P. U. 34(2004)

IN THE MATTER OF the
Public Utilities Act, *R.S.N. 1990*,
c. P-47, as amended (the "Act")

and

IN THE MATTER OF an Application by
Newfoundland and Labrador Hydro ("Hydro"),
pursuant to s. 38 of the *Act*, for consent to
relocate its mobile diesel generating units
from Roddickton to St. Anthony;
and pursuant to s. 41 of the *Act* for the
approval of the capital costs associated with
this relocation.

Background

On November 16, 1999 Hydro applied to the Board of Commissioners of Public Utilities (the "Board") under s. 38 of the *Act* to abandon the woodchip fired thermal generating plant and the diesel generating plant, both located in the Town of Roddickton. Following a public hearing in Roddickton the Board issued Order No. P. U. 26(1999-2000) consenting to the abandonment of the woodchip fired generating plant but continued the hearing in St. John's to consider further evidence relating to Hydro's application to abandon its diesel plant in Roddickton. During the hearing Hydro also advised of its intention to relocate the 850 kW mobile unit from Roddickton to St. Anthony in addition to the abandonment of the thermal and diesel plants in Roddickton. On May 12, 2000 the Board issued Order No. P. U. 5(2000-2001) authorizing Hydro to abandon the Roddickton diesel plant and to write off the undepreciated value of the assets that are no longer used and useful, subject to the following conditions:

(a) Hydro will put in place a supply of emergency power by November 1, 2000 in the amount of 1500-2000 kW, in addition to the mini-hydro plant, with any future discontinuance of this service to be authorized by the Board pursuant to an application by Hydro to be filed on or after July 1, 2003;

(b) Hydro will decide on the staffing it deems necessary in accordance with good management practice to make emergency power available on a timely basis;

(c) Hydro will monitor and report on outages, other than failures specific to the distribution system, which affect the area north of Hawke's Bay, in the manner as set out by the Board in the Order; and

(d) Hydro is to conduct a study into the reliability of the transmission line serving the Great Northern Peninsula and will identify the amount of emergency power required. This study is required to draw upon the information acquired by Hydro through the monitoring activities set out by the Board in the Order. The study will also identify the role of mobile, transportable, and fixed generation units and where these units should be placed, recognizing the history of reliability and the performance of the transmission lines. The study shall be conducted by an independent consultant and should be filed with the Board no later than July 1, 2003, reflecting the performance of the electrical system and its reliability up to May 31, 2003.

In accordance with Order No. P. U. 5(2000-2001) Hydro relocated an 850 kW mobile diesel generating unit from St. Anthony to Roddickton which, along with the existing 850 kW mobile diesel unit, provided a combined capacity of 1700 kW in Roddickton. These generating units provide emergency power and energy to the Island Interconnected grid but, particularly, have been retained at Roddickton to provide back-up and emergency power to the Roddickton area. Additional generation capacity in the Roddickton-St. Anthony area is provided by the 8.8 MW diesel generating plant in St. Anthony and the 400 kW mini-hydro plant in Roddickton.

On June 30, 2003 Hydro filed with the Board a report entitled "System Performance Review – Great Northern Peninsula". This report was prepared by Acres International Limited ("Acres") in accordance with the Board's direction in Order No. P. U. 5(2000-2001).

On February 5, 2004 Hydro filed an Application with the Board under s. 38 of the *Act* seeking consent to relocate its mobile diesel generating units from Roddickton to St. Anthony. This Application also requested approval pursuant to s. 41 of the *Act* of the capital costs of $95,200 associated with this relocation. Hydro provided notice of this Application, including a copy of the Application and the report prepared by Acres, to the Town Council of Roddickton on February 4, 2004.

On March 1, 2004 the Board received a letter of comment dated February 27, 2004 from the Town Council of Roddickton (the "Town"). In this letter the Town requested the opportunity to make formal objection to the Board on Hydro's Application for the relocation of the two diesel generating units to St. Anthony. The Town presented a written brief to the Board on April 28, 2004. In the accompanying letter to this brief the Town also advised the Board that it was not its wish at this time to appear before the Board at a formal hearing but instead was providing the Board with a written brief outlining its position on the matter.

Hydro filed a written response to the Town's brief on May 19, 2004. On June 18, 2004 the Town responded with a further written submission. Hydro advised the Board on June 24, 2004 that it would not be providing any comments on the Town's June 18, 2004 letter. In its reply Hydro stated that it did not believe that further comment or information from Hydro at this stage would further the Board's information or understanding of the issues at hand.

The Board also provided a copy of the Application on April 19 and 20, 2004 to the communities of Bide Arm, Main Brook, Conche, Englee, and St. Anthony, requesting that any comments regarding this Application be provided in writing to the Board by Friday, April 30, 2004. No additional comments on the Application were received as a result of this communication.

The Board is satisfied that it has sufficient information to enable it to make a final determination on Hydro's Application and will make its decision on the basis of the written information before it.

Discussion

Section 38 of the *Act* requires that a public utility receive the written consent of the Board before it abandons a part of its line or works or discontinues a service. In consenting to such a request from a utility the Board will consider whether the proposed abandonment is in the public interest, is cost effective and will not result in measurable adverse customer impacts.

In Order No. P. U. 5(2000-2001) the Board was not prepared to consent to the abandonment of all emergency power in the Roddickton area at that time. The Board stated at pg. 27 of that Order:

> *"The history of performance for TL 261 is short and, in the opinion of the Board, there should be a longer history of performance available before the Board agrees to consent to the abandonment of all emergency power in the Roddickton area. The Board believes that the experience of three additional years will provide sufficient record of historical performance for an assessment to be made. During this period there should continue to be a reasonable level of emergency capacity available."*

Hydro was required to put in place an emergency power supply of 1500 kW to 2000 kW in Roddickton for a three-year period up to September 1, 2003 after which the Board would make a further determination on the matter. It is clear from Order No. P. U. 5(2000-2001) that, in considering Hydro's application to remove emergency capacity from Roddickton, the Board was concerned at that time with the reliability of the transmission lines serving the Great Northern Peninsula ("GNP") and specifically the performance of transmission lines TL257 and TL261, which serve the Roddickton area. The additional information on the reliability and performance of the system north of Hawke's Bay filed by Hydro since the third quarter of 2000 was intended to provide the Board with more complete and necessary information when considering this matter at a later time. This information has been filed with the Board since September 2000 and has been considered by the Board in its decision on this Application.

Hydro was also required to conduct an independent study into the reliability of the transmission line serving the GNP and the amount of emergency power which should be in place. This study has been filed with the Board and has been accepted by the Board as being in compliance with the requirements of Order No. P. U. 5(2000-2001). The Town of Roddickton

takes the position that, although the Acres report may have "met the letter of the law", there is the question of whether the opinions and data compiled by Acres are unbiased and independent. While not suggesting that the data is anything but accurate, the Town questions how a study commissioned and paid for by Hydro would have recommended any undertaking with respect to the two 850 kW generators in Roddickton which would have not been beneficial to Hydro in the final instance. The Town also expressed its disagreement with the premise upon which the Acres study was carried out. The Town stated that the information reviewed in the Acres report came from Hydro, with no public consultation and no provision for input from other sources, especially from municipalities to be directly affected by any decision to relocate the diesels out of Roddickton. According to the Town the study was not entirely objective and does not address adequately the social and economic impacts, as well as the hardship which will result, if the immediate area is without backup power.

There is no evidence to support the Town's contention that the Acres report may not be unbiased or independent. The data compiled and analyzed in the report was taken from Hydro's records and the conclusions and recommendations of the consultant are supported by analyses and fact. As to the Town's assertion that Acres should have consulted the Town prior to writing its report the Board does not agree that this was necessary or contemplated in its direction to Hydro in Order No. P. U. 5(2000-2001). The study was undertaken in accordance with the Board's direction and Hydro provided the Town with a copy of the report as part of its notice to the Town of its Application. The Town has had sufficient opportunity to review and provide comments on the study and its findings, which it has done, and the Board will consider this information in making its determination on this matter.

In its Application Hydro stated that the Acres study indicates that the existing standby capacity located in the northern area of the GNP is sufficient and that the most cost effective and reliable means of providing back-up generation to the Roddickton area is to relocate the two 850 kW mobile diesel generating units from Roddickton to Hydro's St. Anthony diesel generating station. The Acres study included a consideration of the reliability benefit of relocating the two 850 kW mobile units to the St. Anthony diesel generating station site whereby one could be remotely started from the St. John's Energy Control Center and the other could be started by the

full-time operator upon direction from the Energy Control Center. According to Hydro's submission relocation of the two 850 kW diesel generating units from Roddickton to St. Anthony will maintain reliable service to the customers of Roddickton, will permit savings in operating and maintenance costs, and is the lowest cost option.

In its Application Hydro estimates that the movement of the mobile diesel units to St. Anthony would result in a one-time cost of approximately $95,200 with annual savings of approximately $39,000 in operating and maintenance costs due to the discontinuation of the services of an operator at Roddickton and from the reduction in travel and expenses pertaining to maintaining the units at Hydro's existing diesel generating station at St. Anthony instead of Roddickton.

The Board acknowledges that because Roddickton, in addition to surrounding communities, is at the end of a 400 km radial system, there is a potential for lesser reliability of electricity supply than for communities on the interconnected system. The Board therefore must always be concerned that Hydro is providing reliable service in the area. The Board must also be concerned with the cost of providing that service. Section 3(b)(iii) of the *EPCA* directs the Board to ensure that all sources and facilities for the production, transmission and distribution of power in the Province should be managed and operated in a manner "*that would result in power being delivered to consumers in the province at the lowest possible cost consistent with reliable service.*" In discharging its mandate to ensure least cost power to consumers in the province the Board must balance the overall cost of providing service with what it would consider to be an acceptable level of reliable service.

The Board has considered the analyses and findings of the Acres report with respect to the reliability of the transmission line serving the GNP. The Acres report (pg. 5-20) found that almost all the Hydro transmission circuits outperformed in terms of average annual interruption duration in comparison to the circuits belonging to other utilities and in comparison to the Canadian Electrical Association ("CEA") average for similar types of circuits. According to Acres this suggests that Hydro maintains and restores its radial transmission circuits in an efficient manner when subjected to sustained outages, excluding extreme events. The frequency

of interruption results for the GNP transmission circuits is better than the frequency statistics of Hydro's transmission lines TL214 and TL215 serving the southwest region of the Province and TL220, serving the Connaigre Peninsula, and also better than similar transmission circuits in other jurisdictions.

In reviewing the quarterly performance reports for Plum Point to St. Anthony filed by Hydro in accordance with Order No. P. U. 5(2000-2001) it is evident that the historical performance of transmission lines TL261 and TL257 meets acceptable standards. In the reporting period since September 2000 only one sustained outage at Roddickton involved TL261 and TL257. This outage lasted 70 minutes and was attributed to a severe lightning storm which affected the entire island interconnected system, including most of the transmission lines on the GNP. The Acres report also concluded (pg. 6-3) that the transmission lines TL261 and TL257 are very reliable and had negligible number and duration of interruptions over the past six-year period.

Hydro has, with the approval of the Board, undertaken a number of capital projects in the past five years to maintain and improve the performance of the transmission system on the GNP, including the replacement of insulators on TL239 in 1999, rerouting of TL262 in its entirety in 2001, the partial replacement of insulators on TL226 and TL227 during 2001 and 2002, and the replacement of some structures along the route. The analysis of historical trends in the number and causes of interruptions on the GNP in the Acres report (pg. 5-17) shows that transmission line interruptions due to high winds and salt spray have reduced significantly during the last three years. The frequency of interruptions due to high winds and lightening on the GNP has also decreased during this period. As stated previously, adverse weather has been the major cause of interruptions on the GNP transmission system in the past and the Board agrees with Acres' finding that adverse weather is likely to be the main cause of interruptions in the future. However it would be impractical and cost prohibitive to expect or require Hydro to mitigate against all potential events that may cause interruptions in service.

In its April 28 brief the Town stated that "*…it is our firm position that the diesels could have, and should have, been used more extensively over the past three years or so during the*

hundreds and hundreds of momentary and sustained outages which resulted on Hydro's transmission lines elsewhere but which adversely affected the Roddickton area…". The prevention of momentary outages was not the intention of the Board in requiring Hydro to retain an amount of emergency standby generation in the Roddickton area. Rather the Board was concerned that a reasonable amount of emergency generation to meet critical loads be available to mitigate the effect of extended outages. The statistics also do not support the Town's position concerning the high number of sustained outages. The delivery point performance statistics for Plum Point to St. Anthony shows that there were 9 sustained outages of over 30 minutes in duration in the 45-month reporting period. The length of the longest outage was 141 minutes. These reliability statistics are, in the Board's view, indicative of reliable system performance and do not justify continued provision of emergency standby generation in the Roddickton area.

The Town also suggested that the Board should consider the fact that Roddickton is at the end of a long radial line and that any outage on the trans-island grid usually results in a power outage in this extreme end of the transmission lines. According to the Town power is restored to the central portion of the province or to the southern area of the GNP (in such instances) long before it is restored to Roddickton, which indicates a greater need for stand-by power in Roddickton, especially in the winter months, than in other regions of the Province. While the Board acknowledges that the weather conditions on the GNP can be extreme, the Board does not agree that Roddickton is in any more of a unique circumstance than many other communities in the Province which are located at the end of long radial lines. Standby or emergency generation would be located directly in a community only if it could be clearly demonstrated that economic and reliability benefits exceed the cost. This is not the case in this situation. Standby power in the event of an emergency will continue to be available to the area from St. Anthony, which is similar to the situation for most communities in the Province where standby power is delivered from a centrally or regionally located site.

The Board is satisfied based on its review of the reliability statistics provided by Hydro in its quarterly reports and the findings of the Acres report that the reliability of the transmission system in the Roddickton area compares favorably with overall Hydro statistics and does not

provide reason for concern in its consideration of whether the mobile generating units should be relocated from Roddickton to St. Anthony.

The Acres report also analyzed the contribution of the existing standby generation at Hawke's Bay, St. Anthony, and Roddickton and examined the impact of this generation on reliability performance in the northern section of the GNP. The study concluded that the existing standby capacity in this area is sufficient and that additional standby generation capacity is not needed. The Acres report (pg. 7-5) recommended that "*the generation be moved from Roddickton to St. Anthony, as it is the lowest cost solution, it provides better service to the customers at Roddickton, and it will have anticipated lower maintenance costs because of the close proximity of maintenance crews."* This recommendation was based on a review of customer delivery point performance in relation to standby generation contribution, in particular the duration of interruptions in the northern section of the GNP. Other options considered by Acres included maintaining the status quo with continued manual operation at Roddickton, and remote control operation of Roddickton.

The Board is satisfied that the existing standby generation capability in the St. Anthony-Roddickton area is sufficient to meet emergency power requirements in the area in the event of a major power outage. The Board notes the Town's concern about the potential for frozen water lines, damaged electrical and electronic equipment if the area was to experience an extended power outage at any time during the cold winter months without an available standby power supply. However this situation is no different than for many other of Hydro's customers in the Province. Hydro is not required to maintain backup or standby generation of sufficient capacity to completely replace the lost load and provide emergency power at all times to all customers in any of its service areas. This would be cost prohibitive. Instead Hydro maintains standby generation in various locations designed to provide a cost effective and reasonable amount of emergency generation to meet critical loads and to mitigate the effect of extended outages.

In its April 28th submission the Town proposed that a surcharge of slightly more than 3% be added by Hydro to the electrical bills of the residents of the Roddickton area to cover the cost of the $39,000 associated with maintaining the units at Roddickton. The Town suggested that it

was incredible that Hydro would go to such lengths to save only $39,000 while at the same time place at risk the private and public properties of residents and businesses of the area. According to the Town the area contributes approximately $1.2 million annually to Hydro's operating budget with the $39,000 savings representing slightly more that 3% of this revenue. The Town's proposal therefore is that customers of the area pay the surcharge to maintain the mobile generation in Roddickton. In its reply brief Hydro argued that this proposal is contrary to established regulatory policy in this Province and contrary to s. 73 of the *Act* which requires equality of rates for customers under substantially similar circumstances and conditions in respect of service.

The Board agrees that the proposal of the Town of Roddickton to impose a surcharge to cover the anticipated savings to be realized by Hydro in moving the generation capacity to St. Anthony is against established regulatory policy. Within each rate class all customers in the Province connected to a common generation source are deemed by the Board to be provided service under substantially similar circumstances and hence pay the same rates for that service as required by s. 73 of the *Act*. The Board confirmed this position in its recent decision on Hydro's general rate application, where it found that customers in Western Labrador and Happy Valley-Goose Bay should pay the same rates for electrical service of the same description. Rates are set based on the cost of service of the system and all customer classes contribute to these costs based on their electricity usage, while customers within the classes pay the same rate per kilowatt hour. In this way costs and benefits are shared fairly among all customers, irrespective of their proximity to a generation source. In the Board's opinion the proposal of the Town is contrary to the cost of service principles employed by the Board for rate setting and is not an appropriate alternative in this circumstance.

Based on its review of the submissions of both Hydro and the Town of Roddickton, the Board is satisfied that the movement of the two 850 kW mobile generation units from Roddickton to St. Anthony is justified and represents a least cost option for the supply of electrical power in the northern section of the GNP. The Board's concerns raised in Order No. P.U. 5(2000-2001) have been addressed by Hydro and the Acres report and the Board is satisfied

that the proposed relocation is cost effective and in the public interest and that customers in Roddickton will not be detrimentally affected by the relocation.

IT IS HEREBY ORDERED THAT:

1. Pursuant to Section 38 of the *Act*, the Board consents to the relocation of Hydro's two 850 kW mobile diesel generating units from Roddickton to St. Anthony.

2. Pursuant to Section 41(3) of the *Act*, the Board approves the supplementary 2004 capital expenditure of $95,200 by Hydro to carry out the relocation of its two 850 kW mobile diesel generating units from Roddickton to St. Anthony.

3. Hydro will pay all costs of the Board associated with this Application.

DATED at St. John's, Newfoundland and Labrador, this 2nd day of September 2004.

Robert Noseworthy,
Chair and Chief Executive Officer.

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

G. Cheryl Blundon,
Board Secretary.