

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

AN ORDER OF THE BOARD

NO. P.U. 12(2023)

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 a capital expenditure for the
10 purchase and replacement of last stage
11 blades for Units 1 and 2 at the Holyrood
12 Thermal Generating Station, pursuant to
13 section 41 of the **Act**.
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15

16 **WHEREAS** Newfoundland and Labrador Hydro (“Hydro”) is a corporation continued and existing
17 under the **Hydro Corporation Act, 2007**, is a public utility within the meaning of the **Act**, and is
18 also subject to the provisions of the **EPCA**; and
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20 **WHEREAS** section 41 of the **Act** states that a public utility shall not proceed with the construction,
21 purchase or lease of improvements or additions to its property where:
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- 23 a) the cost of construction or purchase is in excess of \$50,000; or
24 b) the cost of the lease is in excess of \$5,000 in a year of the lease
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26 without prior approval of the Board; and
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28 **WHEREAS** in Order No. P.U. 2(2023) the Board approved Hydro’s 2023 Capital Budget in the
29 amount of \$90,828,700; and
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31 **WHEREAS** the Board approved supplementary 2023 capital expenditures in Order No. P.U.
32 6(2023) in the amount of \$2,105,000 for the section replacement and weld refurbishment of
33 Penstock 1 at the Bay d’Espoir Hydroelectric Generating Station; and
34

35 **WHEREAS** on March 29, 2023 Hydro filed an application requesting approval of a capital
36 expenditure of \$6,408,700 for the replacement of the last stage blades on Units 1 and 2 at the
37 Holyrood Thermal Generating Station (“Holyrood TGS”) including the purchase of a second set of

1 last stage blades and an in-situ inspection of the Unit 2 turbine last stage blades (the
2 “Application”); and

3

4 **WHEREAS** as part of the Holyrood TGS Condition and Assessment and Life Extension Study, Hatch
5 Ltd., with support from the original equipment manufacturer, General Electric (“GE”), completed
6 an assessment of the turbine blades that showed cracking on a last stage blade on Unit 1 and
7 recommended replacement of the last stage blades for Unit 1 and 2; and

8

9 **WHEREAS** to support the reliable and safe operation of the Holyrood TGS until March 31, 2024,
10 Hydro determined that the purchase of one set of last stage blades to be used in the event of
11 failure was required and in Order No. P.U. 17(2022) the Board approved a capital expenditure of
12 \$1,578,900 to purchase one set of last stage blades to serve as capital spares for Units 1 and 2 at
13 the Holyrood TGS; and

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15 **WHEREAS** the Application stated that the operation of the Holyrood TGS is now required as a
16 bridging solution until alternative long-term supply options become available; and

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18 **WHEREAS** with the operational extension of the Holyrood TGS past March 31, 2024 Hydro sought
19 further clarification on GE’s recommendation to replace the last stage blades on Unit 1 and 2 and
20 in February, 2023 GE continued to recommend that Hydro proceed to replace the last stage
21 blades on Unit 2 as well; and

22

23 **WHEREAS** the Application stated that cracking of turbine blades could lead to unacceptable
24 operational vibration in the turbine, forcing the unit offline and could also lead to extensive
25 damage to the unit and possible steam release into the powerhouse; and

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27 **WHEREAS** Hydro proposes to perform an in-situ inspection of Unit 2 to determine if repairs or
28 replacement of the last stage blades are required imminently; install the previously procured last
29 stage blades on Unit 1 and purchase a second set of last stage blades in 2023 and install the newly
30 purchased last stage blades on Unit 2 in 2024; and

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32 **WHEREAS** Hydro assessed, and deemed non-viable, alternatives to the replacement of both sets
33 of last stage blades including deferral of the replacement, upgrading life extension and
34 alternative strategies; and

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36 **WHEREAS** the Application was copied to: Newfoundland Power Inc.; the Consumer Advocate,
37 Dennis Browne, K.C.; a group of Island Industrial customers: Corner Brook Pulp and Paper
38 Limited, Braya Renewable Fuels (Newfoundland) GP Inc.; Vale Newfoundland and Labrador
39 Limited; the communities of Sheshatshiu, Happy Valley-Goose Bay, Wabush, and Labrador City;
40 Linde Canada Inc.; and Teck Resources Limited; and

41

42 **WHEREAS** on April 12, 2023 Newfoundland Power advised that it did not object to the necessity
43 of the expenditures but commented that Hydro should consider alternative sources of supply to
44 the Holyrood TGS as an immediate priority since an earlier replacement of the Holyrood TGS
45 capacity could provide both cost and reliability benefits to customers; and


1 **WHEREAS** on April 18, 2023 Hydro replied that it recognizes the need to accelerate the
2 integration of new generation to reduce the dependence and costs associated with the Holyrood
3 TGS and that analyses associated with supply alternatives are ongoing and will be presented as
4 part of the Reliability and Resource Adequacy Study proceeding; and
5

6 **WHEREAS** the Board is satisfied that the proposed supplemental capital expenditure for the
7 replacement of the last stage blades on Units 1 and 2 at the Holyrood TGS, including the purchase
8 of a second set of last stage blades and an in-situ inspection of the Unit 2 turbine last stage blades
9 is necessary to support the reliable and safe operation of the Holyrood TGS.


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12 **IT IS THEREFORE ORDERED THAT:**
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- 14 1. The proposed capital expenditures in the amount of \$3,596,500 in 2023 and \$2,812,200 in
15 2024 for the replacement of the last stage blades on Units 1 and 2 at the Holyrood TGS,
16 including the purchase of a second set of last stage blades and an in-situ inspection of the
17 Unit 2 turbine last stage blades are approved.
18
19 2. Hydro shall pay all expenses of the Board arising from this Application.

DATED at St. John's, Newfoundland and Labrador, this 5th day of May 2023.



John O'Brien, FCPA, FCA, CISA
Commissioner



Christopher Pike, LL.B., FCIP
Commissioner



Sara Kean
Assistant Board Secretary