditures in the amount of \$1,942,814 for raw steel procurement and line

¹ The project and the 2026 expenditures are supplemental to Hydro’s 2026 Capital Budget in the amount of \$130,343,100 approved in Order No. P.U. 2(2026).

relocation to maintain the overall project schedule and budget and to mitigate risks to the system and project costs (“Early Execution”).²

PROCESS

The Consumer Advocate, Ms. Adrienne Ding (“Consumer Advocate”) and Newfoundland Power Inc. (“Newfoundland Power”) participated in the Application.

On May 11, 2026 Hydro responded to 24 Requests for Information (“RFIs”) filed by the Board, the Consumer Advocate and Newfoundland Power.³

On June 3, 2026 the Consumer Advocate and Newfoundland Power filed comments. The parties did not object to the Application and noted the importance of Bay d’Espoir to the Island Interconnected System. On June 9, 2026 Hydro filed its reply, noting that no party objected to the Application and requested approval of Application as submitted.

BOARD DECISION

In Order No. P.U. 6(2023), the Board accepted that Bay d’Espoir, which is Hydro’s largest generating facility providing 613 MW of electrical capacity and 2,560 GWh of energy, is a critical generating facility.⁴

Penstock 3 has been in service since 1969 supporting Units 5 and 6, which together produce 153 MW of generation. It is approximately 1,200 metres long and ranges in diameter from 17 feet at the intake to 13.5 feet at the powerhouse bifurcation. The penstock is constructed from a series of steel cans that vary in length and plate thickness, and is buried along its entire length, generally by two feet of soil and at least one foot of riprap.

Over the past number of years, Penstock 3 has experienced significant and recurring weld issues requiring inspection and repair. In 2018, Hydro began an annual inspection program of Penstocks 1, 2 and 3 in response to consultant recommendations.⁵ The results of these inspections led to substantial weld refurbishments across all penstocks, including 1,030 metres of weld refurbishment on Penstock 3 in 2018.

Repeated inspections and condition assessments in recent years have consistently identified recurring issues in Penstock 3.⁶ Since 2023, additional weld indications have been found in

² The Board approved the Early Execution expenditures in Order No. P.U. 11(2026).

³ The Board filed 17 RFIs, the Consumer Advocate filed 6 RFIs and Newfoundland Power filed 1 RFI.

⁴ The Board also accepted that Penstock 1 which supplies Units 1 and 2 was required for Hydro to meet established planning criteria and satisfy current customer requirements.

⁵ Level 2 condition assessments were conducted on Penstocks 1, 2 and 3 in 2018, followed by continued annual inspections of the penstocks.

⁶ Hydro filed various engineering reports from consultants Hatch Ltd. and Kleinschmidt Associates for failure investigations, condition assessments and life extension options from 2018 to 2024. See Schedule 1, Attachments 2 through 10 of the Application.

previously repaired areas which suggests that prior weld repairs may have a limited life expectancy.⁷ This has resulted in elevated inspection and repair expenditures in recent years, and demonstrated Hydro's increasing difficulty of sustaining acceptable risk levels through incremental repairs alone.⁸ Over the period 2017 to 2025, Hydro has spent approximately \$6.5 million for inspections and repairs of Penstock 3 and has experienced 24 weeks of outage.⁹

Recurring issues with Penstock 3 have also forced Hydro to implement a more prescriptive operating regime for Units 5 and 6, which has led to sustained operating restrictions including minimum load requirements and limits on cycling.¹⁰ Hydro stated that while this is intended to manage the risk of the asset condition while maintaining system reliability, it also limits Hydro's ability to dispatch unit output to meet system demands, manage system hydrology, and reduce unit output to mitigate the risk of frazil ice.¹¹

Based on the evidence, the Board is satisfied that incremental refurbishment of Penstock 3 is no longer sufficient to manage its condition given the continued emergence of new and recurring weld issues. The Board is satisfied that maintaining status quo presents an unacceptable risk of failure to a critical generating facility.

In 2021, Hydro engaged Kleinschmidt Associates ("Kleinschmidt") to complete a study for Bay d'Espoir Penstock Life Extension which included a comprehensive review of four options to extend the life of Penstock 3:

- Option 1: Status Quo - No refurbishment of the penstock with continued operational maintenance procedures only. Repairs are completed on an as-needed basis.
- Option 2: Weld Refurbishment - Refurbishment of deteriorated circumferential and longitudinal weld seams, including resurfacing and recoating of the penstock interior. Refurbished welds will be selected after inspection of all welds.
- Option 3: Section Replacement and Weld Refurbishment - Replacement of the 17-foot diameter section of penstock plus weld refurbishment and recoating of the interior of the smaller diameter sections of penstock. All welds will be inspected.
- Option 4: Weld Reinforcement - Refurbishment of deteriorated welds, recoating of the entire interior of the penstock and reinforcement of the longitudinal and circumferential welds in the 17-foot diameter penstock section with reinforcing plates.

Kleinschmidt's analysis determined that Option 3: Section Replacement and Weld Refurbishment would provide the greatest level of risk mitigation and the highest level of reliability among the

⁷ The 2023 inspection identified nine cans with weld indications, the 2024 inspection identified six cans with weld indications and the 2025 inspection identified 13 cans with weld indications. The majority of these indications were identified in previously repaired welds.

⁸ Application, Schedule 1, pages 10-11.

⁹ Application, Schedule 1, page 12.

¹⁰ Units 5 and 6 are limited to a minimum unit loading of 50 MW up to the unit maximum once dispatched and are not cycled or shut down as part of normal system operations. A similar limitation was also implemented for Units 1 and 2 due to the rupture history and condition of Penstock 1 and remained in place until capital refurbishment work was substantially complete in 2025.

¹¹ Application, Schedule 1, pages 7-8.

1 available options. It was also the only option that would adequately address the weld peaking
 2 and fatigue issues identified in Penstock 3 and allow Units 5 and 6 to return to normal
 3 operation.¹²

5 Hydro identified Option 3: Section Replacement and Weld Refurbishment as being the lowest
 6 cost, technically feasible option that would return Penstock 3 to safe and reliable operations and
 7 eliminate current operational constraints. Hydro noted that condition assessments could also be
 8 reduced to a more appropriate, less frequent inspection cycle as a result of this work. Hydro also
 9 noted that this option presents the lowest risk, while providing the highest reliability, as
 10 evidenced by its risk assessment of the project options.¹³

12 The Board accepts that section replacement and weld refurbishment is the lowest cost,
 13 technically feasible option and notes that this is the same option approved for the Penstock 1
 14 refurbishment. The Board notes that the cost estimate was developed by Hydro based on the
 15 Penstock 1 refurbishment and includes adjustments for lessons learned, scope and quantity
 16 differences, actual contract costs, and appropriate unit rates. The Board notes that the parties
 17 did not object to the approval of the proposed section replacement and weld refurbishment of
 18 Penstock 3 and that both the Consumer Advocate and Newfoundland Power emphasized that
 19 Bay d’Espoir is critical to the reliable operation of the Island Interconnected System and that
 20 Penstock 3 is an essential component in supplying 153 MW of generation. The Board finds that
 21 the Penstock 3 refurbishment will reduce the likelihood of outages at the generating facility and
 22 support maintaining reliable service to customers. The Board is satisfied that the section
 23 replacement and weld refurbishment for Penstock 3 is reasonable and necessary for the
 24 continued provision of adequate and reliable service on the Island Interconnected System and
 25 should be approved.

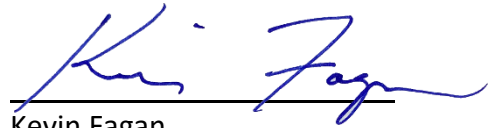
28 **IT IS THEREFORE ORDERED THAT:**

- 30 1. The proposed capital expenditures in the amount of \$77,462,128 for the section replacement
 31 and weld refurbishment of Penstock 3 at the Bay d’Espoir Hydroelectric Generating Station
 32 are approved.
- 34 2. Hydro shall provide updates on the execution of the Penstock 3 life extension project in
 35 accordance with subsequent direction of the Board.
- 37 3. Hydro shall pay all expenses of the Board arising from this Application.

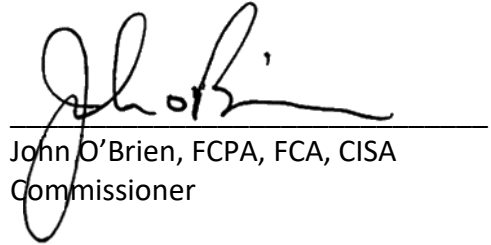
¹² Application, Schedule 1, page 22.

¹³ Application, Schedule 1, pages 16-17.

DATED at St. John's, Newfoundland and Labrador, this 9th day of July, 2026.



Kevin Fagan
Chair and Chief Executive Officer



John O'Brien, FCPA, FCA, CISA
Commissioner



Christopher Pike, LL.B., FCIP
Commissioner



Mike McNiven
Board Secretary