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**P.U. 44(2004)**

**IN THE MATTER OF** the *Electrical Power Control Act* R.S.N. 1994, c.E-5.1 (the “*EPCA*”) and the *Public Utilities Act*, R.S.N. 1990, c.P-47 (the “*Act*”) and their subordinate regulations;

**AND IN THE MATTER OF** an application by Newfoundland and Labrador Hydro (“Hydro”) for approval of rates to be charged its customers and resulting Order Nos. P.U. 14(2004) and P.U. 17(2004);

**AND IN THE MATTER OF** an application pursuant to Order No. P.U. 14(2004) for approval of, under Section 70 of the Act, a change in the rate structure charged for the supply of power and energy to Newfoundland Power Inc. (“NP”) to include a demand component.

**Background**

In Order No. P.U. 14(2004) the Board ordered Hydro to file, no later than July 31, 2004, using the embedded cost of service for the 2004 test year adjusted for the Board’s decision and order, an application for a demand and energy rate to be implemented for NP on January 1, 2005. The application and supporting documents were required to fully address, among other things:

- i. The degree of risk to be assumed by Hydro;
- ii. The expected relationship between the risk assumed by Hydro and the response in terms of conservation efforts by NP;
- iii. An appropriate weather normalization mechanism, with quantification of the intrinsic error in the formula;

- 1           iv.     The treatment of NP's generation as has been determined by Order No. P.U.  
2                 14(2004);
- 3           v.     Appropriate billing and costing determinants;
- 4           vi.    The use of adequate metering, or, in its absence at any supply points, an  
5                 appropriate estimation formula;
- 6           vii.   The effects of variations in NP's hydraulic generation and native load,  
7                 individually and together; and
- 8           viii.  The effects of varying levels of demand and energy rates for a range of usage  
9                 patterns.

10

11           Hydro was ordered in the interim to continue to charge NP an energy-only rate as  
12 approved by the Board.

13

14           On July 30, 2004 Hydro filed an application with the Board for a demand and energy rate  
15 for NP as directed by the Board. Hydro also filed with its application a report containing  
16 supporting documentation with respect to the issues required to be addressed as set out in Order  
17 No. P.U. 14(2004).

18

19           On September 3, 2004 NP filed a response to Hydro's application/report.

20

21           On October 1, 2004 the Consumer Advocate (Mr. Thomas Johnson) filed a response to  
22 Hydro's application.

23

24           The Board also requested EES Consulting of Calgary to review Hydro's application/  
25 report and provide comment. EES's comments were circulated to the parties on October 8, 2004.

26

27           On October 15, 2004 Hydro filed a response to the submissions of the Consumer  
28 Advocate and EES Consulting.

29

30           On November 1, 2004 the Board issued a letter to the parties stating that the record was  
31 now considered closed and that the Board would issue a decision based on the written

1 information before it. The Board sets out below the positions of Hydro, NP and the Consumer  
 2 Advocate on the proposed demand and energy rate and the issues reported on by Hydro, along  
 3 with the Board's findings.

4  
 5 **Hydro's Submission**

6  
 7 In its application Hydro proposed that a demand and energy rate for sales of power and  
 8 energy to NP be implemented as of January 1, 2005 as follows:

9	Demand (\$/kW/month)	\$ 4.65
10		
11	Energy (\$/kWh)	
12	First 250 GWh/month	\$ 0.03588
13	Over 250 GWh	\$ 0.04700
14	Minimum Billing Demand	99.0%

15  
 16 Hydro stated that the proposed demand and energy rate has the same rate structure  
 17 features as the Sample demand and energy rate that was filed in its 2003 general rate application  
 18 (Exhibit RDG-2) and discussed at length during the hearing. In developing the proposed rate  
 19 Hydro has made the following specific modifications to the Sample Rate:

- 20  
 21 a. the structure of the energy portion of the Sample Rate was retained, but the first block  
 22 ending was lowered from 420 GWh to 250 GWh. This lower value corresponds to  
 23 the forecast minimum energy consumption that NP does not fall below in any month.  
 24 b. The minimum billing demand is set at 99.0% rather than the 98.0% as proposed in the  
 25 Sample Rate.  
 26 c. Hydro proposes that the initial demand charge be set at \$4.65/kW/month, which is  
 27 70% of the full demand costs in the cost of service. A phased-in implementation of  
 28 the full demand cost recovery would occur with 85% of the demand charge in place  
 29 as of January 1, 2006 and 100% of the full demand charge in place as of January 1,  
 30 2007. Hydro proposes that the initial monthly demand charge of \$4.65/kWh/month  
 31 be increased on January 1, 2006 and January 1, 2007 to \$5.64/kWh/month and  
 32 \$6.64/kWh/month respectively.

33

1 Hydro stated that its proposal for a phase-in of the demand charge component was as a  
2 result of discussions with NP and is intended to recognize that a demand and energy rate is new  
3 to NP. A phase-in will allow NP time to adjust to the new rate form and formulate a load  
4 management strategy. Hydro supports a phased approach only if the initial demand charge is  
5 significant enough to send an adequate price signal, which in Hydro's view is a minimum 70%  
6 demand cost recovery, and if the phase-in period is defined.

7  
8 In its report Hydro also provided detail on the specific issues required by the Board to be  
9 addressed. Hydro's comments on each of these issues are summarized below.

10  
11 a. The degree of risk to be assumed by Hydro  
12  
13

14 The degree of risk to be assumed by Hydro is a function of the level of demand costs to  
15 be recovered in the demand charge and the minimum billing demand. A phase-in of the demand  
16 charge reduces Hydro's risk until 100% demand cost recovery is reached. As well Hydro is  
17 proposing that the minimum billing demand be set at 99.0% rather than the 98.0% proposed by  
18 Hydro in its 2003 general rate application. Since the Board reduced Hydro's requested return on  
19 equity from 9.75% (\$18.7 million margin) to 5.83% (\$11.6 million margin), Hydro believes it  
20 appropriate to carry a reduced risk. Hydro submits that the 99.0% minimum billing demand  
21 should allow NP to implement a number of load conservation activities.

22  
23 b. Relationship between the risk assumed by Hydro and the response in terms of  
24 conservation efforts by NP  
25

26 The amount of savings available to NP as a result of conservation efforts corresponds  
27 with Hydro's lost margin as a result of any reduction in NP load from forecast levels. If NP's  
28 conservation efforts result in a demand reduction greater than what the minimum demand billing  
29 provision would allow, that reduction will be recognized at the time of Hydro's next general rate  
30 application.

31

1  
2 c. Weather normalization mechanism  
3

4 Hydro and NP have reached agreement on an appropriate weather normalization  
5 mechanism, which is set out in detail in Hydro's report (pgs.7-10). Hydro and NP have also  
6 agreed to jointly review and confirm the acceptability of the weather adjustment coefficient for  
7 weather adjustment prior to a January 1, 2005 implementation of a demand and energy rate  
8 structure.

9  
10 d. Treatment of NP's generation  
11

12 The treatment of NP's generation is in accordance with Order No. P.U. 14(2004), and  
13 recognizes NP's hydraulic and thermal generation capacity net of reserves for both costing and  
14 pricing.

15  
16 e. Costing and billing determinants  
17

18 The actual demand billing determinants under the proposed rate are computed as NP's  
19 weather-normalized peak native load less their hydraulic capacity net of reserves, less their  
20 thermal capacity net of reserves. If NP's billing demand calculated in this manner should fall  
21 below the minimum billing demand set forth in the proposed rate, the billing demand will be set  
22 at the minimum billing demand percent times the forecast billing demand.

23  
24 Energy billing under the proposed rate is based on the actual energy supplied to NP by  
25 Hydro.

26  
27 f. Metering  
28

29 NP and Hydro have agreed that the metering of power and energy exchanged between the  
30 two utilities and on NP generation will, by December 31, 2004, be appropriately structured for  
31 demand billing implementation. In its report Hydro has provided details of the demand metering  
32 for NP as well as outstanding work to be completed as agreed to by Hydro and NP. (pgs. 13,  
33 Appendix B)  
34

1  
2 g. Effects of variations on NP's hydraulic generation and native load  
3

4 In its report Hydro states that demand variations in NP's hydraulic generation have no  
5 effect on Hydro's net income because of the treatment of NP's generation in the cost of service  
6 and in setting billing determinants. Similarly variations in NP's hydraulic variations with regard  
7 to energy do not affect Hydro's net income since these variations are captured in the load  
8 variation component of the Rate Stabilization Plan (RSP).

9  
10 h. Effects of varying levels of demand and energy rates  
11

12 Under the proposed rates Hydro is financially indifferent with respect to varying levels of  
13 energy usage patterns.

14  
15 **NP's Submission**  
16

17 NP stated that, for a demand charge of \$4.65/kWh/month to be implemented January 1,  
18 2005, the Board should consider and address: (i) the reasonable recovery of NP's purchased  
19 power costs; and (ii) the avoidance of potential short-term rate increases to customers which do  
20 not reflect changes in costs on the island electrical system. To address these concerns NP  
21 proposed (i) the creation of a reserve mechanism to mitigate the risk to NP of insufficient  
22 recovery of its purchased power expense; and (ii) required modifications to the rate design. NP  
23 submitted that, while the changes proposed by NP will make the \$4.65/kW/month a reasonable  
24 initial rate, there is insufficient justification to increase the demand charge in the wholesale rate  
25 to 100% of embedded demand cost by January 1, 2007.

26  
27 **Consumer Advocate's Submission**  
28

29 The Consumer Advocate supported the implementation of the wholesale demand and  
30 energy rate as proposed by Hydro, with the exception that the minimum billing demand should  
31 be reduced from 99% to 98%. The Consumer Advocate submitted that there is no justification  
32 for further revenue volatility measures beyond those proposed by Hydro as they would  
33 undermine the principal objective and rationale for the whole demand and energy rate. The

1 Consumer Advocate recommended that the wholesale rate design be reviewed once experience  
2 has been gained. A decision on the need for further revenue stabilization measures can be made  
3 by the Board at that time.

#### 4 5 **Comments of EES Consulting**

6  
7 In its review of Hydro's proposal and NP's submission EES Consulting recommended  
8 that the Board accept Hydro's proposal as a transition rate subject to two conditions: (i) the  
9 minimum billing should be reduced to at least 98%; and (ii) the Board should consider making  
10 any other revisions to weather normalization and the phase-in period such that business risks are  
11 consistent with what the Board considered appropriate when it set Hydro's allowed rate of return  
12 in Order No. P.U. 14(2004). With respect to NP's submission EES Consulting recommended  
13 that the risk issues relative to NP's revenue requirement are more appropriately addressed after  
14 the implementation of the demand-based tariff within the context of a future NP general rate  
15 proceeding.

16

#### 17 **Hydro's Reply Submissions**

18

19 In its reply submission to NP's response Hydro reiterated its position that the weather  
20 normalization adjustment agreed to between Hydro and NP will act to significantly decrease the  
21 risk of gain or loss in margin as a result of adverse weather conditions. Hydro also restated its  
22 position that the phase-in of the demand and energy rate to NP is acceptable provided there is an  
23 identified time frame for full implementation. Hydro does not agree with NP's proposal to  
24 implement a billing demand cap of 101%, stating that such a cap will almost entirely negate the  
25 benefit of the demand charge. Hydro suggested that, to address NP's concerns for financial  
26 risks, a billing demand cap in the range of 104-106% of NP's forecast may be acceptable. With  
27 respect to the establishment of a reserve as proposed by NP, Hydro submitted that a reserve is  
28 not necessary and, in conjunction with a billing demand cap, is duplicative. Hydro's position is  
29 that reserve mechanisms will tend to unduly mute the price signal to NP by passing on a  
30 significant portion of costs to customers.

1 In its second reply submission Hydro disagreed with the position of both the Consumer  
2 Advocate and EES Consulting with respect to the minimum billing demand. Hydro stated that  
3 the 98% minimum billing proposed by Hydro in its 2003 general rate application was proposed  
4 at a time when it was seeking a 9.75% return on equity. With a reduction by the Board of the  
5 return on equity to 5.83%, Hydro proposed that the minimum billing demand be 99% to reflect  
6 what Hydro felt it could offer in light of this reduced return on equity.

7  
8 **Discussion**  
9

10 In Order No. P.U. 14(2004) the Board found that the implementation of a demand and  
11 energy rate for NP's wholesale power purchases from Hydro was appropriate. The Board based  
12 its finding on the ability of a demand and energy rate to send the proper price signal by tracking  
13 system costs as they occur and the resulting potential for improved efficiency on the system  
14 overall. By tracking the costs imposed on the system as a result of demand, and pricing these  
15 costs accordingly, Hydro is able to send a proper price signal to NP. A demand and energy rate  
16 that does not recover 100% of the demand costs results in a dampening of this price signal and  
17 reduces the potential for reduced system costs overall in the longer term. While the  
18 implementation of a demand and energy rate has been found to be appropriate, the Board agrees  
19 with NP's statement that "*a moderate pace is the practical and prudent approach to*  
20 *implementing the contemplated changes in wholesale pricing on the island electrical system*".  
21

22 Based on discussions with NP, Hydro has agreed to a phase-in of the recovery of 100%  
23 of demand costs on the condition that there is a meaningful starting point for the demand charge  
24 and a targeted time frame for implementation. The Board agrees that a phase-in of the demand  
25 and energy rate over a specific time period is appropriate in the circumstances given that this is  
26 the first time such a rate structure will be in place for NP. A phase-in will provide NP with time  
27 to adjust to the new rate structure and formulate a load management plan and will also provide  
28 an opportunity for the Board to monitor the implementation of the new rate structure. The Board  
29 accepts Hydro's proposal of a phase-in over three years as it is a reasonable time frame that will  
30 not impact the ultimate goal of increased efficiency of the system over the longer term.



1 Hydro has proposed that the initial demand charge to NP be set on January 1, 2005 at  
2 70% recovery of the embedded demand costs in the cost of service, with a phase-in to 85% in  
3 2006 and 100% in 2007. The remaining energy charge is a two-block structure – the first 250  
4 GWh per month corresponds to the forecast minimum energy consumption below which NP  
5 does not fall below in any month. The tail block pricing reflects the incremental cost of fuel at  
6 Holyrood. The Board is satisfied that the initial level of 70% recovery of demand costs is a  
7 reasonable starting point for the phase-in of the demand energy rate.

8  
9 It is noted that, while NP believes the level of the initial demand charge proposed by  
10 Hydro is reasonable, NP states that there is insufficient justification to increase the demand  
11 charge in the wholesale rate to 100% of embedded demand costs by January 1, 2007. The Board  
12 does not agree with NP's position. The intent of the wholesale demand charge is to reflect a  
13 proper price signal in rates to NP of demand costs imposed on the system. This can only happen  
14 with a demand charge that is designed to recover 100% of embedded demand costs. The Board  
15 has accepted the proposal for a phase-in of the demand charge over a three-year period as  
16 described above. The Board acknowledges that the initial rate will only recover 70% of these  
17 costs; however, once the phase-in to 100% recovery is completed, a proper price signal to NP  
18 will be in place. The Board will also have the benefit at that time of more information, in the  
19 form of a marginal cost study from Hydro and the benefit of two years experience, to satisfy  
20 itself that the \$6.64 per kW per month continues to be a reasonable rate. The Board continues to  
21 be of the view that a proper price signal, reflecting 100% of the demand costs, is imperative as an  
22 incentive to NP and its customers to engage in load management practices.

23  
24 Hydro and NP have agreed that the demand rate will be applied to NP's weather  
25 normalized peak annual native load less net generation credits. One of the major impediments to  
26 the implementation of demand pricing for NP was the potential for windfall gain or penalty  
27 associated with abnormal weather conditions. This issue was canvassed fully during Hydro's  
28 2003 general rate hearing, and NP and Hydro have now reached agreement on a weather  
29 normalization mechanism that will alleviate the financial uncertainties to both utilities due to  
30 weather. The Consumer Advocate also supports the weather normalization mechanism as  
31 proposed. The Board acknowledges the efforts of both NP and Hydro in resolving this important

1 issue, which is a significant aspect of implementing a demand pricing signal to NP. The Board  
2 anticipates that both NP and Hydro will monitor the operation of the peak demand weather  
3 adjustment mechanism with a view to making any further improvements or refinements as  
4 necessary.

5  
6 Hydro has also proposed that a minimum billing demand of 99% be approved to provide  
7 NP with an incentive to enter into demand-related initiatives that could reduce demand below the  
8 test year forecast, and also to limit its risk as it moves out of a revenue stabilized environment.  
9 Both the Consumer Advocate and EES Consulting have recommended that the minimum billing  
10 demand be set at 98% as proposed by Hydro in its 2003 general rate application. The Board  
11 notes Hydro's position that the increase in the proposed minimum billing demand is as a result of  
12 the Board's order reducing Hydro's return on equity for rate setting purposes to 5.83% from the  
13 9.75% proposed. Hydro states that because of this lower return on equity it should also carry a  
14 reduced risk. The Board notes that a minimum billing demand of 99% will result in potential  
15 savings to NP of approximately \$588,000 in 2005, which will increase to approximately  
16 \$840,000 per year in 2007 once the full demand charge is implemented. The realization of these  
17 savings by NP will depend on the extent to which NP can reduce its demand levels through load  
18 conservation efforts.

19  
20 The question for the Board then is whether the amount available to NP with a 99%  
21 minimum billing demand as proposed by Hydro is sufficient incentive for NP to implement load  
22 management and conservation programs aimed at reducing demand growth on the system, and  
23 hence reduce its purchased power costs through a lower billing demand. In its reply submission  
24 Hydro stated that the question of the magnitude of savings that would be necessary as an  
25 incentive for NP to pursue load management is a question for NP. Hydro believes that the studies  
26 required to answer this question would be more appropriately undertaken by NP based on its  
27 knowledge of potential savings of both current and future demand costs. The Board agrees with  
28 Hydro on this issue. NP has indicated that it will undertake an assessment of current options for  
29 load management in the ensuing year. While NP has used the 99% minimum billing demand in  
30 its submission NP does not provide any comment on whether the minimum billing demand  
31 should be set at 99% or some other amount.

32

1 NP's test year forecast billing demand is 1054.55 MW. A minimum billing demand of  
2 99% results in an incentive for NP to reduce its maximum annual native load growth by 1% of  
3 forecast billing demand, or approximately \$588,000 in the first year, which equates to  
4 approximately 10.5 MW of potential demand load reduction on the system. This incentive will  
5 increase with load growth. At a minimum billing demand of 98%, the amount of potential load  
6 reduction on the system increases to 2% of forecast billing demand, or approximately \$1,176,878  
7 in the first year, which equates to approximately 21.1 MW of potential demand load reduction.  
8 The financial incentive to NP to reduce demand is achieved by Hydro putting at risk the recovery  
9 of that portion of its revenue which, in the past, would have been recovered in the combined  
10 demand energy charge to NP, with any variation in load recovered through the RSP. NP did not  
11 provide any evidence with respect to the specific actions that it may take with respect to load  
12 management for its customers, the associated costs of such programs, and the expected outcomes  
13 in terms of potential load reduction. As a result the Board is not able to make a definite finding  
14 on whether the proposed demand rate along with the 99% billing demand is a meaningful  
15 incentive for NP to implement load management programs. However, the Board is satisfied that  
16 Hydro's proposed rate structure with a 99% billing demand is a reasonable starting point for  
17 implementation of a wholesale demand energy rate to NP. While both EES and the CA  
18 recommended that a 98% minimum billing demand be approved, the Board accepts Hydro's  
19 position that its proposal does result in risk of under recovery of its costs, depending on the  
20 success of NP's load management efforts.

21  
22 In its submission NP made two further proposals intended to ensure that undue financial  
23 risk or windfall to either Hydro or NP is avoided. These proposals include both a demand charge  
24 cap and a reserve mechanism. The maximum billing demand proposed by NP is intended to cap  
25 the demand charges payable by NP and is, according to NP, a practical and simple means to  
26 ensure that NP and its customers do not have to pay for extraordinary short-term demand  
27 increases that do not materially increase costs on the system. NP has also proposed that the  
28 maximum billing demand cap be applied to an annual forecast of NP's demand forecast, to  
29 reflect growth in NP's native peak demand.

1           The Board agrees that NP should be allowed to recover those costs associated with  
2 purchased power, and should not be penalized for changes in those costs due to factors beyond  
3 its control. This concept is recognized by the application of a weather normalization adjustment  
4 to shield NP from additional costs due to weather conditions that fall outside normal ranges. As  
5 well NP is generally permitted to pass through, for recovery in rates, changes in the price of its  
6 purchased power from Hydro as approved by the Board. The Board, however, sees a distinction  
7 between the wholesale price of NP's purchased power, which will be set by this Order and is  
8 outside NP's control, and the ultimate cost of this power to NP. NP can affect these costs by  
9 implementing load reduction programs for its customers and hence reducing its demand costs to  
10 Hydro. The intent of implementing a demand and energy rate to NP is to incorporate the proper  
11 price signals in the wholesale rates so that NP can respond appropriately to reduce its costs and  
12 ultimately the costs imposed on the system by increasing load growth. The Board is concerned  
13 that the effect of NP's proposals to mitigate revenue instability will actually mute the price signal  
14 that the demand rate is intended to send, and result in no incentive for NP to take any action to  
15 reduce its demand costs.

16

17           The Board is not satisfied that both a demand charge cap and a reserve mechanism are  
18 necessary to protect NP from potential financial risk associated with the introduction of a  
19 demand and energy rate. The largest source of revenue instability for NP is, in the Board's view,  
20 associated with weather variations. This issue has been addressed by the proposed weather  
21 normalization adjustment jointly agreed to by NP and Hydro. The Board acknowledges however  
22 that, even with the weather normalization adjustment, there is still potential for financial impact  
23 on NP's return due to demand forecast and energy forecast variances. While NP has provided  
24 some examples of the magnitude of this financial impact, the information is based on historical  
25 information when NP was not subject to a demand and energy rate and had no incentive to  
26 reduce its demand peak. Looking ahead, the extent of the forecast variances (positive or  
27 negative) will depend to a large extent on the accuracy of NP's forecasting, and also on the  
28 manner in which NP responds to the wholesale demand and energy rate, including retail rate  
29 design innovations and load management programs.

30

1 NP has suggested that its proposals are intended to provide the utility with comparable  
2 additional financial risk to what is acceptable to Hydro in its proposed wholesale demand and  
3 energy rate. The Board does not agree, however, that the financial risks to each utility as a result  
4 of implementing the demand and energy rate are, or should be, comparable. Hydro has agreed to  
5 put at risk a portion of its revenue to provide NP with an incentive to reduce its peak demand. If  
6 NP does not take advantage of this incentive, the additional risks are its own and the costs of  
7 such inaction should not be automatically passed to its customers.

8  
9 The Board is inclined to accept the positions of both Hydro and the Consumer Advocate  
10 that NP's proposals to limit its financial risk undermine the principal objective and rationale for  
11 the wholesale demand and energy rate. The Board acknowledges, however, that, at least for the  
12 period of the phase-in of the demand and energy rate, NP will be adjusting to this new rate  
13 structure. In light of this the Board is prepared to put in place a temporary reserve to be re-  
14 evaluated in the context of the actual experience and results of the demand and energy rate  
15 structure. The reserve will be based on the proposal put forth by NP but will not be subject to  
16 automatic refund/recovery provisions as proposed by NP. Rather the Board will retain the  
17 discretion to determine the disposition of the reserve, taking into account NP's response to the  
18 demand and energy rate to reduce system peak. The Board is not persuaded that the  
19 implementation of a maximum billing demand is necessary at this time, particularly in the  
20 context of the Board's decision to allow a reserve for NP.

21  
22 The Board agrees that marginal costs should be the basis of future decision-making in the  
23 area of load management and should be considered in the design of wholesale rates. In Order  
24 No. P.U. 14(2003) the Board directed Hydro to file a marginal cost study by June 30, 2006. The  
25 Board will re-evaluate the structure and design of the wholesale demand and energy rate at that  
26 time, including the use of a reserve by NP, and in the context of the experience gained with the  
27 demand and energy rate implemented as of this Order. The implementation and phase-in of the  
28 wholesale demand and energy rate will also be subject to continuing regulatory oversight by the  
29 Board over the phase-in period. As part of this ongoing monitoring the Board may request  
30 reports and other information from both Hydro and NP. In the Board's view actual experience  
31 with the wholesale demand and energy rate will be among the most important information in

1 assessing whether the demand and energy rate form is providing the intended results over the  
2 long-term.

3

4 **IT IS THEREFORE ORDERED THAT:**

5

6 1. The Board approves the demand and energy rate to NP as proposed by Hydro to be  
7 effective January 1, 2005 as set out in Schedule 1 to this Order.

8

9 2. The Board approves Hydro's proposal for a three-year phase-in of the demand and  
10 energy rate to NP.

11

12 3. Hydro shall file an application for subsequent adjustments to the demand and energy rate  
13 for NP in accordance with the proposed phase-in schedule.

14

15 4. The Board approves the establishment by NP of a reserve as proposed.

16

17 5. NP shall file an application no later than March 1 of each year for the disposition of the  
18 balance in the reserve for the previous year.

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Dated at St. John's, Newfoundland and Labrador this 8<sup>th</sup> day of December 2004.

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Robert Noseworthy,  
Chair and CEO.

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Darlene Whalen, P.Eng.,  
Vice-Chair.

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G. Fred Saunders,  
Commissioner.

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G. Cheryl Blundon,  
Board Secretary.

**Schedule 1**

**Order No. P.U. 44(2004)**

**Issued: December 8, 2004**



**NEWFOUNDLAND AND LABRADOR HYDRO**  
**UTILITY**

**Availability:**

This rate is applicable to service to Newfoundland Power (NP).

**Definitions:**

"Billing Demand"

In the Months of January through March, billing demand shall be the greater of:

- (a) the highest Native Load less the Generation Credit, beginning in the previous December and ending in the current Month; and
- (b) the Minimum Billing Demand.

In the Months of April through December, billing demand shall be the greater of:

- (a) the Weather-Adjusted Native Load less the Generation Credit, plus the Weather Adjustment True-up; and
- (b) the Minimum Billing Demand.

"Generation Credit" refers to NP's net generation capacity less allowance for system reserve, as follows:

	kW
Hydraulic Generation Credit	81,550
Thermal Generation Credit	<u>43,900</u>
Total Generation Credit	125,450

In order to continue to avail of the Generation Credit, NP must demonstrate the capability to operate its generation to the level of the Generation Credit. This will be verified in a test by operating the generation at a minimum of this level for a period of one hour as measured by the generation demand metering used to determine the Native Load. The test will be carried out at a mutually agreed time between December 1 and March 31 each year. If the level is not sustained, Newfoundland Power will be provided an opportunity to repeat the test at another mutually agreed time during the same December 1 to March 31 period. If the level is not sustained in the second test, the Generation Credit will be reduced in calculating the associated billing demands for January to December to the highest level that could be sustained.

**NEWFOUNDLAND AND LABRADOR HYDRO**  
**UTILITY (Continued)**

“Maximum Native Load” means the maximum Native Load of NP in the four-Month period beginning in December of the preceding year and ending in March of the current year.

“Minimum Billing Demand” means ninety-nine percent (99%) of:

NP’s test year Native Load less the Generation Credit.

“Month” means for billing purposes, the period commencing at 12:01 hours on the last day of the previous month and ending at 12:00 hours on the last day of the month for which the bill applies.

“Native Load” is the sum of:

- (a) the amount of electrical power, delivered at any time and measured in kilowatts, supplied by Hydro to NP, averaged over each consecutive period of fifteen minutes duration, commencing on the hour and ending each fifteen minute period thereafter; and
- (b) the total generation by NP averaged over the same fifteen-minute periods.

“Weather-Adjusted Native Load” means the Maximum Native Load adjusted to normal weather conditions, calculated as:

Maximum Native Load  
plus (Weather Adjustment, rounded to 3 decimal places, x 1000)

Weather Adjustment is further described and defined in the Weather Adjustment section.

“Weather Adjustment True-up” means one-ninth of the difference between:

- (a) the greater of:
  - the Weather Adjusted Native Load less the Generation Credit, times three; and
  - the Minimum Billing Demand, times three; and
- (b) the sum of the actual billed demands in the Months of January, February and March of the current year.

**NEWFOUNDLAND AND LABRADOR HYDRO**  
**UTILITY (Continued)**

**Monthly Rates:**

**Billing Demand Charge:**

Billing Demand, as set out in the Definitions section, shall be charged at the following rate:

\$4.65 per kW of billing demand

**Energy Charge:**

First 250,000 kilowatt-hours\* ..... @ 3.588 ¢ per kWh

All excess kilowatt-hours\* ..... @ 4.700 ¢ per kWh

**Firming-up Charge:**

Secondary energy supplied by

Corner Brook Pulp and Paper Limited\* ..... @ 0.600 ¢ per kWh

**RSP Adjustment:**

All kilowatt-hours ..... @ 0.685 ¢ per kWh

**\*Subject to RSP Adjustment:**

RSP Adjustment refers to all applicable adjustments arising from the operation of Hydro's Rate Stabilization Plan, which levelizes variations in hydraulic production, fuel cost, load and rural rates.

**Adjustment for Losses:**

If the metering point is on the load side of the transformer, either owned by the customer or specifically assigned to the customer, an adjustment for losses as determined in consultation with the customer prior to January 31 of each year, shall be applied to metered demand and energy.

**Adjustment for Station Services and Step-Up Transformer Losses:**

If the metering point is not on the generator output terminals of NP's generators, an adjustment for Newfoundland Power's power consumption between the generator output terminals and the metering point as determined in consultation with the customer prior to the implementation of the metering, shall be applied to the metered demand.

**NEWFOUNDLAND AND LABRADOR HYDRO**  
**UTILITY (Continued)**

**Weather Adjustment:** This section outlines procedures and calculations related to the weather adjustment applied to NP's Maximum Native Load.

- (a) Weather adjustment shall be undertaken for NP's actual Maximum Native Load.
- (b) Weather adjustment shall be derived from Hydro's general NP native peak demand forecasting model.
- (c) By September 30<sup>th</sup> of each year, Hydro shall provide NP with updated weather adjustment coefficient incorporating the latest year of actuals.
- (d) The underlying temperature and wind speed data utilized to derive weather adjustment shall be sourced to Environment Canada's weather station data for the St. John's, Gander, and Stephenville airports. NP's regional customer counts shall be used to weight regional weather data. Hydro shall consult with NP to resolve any circumstances arising the availability of, or revisions to, Environment Canada's weather data and/or wind chill formulation.
- (e) The primary definition for the temperature weather variable is the average temperature for the peak demand hour and the preceding 19 hours. The primary definition for the wind weather data is the average wind speed for the peak demand hour and the preceding seven hours. Hydro will consult with NP should data anomalies indicate a departure from the primary definition on underlying weather data.
- (f) Subject to the availability of Environment Canada weather data, Hydro shall prepare a preliminary estimate of the Weather-Adjusted Native Load by March 15<sup>th</sup> of each year, and a final calculation of Weather-Adjusted Native Load by April 5<sup>th</sup> of each year.

**General:**

**This rate schedule does not include the Harmonized Sales Tax (HST) which applies to electricity bills.**

With respect to all matters where the customer and Hydro consult on resolution but are unable to reach mutual agreement, the billing will be based on Hydro's best estimate.