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7 **P. U. 33(2005)**

8 **IN THE MATTER OF** the
9 *Public Utilities Act*, R.S.N.L. 1990,
10 c. P-47, as amended (“the *Act*”)

11 **AND**

12 **IN THE MATTER OF** an application by
13 Newfoundland Power Inc. for approval to
14 proceed with the construction and purchase
15 of certain improvements to its property
16 pursuant to Section 41(3) of the *Act* and
17 supplemental to its 2005 capital budget
18 approved by Orders No. P. U. 43(2004)
19 and P. U. 26 (2005).

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22 **The Application**

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25 Newfoundland Power Inc. (“NP”) filed an application with the Board of Commissioners of
26 Public Utilities (“the Board”) on November 30, 2005 requesting the Board to make an Order
27 approving

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29 (a) the rehabilitation of its Rocky Pond hydroelectric generating facility at an estimated
30 capital expenditure of \$500,000, and
31 (b) the refurbishment of its P-435 portable substation at an estimated capital expenditure of
32 \$400,000.

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34 In Order No. P. U. 43(2004) the Board approved NP’s 2005 capital budget in the amount of
35 \$48,141,000. To date there has been one further application for capital expenditures
36 supplemental to the approved 2005 budget. This Application was approved in Order No. P. U.
37 26(2005) in the amount of \$100,000.
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3 **Board Authority**
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5 Section 41 (3) of the *Act* requires that a public utility shall not proceed with the construction,
6 purchase or lease of improvements or additions to its property where the cost of the construction
7 or purchase is in excess of \$50,000 or the cost of the lease is in excess of \$5,000 in a year of the
8 lease without the prior approval of the Board.
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10 **Proposed supplementary 2005 Capital Budget Projects**
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12 ENERGY SUPPLY
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14 **Plant Refurbishment – Rocky Pond - \$500,000**
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16 This is a multi-year project that NP proposes to complete over two years. In 2005 NP proposes
17 to complete the reassembly of the generator unit, the engineering and procurement of material
18 and the commencement of the building extension. The remaining expenditures totalling
19 \$963,200 are planned for 2006.
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21 This project is a major refurbishment of NP's Rocky Pond hydroelectric generating plant
22 necessitated by a destructive fire. The normal annual energy production of the plant is
23 approximately 14.1 GWh, or approximately 3.3 per cent of NP's total annual hydroelectric
24 energy production. The refurbishment project, which involves capital expenditures in both 2005
25 and 2006, will require the upgrade or replacement of major components of the plant, including
26 protection and control systems, as well as the cleaning of the generator unit and the construction
27 of a building extension to accommodate the new equipment and meet current building standards.
28

29 NP reports that the fire destroyed substantially all of the plant's switchgear and protection and
30 control equipment that must be replaced before the plant can return to service. In addition, soot
31 and particulate matter deposited within the generator unit as a result of the fire necessitated the
32 disassembly of the generator for cleaning.
33

34 NP adds that the disassembly of the generator provides a cost-effective opportunity to address a
35 known deficiency in the generator assembly. Problems have been experienced with the
36 greaseless wicket gate bushings installed at three of NP's hydro plants in the mid -1990s. To
37 avoid lost production it is more cost effective to replace the bushings while the unit is
38 disassembled to repair the fire damage rather than to delay the replacement of the bushings for a
39 later time. The disassembly of the unit also provides an opportunity to correct certain other
40 mechanical deficiencies.
41

42 A significant portion of the expenditure on this project is covered by an insurance claim,
43 including compensation for lost production. In order to minimize lost production in accordance
44 with the insurance policy requirements, NP has completed the cleanup of the plant, including the
45 disassembly of the generator for cleaning.
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1 NP carried out a cost benefit analysis of projected capital and operating expenditure
2 requirements for the Rocky Pond hydroelectric generating plant and determined the levelized
3 cost of energy from the plant over the next 25 years to be 2.8 cents per kilowatt-hour, which is
4 significantly less than the cost of replacement energy at Holyrood.

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6 The Board is satisfied that this project is justified and that the estimated expenditures are
7 reasonable and prudent.

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9 **The Board will approve this project for the rehabilitation of NP's Rocky Pond**
10 **hydroelectric generating facility in the amount of \$500,000, which is supplemental to the**
11 **Energy Supply budget approved by Orders No. P.U. 43 (2004) and P.U. 26 (2005).**

12 SUBSTATIONS

13 Repair Portable Substation P-435 - \$400,000

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17 This project involves the repair of NP's largest portable substation, P-435, that sustained damage
18 as a result of a fault that occurred while the unit was installed at NP's Holyrood Substation in
19 April 2005.

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21 NP explains that a substation is the point at which voltage is transformed from transmission to
22 distribution levels and is typically an enclosed compound containing large transformers and
23 switching equipment. Portable substations enable preventative maintenance and repairs to be
24 performed on substation power transformers without the need for lengthy interruptions in
25 electrical service to customers. Portable substation P-435, which was acquired in 1992, is a 50
26 MVA, 138/69 – 25/12.5 kV unit and is NP's largest and newest portable substation.

27
28 NP explored the options of replacing the entire portable substation at a cost of \$3 million or
29 replacing only the transformer at a cost of \$1 million. Since the transformer had been
30 completely rewound in 2002, the life expectancy of the existing unit following refurbishment
31 was expected to be essentially the same as that of a new unit. Consequently, NP chose the
32 refurbishment of the existing unit as being the least cost alternative and one that would see the
33 unit being returned to service in the shortest time.

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35 The Board is satisfied that this project is necessary on the basis that P-435 is the only one of
36 NP's three portable substations that provides voltage regulation, is capable of operating as a 50
37 MVA, 138 kV to 66 kV system auto transformer, and is also the only portable substation that
38 provides backup for the nine system transformers that are larger than 25 MVA.

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40 **The Board will approve this project for the refurbishment of its P-435 portable substation**
41 **in the amount of \$400,000, which is supplemental to the Substations budget approved by**
42 **Orders No. P.U. 43 (2004) and P.U. 26 (2005).**

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1 **IT IS THEREFORE ORDERED THAT:**

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- 3 1. Pursuant to Section 41(3) of the *Act*, the Board approves the supplemental 2005 capital
- 4 expenditures of:
- 5
- 6 (i) \$500,000 for the Plant Refurbishment – Rocky Pond; and
- 7 (ii) \$400,000 to Repair Portable Substation P-435.
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- 9 2. NP shall pay the expenses of the Board arising from this Application.
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11 **DATED** at St. John’s, Newfoundland and Labrador, this 15th day of December 2005.

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19 Robert Noseworthy,

20 Chair and Chief Executive Officer.

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26 G. Fred Saunders,

27 Commissioner.

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35 G. Cheryl Blundon,

36 Board Secretary.