In the Pre-Filed Evidence of Ludlow, page 5, lines 2-3, it is stated that Newfoundland Power's customers continue to rank reliability of supplies as one of the most important attributes of electric service:

Q. How does Newfoundland Power balance reliability and costs?

A. The following explains how Newfoundland Power balances reliability and costs.

Background

The 1998 Quality of Service Report

In his 1998 Report to the Board on *Newfoundland Light & Power Co. Limited Quality of Service and Reliability of Supply*, (the "1998 Quality Service Report"), Mr. D. G. Brown, P.Eng., concluded that:

> "After a thorough review of the material provided by the Board and the Company, detailed discussion with senior people at the Company's offices and visits to some of the Company's facilities in the St. John's region, the Engineer concludes that the Company is doing an effective job in maintaining and operating its facilities in the provision of electric service to its customers. It is noted that the Company's emphasis, now that there is practically no load growth on the system, is directed more toward customer service than construction of new facilities. ***The reliability of supply to Company customers is considered to be acceptable, although lower than the average for Canadian utilities. It is important that the utility maintain and in fact seek to improve its performance in this regard***."

The 1998 Quality of Service Report identified the two major causes of the Company's reliability performance at that time as defective equipment and adverse weather.

The 1998 Quality of Service Report clearly indicated to the Board and Newfoundland Power that the Company should seek to improve its reliability performance. In response to this, Newfoundland Power has undertaken a number of initiatives to improve its reliability performance.

One example of such initiatives has been Newfoundland Power's targeted efforts to improve reliability on rural distribution feeders.

Improving Rural Distribution Reliability

Newfoundland Power is primarily a distribution utility. Accordingly, improvements in reliability will be to a large extent, but not totally, a function of improving the quality of the distribution system.

Table 1 at page 6 of the Prefiled Evidence of Ludlow contains a list of rural distribution feeders upon which Newfoundland Power has performed significant capital work between 1999 and 2001. The feeders listed in Table 1 with the poorest reliability performance from 1995 to 1999 are OPL-01 and DUN-01.

The history of reliability performance for feeders OPL-01 and DUN-01 provide specific examples of the results of Newfoundland Power's efforts to improve system reliability.

OPL-01

In the period from 1995 to 1999, Newfoundland Power's OPL-01 feeder, which runs from Old Perlican to Bay de Verde, experienced 6.4 times the average number of outages experienced across Newfoundland Power's service territory. In the same period, the duration of outages was almost 12 times the Company average.

In the period 1995 to 1997, civic officials from the communities of Bay de Verde, Old Perlican and Grate's Cove, which is served by OPL-01 feeder, made complaints to the Board regarding the number and length of service outages experienced in their communities. Attachment A is a copy of a report to the Board by the Company in response to the complaint of these communities.

In the 12-month period ending August 31, 2002, reliability performance of OPL-01 feeder has been better than the Company average.

DUN-01

In the period from 1995 to 1999, Newfoundland Power's DUN-01 feeder, which runs from Dunville to Branch and St. Bride's, experienced almost 7 times the average number of outages experienced across Newfoundland Power's service territory. In the same period, the duration of outages was over 7 times the Company average.

In 1995, civic officials from the community of Branch, which is served by DUN-01 feeder, made complaints to the Board regarding the number and length of service outages experienced in the community. Attachment B is a copy of a report to the Board by the Company in response to the complaint of the community of Branch.

In the 12-month period ending August 21, 2002, reliability performance of DUN-01 feeder has been relatively consistent with the Company average.

Context

Newfoundland Power has almost 300 feeders.

OPL-1 and DUN-01 were two of Newfoundland Power's rural feeders with very poor reliability performance. There is little doubt that in 1995, the customers served by those feeders were dissatisfied with the reliability of the service provided.

By targeting capital investment for rural feeders with the poorest reliability performance, the Company has exercised sound engineering judgement. This should help the Company achieve longer-term sustainable improvement in its overall reliability performance.

Newfoundland Power's initiatives to improve rural distribution reliability through feeder rebuilds is an example of the Company's overall efforts to improve reliability. These initiatives have now addressed most individual feeders exhibiting reliability statistics well below the Company average. The next step in the refurbishment of deteriorated distribution plant will be to address smaller sections of deteriorated line. The proposed reconstruction of part of feeder MIL-02 in the 2003 capital budget is one such project.

Reliability Performance

Table 1 provides reliability statistics for Newfoundland Power for the period 1998 through 2001.

Table 1
Reliability: 1998 to 2001

	1998	**1999**	**2000**	**2001**
SAIFI[1]	5.60	6.61	4.93	3.99
SAIDI[2]	7.41	9.71	5.93	3.73

[1] Average number of interruptions per customer.
[2] Average hours of interruption per customer.

The reliability statistics in Table 1 show a measurable improvement in Newfoundland Power's reliability of service over the period from 1998 through 2001.

Table 2 provides a comparison of Newfoundland Power's reliability statistics with the overall national average reported by the Canadian Electricity Association (CEA) for 2000 and 2001.

Table 2
Comparative Reliability: 2000 to 2001

	CEA		**Newfoundland Power**	
	2000	**2001**	**2000**	**2001**
SAIFI	2.26	2.41	4.93	3.99
SAIDI	3.23	3.67	5.93	3.73

While Newfoundland Power's 2001 reliability was improved over 1998, it still has not reached the national average as compiled by the CEA.

The Cost of Reliability

Causes of Costs

Failure and Imminent Failure

Newfoundland Power's reliability will in significant measure reflect the general condition of its plant. If the plant is deteriorated or defective, it will be more prone to failure. The cost of replacement of deteriorated or defective plant is a significant factor in the cost of maintaining or improving the level of service reliability.

As Newfoundland Power is obligated to continue to provide a reasonable level of service to its customers, in cases of plant failure there is usually no question that the plant must be replaced. The only question is how can it be replaced in a least cost manner that contributes effectively to improved reliability.

From Newfoundland Power's perspective, the same essential logic applies to cases of imminent plant failure. It simply would not be prudent for Newfoundland Power to not replace plant which appeared through inspection, experience or sound engineering judgement to be reasonably close to failure or unreasonably prone to failure.

Aging Plant

Maintaining 30 to 40 year old deteriorated plant, particularly in areas subject to severe weather conditions, requires Newfoundland Power to incur operating costs on a recurring basis. These costs include the cost of reinstating service when failures occur, which are often in severe weather conditions. Increased failure reduces the level of reliability that customers experience. These operating costs are ultimately reflected in the rates charged to Newfoundland Power's customers.

Replacing 30 to 40 year old deteriorated plant has tended to help Newfoundland Power reduce its operating costs by reducing failures. Reduced failure also improves the level of reliability that customers experience. Replacement has the effect of increasing capital costs, which is principally the result of long-term inflation. These capital costs are ultimately reflected in the rates charged to Newfoundland Power's customers.

Balancing Cost and Reliability

In cases of failure and imminent failure, Newfoundland Power manages the cost of plant replacement by ensuring the replacement is undertaken in a least cost manner. This is typically achieved through processes such as competitive tendering. Due to the long life of utility assets, the cost of replacement plant will nevertheless generally exceed the historic cost of the plant being replaced.

In cases involving aging or deteriorated plant, Newfoundland Power approaches plant replacement differently. In most cases, the need for replacement is plainly supported by performance or inspection. Given that the cost of plant replacement will exceed historical cost, plant replacement will tend to increase capital costs. On the other hand, as indicated under *Aging Plant* above, it can also tend to reduce overall operating costs.

From a reliability perspective, the year-to-year mix of capital and operating costs that must be recovered in customers' rates is not a matter of fundamental importance. Stability of customer rates is, on the other hand, very important. Newfoundland Power's goal is to improve reliability without significantly increasing the total costs to be recovered in rates from customers. If reliability of service can be improved without causing customers' rates to increase, Newfoundland Power believes it should be.

Newfoundland Power's customers value both reliability of supply and price. Increased investment in the electrical system will contribute to improved reliability. So long as such investments are made in a manner that gives due regard to rate stability, customers expectations and the provincial policy outlined in the response to information request CA-85 (a) will be reasonably fulfilled.