THE NEW BRUNSWICK BOARD OF COMMISSIONERS OF PUBLIC UTILITIES

IN THE MATTER OF a Generic Hearing concerning the Accounting and Financial Policies of The New Brunswick Electric Power Commission

DECISION

May 22, 1991

THE NEW BRUNSWICK
BOARD OF COMMISSIONERS OF PUBLIC UTILITIES

IN THE MATTER OF The Public Utilities Act, R.S.N.B. 1978, Ch. P-27 as amended

IN THE MATTER OF a Generic Hearing concerning the Accounting and Financial Policies of The New Brunswick Electric Power Commission

Board:	Mr. David C. Nicholson - Chairman Mr. B. Fernand Nadeau - Vice-Chairman Mr. J.E. Stevens - Commissioner Mrs. Claudette Stymiest - Commissioner Mr. Paul E. LeBlanc - Commissioner Mr. Douglas Sanders - Secretary Ms. Lorraine Légère - Assistant Secretary Mr. M. Douglas Goss - Senior Advisor Mr. Harry G. Colwell - Solicitor
NB Power:	Mr. Thomas B. Drummie, Q.C., Mr. Robert Jette, and Mr. R.B. Cochrane, Q.C., Solicitors
The Large Power Users Group:	Mr. E. Neil McKelvey, Q.C., and Mr. James F. LeMesurier, Solicitors
The Power Commission of the City of Saint John:	Mr. Richard Burpee, General Manager

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SUMMARY OF CONCLUSIONS

The Public Utilities Act, as a result of amendments that took effect on January 1, 1990, now applies to NB Power. NB Power must apply to the Board for approval to change any of its rates for services offered in New Brunswick. The first such application was received by the Board on April 20, 1990. The primary purpose of that application was to permit the Board to conduct a series of public hearings to review in detail the basic background principles (generic issues) of NB Power which can have a significant effect on its rates.

The first such public hearing dealt with the accounting and financial policies of NB Power. It commenced on October 15, 1990, and concluded on October 24, 1990. The issues raised at that hearing are discussed in detail in the body of this report. The Board's conclusions are presented in summary fashion in the sections immediately following.

Accounting Policies

The principle of adjusting NB Power's annual operating results so as to equalize the operating performance of the nuclear and hydro units is appropriate. (Page 11)

NB Power should continue to maintain the water performance equalization portion of the generation equalization

account, consistent with its past practices. (Page 11)

Known maintenance requirements for Point Lepreau should be included in the calculation of the average annual capacity factor and NB Power should continue to record the related charges (or credits) to income through the generation equalization account. (Page 17)

The estimated shut-down period for Point Lepreau should be included in the calculation of the average annual capacity factor in the same manner as planned maintenance. (Page 17)

The use of the generation equalization account to accommodate the additional generating costs consequent to forced outages at Point Lepreau is appropriate, in principle. (Page 19)

NB Power is to report to the Board with a proposal for a change should the actual performance of Point Lepreau continue to significantly exceed its estimated average gross capacity factor. (Page 20)

NB Power, beginning in 1991, is to use a gross capacity factor for Point Lepreau of 81.1%, to correct for an error in the estimates for 1998 and 1999. (Page 21)

NB Power is to file with the Board, at the time of each general rate application, the dollar value associated with each of

the three elements of the nuclear stabilization portion of the generation equalization account. (Page 22)

NB Power is to provide the Board with a detailed description of the procedures used in forecasting annual economy export sales, an analysis of variances since 1986, a description of their causes and recommendations for improvements, to be filed prior to the next general rate application. (Page 24)

Deferrals related to the account for economy export sales are to be amortized over two years, rather than the current practice of 3 years for regulatory purposes. This change is to apply to deferrals arising in 1991 and subsequent years. The balance, as of March 31, 1990, will continue to be amortized over three years. (Page 27)

NB Power is to develop a mechanism to ensure that all export earnings are properly reflected in the calculation of future revenue requirements and to report on same by the time of the next general rate application. (Page 28)

The principle of accounting for the decommissioning costs of Point Lepreau over the lifetime of the nuclear unit is appropriate. (Page 33)

The collection from customers, on a prospective basis, of the increase in the estimated cost of decommissioning Point

Lepreau is appropriate. (Page 34)

The accounting treatment used by NB Power to provide for the costs associated with irradiated fuel management for Point Lepreau is appropriate. (Page 35)

The return to customers, on a prospective basis, of the over-collection related to irradiated fuel management for Point Lepreau is appropriate. (Page 36)

When NB Power made the decision to make a retroactive adjustment to the provision for fuel channel removal costs for Point Lepreau it should have made a full adjustment. Therefore, NB Power is directed to make a further retroactive adjustment of $16,000,000 and to recompute the future costs for fuel channel removal on the basis of this adjustment. (Page 40)

The generation equalization reserve represents appropriated earnings invested in the business and, regardless of its title, it has no specific purpose to provide for known or contingent liabilities. Therefore, for regulatory purposes, it should be returned to earnings invested in the business. (Page 47)

The rate stabilization accounts represent deferred liabilities and it would not be appropriate to include them in the equity of NB Power. (Page 49)

The earnings invested in the business should be considered as part of the equity capital of NB Power. (Page 50)

Other accounting matters were covered in the evidence of NB Power and the policies with respect to those items are appropriate. (Page 41)

Financial Policies

The debt to equity ratio is the least important of the two criteria that are required to be considered under section 42(2) of the Public Utilities Act. (Page 62)

A debt to equity ratio of 80:20 is a reasonable target for NB Power. (Page 62)

The nuclear liabilities and pension liability should be excluded from the debt component for the purposes of calculating the debt to equity ratio. (Page 63)

Interest coverage is the most important of the two criteria that are required to be considered under section 42(2) of the Public Utilities Act. (Page 71)

The interest component of annual charges related to the nuclear liabilities is to be excluded from the interest expense for the purpose for calculating the interest coverage ratio. (Page 72)

It is not appropriate to include stabilization/equalization deferrals in net income. (Page 72)

The netting of sinking fund earnings against interest and exchange expense is appropriate. (Page 72)

An interest coverage ratio of 1.0x is the minimum acceptable level. (Page 74)

An appropriate upper limit for the interest coverage ratio is 1.25x. (Page 74)

It is not appropriate to focus solely on the two ratios of debt to equity and interest coverage for the purposes of setting rates. (Page 75)

The proper approach must include consideration of the net income of NB Power and it is desirable that the appropriate amount of net income be clearly established. (Page 75)

An appropriate net income will result in debt to equity and interest coverage ratios that are appropriate for NB Power. (Page 75)

An appropriate return on equity is a normal cost for a properly managed corporation. (page 76)

The appropriate rate of return on the equity component of NB Power's capital structure should be the embedded cost of NB Power's debt. (Page 77)

Reductions in targeted financial performance are not the preferable way to avoid sudden, large rate increases. (Page 78-79)

The guarantee fee is a return on equity and will be deducted from the appropriate return on equity when setting the rates of NB Power. (Page 79)

Comments on the recommended regulatory approach will be welcomed at the time of the next general rate hearing. (Page 80)

NB Power is to file its next general rate application in accordance with the recommended approach. (Page 80)

That the Board be given specific authority to direct NB Power:

(a) to file with the Board any relevant information on any matter within the Board's jurisdiction;

(b) to undertake studies and to report to the Board upon any matter within the Board's jurisdiction. (Page 84)

That the Board be given the authority to initiate Public Hearings on its own motion, to review policy issues within its jurisdiction. (Page 84)

That Section 7 of the Act be made applicable to the regulation of NB Power. (Page 87)

That pursuant to Section 39(2), the Board be given discretion to rule as to whether or not a proposed "new service" is simply the re-pricing of an existing service. (Page 88)

INTRODUCTION

1) The New Brunswick Electric Power Commission and the Legislation

The history of electric power in the Province of New Brunswick dates back to the 1880's, when small amounts of power were made available commercially through a number of private enterprises in several major communities. It was not until April 24, 1920, however, that the Government of New Brunswick became directly involved in the supply of electric power. On that date the New Brunswick Electric Power Act (Power Act) was enacted, which also established The New Brunswick Electric Power Commission (NB Power) and charged it with the responsibility of developing a power supply that would meet the continuing needs of the Province.

NB Power suffered an early setback, when the collapse of the Musquash dam in 1923 caused considerable property damage and the loss of both generating capacity and public confidence in NB Power. However the growing need for power provided the opportunity for it to overcome such setbacks and to begin to expand its generating and distribution system.

Initially the majority of the power was produced from hydraulic generating stations. Many of these were owned by private industry that needed electricity for its own purposes and sold any surplus to NB Power. Demand rapidly outstripped the supply available from hydraulic sources and NB Power constructed the first

coal-fired generating facility in the Province at Grand Lake. By the end of the 1930's the supply to meet NB Power's growing demand came from hydraulic generation, coal-fired generation and the purchase of surplus power from several industries.

By 1980 the generating capacity had grown to 2.5 million Kw, with energy being produced from six hydro plants, six thermal generating plants (coal or oil), one diesel plant and a small combustion turbine unit. The move into nuclear generating and the expansion of other facilities during the 1980's increased the overall system generation capacity by 1990 to 3.2 million Kw.

NB Power continues to expand its generation capacity to meet its forecasts of the growing needs of the Province such as the construction which is currently in progress at Belledune. It provides services to over 300,000 customers in the Province and as well has significant sales of electricity to customers outside N.B. Total revenues are approaching a billion dollars per year and its assets exceed $3.3 billion.

Although the Power Act has been amended several times since it was enacted, none of the amendments prior to 1989, changed the method by which any changes in the charges, rates and tolls (rates) of NB Power were approved. It is understood that the following process was followed by NB Power to obtain approval of new and/or revised rates:

1. NB Power management developed proposals for changes to the rates.

2. These proposals would be reviewed by the Commissioners of NB Power, with any revisions being made as required until the proposals were accepted by the Commission as being appropriate for the forecast circumstances.

3. The Chairman of the Commission, who is a member of the New Brunswick Cabinet, would then submit the proposed rates to Cabinet for review and approval.

In 1989, the Legislative Assembly passed amendments to both the Power Act and the Public Utilities Act (the Act), revising the process for the approval of changes to NB Power's rates and including provision for public participation. These amendments became effective on January 1, 1990, and the New Brunswick Board of Commissioners of Public Utilities (the Board) became involved in the process for the first time.

The process for NB Power to obtain approval of changes to its rates is now as follows:

1. NB Power management develops proposals for changes to the rates.

2. These proposals will be revised by the Commissioners of

NB Power, with any revisions being made as required until the proposals are accepted by the Commission as being appropriate for the forecast circumstances.

3. NB Power files an application with the Board requesting approval of the proposed rate changes.

4. The Board, after ensuring that appropriate public notice has been given, holds a public hearing at which all interested parties have an opportunity to examine the proposed changes and to submit their comments.

5. The Board issues a Decision, a copy of which is filed, within 14 days, with the President of the Executive Council (Cabinet).

6. Within 30 days the Cabinet may, without any petition or application, modify, vary or reverse the Decision.

7. If Cabinet takes no action within the appointed time, then an aggrieved person may apply to the courts for a judicial review of the Decision.

2) The Application

By application dated April 20, 1990, NB Power requested that the Board approve a specific change to its rates. In a

Memorandum filed on the same date, NB Power indicated that the primary purpose of the application was to vest jurisdiction in the Board. This enabled the Board to hold hearings to review the basic background principles (generic issues) that impact on the level of rates for services performed by NB Power within the Province.

A pre-hearing conference was held on June 13 and 14, 1990, to consider which generic issues should be reviewed and in which order public hearings should be conducted. Proposals were received by the Board as to the issues that were relevant and opinions were expressed as to the order in which they should be examined. The Board concluded that the appropriate generic issues and the order in which they would be examined is as follows:

1. Accounting and Financial Policies
2. Depreciation Policies
3. Capacity Planning
4. Cost Allocation
5. Rate Design
6. Customer Service Policies

The public hearing with respect to Accounting and Financial policies commenced on October 15, 1990, and concluded on October 24, 1990. There was active participation by an intervenor referred to as the Large Power Users Group (LPU) which consisted

of the following companies:

Denison-Potacan Potash Company
Fraser Inc.
Irving Oil Limited
Miramichi Pulp & Paper Inc.
NBIP Forest Products Inc.
Rothesay Paper Limited
St. Anne-Nackawic Pulp Company Ltd.
Stone Consolidated Inc.

The witnesses who participated in the hearing were as follows:

NB Power:

Mr. K.B. Little	-	Vice President, Finance of NB Power
Mr. D.A. Carmichael	-	Senior Vice-President, Scotia McLeod Inc., Toronto
Mr. J.M. Hawkins	-	Comptroller of NB Power
Mr. K. Boocock, C.A.	-	Partner, Deloitte & Touche, Toronto
Mr. J.A.F. Cook, C.A.	-	Partner, Deloitte & Touche, Fredericton

LPU:

Mr. H.R. Tidby, C.A.	-	Managing Partner, Coopers & Lybrand, Saint John
Mr. B. Wolfman, C.A.	-	Coopers & Lybrand Consulting Group, Toronto

Independent Financial Witness:

Dr. B. Kalymon	-	Kalymon Consulting Ltd., Toronto

This decision covers the following:

A. Accounting policies:

1) Generation Equalization Account
2) Export Sales Stabilization Account
3) Nuclear Liabilities:
   a) Nuclear Decommissioning Account
   b) Irradiated Fuel Management Account
   c) Fuel Channel Removal Account
4) Other Accounting Policies
5) Generation Equalization Reserve
6) Equity

B. Financial policies:

1) Background
2) The Provincial Guarantee
3) Financial Targets
4) Debt to Equity Ratio
5) Debt
6) Board Conclusion on Debt to Equity Ratio and Debt
7) Interest Coverage Formula
8) Interest Coverage Ratio
9) Board Conclusions on Interest Coverage Formula and Ratio

ACCOUNTING POLICIES

The Board has prepared a number of appendices which contain detailed information for NB Power. These are for reference purposes and are attached to the end of this decision. The appendices include the income statement, the balance sheet, the capital structure, the summary of nuclear material disposal charges and the summary of the export sales stabilization account.

1) Generation Equalization Account

Note 1(g) of the annual report of NB Power for the year ended March 31, 1990, sets out their accounting policy with regard to deferred costs and revenues and includes the following statement concerning the generation equalization account:

> "In order to equalize the fluctuations in generating costs caused by variations from average water flow conditions and nuclear operating performance, the Commission annually charges or credits income with an amount calculated to adjust such costs to an average value. The offsetting debit or credit is included in the generation equalization reserve account. (see following paragraph) The calculation of the adjustment is based on historical water flow data compiled over a period of 35 years and on the performance expectations of the nuclear generating station developed from comparable industry statistics and the operating experience of the nuclear unit itself." (Exhibit NBP 4, page 25)

Page 166 of the transcript, indicates that the second sentence of the above quotation should read "The offsetting debit or credit is included in the generation equalization account."

NB Power's rationale for the use of the generation equalization account is explained as follows:

> "Hydro and nuclear units have common cost characteristics in that capital-related charges are very high and fuelling costs are very low. When the energy output from these generating sources falls, most costs continue and the utility must also replace the energy from thermal generating plants which have high fuel costs.
>
> These costs characteristics of hydro and nuclear units mean that costs between periods can experience large fluctuations due to certain factors, which are largely beyond the control of the utility, relating to water flow conditions or nuclear unit performance. NB Power believes that customers in any given time period should receive the benefit of average performance from these high quality generating assets, as a matter of intergenerational equity. The utility further believes that stabilization of costs is essential to avoid the rate volatility which would be required to actually track generation costs period-by-period.
>
> To treat customers in each time period equally, and stabilize rates, NB Power determines its revenue requirements each year on the assumption that average water flows and average nuclear unit performance will be realized. This is done even if there is reason to believe performance in either case will be above or below average levels." (Exhibit NBP 1, pages 5-6 & 5-7)

NB Power's evidence continued as follows:

> "The nuclear plant's anticipated average annual capacity factor is estimated at 80.3% of its total capacity over its lifetime. The capacity factor was established at the time the nuclear plant came into service following a review of the experience, to that time, of Ontario Hydro, which owned the only operating CANDU nuclear plants. Since that date, NB Power has re-examined the capacity factor in the light of its own actual and projected experience and considering the actual experience of other similar installations. A review as at December 31, 1989 has recently confirmed that 80.3% continued to be an appropriate expected average level." (Exhibit NBP 1, page 5-7)

A breakdown of the generation equalization account for

the period from 1955 to 1989 is reproduced below:

Summary of Equalization Account

Annual charge (credit)

Year	Water Equalization	Nuclear Stabilization	Cumulative Balance
1955	$ 300,000	-	$ 300,000
1956	(135,000)	-	165,000
1957	72,000	-	93,000
1958	180,000	-	273,000
1959	447,000	-	720,000
1960	550,000	-	1,270,000
1961	(507,000)	-	763,000
1962	195,000	-	958,000
1963	(25,000)	-	933,000
1964	594,000	-	1,527,000
1965	(124,000)	-	1,403,000
1966	(131,000)	-	1,272,000
1967	(860,000)	-	412,000
1968	284,000	-	696,000
1969	(4,519,000)	-	(3,823,000)
1970	240,000	-	(3,583,000)
1971	(616,500)	-	(4,199,500)
1972	(2,019,600)	-	(6,219,100)
1973	2,871,000	-	(3,348,100)
1974	1,751,000	-	(1,597,100)
1975	(2,630,073)	-	(4,227,173)
1976	(3,121,800)	-	(7,348,973)
1977	6,603,300	-	(745,673)
1978	9,908,300	-	9,162,627
1979	(9,279,466)	-	(116,839)
1980	1,428,942	-	1,312,103
1981	8,470,968	-	9,783,071
1982	19,594,920	-	29,377,991
1983	2,924,395	647,849	32,950,285
1984	12,279,000	20,271,739	65,950,285
1985	3,810,000	14,949,000	84,709,974
1986	(14,487,000)	24,178,000	94,400,974
1987	4,270,000	11,865,000	110,535,974
1988	(18,479,000)	10,523,000	102,579,974
1989	(8,660,000)	10,930,000	104,849,974
Total	$ 11,035,386	$ 93,814,588	$104,849,974

(Exhibit NBP 1, Table 5-2)

The Board has concluded that the principle of adjusting NB Power's annual operating results so as to equalize the operating performance of the nuclear and hydro units is appropriate. The generation equalization account encompasses two distinct elements:

a) Water Performance Equalization and

b) Nuclear Stabilization.

a) Water Performance Equalization

The water equalization account has been in existence since 1955, and is based upon the observation of average water conditions over a thirty-five year historical period. LPU stated as follows:

> "Accordingly, we conclude that the method used is objective, in accordance with generally accepted accounting principles, and is intergenerationally equitable." (Exhibit LPU 1, page 8)

The Board concurs with this view, and approves that NB Power should continue to maintain this portion of the account, consistent with its past practices.

b) Nuclear Stabilization

As indicated in the accounting policy described in note 1(g) to the financial statements (page 8 supra) the adjustment for nuclear stabilization is "developed from comparable industry

statistics and the operating experience of the nuclear unit itself."

It is the understanding of this Board that, on a monthly basis, NB Power compares the actual operating performance of the nuclear unit with its anticipated average lifetime performance. If the unit has operated at a level that exceeds the anticipated average lifetime performance, NB Power estimates the amount of generation of thermal energy which has thus been avoided, and computes the related cost saving by reference to the thermal generation costs for the month, using the following formula:

Total applicable fuel cost ($) / Total applicable thermal generation (kwh)	=	Average cost per kwh of thermal generation
(Average cost per kwh of thermal generation) x (Kwhs of thermal generation avoided)	=	Saving

An accounting entry is then recorded which debits the income statement with the estimated cost saving and credits the generation equalization account in the balance sheet. In months where the actual operating performance is below the anticipated average lifetime performance of the unit, a computation of the additional cost of generation is made in the same manner as above. In this case the accounting entry would credit the income statement and reduce the generation equalization account in the balance sheet.

Considerable evidence was advanced by witnesses for NB Power in support of the use of a gross capacity factor of 80.3%, representing the estimated average performance of the nuclear unit over its estimated useful life. A comparison with other CANDU 600 units was provided in Table 5-1 of Exhibit NBP 1, which is reproduced on the following page:

Gross Capacity Factors for Candu Units As At

December 31, 1989*

CANDU 600 UNITS

Unit	Gross Capacity Factor
Point Lepreau	93.0%
Gentilly-2 (Quebec)[1]	74.6
Wolsong-1 (Sough Korea)[1]	81.7
Embalse (Argentina)[1]	74.6

Current Comparison

Point Lepreau	93.0%
Average of other CANDU 600's	77.0
Average	85.0 **
Less 1998 18 month outage	5.0
	80.0%

ONTARIO HYDRO UNITS

Pickering A 1-4	69.5%
Pickering B 5-8	86.7
Bruce A 1-4	77.8
Bruce B 5-8	85.4
Overall	79.9%

* Gross Capacity Factors are since plants started in service

** Average of other units used to give higher weight to experience of Lepreau; other units have operating problems which are external to the generating station and are not applicable to Lepreau.

1 Information in brackets added by the Board.

NB Power also provided the following estimates in support of projected capacity factors for the calendar years 1991 through 1999:

> "When forecasting for planning or budget purposes, Lepreau is assumed to operate at its lifetime average capacity factor of 80.3%. Plant operating personnel do however plan major known maintenance requirements several years in advance, and it is possible to construct annual estimates of gross capacity factor therefrom. The current expectations for planned maintenance outages are as follows:
>
> | Calendar years | |
> |---|---|
> | 1991 | 30 days |
> | 1992 | 30 |
> | 1993 | 30 |
> | 1994 | 30 |
> | 1995 | 5 |
> | 1996 | 10 |
> | 1997 | 5 |
> | 1998 | 274 |
> | 1999 | 274 |
>
> The foregoing estimates are updated as circumstances change. Also, the plant is always subject to unplanned occurrences.
>
> Outside of planned maintenance outages an average forced outage rate of 12.0% is generally assumed for projections. The resultant estimated gross annual capacity factors would be as follows:
>
> | Calendar years | Capacity Factor |
> |---|---|
> | 1991 | 79.8 |
> | 1992 | 79.8 |
> | 1993 | 79.8 |
> | 1994 | 79.8 |
> | 1995 | 86.6 |
> | 1996 | 85.3 |
> | 1997 | 86.6 |
> | 1998 | 12.9 |
> | 1999 | 12.9" |
>
> (Interrogatory 2 NBP(PUB)4 Supplemental)

Based upon a review of this evidence and the evidence

provided in direct and cross-examination, it appears to the Board that the development of the gross capacity factor, and consequently the adjustments for nuclear stabilization in the generation equalization account, is based on three distinct elements:

i) Planned Maintenance Outages,
ii) Shutdown for Fuel Channel Removal and
iii) Forced Outages

It also appears to the Board that NB Power estimates the impact on the lifetime performance of the nuclear unit due to each of these events as follows:

Maximum life time capacity		100.0%
Planned maintenance outages	2.7%	
Shut-down for fuel channel removal	5.0%	
Forced outages	12.0%	19.7%
Estimated gross capacity factor		80.3%

The Board will consider each of these factors below.

i) Planned Maintenance Outages

Planned maintenance outages were discussed by NB Power as follow:

> "Plant operating personnel do however plan major known maintenance requirements several years in advance, and it is

possible to construct annual estimates of gross capacity factor therefrom." (Interrogatory 2 NBP(PUB)4 Supplemental)

The Board agrees that known maintenance requirements should be included in the calculation of the average annual capacity factor and accordingly approves that NB Power should continue to record the related charges (or credits) to income through the generation equalization account.

ii) Shut-down for Fuel Channel Removal

NB Power, at the time of the hearing estimated the useful life of the nuclear unit at Point Lepreau at thirty years. In addition, NB Power estimated that it will be necessary to shut down the unit for a period of eighteen months commencing in 1998 for the purpose of fuel channel removal and replacement. Based upon these estimates, the shut-down period represents 5% of the estimated useful life of the unit.

The Board believes that the estimated shut-down period should be included in the calculation of the average annual capacity factor in the same manner as the planned maintenance referred to in the previous section.

iii) Forced Outages

The remaining element in the calculation of the average annual capacity factor of the nuclear unit is related to forced or

unplanned outages. NB Power indicated that:

> "Outside of planned maintenance outages an average forced outage rate of 12% is generally assumed for projections." (Interrogatory 2 NBP(PUB)4 Supplemental)

Clearly, this is the most significant element in the computations of NB Power in determining the adjustments to the generation equalization account. In support of its estimates, NB Power filed Exhibit NBP 9 identified as "Performance of Nuclear Units of Ontario Hydro" which indicated in graphic form the average annual performance factors. However, little or no evidence was presented as to why forced outages occurred other than the fact that the units developed unidentified problems. LPU stated:

> "While other adverse events may indeed occur, the proven performance over 1983-1990 has been exemplary. The evidence in Table 5-1 shows the highest Gross Capacity Factor (93.0%) for Point Lepreau among comparable Candu 600 units and also among Ontario Hydro nuclear units." (Exhibit LPU 1, pages 8 & 9)

In cross-examination Mr. Little responded as follows:

> "Q Now would you look, please, at Exhibit NBP-9 which is one that was filed. Now this is a series of graphs showing the performance of a number of Ontario nuclear plants. In response to a question from Mr. Drummie, you indicated that if the Lepreau plant were superimposed on this that it would be more or less a straight line above the 90 percent level, do you recall that?
>
> Mr. Little
>
> A Yes.
>
> Q Now I'd like to go one step further and suggest to you

that (that) means from the standpoint of looking at operations, it would not be valid to compare the operation of ..... Lepreau with any of these plants?

A The plant probably has more similarities to those plants than differences but certainly it has some features of its own, yes. I think some comparisons can be made.

Q Well, I might suggest to you that this shows that from the standpoint of operating efficiency that Point Lepreau is far ahead of any of these others and can't be compared with it?

A I wouldn't dispute the fact that Point Lepreau has been the best of the group so far, yeah." (Transcript pages 609 & 610)

NB Power is justifiably proud of the performance of Point Lepreau to date. The gross capacity factor has been significantly above that experienced by the various Ontario units. However the Board is satisfied that NB Power would be more significantly affected from the outage of Point Lepreau, since it represents approximately twenty percent of the system, than would Ontario Hydro if it lost one of its nuclear units.

Therefore, in principle, the Board concurs with NB Power that the use of the generation equalization account to accommodate the additional generating costs consequent to forced outages of the unit is appropriate. Nevertheless, if the operating performance of the nuclear unit over its remaining life does not decline to the extent estimated by NB Power, then clearly the charges to customers will have been excessive. NB Power periodically reviews the average annual capacity factor of the nuclear unit and has to date confirmed that 80.3% continues to be an appropriate expected average level. The actual performance for Point Lepreau has been

as follows:

1984	92.0
1985	89.9
1986	96.8
1987	94.4
1988	91.3
1989	96.5
1990	92.3

The actual average performance of these years is 93.3% which is well above the estimated lifetime average performance.

This means that, to date, the forced outages have been well below the assumed amount of 12% per year. For this to balance out over the life of Point Lepreau it requires that forced outages in future years must exceed 12%. Each additional year of above average performance means that the remaining years must have even lower performance. At some point, the continued use of 12% for forced outages will become unrealistic. The Board was not presented with any evidence as to a more appropriate estimate for forced outages. **However, the Board directs NB Power to monitor this situation very carefully and to report to the Board with a proposal for a change should the actual performance of Point Lepreau continue to significantly exceed its estimated average gross capacity factor.**

The Board also has concerns with respect to the adjustment for forced outages for the years 1998 and 1999. This was assumed to be 12% in each of 1998 and 1999 regardless of the

fact that the unit is estimated to be shut down for nine months of each year for fuel channel removal and replacement. This fact was brought to the attention of the accounting panel by Board counsel, and Mr. Little concluded that NB Power's calculations were incorrect, as follows:

> "Q. Would you agree with me, Mr. Little, that the 3 percent scenario makes sense to you and that would be proper, in your estimation?
>
> A. Yes, it certainly makes sense that the 12 percent....forced outage rate should only be applied during the period of actual operation which in this particular case, if it's one-quarter of a year, you would expect there would be a 3 percent effect.
>
> Q. Right.
>
> A I agree." (Transcript pages 701 & 702)

As a result of correcting this error in calculation, the estimated capacity factor for both 1998 and 1999 should be 21.9%. This amounts to an additional availability of 18 per cent during those two years. For the years from 1991 to 2013, this results in an average increase of 0.8%. **Therefore, the Board directs NB Power to begin using in 1991 a gross capacity factor of 81.1%.**

In cross-examination, Mr. Little conceded that the portion of the generation equalization reserve account related to the fuel channel removal and replacement could be isolated and estimated separately from the other elements in the account. The Board agrees and also considers that the same could be done for the other elements of the account that were discussed above. **The**

Board is of the view that it would be useful to have this information and, therefore, directs NB Power to file with the Board at the time of each general rate application the dollar value associated with each of the above three elements of the nuclear stabilization portion of the generation equalization account.

2) Export Sales Stabilization Account

Note 1(g) to the consolidated financial statements of NB Power for the year ended March 31, 1990,included in Exhibit NBP 4, discloses the accounting policy concerning the export sales stabilization account.

This note indicates that with respect to certain export sales, otherwise referred to as Economy Export Sales, NB Power annually compares its forecast earnings from such sales with the actual earnings experienced.

When actual earnings are below forecast, the deficiency is credited in the income statement. When actual earnings exceed forecast the excess is debited in the income statement.

A corresponding reduction or increase is then recorded in the Export Sales Stabilization Account, in the deferred liabilities section of the balance sheet. The amounts deferred annually are amortized for inclusion in the income statement over the following three financial years.

In its prefiled evidence, at page 5-34 NB Power provided an analysis of the Export Sales Stabilization account, the information from which is presented in Appendix 5 to this decision. The amount reported in the income statement of NB Power for 1990 (Appendix 1) can be derived from Appendix 5 as follows:

	1990	1989
	($000's)	
Earnings from Economy Export Sales in excess of forecast	$22,737	15,979
Amortization of excess earnings from previous three years	(9,654)	(3,485)
Net reduction of earnings for the year	$13,083	12,494

A review of the activity in the account discloses that only once since 1980, has the deferred balance been in debit. At March 31, 1990, the deferred credit was $36,370,000. NB Power described the difficulties in making accurate forecasts of export revenues as follow:

> "These sales, hence net income from them, are subject to many influences beyond the control of NB Power, even beyond the control of the customer utility to predict. E.g., a strike of coal transportation workers in Nova Scotia, an extended outage on a large nuclear unit in New England or drought that affects Hydro Quebec's reservoirs. Unpredictable variances also occur in the cost of fuel to NB Power, Hydro flow/generation and the availability of thermal generation on the NB Power system.
>
> It is because of the many in-determinants in the accurate forecasting of net income that NB Power implemented the Export Sales Stabilization Account. NB Power continues to update its computer programs and to extend its contacts with neighbouring utilities to refine and improve on its forecasting of net income." (Interrogatory 2 NBP(PUB)10)

Regardless of these explanations the Board is concerned with the extent of the variances between forecast and actual performance. LPU illustrated certain of these variances as follows:

"1987 $ 4,044,015 or 14%
1988 $ 8,940,095 or 29%
1989 $15,978,982 or 61%
1990 $22,737,183 or 71%"
(Exhibit LPU 6)

In regard to these variances, Mr. Tidby proposed that the Board should examine the procedures used for forecasting the annual economy export sales. **The Board concurs with Mr. Tidby and orders NB Power to provide a detailed description of those procedures, an analysis of variances since 1986 and a description of their causes. Furthermore, NB Power shall formulate recommendations to improve the forecasting of earnings from export economy sales, to be filed prior to the next general rate application.**

As indicated in the accounting policy described at page 22 supra the amounts deferred annually are brought into the calculation of future revenue requirements in equal amounts over a period of three years and are amortized to the income statement on that basis. The Board considers that two further matters need

to be addressed:

i) The period of amortization of deferred export earnings for regulatory purposes, and

ii) The inclusion of all such earnings in the calculation of revenue requirement.

i) Period of Amortization for Regulatory Purposes

NB Power provided the rationale for amortizing the annual amounts deferred in the Export Sales Stabilization Account over a three-year period as follows:

> "The selection of the three-year period for the export sales stabilization account is to allow the variations from budget to be brought into the revenue requirements over a short term period without raising the possibility of undue distortion in the short term. NB Power determines each year its expected total energy cost (fuel and power purchases from interconnected utilities) to supply the total forecast load comprised of in-province load plus expected sales to other utilities. Judgement is applied on anticipated sales to neighbouring utilities, to arrive at the quantities of energy that can most probably be marketed and at what net return to NB Power." (Interrogatory 2 NBP(PUB)10)

LPU concluded in its prefiled evidence:

> "It is our opinion that consistent retention of funds over such a period of time jeopardizes the principle of intergenerational equity for a minor improvement in smoothing rate fluctuations on a year-to-year basis. We recommend returning such budget variances to rates and income in the shortest period of time; that is in the following year. This will have the benefit of never having the account build up large collections of balances from customers, over a period of years, as occurred until 1984 and which is beginning to recur in 1988, 1989 and 1990. It will also adjust excess funds or over-charges to customers in close proximity to the

time when the initial export budget deviation occurred." (Exhibit LPU 1, page 6)

In direct examination Mr. Little commented on this recommendation as follows:

"A Yes, I'd like to make two points in respect to the recommendation. The first one I alluded to earlier was the fact that the actual... or the budgeted benefits from export are, in fact, included in the revenue requirements in budgets and rates for any given year. So, to the extent that actual performance is near budget, the budgeted amount is already included in the rates, the expected export performance.

The second point I'd like to make is with respect to the logistics or practicality of returning any variance from a given year's budgeted exports into income in one year, particularly if the reference year is the immediately following year. Perhaps I could use an example with reference to the current year.

The export benefit budget for the current year, I don't have the exact number but let's say it's in the order of 50 million dollars for the current year. I believe that's the appropriate level of magnitude. We are setting our budgets right now so that we can proceed with a rate request if appropriate to this Board. The estimates behind the budgets which are in the process of being reviewed by our own Commission have been prepared over the last.... or that element of them would have been prepared over the last couple of months. In the August /September time frame where we are not even half-way throughout the year, it's very difficult to know exactly what the variance from budget is going to be on export earnings this year. We don't know yet. We haven't seen 12 months' worth of results. If we were to adopt a policy whereby the actual variance from budgeted export benefits, which we won't know until the 31st of March in 1991, is to be incorporated in budgets and rates in the '91/'92 year, which seems to be the recommendation of Messrs. Tidby and Wolfman, there is a substantial risk that the estimates that we would have to undertake in August as to what that variance will be won't be correct and, therefore, that the amount ultimately reflected in budgets and rates could be quite different than what actually turns out to have been earned this year.

So it's a very practical difficulty I have with the

> concept of trying to incorporate the variance from budgeted export benefits in one year if that year is the immediate following year." (Transcript pages 466-468)

Mr. Little continued later:

> "So for two reasons, we would continue to recommend use of the three-year period. One is just the practical aspect of knowing what the variance will be at the time budgets and rate requests have to be established, and the other being the overall objective of maintaining rate smoothing." (Transcript page 469)

The Board concludes from this evidence that there are practical difficulties in amortizing the deferred excess or deficiency amounts over one year when projecting revenue requirements for a future period. However, the Board believes that the principle of intergenerational equity would be better served if any adjustments were made as soon as possible. **Accordingly, the Board orders NB Power to amortize such deferrals over two years, rather than three years, for regulatory purposes.**

Implementation of this policy change in the 1991 financial year would have a significant impact upon revenue requirements in 1992 and 1993. **Accordingly, the Board will approve that the balance as at March 31, 1990, of $36,370,000 be brought into revenue requirements over a three year period, and that only the deferrals arising in 1991 and later years should be amortized over a period of two years.**

ii) Inclusion of Export Earnings in Revenue Requirements

In cross examination by Board counsel, Mr. Little indicated that the present budget process was not designed to ensure that all export earnings are accounted for in calculating revenue requirements. Mr. Little stated:

> "A Perhaps an example, if we estimate in 1987 that we will be 9 million dollars over budget in export benefits in the budget process for 1988, 3 million dollars of that will be reflected as an income item. If it turns out that it was 2,950 thousand instead of 3 million, it would be this 50 thousand error in estimate or a third of the error in estimate that would not be reflected in rates.
>
> Q Right. So there is an attempt to reflect in the rate-setting process the one-third of the export sales based on your three-year amortization .....?
>
> A Yes, on our best estimate.
>
> Q Right. So you've got, what I call, a moving estimate through regulation, is that what you're anticipating?
>
> A Actually, I hadn't thought of that aspect until we were questioned by Mr. McKelvey on that issue the other day, as to whether there should be a mechanism to specifically capture one-third of the error in estimate which would not otherwise be captured if we didn't have a subsequent adjustment. We had not, or I, had not contemplated that. It sounds like a good idea." (Transcript pages 707 & 708).

The Board concurs with Mr. Little's conclusion and expects NB Power to develop a mechanism which will ensure that all export earnings are properly reflected in the calculation of future revenue requirements, and report on it to the Board by the time of the next general rate application.

The Board observes that the account is designated as the "Export Sales Stabilization Account" whereas it actually acts as a mechanism for levelling variances in net income. Further, the account does not include the effects of any firm export sales. The Board, therefore, suggests that the account should have a designation which more properly reflects its purpose.

3) Nuclear Liabilities

NB Power has established the following accounts to provide for estimated future liabilities connected with the operation of the Point Lepreau nuclear generating station:

a) Nuclear Decommissioning Account

b) Irradiated Fuel Management Costs

c) Fuel Channel Removal Account

In its prefiled evidence NB Power provided a document dated June, 1990, entitled "Estimated Revenue Requirements for Decommissioning and Irradiated Fuel Management of Point Lepreau Nuclear Generating Station." In the introduction, the document states:

> "Nuclear generating stations, at the end of their normal operating lives, must be placed in a permanently out of service state in a manner that provides adequate protection for the health and safety of the general public, the decommissioning workers and the environment, all in accordance with the Atomic Energy Control Board Regulatory Document R-90.
>
> It is a generally accepted practice for electric utilities to

provide for the future costs of decommissioning and irradiated fuel management through charges to customers during the operational lifetime of the facility." (Exhibit NBP 1, section 7.6, page 1)

In addition, NB Power stated:

"NB Power is also providing through an annual charge to income from the estimated future costs of removing all pressure tubes and 100 calandria tubes at the nuclear generating station for replacement (collectively "fuel channels"). The anticipated future costs have been calculated based on the experience already developed by another Canadian electric utility and on the assumption that fuel channel replacement will become necessary in 1998." (Exhibit NBP 1 page 5-10)

The accounts used by NB Power to accumulate charges to customers regarding these estimated future liabilities were collectively referred to throughout the hearing as "Nuclear liability accounts" or "Nuclear liabilities".

In its prefiled evidence LPU concluded as follows:

"The operation of deferral accounts for these three future nuclear plant costs are in use in Canada in Ontario Hydro and, to a lesser extent in Hydro Quebec, where a small nuclear plant decommissioning cost deferral account has recently been instituted. We concur with evidence provided by NB Power's witnesses in terms of the need to operate such accounts for adequate matching of costs. We concur also that the time value of money must be recognized in allowing for these charges." (Exhibit LPU 1, page 11)

NB Power outlined its accounting policies with regard to

liabilities resulting from nuclear generation, as follows:

"Irradiated fuel management, nuclear unit decommissioning and fuel channel removal

In order to provide for the estimated future costs of permanently disposing of irradiated nuclear fuel and decommissioning the nuclear generating station to return the site to a state of unrestricted use, the Commission annually charges income with amounts calculated to be adequate, when accumulated with interest, to cover the total costs of these future activities as they occur. The calculations of the anticipated future costs are based on a detailed study which takes into account various assumptions regarding the method and timing of dismantlement of the nuclear facility, the cost of transportation of nuclear material to permanent disposal facilities, and estimates of interest and inflation rates in the future. With respect to irradiated nuclear fuel, the annual charge is related to the amount of nuclear fuel consumed while the decommissioning requirements are on the basis of equal annual amounts over the life of the unit.

The Commission is also providing through an annual charge to income for the estimated future costs of removing fuel channels at the nuclear generating station for replacement. The anticipated future costs have been calculated based on the experience already developed by another Canadian electric utility and on the assumption that fuel channel replacement will become necessary in 1998.

The Commission is accounting for these transactions through means of deferred asset and deferred liability accounts. The total amount required to be collected over the life of the unit to cover decommissioning activities was recorded in these accounts as of the date the nuclear unit was placed in service. The deferred asset account is reduced annually by the amount collected from customers for decommissioning. The deferred liability account is increased each year by the amount collected from customers to cover fuel channel removal and disposal of irradiated nuclear fuel consumed during the year and by interest, compounded annually, on the accumulated amounts collected. Interest is calculated at the Commission's long-term borrowing rate and is charged to income annually. Both accounts are adjusted periodically to reflect changes in amounts to be collected from customers as a result of revisions to the decommissioning estimate.

In view of potential developments in the technology of decommissioning, fuel channel removal and irradiated fuel management, and because of the various assumptions and estimates inherent in the calculations, NB Power reviews such calculations periodically, making adjustments as necessary on

a prospective basis." (Exhibit NBP 4, note 1(h))

At March 31, 1990, the deferred asset and deferred liability accounts recorded by NB Power were included in the Consolidated Balance Sheet as follows:

	($000's)
Deferred liability	
Irradiated fuel management, nuclear unit decommissioning and fuel channel removal	$226,251
Deferred asset	
Nuclear unit decommissioning	112,590

(Exhibit NBP 4, pages 18 & 19)

The net deferred liability as at March 31, 1990, is therefore $113,661,000. Appendix 4 provides a detailed breakdown of this amount.

a) Nuclear Decommissioning Account

As indicated in note 1(h) page 31 supra, NB Power is accounting for the estimated future costs of decommissioning the nuclear generating station, including returning the site to a state of unrestricted use, by means of a deferred asset and a deferred liability account.

At the time the unit was commissioned in 1983, it was known that, pursuant to Regulatory Document R-90 of the Atomic

Energy Control Board, NB Power would be required to return the site to a state of unrestricted use.

> "The principle of intergenerational equity and the cost of service standard require that the customers of a particular period pay for the costs of providing them with power. In the case of customers receiving power from a nuclear plant, this requires that the costs charged to those customers include the cost to be expended in the future on the decommissioning of the plant,.... If such costs are not included in the cost of service over the period that the plant itself,... (is) in service, then customers receiving the benefits would not pay the costs." (Exhibit NBP 1, page 5-27)

Accordingly, at the time that Point Lepreau was put in service, an estimate was made of the anticipated future liability for decommissioning of the unit. The total amount to be collected by way of annual charges to customers over the life of the unit was recorded as both a deferred asset and a deferred liability. The deferred asset account is reduced annually by the amount collected from customers.

The Board agrees with the accounting treatment adopted by NB Power to provide for this liability over the lifetime of the nuclear unit. Further, the Board accepts that such treatment affords a measure of intergenerational equity. However, NB Power, indicated that certain difficulties exist in the forecasting of the estimated future costs to be incurred as follows:

> "In view of the potential developments in the technology of decommissioning and because of the various assumptions and estimates inherent in the calculations, NB Power reviews such calculations periodically (normally every three years), making

> adjustments as necessary on a prospective basis. The last review on decommissioning costs was carried out by Atomic Energy of Canada Ltd. (AECL) in 1989 and the estimates were prepared in an analysis specific to the Point Lepreau plant." (Exhibit NBP 1, page 5-9)

As a result of this review NB Power increased the deferred asset and the deferred liability accounts by $66,093,000. It also increased the annual amount to be collected from customers from $2,143,000 to $4,895,000. Clearly, a portion of the increase in the estimated future liability relates to the years 1983 to 1988. Had the present estimate been available at the time of the start-up of Point Lepreau, the annual charge would have been greater. **However, the Board concurs that the increase in the estimated costs should be collected from customers on a prospective basis as noted above.**

The annual charges for decommissioning have been calculated on the basis of a thirty year operating life of the nuclear unit. In Interrogatory 3 NBP(PUB)3, the Board asked what changes would result in the annual decommissioning charge if a thirty-five year life were assumed for Point Lepreau. NB Power responded that the decommissioning charge for the fiscal year ended March 31, 1990 would have been reduced by approximately $810,000. Clearly, if it were determined that the estimated useful life of the plant should be increased, it would be necessary to recompute the annual charges for decommissioning accordingly.

b) Irradiated Fuel Management Costs

As indicated in note 1(h) (page 31 supra) NB Power is providing for the estimated future costs of permanently disposing of irradiated (i.e. used) nuclear fuel. NB Power stated as follows:

> "In order to provide for the estimated future costs of permanently disposing of irradiated nuclear fuel, NB Power annually charges income with amounts calculated to be adequate, when accumulated with interest, to cover the total costs of this future activity as it occurs. The annual charge for irradiated nuclear fuel is related to the amount of nuclear fuel consumed in the year and is designed to cover all future costs associated with the storage and ultimate permanent disposal of that fuel.
>
> NB Power is accounting for the irradiated fuel through means of a deferred liability account. The deferred liability account is increased each year by the amount collected from customers to cover disposal of irradiated nuclear fuel consumed during the year and by interest, compounded annually, on the accumulated amounts collected." (Exhibit NBP 1, page 5-9)

The Board concurs with the accounting treatment adopted by NB Power to provide for this liability over the lifetime of the nuclear unit. A review of the detailed calculations contained in section 7.6 of Exhibit NBP 1 indicates that estimates of future costs have been made based upon anticipated fuel consumption. The calculations made in 1989 indicated that previous estimates of the total future costs of disposal of irradiated fuel had been overstated by approximately $70,000,000 and that a surplus of $26,245,715 had been collected from customers up to March 31, 1989. NB Power is returning the surplus to customers on a prospective

basis over the remaining estimated life of the nuclear unit, by means of a level monthly credit of $247,243 or approximately $2,967,000 per annum. **The Board agrees that this is a reasonable approach to deal with the surplus, which is consistent with the treatment of the increase in estimated future decommissioning charges.**

c) Fuel Channel Removal Account

As indicated in note 1(h) (page 31 supra) NB Power is providing for the estimated future costs of replacement of fuel channels. This policy was introduced in the annual financial statements for the year ended March 31, 1989.

> "In view of potential developments in the technology of fuel channel removal and because of the various assumptions and estimates inherent in the calculations, NB Power will review such calculations periodically (normally every three years), making adjustment as necessary on a prospective basis.
>
> The initial review of the estimates was carried out in 1988 when the policy on fuel channel removal charges was originally implemented.
>
> The experience of Ontario Hydro and specific tests conducted at Point Lepreau have indicated that fuel channels will likely require replacement after about fifteen years of life. The removal of the old fuel channels for the purpose of installing the new channels is a complex and lengthy operation. The capital cost of new fuel channels is covered by NB Power's depreciation policy and the cost of replacement power during the maintenance outage is covered by the generation equalization account. The cost of removing the old fuel channels is a maintenance expense and would normally be charged to income as incurred. However, in view of the magnitude of the projected costs for this operation, NB Power has developed the fuel channel removal accounting policy to spread the costs over time while ensuring that the costs are properly charged to those customers who have received the power output from the nuclear station during the life of the

original fuel channels. Ontario Hydro follows the same approach and assisted NB Power in the evaluation of the costs of fuel channel removal." (Exhibit NBP 1, pages 5-10 & 5-11)

Mr. Hawkins offered the following clarification:

"Q Am I right in concluding that the estimated fuel channel removal cost is being charged to those years in which the particular fuel channels are being used as to opposed to the life of the whole plant?

A That is correct.

Q And the ones that replace it, how will they be charged? To future generations?

A The cost of replacing the tubes; that is, the cost of the tubes and the labour and other expenditures required to put them in will be capitalized and depreciated over the remainder of the plant's life. The cost of removing those tubes is then included in the decommissioning at the end of the plant's life." (Transcript pages 442 & 443)

This policy was instituted in 1989 although the necessity to replace the fuel channels during the life of the unit was known at the time it was brought into service. However, NB Power did not anticipate the magnitude of the costs of fuel channel removal.

"Q Mr. Little, in 1983, the Commission knew that the fuel channels had a shorter life than the plant itself at Point Lepreau. Did the Commission know at that time, or did they believe at that time, that a lengthy shut-down was required?

Mr. Little

A We really had very little knowledge at that time, so I'd say no." (Transcript pages 732 & 733)

NB Power is now collecting these costs from customers on a prospective basis, although a portion of the costs clearly applies to the period from 1983 to 1988.

At the time the policy was instituted, the following footnote disclosure was made in note 11 to the 1989 consolidated financial statements of NB Power:

> "The Commission has started in the fiscal year ended March 31, 1989 to provide for the estimated future costs of removing fuel channels at the nuclear generating station for replacement. While the cost of installing the new fuel channels will become a depreciable asset and be collected from future customers through the rate setting process, the cost of removing the existing channels is more properly chargeable to those customers who benefit from the power produced during their lifetime.
>
> The Commission has determined that an adjustment to earnings invested in the business for fuel channel removal is appropriate to the extent of performance bonus payments received from export participants in the nuclear generating station which have been taken into revenue in previous years. These bonuses were not included in the rate setting process in previous years. The adjustments to earnings invested in the business, amounting to $13,300,000, accordingly represents the total amount of performance bonus payments received in years up to March 31, 1988. This amount has been applied to reduce the total amount to be collected from customers to cover the cost of the fuel channel removal activities. The remaining amount will be collected in equal annual amounts until the channels are removed. Interest charges will apply with effect from April 1, 1989." (Exhibit NBP 1, Annual Report, note 11)

By cross-examination, it was established that there was no connection between the necessity to provide for the future costs of fuel channel removal and the earning of performance bonuses:

> "Q Now, Mr. Little, does NB Power consider that there's any

relationship between the fuel channel removal account and the performance bonuses received from export participants in the nuclear generating station?

Mr. Little

A There's no accounting type of connection. The connection that does exist, however, is more one of the rationales for why the performance bonus charges were not budgeted and included in rates in the two or three years before the fuel channel charge was implemented, was due to the uncertainty of this problem. It's not the only reason but it was certainly a factor and in that sense, management and the Commission link the two. And it was for that reason that when the fuel channel charge was implemented that the cumulative amount of the performance charges that had not previously been included in rates, which I believe at that point in time would have been three years worth, was applied against that cost. Other than that, there is not a direct accounting type linkage, no.

Q So no cause-and-effect linkage?

A No, there is not." (Transcript pages 651 & 652)

It appears to the Board that NB Power has chosen to introduce the accounting policy partly on a retroactive basis, to the extent of $13,300,000, with the remaining costs to be recovered from customers in the future. An interrogatory on this subject was as follows:

"Q. Does NB Power estimate that the provision for Fuel Channel Removal Cost of $18.6 million represents the amount that would otherwise have been provided to March 31, 1989 had these charges been accounted for since 1983?

A. The $18.6 million does not represent the amount that would have been collected to March 31, 1989 had the charge been instituted in 1983. The accumulated balance, including interest, would have been $29.3 million." (Interrogatory 2 NBP(PUB)11)

It is the opinion of this Board that NB Power should have

established the adjustment in the total amount of $29,300,000, so that subsequent collections from customers would have represented only the share of costs applicable to periods after 1988. **Accordingly, for regulatory purposes, the Board orders NB Power to transfer $16,000,000 from earnings invested in the business to the fuel channel removal account and to recompute future charges to customers.**

4) Other Accounting Policies

NB Power provided evidence related to a number of accounting policies other than those dealt with separately in this decision. This evidence was contained in two reports, the first being dated August, 1987, and an update as of May 1990. In addition NB Power provided a copy of an opinion on each of these reports signed by NB Power's auditors.

The Accounting Policies and Practices evidence included material on general accounting principles, and discussion of the following specific topics in addition to those dealt with separately in this decision:

Fixed Assets
- Capitalization of Assets
- Capitalization of Interest during Construction
- Capitalization of Overhead
- Contributions in Aid of Construction and Government Grants
- Asset Disposals and Retirements
- Leases

Current Assets
- Inventories other than Nuclear Fuel
- Nuclear Fuel Inventory

Other Assets and Liabilities
- Deferred Charges
- Sinking Funds
- Refinancing of Long-term Debt
- Foreign Exchange - Long-term Debt
- Foreign Exchange - Sinking Fund Assets
- Foreign Exchange - Current Transactions
- Pension Obligations

Revenue

The Accounting Policies and Practices Update dealt with accounting and developments since 1987 and, apart from the accounting for fuel channel removal and replacement, which is dealt with at page 36-40 supra, was principally concerned with the changes in accounting policy regarding pension obligations which was consistent with the accepted accounting practice introduced by the Canadian Institute of Chartered Accountants.

The Board has reviewed this evidence, and, together with the LPU, sought additional information in a number of areas through the interrogatory process. **Based upon its review of the evidence and the replies to interrogatories, the Board believes that the accounting policies enumerated above are appropriate, and approves that NB Power should continue to apply them consistently in the future.**

5) Generation Equalization Reserve

In the Annual Report of NB Power for the year ended March

31, 1989, the liabilities side of the consolidated balance sheet included, in an un-named grouping of accounts, the caption "Generation equalization reserve" in the amount of $280,849,974. Note 9 to the consolidated financial statements, is as follows:

"9. Generation equalization reserve

	1989	1988
Balance at beginning of year	$278,579,974	$262,535,974
Generation equalization adjustment	2,270,000	(7,956,000)
Generation equalization appropriation	-	24,000,000
Balance at end of year	$280,849,974	$278,579,974

In addition to the annual adjustment to generation cost described in Note 1.g, the Commission increases the generation equalization reserve by appropriations from earnings invested in the business. Total appropriations to the reserve amounted to $176,000,000 at March 31, 1989 (1988 - $176,000,000).

Appropriations are made to help ensure that the reserve is sufficient to cover the cost of replacement power in the event of unfavourable water flow conditions and nuclear operating performance for an extended period." (Exhibit NBP 1)

Note 1(g) contains the following:

"Generation Equalization Adjustment

In order to equalize the fluctuations in generating costs caused by variations from average water flow conditions and nuclear operating performance, the Commission annually charges or credits income with an amount calculated to adjust such costs to an average value. The offsetting debit or credit is included in the generation equalization reserve account. The calculation of the adjustment is based on historical water flow data compiled over a period of 35 years and on the performance expectations of the nuclear generating station

developed from comparable industry statistics and the operating experience of the nuclear unit itself." (Exhibit NBP 1)

However, in the 1990 Annual Report, the amount previously disclosed as a generation equalization reserve has been split into the following two components:

	1990	1989
Deferred liabilities:		
Generation equalization account	$108,031,974	104,849,974
Generation equalization reserve	176,000,000	176,000,000
	$284,031,974	280,849,974

Mr. Boocock testified as follows:

"Q ...The generation equalization account, that could be shown as it is now as a liability, right?

A It is a liability, sir.

Q Well, how come it's a liability in 1990 but for the last seven years it has not been a liability?

A I don't believe that's the case. I think if you subjected the accounts of New Brunswick for the previous years and the notes to the financial statements, it clearly indicated that the generation equalization, as it was described at that point, had two component pieces .... An informed read(er) of the statements would have to draw the conclusion that what we describe as a generation equalization account is a liability and not equity." (Transcript page 524)

and further:

"Q Is it normal to designate a liability as a reserve?

A I would certainly (agree) that the presentation that is used in the latest financial statements is much superior.

Q I don't believe that answers my question. I'm suggesting to you that if you have something which you consider to be a liability, you call it that. You do not call it a reserve.

A I hear your question, sir. I'm simply stating that 104 million is not equity, irregardless of whether it's in an item that has 280 million and is described as reserve on that balance sheet." (Transcript page 526)

The Board agrees that, following a careful reading of the consolidated financial statements for 1989, it can be concluded that the balance classified as the generation equalization reserve does combine two components, one of which should more properly have been classified as a deferred liability. However, the Board is concerned by the fact that the former presentation persisted for a number of years against the recommendation of the auditors as disclosed in re-direct:

"Q Now one of the themes of Mr. McKelvey's cross-examination related to the restatement on the balance sheet to show the generation equalization account as a deferred liability, instead of showing it as a portion of the reserve in the equity part of the balance sheet. Could you, Mr. Little or Mr. Cook or both of you, give a little history as to why that decision was taken to restate the balance sheet presentation of those two amounts?

Mr. Little

A I think I'd like to start the answer, and Mr. Cook may wish to add. Perhaps I can go back in time and come forward. The fact that the generation equalization account is not equity has been recognized for some time,

and has been noted in the financial statements. The two portions have been segregated.

I learned last night for the first time that in 1979, Touche Ross recommended a revised presentation, splitting the two segments, and taking the generation equalization account portion and putting it into liabilities. I don't know all the reasons why that was not done at that point in time...." (Transcript pages 733 & 734)

Later Mr. Cook commented as follows:

"A The only thing I would have to add to that was that in 1979, when we originally made the recommendation that this classification be changed, the Commission was reluctant to do it at that time because, my understanding from them, was that we were heavily into, at that time, US financing, and there was concern that any changes made at that time would result in questioning and dissatisfaction from the Securities and Exchange Commissions in the United States.

At that time, however, the management of the Commission, in response to our concern, did agree to put in the note to the financial statements, which is still there today, segregating the amount of the reserve portion from the account." (Transcript page 736)

The Board concurs that the amount of $176,000,000, by virtue of the fact that it owes its origin to appropriations from earnings invested in the business, is properly classified as a reserve.

The Board, through the interrogatory process, posed the following question:

"Q Please provide the rationale for appropriating funds from earnings invested in the business and crediting these funds to the generation equalization reserve. Please describe in detail how the total appropriation of

$176,000,000. occurred. NB Power proposes to designate the operating portion of the generation equalization account as a deferred liability. Would it be appropriate to designate the generation equalization reserve itself as a deferred liability. If not, why not? What is the ultimate purpose of the funds that were appropriated from earnings invested in the business.

A The Generation Equalization Reserve was established by appropriation to make it clear that the Commission feels there could be a call upon the equity of the utility if protracted poor water conditions and nuclear performance occurs.

The Reserve does not now have, nor has it ever had, any impact on power rates.

The level of the appropriation is reviewed periodically. The last appropriation was made in 1987/1988. No recent appropriations have been made because the Generation Equalization Account itself, together with the existing reserve, are projected to be approximately adequate to cover the withdrawals likely to occur if there are no extended nuclear unit outages until fuel channel replacement occurs in the 1998 timeframe.

It would not be appropriate to classify the amount appropriated as a deferred liability because the monies are part of the utility's equity (i.e. owed to owners rather than customers or third parties)." (Interrogatory 2 NBP(PUB)5)

During the hearing process it became evident that the generation equalization reserve is not required. Mr. Little testified as follows:

"Q ...All that being the case, why do you need the generation equalization reserve at all?

A We don't.

Q Then why do you have it?

A It was first applied in 1954, I believe, and has been a mechanism for our Commission to put a flag on a portion of our equity to let the shareholder know...shareholder, I guess, is the wrong word, to let the owner know that the Commission has certain exposures which are large in

> relation to the magnitude of its equity. But the generation equalization reserve has no impact on rates, will have no impact on rates and therefore in that sense, it's more of a communication device...." (Transcript page 704)

The Board concludes from this evidence that the generation equalization reserve of $176,000,000 represents appropriated earnings invested in the business and that, regardless of its title, it has no specific purpose to provide for known or contingent liabilities. **Accordingly, the Board concludes that for regulatory purposes the amount should be returned to earnings invested in the business.**

6) Equity

During the hearing it was noted that NB Power's consolidated financial statements as at March 31, 1990, do not include a caption entitled "equity". Dr. Kalymon provided the following description of the purpose of equity capital in the capital structure of a utility:

> "The purpose of equity in either a publicly or a privately owned utility is to provide the risk capital which absorbs the fluctuations in financial results. Such fluctuations in performance arise from any of the business risks to which the entity may be exposed. These might include variations in demand from forecast levels, unanticipated operating cost increases, unfavourable weather conditions or changes in prices of major input commodities. Any such factors create business risk exposure and may result in the instability of operating income performance.
>
> Furthermore, equity capital absorbs the overall changes in the value of the assets arising from changing business conditions. If the total value of assets is impaired, the

equity capital must absorb the initial loss.

> Thus, first in regard to income, equity capital provides the absorption which permits bond holders to receive their stipulated interest income regardless of fluctuations in operating performance. Secondly, with respect to asset value, equity capital shields the debt holders from capital losses arising from decreased asset values.
>
> In providing such risk absorption functions, the equity capital of the utility creates financial stability for the ongoing operations of the firm." (Exhibit PUB 1, page 4)

By contrast, Dr. Kalymon described the function of a reserve as follows:

> "A reserve which is created for a known and specific future liability should be considered as a provision for future expenses. Such reserve provisioning should not be considered as income and the resulting reserves cannot be considered as equity.
>
> However, an arbitrary designation of a portion of revenues for general reserve provisioning against highly uncertain and unknown contingencies should more appropriately be considered as income. Such reserves would then be properly considered to be equity capital since, in effect, they are available for absorbing the general risks of the organisation." (Exhibit PUB 1, pages 4 & 5)

There was no disagreement by witnesses with the above evidence, and the Board will apply Dr. Kalymon's criteria in determining the accounts which should be considered as comprising the equity of NB Power.

In its discussion of NB Power's debt to equity ratio, LPU recommended that the method be changed to include the rate stabilization deferrals in equity. (Exhibit LPU 1, page 15). The rate stabilization deferrals referred to by LPU are accounts that

NB Power considers to be deferred liabilities and, therefore not equity. Counsel for LPU claimed that:

> "...no matter what you categorize them at, whether you say they're monies eventually owing to customers...these two accounts are in fact accounts which provide for future fluctuations in financial performance, which, as Dr. Kalymon said, and with which everybody agreed, is a function of equity. Now it may or may not be appropriate to carry them on the books as a liability. I'm not discussing that now. I really don't care. But they should certainly, for the purpose of this ratio, be included in equity like everybody else does." (Transcript page 1153)

The Board has concluded that these accounts do represent deferred liabilities and that it would not be appropriate to include them in the equity of NB Power for regulatory purposes.

As noted previously, the consolidated balance sheet of NB Power as at March 31, 1990 includes the following un-named grouping:

"Minority interest in subsidiary company	$(98,773)
Generation equalization reserve	176,000,000
Earnings invested in the business	213,659,272
	$389,560,499"

These accounts are discussed as follows:

a) Minority Interest in Subsidiary Company:

This caption arises as a result of the consolidation of

NB Power with its subsidiary company, N.B. Coal Limited. Because of the insignificance of the amount involved and the fact that the minority interest would not appear on non-consolidated financial statements, which will be used for regulatory purposes, the Board excludes it from further discussion and calculations in this decision.

b) Generation Equalization Reserve:

The Board refers to the discussion in the previous section of this decision, and reiterates its conclusion that the amount of $176,000,000 should be returned to earnings invested in the business for regulatory purposes.

c) Earnings Invested in the Business:

This caption encompasses the accumulated retained net earnings of NB Power since its creation, other than the amounts appropriated under the generation equalization reserve. **The Board believes that this account clearly is available to absorb fluctuations in financial results and/or changes in the value of assets, and accordingly should be considered as part of the equity capital of NB Power.**

However, in section 3 (c) above, the Board ordered NB Power to reduce by $16,000,000 earnings invested in the business by adjusting the amount transferred retroactively to the deferred

liability for fuel channel removal. As a result, for purposes of the Board's calculations, earnings invested in the business at March 31, 1990, is established as follows:

	($000's)
Balance per page 19 of Exhibit NBP 4	$213,659
Less retroactive adjustment	16,000
Adjusting Balance	$197,569

The Board concludes that the equity capital of NB Power as of March 31, 1990, is as follows:

	(000'S)
"Generation equalization reserve"	$176,000
Earnings invested in the business	197,659
Total equity, for regulatory purposes	$373,659

FINANCIAL POLICIES

1) Background

The financial policies established by NB Power have a significant effect on decisions relating to financial performance, which impacts ultimately on the rates of the utility. These policies are important for several reasons:

1. Failure to achieve a satisfactory financial performance could result in a higher cost of electricity and increased rates.

2. Sound financial performance facilitates the continued secure supply of electricity at a reasonable price.

3. Since the debt of NB Power is guaranteed by the Province, its financial performance can impact on the credit rating of both NB Power and the Province.

NB Power is required, under section 2 of the Power Act to:

> "...provide for the continuous supply of energy adequate for the needs and future development of the Province and to promote economy and efficiency in the generation, distribution, supply, sale, and use of power."

In fulfilling this mandate, NB Power was required to

obtain sufficient financing to permit development of the total system required to meet the demand for electrical energy in the Province. Since demand for electrical energy in the Province can be expected to grow, the utility must maintain a financial position so that it can obtain additional financing in an economical and efficient manner.

NB Power is a Crown Corporation and therefore has no shareholders. The only source of equity is the earnings invested in the business ("retained earnings") generated through operations. Therefore, all external funds required for the business have been raised through debt, with the majority being in the form of long-term bonds. Since the Province guarantees certain of the funds it borrows, NB Power noted that it "...must achieve certain financial standards to avoid becoming a burden on taxpayers and negatively impacting on the Province's credit rating." (Exhibit NBP 1, page 3-3)

In the material prefiled with the Board, NB Power maintained that it's evidence would demonstrate that the financial targets it has established "...are appropriate and adequate to ensure that the Province's credit is not impaired." Also that "...achieving said financial targets is consistent with the purposes and intent of section 20 of the Power Act." (Exhibit NBP 1, page 3-3) Section 20 is as follows:

> "20 The charges, rates and tolls to be charged by the Commission shall be such as will enable it, in addition to

paying all operating charges and expenses, overhead interest and amortization charges,

(a) to provide for the renewal, reconstruction expansion, alteration and repair of the works constructed and operated by the Commission,

(b) to meet interest upon working capital and for the operations of the Commission under the Act and to meet obligations, charges, salaries and expenses arising in the course of such operation,

(c) to meet any unforseen expenditures or costs caused by the destruction or injury of any of the works of the Commission or otherwise incurred or payable by the Commission, and

(d) to maintain such reserve, depreciation and surplus accounts as are maintained by a properly managed corporation."

This Board when reviewing any applications for changes in the rates of NB Power, must consider section 42 of the Act, which states:

"42(1) The Board shall, when considering an application by The New Brunswick Electric Power Commission in respect of the charges, rates and tolls to be charged or being charged by The New Brunswick Electric Power Commission, base its order or decision respecting the charges, rates and tolls to be charged or being charged by The New Brunswick Electric Power Commission on all of the projected revenues and all of the projected costs of a future rate period and in so doing shall provide for the full recovery of all of The New Brunswick Electric Power Commission's costs, as set under section 20 of the Electric Power Act.

42(2) The Board, when considering the appropriate reserve, depreciation and surplus accounts that are required to be maintained under paragraph 20(d) of the Electric Power Act shall have due regard for the interest coverage and debt-to-equity ratios that are appropriate for a Crown corporation that has as its objective the provision for the continuous supply of energy adequate for the needs and future development of the Province and the promotion of economy and efficiency in the generation, distribution, supply, sale and use of power."

2) The Provincial Guarantee

The Province charges NB Power a fee for the guarantee it provides on certain NB Power debt. During the hearing there was discussion concerning how this fee is established. NB Power witnesses advised the Board that it has no input into the determination of the fee and that NB Power first becomes aware of the amount when it appears in the Provincial budget.

When introduced in the 1988/89 fiscal year it was calculated as 0.00479% of the amount of guaranteed debt at the balance sheet date. This rate has been increased to 0.006489% for the 1990/91 fiscal year. Mr. Carmichael commented on the reasonableness of the level of such a fee as follows:

> "I believe that somewhere in the half of one percent to a maximum, maybe, of three-quarters of one percent would adequately compensate." (Transcript page 328)

A similar guarantee is charged by other Provinces to their crown-owned electric utilities.

3) Financial Targets

The financial requirements of the Province together with those of NB Power are such that both must have access to capital markets all around the world. Since lenders in global markets rely heavily on bond rating agencies such as Moody's and Standard &

Poor's of New York, NB Power considered that the ratings of these agencies are of critical importance.

In order to obtain a satisfactory rating from these agencies NB Power must demonstrate adequate financial strength and stability which minimizes the risk to the lenders. Bond rating agencies, and the financial community in general, use a number of different tests to evaluate the financial performance of utilities such as NB Power, and to determine the appropriate rating which will be applied to both the Province and utility.

In it's prefiled evidence, NB Power stated that:

> "It is recommended that the Board endorse the Commission's financial targets of 1.25x interest coverage and 80:20 debt:equity ratio and the formulae outlined in this evidence for their determination. It is further recommended that the Board agree with the Commission's long-standing practice of reducing targeted performance levels on a short term basis from time-to-time as conditions warrant." (Exhibit NBP 1, page 4-6)

The debt to equity ratio is a measure of the proportion of debt and equity in the capital structure of the company and it provides a measure of the financial strength or stability of an enterprise.

The interest coverage ratio is an indication of the ability of NB Power to meet the interest expense from current earnings.

Equity will increase if the interest coverage is over 1.00x in any year and conversely, equity will decrease if interest coverage falls below 1.00x. The debt to equity ratio may change as the levels of debt and equity fluctuate from year to year. Net income, resulting from a coverage above 1.00x, is a return on equity.

The amount of interest paid each year will vary, depending on the interest and foreign exchange rates applicable to each of the debt instruments, and on the amount of debt employed in the business.

NB Power provided the following comments in support of the targets it proposed:

> "...financial targets have been traditionally set with reference to the requirements of lenders as reflected by credit rating agencies." (Exhibit NBP 1, page 4-2)
>
> "NB Power's financial targets are comparable with those used by other Canadian provincially-owned electric utilities...". (Exhibit NBP 1, page 4-3)

NB Power claimed that since it and the Province will be competing with other Provinces and other crown-owned electric utilities to borrow funds, it is reasonable that the targets established should be compared to the targets set by others that will be competing for the same funds.

Witnesses for NB Power referred to the financial targets

as ceilings and stated that in establishing and applying such targets, rate setting objectives and prevailing economic and competitive pressures have periodically resulted in performance below target levels. They stated "When this occurs, the utility strives to return to those levels over a period of time consistent with stable rate increase patterns". (Exhibit NBP 1, page 4-3)

The financial indicators for NB Power during the years 1979 to 1990 and the debt ratings for NB Power for the same period are presented as Table 1.

TABLE 1

Financial Performance of NB Power 1979 - 1990

Year	Interest Coverage	Debt/Total Capital	Debt Ratings S/P	Moody
1979	1.15	94.5	A+	A
1980	1.28	93.6	A+	A
1981	1.14	93.0	A+	A
1982	1.14	92.8	A+	A
1983	1.10	91.9	A+	A
1984	1.01	91.8	A+	A
1985	1.07	91.2	A+	A
1986	1.09	89.7	A+	A1
1987	1.11	88.5	A+	A1
1988	1.14	86.9	A+	A1
1989	1.20	84.8	A+	A1
1990	1.10	82.8	A+	A1

Table 1 clearly indicates that the actual financial performance during that period was almost always below the stated targets. NB Power claimed that in order to maintain the credit rating the financial targets should not be changed in the short term, but that the credit rating agencies and lenders must be

informed that the intention is to achieve these targets in the near future.

4) **Debt to Equity Ratio**

During the hearing, it was generally agreed that, although the debt to equity ratio is an accepted financial indicator, it is not as important as the interest coverage ratio.

It was the position of NB Power that a debt to equity target of 80:20 is appropriate and should be endorsed by the Board.

Mr. Carmichael testified that he had reviewed NB Power's debt to total capital ratio and he did not identify any disagreement with NB Power as to the components that should be included in both debt and equity. He offered the following conclusion with respect to an appropriate debt to equity ratio target for NB Power:

> "I believe that an appropriate target for NB Power's debt to total capital ratio is 80% based on a number [of] factors. These include NB Power's level of business risk, the financial performance and targets adopted by other crown-owned electric utilities and the requirements of credit rating agencies and lenders. This target should be considered long term in nature and I anticipate that the level of debt will increase over the medium term as new facilities are constructed. Once construction is completed, I anticipate that rates will be set with reference to the target of 80%." (Exhibit NBP 1, page 4-23)

LPU stated:

> "We do not dispute that the targets themselves are comparable with those of other Canadian utilities." (Exhibit LPU 1, page 3)

They also agreed that NB Power's target debt to equity ratio of 80:20 is consistent with other crown-owned utilities.

Dr. Kalymon stated that the target for the capital structure of a publicly owned utility should be such that the utility is financially self-sufficient and imposes no cost on the public owner. He also noted that the provincial guarantee, is "...an alternative form of equity that is not explicitly recognized on the balance sheet." (Exhibit PUB 1, pages 3 & 5)

Dr. Kalymon maintained that if the mandate of the Board were to establish the full cost of capital to NB Power then the appropriate treatment would be to deem a capital structure that will reflect the true level of equity underlying utility operations. He considered that a deemed structure of 60:40 debt to equity for NB Power would be comparable to stand-alone electric utilities. Based on the capital structures of comparable risk electric utilities he concluded that:

> "The current equity component of NBP, which is currently at 18.39%, is not consistent with the level of equity required for the utility to be financially viable on a stand-alone basis.
>
> Due to the Provincial guarantee of debt, NBP has been able to

operate with over 80% debt in the capital structure. An objective to achieve financial self-sufficiency by NBP in the future would require that the equity component of capitalization be targeted to reach a level of at least 20%. This is a level which is comparable to the better capitalized publicly owned electric utilities.

This target for the equity level is consistent with the long-term financial targets outlined by NB Power in their application." (Exhibit PUB 1, page 12)

5) Debt

NB Power proposed that debt should be defined as follows:

Debt = Total debt - Sinking funds + Borrowing from Nuclear and Pension Liability accounts.

Table 2 shows the calculation of debt and equity using the NB Power method.

TABLE 2

DEBT	($ millions)
long-term debt	1,860.4
short-term debt	30.0
pension liability	10.2
nuclear liabilities	113.7
	2,014.3

With regard to debt the LPU, in its prefiled evidence LPU 1, on page 15, recommended that the nuclear liabilities be excluded from the calculation, and Dr. Kalymon in Schedule 1 of his prefiled evidence clearly excluded the nuclear liabilities and the pension liability from his calculations of the capital

structure of NB Power.

6) Board Conclusions on Debt to Equity Ratio and Debt

The Board accepts that the debt to equity ratio is the least important of the two criteria that it is required to consider under section 42(2) of the Act. The Board notes the statement of NB Power that this target is used as a guideline in the setting of rates for in-province service and that the existence of the target provides some assurance that the credit rating of the Province will not be adversely affected by the performance of NB Power. This can be seen from Table 1 (page 58 supra) which shows that NB Power did not achieve its target of 80:20 from 1979 to 1990, during which period the credit rating was maintained at a level that allowed NB Power to raise the funds it required.

Although the Board has some concern with the weight that should be applied to a debt to equity target it accepts that such a target is appropriate for NB Power. It notes that all witnesses in this proceeding agreed that an 80:20 debt to equity target is appropriate. This target is consistent with those set by other crown-owned electric utilities, against whom NB Power and the Province must compete to borrow funds. **Therefore, the Board accepts that an 80:20 debt to equity ratio is a reasonable target for NB Power.**

Dealing with the inclusion of nuclear liabilities in the calculation of the debt component it is the view of the Board that these amounts, which are collected from customers, clearly represent accumulated contributions towards the estimated cost of future events which can be predicted with some certainty. At present, NB Power is able to avail itself of these funds for use in its current operations, and indeed, has argued that if a trust account had been established to fund these future events, additional long term financing would have been required to replace the funds. However, the Board notes that no such trust account exists, and NB Power, properly in the view of the Board, uses these funds as a part of its financing of its current operations. With respect to the pension liability this arose as a result of an actuarial review. It is the view of the Board that while this represents a liability of NB Power to the Province it does not represent funds advanced to NB Power. **Accordingly, the Board orders that the nuclear liabilities and the pension liability, be excluded from the debt component of the calculation of the debt to equity ratio.**

Accordingly, for regulatory purposes debt at March 31, 1990, is calculated as follows:

	($000's)
Long-term debt	$1,860,392
Short-term debt	30,042
Total debt for regulatory purposes	$1,890,434

The Board notes, that on this basis, the debt to equity ratio for NB Power on March 31, 1990, was 83.5:16.5.

7) Interest Coverage Formula

The interest coverage formula proposed by NB Power is as follows:

$$\frac{\text{net income + interest and exchange expense}}{\text{interest and exchange expense}}$$

Where:

- net income includes the effects of the export sales stabilization and generation equalization adjustments,
- interest and exchange expense includes all interest costs, including interest on monies borrowed from the pension and nuclear liability accounts, but is net of sinking fund earnings, investment income and interest capitalized
- non-cash items and the guarantee fee are excluded.

NB Power goes on to disclose that:

> "The netting of sinking fund earnings against interest and exchange expense is a new approach, to be adopted by the Commission for the first time in the preparation of the 1989/90 financial statements. The primary rationale for the change was that the Commission's sinking fund is invested for the most part in NB Power or Province of New Brunswick securities and that it would not be fair to have power consumers pay interest coverage on monies owed by the utility to itself. The new approach also makes NB Power's interest coverages more comparable to utilities like Ontario Hydro and Hydro-Quebec which do not have sinking funds to offset their debt exposures." (Exhibit NBP 1, page 4-5)

It was claimed by NB Power that this change resulted in the interest coverage calculation being more comparable with other utilities, such as Ontario Hydro and Quebec Hydro.

Mr. Carmichael recommended that the formula be:

$$\frac{\text{net income + gross interest}}{\text{gross interest}}$$

The gross interest referred to is the interest and exchange expense before sinking fund earnings are deducted. In other words, Mr. Carmichael did not adopt the change that NB Power implemented in its 1989/1990 financial statements. The impact of using Mr. Carmichael's approach would be to reduce the interest coverage from 1.14x, as calculated by NB Power, to 1.11x for the 1990 year.

Mr. Carmichael's calculation was referred to as the "gross" method and that proposed by NB Power was the "net" method. Mr. Carmichael noted that certain rating agencies use "slightly different definitions for the determination of interest coverage", but he concluded that "...when comparisons are made with other utilities using these other definitions the conclusions derived are the same as those under the definition above." (Exhibit NBP 1, page 4-17) In other words, as long as one method is used consistently the comparison among utilities will be relevant.

LPU recommended that stabilization/equalization deferrals

be included in net income and that interest on nuclear liabilities be considered as an operating charge rather than an interest expense. They claimed that by adopting these changes the determination of the financial ratios would be more comparable with other provincially-owned utilities and that rate-making for NB Power's customers would be more equitable.

8) Interest Coverage Ratio

NB Power recommended that the Board agree with its long-standing practice of reducing targeted performance levels on a short term basis from time to time as conditions warrant.

Mr. Carmichael indicated that short run variations from targets would not have any effect on credit rating, provided that NB Power could demonstrate that it has a plan in place to get back to the interest coverage target within 3 or 4 years. (Transcript page 75) He suggested that the credit rating agencies would understand that circumstances could cause a reduction in coverage below target, but would ask to see a plan that would return NB Power to at least the lower end of any target within a few years. (Transcript page 76).

He also expressed the view that lenders would expect interest coverage to rise during periods of capital expenditure, when debt is increasing. He considered that during such period the equity component of the capital structure would be smaller,

which the lenders would perceive as involving a greater risk. (Transcript page 96)

Mr. Carmichael noted that NB Power's debt currently represents approximately 40% of the total Provincial debt, and he forecast that this figure is likely to increase over the medium term. He claimed that unless current and forecast financial performance provide assurance that NB Power will continue to be self-supporting the credit rating of both the Province and NB Power could be downgraded. He pointed out that the application of the Provincial guarantee to all NB Power's debt results in the same credit rating for both the Province and NB Power.

He reviewed the business risk of NB Power against the risk and performance of other crown-owned electric utilities and the requirements of the lenders and credit rating agencies and concluded that interest coverage should fall between 1.15x and 1.25x gross interest charges. In view of NB Power's announced capital expansion program he recommended that there should be short term flexibility to fall below the 1.15x to permit rate smoothing as economic and other circumstances warrant. (Exhibit NBP 1, page 4-20)

LPU agreed with the 1.25x coverage target and recommended that since NB Power is about to enter a construction phase, the target should be modified to recognize the impact of interest

during construction. LPU suggested that:

> "...the following targets be used in conjunction with each other:
>
> - Operating interest coverage after deducting capitalized interest of 1.25 times. This permits rate setting based on interest incurred only for plant completed and used or useful.
> - Total interest coverage including interest being capitalized of 1.00 times. This will deal with periods where there is major construction
> - Both targets considered in light of a maximum annual return on equity not to exceed an appropriate risk premium over a specified bench mark such as the long-term federal government borrowing." (LPU 1, page 17)

It appears from the evidence that LPU intended that the first test would be used to determine the operating interest coverage and, if this were 1.25x or less, the second test would not be necessary. If operating interest coverage were greater than 1.25x, the second test would then be applied. As a final test, the return on equity would be calculated to ensure that it did not exceed an acceptable level. LPU suggested that an overall ceiling target for return on equity should be established, presumably by the Board.

Dr. Kalymon stated that given the wide range of interest coverage ratios observed for other publicly owned Canadian electric utilities no firm conclusion can be drawn on the appropriateness of the interest coverages achieved or targeted. He proposed that the debt interest coverage for NB Power, be based on a determination of the total cost of each component of the deemed

capital structure. The costing of each component of the capital structure would reflect either the actual embedded costs of debt or the market cost of equity and guarantees on debt.

In effect, Dr. Kalymon was advocating that NB Power be subjected to the rate of return regulation that is normally applied to investor-owned utilities. He maintained that his method would provide consumers with the appropriate pricing signals and avoid economic distortions that result from the subsidizing of one group by another.

Dr. Kalymon provided an illustrative calculation based on NB Power's 1990 debt-to-equity ratio, an embedded cost of debt of 10.02% and a return on equity of 13.32%. With these assumptions he determined that the interest coverage ratio should be 1.4x, or 1.36x if the current guarantee fee levied by the Province were excluded. He also provided calculations showing the results of his method for several different debt to equity ratios but using the same embedded cost and return on equity. These are shown in Table 3.

TABLE 3

Interest Coverage Using Dr Kalymon Method

Debt to Equity	Interest Coverage	Interest Coverage (Less Guarantee Fee)
82/18	1.40x	1.36x
80/20	1.43x	1.39x
90/10	1.27x	1.22x

He did recognize that rates resulting from his method would normally be higher that those from the rate-setting practices of NB Power.

Dr. Kalymon agreed with Mr. Carmichael that the important consideration for this Board with respect to interest coverage is the appropriate level, or the correct level, of net income for NB Power. He stressed that "...the debt interest coverage ratio falls out from a determination of the proper net income." (Transcript page 355)

He maintained that, since the issue is the determination of the fair costing of the capital provided, an increase in the percentage of debt should result in the coverage ratios being adjusted downward. This view is opposite to that expressed by Mr. Carmichael. Dr. Kalymon observed that:

> "...the essence of the comment made by Mr. Carmichael and which is in conflict with my recommendation, is that if you have the debt level rise, the implication of Mr. Carmichael's approach is that at that point somehow miraculously the income should rise. Well, there's less equity in the operation, the rate payer should pay less net income because there is less equity in the operation. My position is that it would be overcharging for the equity in the operation if you have debt interest coverage ratios rise when the level of equity is falling or when the level of debt is increasing. Sure, lenders might like that but the issue here is what is fair costing of the capital being provided into the operation.
>
> ...I find that an inconsistency to say that one is focused on that [net] income and proper levels and then suggesting..., that the debt interest coverage ratios should rise when the amount of equity is falling, that would be inconsistent with a costing approach. And it basically reflects an orientation that is strictly lender oriented, strictly related to what the requirements are of the lender." (Transcript pages 356-358)

7) Board Conclusions on Interest Coverage Formula and Ratio

The Board is satisfied that of the two criteria it is directed to consider by section 42(2) of the Public Utilities Act, interest coverage is the most important. Interest coverage, calculated in a consistent manner over a period of several years, will provide a reasonable measure of the ability of NB Power to meet current and future financial commitments. This must be important for both lenders and the credit rating agencies.

Interest Coverage Formula

During the hearing there was disagreement with respect to the interest and net income components of the interest coverage formula. With regard to the "interest" component of the provision for estimated future costs relating to nuclear liabilities the Board concurs with NB Power that the time value of money must be recognized in providing for these costs. However, the Board also concurs with the witnesses for LPU that NB Power needlessly disadvantages its customers by including the "interest" component in its interest and exchange expense requiring up to an additional 25% for interest coverage.

It is the view of the Board that since such "interest" arises as a result of an accounting entry which results in a non-cash charge in the statement of income, it is unfair to expect the customers to pay an additional amount in satisfaction of a targeted

interest coverage. **Accordingly, the Board orders NB Power to exclude the interest component of annual charges related to nuclear liabilities from its calculations of the interest coverage ratio.** The Board suggests that the charge might more appropriately be included in the income statement either as a separate item of expenditure or as a separate item under the grouping of financial costs.

Concerning the LPU recommendations that stabilization/ equalization deferrals be added back in arriving at net income, as discussed earlier, the Board considers the related balance sheet accounts to be properly classified as deferred liabilities. **Accordingly, the offsetting adjustments to net income are considered by the Board to be appropriate and, therefore, no adjustment is required in calculating the interest coverage ratio.**

The Board is also of the opinion that the netting of sinking fund earnings against interest and exchange expenses is appropriate.

Interest Coverage Ratio

The Board found the LPU approach to the interest coverage ratio to be complex and lacking in definition. Further, it does not provide for an appropriate minimum rate of return on equity. The Board, therefore, will not adopt the method proposed by LPU.

Dr. Kalymon's method clearly recognizes that there is a cost associated with equity. If this cost is not fully included in the price of electricity then the Province of New Brunswick is subsidizing the customers of NB Power. To the extent that such subsidy exists, this could result in the use of electricity when, in fact, other energy sources might be less expense, if all costs were included.

The Board agrees with Dr. Kalymon but differs with regard to how this cost should be determined. The Board considers that the ownership of NB Power by the Province of New Brunswick should benefit the people of the province.

One benefit is that NB Power can operate with a higher debt to equity ratio than would be possible for a privately owned utility. Therefore, the Board is of the view that the appropriate capital structure to be used when setting rates for NB power is the actual structure that the company projects will exist in the future test period. A further benefit of Provincial ownership relates to the cost of equity of NB Power. The Board is of the view that using a market-related cost of equity would not be appropriate for the purposes of setting rates for NB Power. For these reasons, the Board will not adopt the method proposed by Dr. Kalymon.

It is apparent that when either the Province or NB Power borrow funds, they will be competing for such funds against others,

including other Canadian provinces and Canadian crown-owned electric utilities. The Board accepts that the financial performance of NB Power affects its ability to raise the necessary funds. However, there is evidence on the record that even with an interest coverage ratio as low as 1.0x NB Power was able to obtain funds. The Board notes that all parties have recognized the need for NB Power to meet its obligations with respect to interest payments. **The Board is of the view that an interest coverage ratio of 1.0x is the minimum acceptable level.**

NB Power and LPU both suggested 1.25x as being the appropriate upper limit for the interest coverage ratio Dr. Kalymon's approach did not result in the recommendation of any maximum level for the interest coverage ratio. The Board considers that a target for the interest coverage ratio of 1.25x is not inconsistent with the targets of other Canadian crown-owned electric utilities. **The Board finds that 1.25x is the appropriate upper limit for the interest coverage ratio of NB Power.**

NB Power's proposal recognizes the need for fluctuations in both the debt to equity and interest coverage ratios. The targets of 80:20 for debt to equity and 1.25x for interest coverage are stated objectives. It is not expected that the targets would be achieved on a continuing basis but rather that the ratios achieved will generally be below the targets.

It is noted that the financial performance of NB Power

has frequently resulted in debt to equity and interest coverage ratios that were below the ceiling targets. However, this does not mean that the financial performance was below an acceptable level. Debt to equity and interest coverage do indicate if operating costs and interest payments have been met and whether or not net income has been earned. However, they do not indicate, whether the amount of net income was appropriate.

This is an important omission. The net income is derived from the customers, through the rates that they pay for electricity. If the ratios do not indicate whether the amount of net income will be appropriate then they will not indicate if the proposed rates will be appropriate.

The Board concludes that it is not appropriate, for the purposes of setting rates, to focus solely on the debt to equity and interest coverage ratios. **The Board agrees with both Dr. Kalymon and Mr. Carmichael that the proper approach must include consideration of the net income of NB Power and considers it desirable that the appropriate amount of net income be clearly established. The rates can then be set accordingly. The Board is of the view that an appropriate net income will result in debt to equity and interest coverage ratios that are appropriate for NB Power.**

Net income is a return on equity and when divided by the equity equals the rate of return. All parties at the hearing

recognized the need for a return on equity. Dr. Kalymon explicitly recognized equity and assigned a market-related cost. The LPU recommended that a maximum return on equity be established. NB Power proposed an interest coverage ratio with a maximum target of 1.25x. Since any coverage over 1.0x provides net income NB Power implicitly recognized the need to have a return on equity.

The Board is of the view that an appropriate return on equity is a normal cost for a properly managed corporation. Section 42(1) of the Act requires that the Board, when reviewing any proposed changes to the rates of NB Power, consider all of the projected costs of a future rate period and provide for their full recovery.

Such an approach will also provide the following benefits. It will enable NB Power to operate on a financially sound basis, assist in the development of equitable rates for customers and promote economic efficiency in the use of electricity.

The Board considers that the determination of a suitable rate of return must take into consideration the specific circumstances of NB Power. It is not appropriate to consider ownership by the Province as being similar in nature to private ownership. The ownership of NB Power by the Province should benefit the people of New Brunswick. The Board is of the view that using a market-related rate of return would not be appropriate for

the purpose of setting rates for NB Power.

The Board considers that the determination of the rate of return should be based on an appropriate cost. The Province, by allowing NB Power to retain its earnings, has borrowed money that would not otherwise have been necessary, and has incurred an interest cost associated with such borrowings. The Province and NB Power have the same bond rating. **Therefore, the Board considers that the appropriate rate of return on the equity component of NB Power's capital structure should be the embedded cost of NB Power's debt.** The rate of return would be multiplied by the equity to calculate the net income which would then be included in the revenue requirement of NB Power for the purposes of setting rates.

NB Power recommended that the Board agree with its long-standing practice of targeting the debt to equity and interest coverage ratios to be below the ceiling level on a short term basis, from time to time, as conditions warrant. It would appear that the intent of this proposal is to permit financial performance to decline so that the possibility of any sudden, large rate increases may be reduced. A lowering of the debt to equity and interest coverage ratios does not necessarily mean that overall financial performance is suffering. In fact, during the 1981-89 period when neither ratio reached its ceiling target, the annual rate of return on equity ranged from approximately 1% to 19%. This would certainly indicate that in some years financial performance was at an acceptable level. In addition, the average return on

equity for the nine year period was approximately 10.6%. This would indicate that financial performance, at least over the period as a whole, did not suffer.

It is quite possible that the average of 10.6% is very similar to what would have happened had the Board's recommended approach been used in setting rates during 1981-89. However, there is one significant difference between the two methods. That is, the annual rate of return on equity would not have fluctuated so widely had the Board's recommended approach been used. The fluctuations that did occur indicate that customers in some years paid more than was necessary while customers in other years paid less than they should have. The Board considers that this situation should be avoided if at all possible. It would generally be preferable that the customers, in each rate period, pay the costs that are properly associated with that period.

The flexibility in setting rates that is provided by way of any short term reduction in financial performance is limited. Complete elimination of the requirement for an appropriate amount of net income in a given year would provide rather modest assistance in relation to the overall revenue requirement of NB Power. For example, assuming a 10% rate of return and using the current levels of equity and in-province revenues, completely eliminating the need for an appropriate amount of net income would result in a reduction in revenue requirement of approximately 6%. **For these reasons, the Board considers that reductions in targeted**

financial performance are not the preferable way to avoid sudden, large rate increases.

The possibility of such an increase would most likely be related to the bringing into service of a major new asset. However, the Board is of the view that proper timing of the introduction of major capital additions would minimize the need for large increases in rates. The Board anticipates that such additions would be carefully timed so that a significant portion of the additional capacity would be immediately required. The application of an appropriate depreciation method would also minimize the possibility of rate shock.

The Board has concluded that a return on equity is a normal cost and that an appropriate limit on the rate of return is the embedded cost of debt. Further, the Board has concluded that recognition of this cost in the rate setting process will promote financial soundness, equitable rates and economic efficiency. The Board is of the opinion that the allowance of a return on equity, at a rate equal to NB Power's embedded cost of debt, will fully compensate the Province. The guarantee fee is an annual payment from NB Power. It is the view of the Board that this fee represents a return to the Province due to its ownership of NB Power. **Therefore, the Board will deduct the amount of the guarantee fee from the amount calculated as the appropriate return on equity when setting the rates of NB Power. The Board recognizes that these concepts were not thoroughly canvassed at the public**

hearing and would welcome any comments on its recommended approach at the time of the next general rate hearing. However, the Board directs NB Power to file its application in accordance with the Board's recommended approach.

RECOMMENDED LEGISLATIVE CHANGES

This decision is the first opportunity, since the Act was amended on January 11, 1990, for this Board to comment in writing on the changes in the legislation which brought NB Power under regulation for rate changes. Since hearing the evidence in this matter, we have also heard evidence on two further generic subjects as well as an interim rate application in December of 1990.

The Board believes that the Legislative Assembly of New Brunswick subjected NB Power to rate regulation in order to provide a thorough and public review, of the matters within the Board's jurisdiction in the most efficient and cost effective manner possible.

In order to have the regulatory process conducted in the proper fashion, the Board must have access to all of the relevant information at regular intervals to properly carry out its statutory duties. Further, this information must be available to the public as well.

If the necessary information is not provided on a regular basis then the situation may well arise where the Board and the public must deal with a substantial backlog of historical information. This would lead to a very significant increase in the time required for the interrogatory and public hearing process at

the time of a rate increase application. Not only would the amount of time required increase substantially but so would the cost associated with the process. The Board is of the view that the provision of the relevant information on a regular basis is the most appropriate, cost effective and efficient way to proceed.

At the conclusion of the hearing legal counsel were asked to comment on the Board's authority to direct NB Power to file information in its possession or to conduct studies and to file the same with the Board on matters within the Board's jurisdiction.

Counsel for NB Power observed that sections 5(1) and 7 of the Act do not apply to NB Power. He argued therefore that the Board had no authority to order NB Power to do studies at any time. Further, the Board had no authority to order NB Power to file any information with it except at the time of a rate hearing.

Counsel for an intervenor suggested that the Board inherently had the authority to order that information be filed or a study be made and a report filed. He did admit, however, that the difficulty lay in enforcement of that power if the utility refused to comply. He argued that the Board would be within its statutory authority to refuse to exercise its discretion until the information was placed before it. On a practical basis, this could mean refusing to approve a requested rate change until information had been filed.

It is noted that, by Section 6.1 of the Act, the Board has all the powers and privileges of Commissioners under the Inquiries Act Chap. I-11, R.S.N.B. 1973. Pursuant thereto, the Board has the power to require an officer of the utility to appear and bring all relevant documents to be reviewed under oath at a public hearing.

While it can be argued that the Board has the power to require production of relevant information under the above options, it would be an onerous process. This could possibly lead to significant delays, a problem often referred to as "regulatory lag". However, to have confidence that the regulatory process will work properly, information production and review cannot be left to the whim of NB Power.

The Board, therefore, believes that the Act should be amended to specifically grant certain powers to the Board which will allow it to carry out its statutory responsibilities in a more efficient and cost effective manner.

The Board does not, through any of the following recommendations, seek greater jurisdiction in the regulation of NB Power. If the Legislative Assembly were to enact the recommended changes, it would give the Board the statutory authority to obtain information and review policy issues in a Board initiated hearing. NB Power has already indicated that, on the whole, it would be prepared to supply such information upon request. It is the

Board's view, to have confidence that the regulatory system will work properly, the system should be based upon the statutory authority to receive the necessary information. The Board, therefore, recommends that a number of changes be made to the legislation as discussed below.

1) That the Board be given specific authority to direct NB Power:

   (a) to file with the Board any relevant information on any matter within the Board's jurisdiction;

   (b) to undertake studies and to report to the Board upon any matter within the Board's jurisdiction.

The Board believes, for the reasons stated previously, that these changes would allow it to carry out its regulatory mandate in an orderly fashion and on a continuing basis. This would streamline the regulatory process by taking pressure off the staff of NB Power and the Board at rate application time. It would also reduce the length, complexity and cost of the public hearing process.

2) That the Board be given the authority to initiate Public Hearings on its own motion, to review policy issues within its jurisdiction.

The Act, as it applies to the regulation of NB Power, is

an application-driven system. That is, the Board does not become seized of jurisdiction over NB Power until it applies for a rate change pursuant to Section 38(1) of the Act or when the Lieutenant Governor in Council orders a review pursuant to Section 40(1).

By this recommendation, the Board does not propose to change the nature of the existing regulatory regime. Provision for a review hearing authority would provide greater continuity between rate change applications and would expedite the process associated with a rate change hearing.

The present generic hearing process is an example of the need for a public review of policy matters which affect the rates of NB Power and for which no specific authority now exists. Within a short time of the proclamation of the legislation, the Board and NB Power agreed that the regulatory process would be greatly enhanced if, in a public hearing process, certain fundamental or "generic" policies of NB Power could be reviewed and commented upon by the Board after input from the interested public. It was agreed that the Board could only be seized with jurisdiction to hold such hearings if it were required to review rates, either upon application by NB Power or order by the Lieutenant Governor in Council. At the pre-hearing conference, the Board, with NB Power's concurrence, ruled that it would not hear the evidence on the proposed minor rate change until it had reviewed the appropriate background or generic information. Five generic hearings were then scheduled, three of which have now been completed.

Those generic hearings that have been held have been beneficial to all those involved in the regulatory process. The Board has been able to acquire a level of understanding of NB Power's operations and policies that would have been extremely difficult to do during a rate hearing, even a very lengthy one. NB Power has had an opportunity to familiarize itself with the regulatory process as well as to subject its policies to regulatory examination and comment outside of the pressure of a rate proceeding. The Intervenors have gained knowledge as well as the opportunity to provide input into the Board's comments.

The Board believes that the other generic hearings currently scheduled will also be beneficial. Over a period of time, as circumstances change, it may well be appropriate to revisit certain of these issues and other generic issues may also arise in the future. The Board believes that these could be most effectively dealt with outside of the rate review process. By specifically giving the Board the authority to review policy matters between rate change hearings, three benefits will be realized:

A) The public will be given the opportunity to comment on proposed policy changes before initiation;

B) NB Power will be able to gain the benefit of having the Board's comments on proposed policy changes before initiation;

C) The public hearing process at the time of a rate change application will be shortened considerably as policy issues, previously reviewed in a public hearing, will not require the same scrutiny.

3) <u>That Section 7 of the Act be made applicable to the regulation of NB Power.</u>

Section 7 reads as follows:

"The Board may direct any person to make an inquiry and report upon any matter over which the Board has jurisdiction."

In the past, the Board has used the powers under this section to direct an outside independent expert to review matters with the utility's staff within his or her field of expertise. This expert has then produced a report and filed it with the Board well in advance of a Public Hearing on the subject matter involved. The report to the Board became a Board exhibit in any subsequent hearing. The Board offered the expert as a witness at the public hearing for cross-examination by the utility or the intervenors. This greatly facilitated the hearing process, added clarity and reduced costs overall. We recommend this change in order to allow outside independent experts, retained by the Board, the power to investigate matters.

Although unrelated to the previous three recommendations,

the Board has a fourth recommendation for change to the legislation.

4) That, pursuant to Section 39(2), the Board be given discretion to rule as to whether or not a proposed "new service" is simply the re-pricing of an existing service.

Provisions similar to those contained in Section 39 are set forth in Section 15 of the Act which is applicable to the regulation of utilities other than NB Power. Those utilities have always sought the Board's approval prior to filing under the "new service" provisions. If they had not done so, the Board would have immediately held a public hearing to review the "new" rate.

There has only been one "new service" filed by NB Power under section 39(2). The Board has serious questions as to whether it is a "new service" or just the repricing of an existing service. At present, it would appear that NB Power alone has the right to decide if it is a "new service" and therefore file under section 39(2). The Board will not be able to review this decision and its pricing until the next general rate application. By that time, customers will have switched to the "new service" having based their decision on NB Power's initial pricing. Any subsequent change to the rate could cause serious disruption to customers. To avoid this possibility, the Board believes it would be more appropriate to review proposals for "new services" in advance of their introduction.

DATED at the City of Saint John, N.B. this 22nd day of May, 1991.

David C. Nicholson
Chairman

B. Fernand Nadeau
Vice-Chairman

J. E. Stevens
Commissioner

Claudette Stymiest
Commissioner

Paul E. LeBlanc
Commissioner

THE NEW BRUNSWICK ELECTRIC POWER COMMISSION
Consolidated Statement of Income
Year ended March 31, 1990
($000's)

	1990	1989
REVENUE		
Sales of power:		
In-province	$629,744	600,448
Out-of-province	311,560	240,943
Total sales of power	941,304	841,391
Sales of steam	4,564	3,667
Miscellaneous	11,586	11,249
Total revenue	957,454	856,307
EXPENDITURE		
Purchased power	109,528	86,266
Generated power:		
Fuel	258,580	187,983
Other	124,012	111,841
Total cost of power	492,120	386,090
Operations, maintenance, administration and general	120,665	109,306
Depreciation:		
Depreciation expense	94,590	90,692
Charges for decommissioning	4,895	2,141
Charges for fuel channel removal	5,300	5,300
Total depreciation	104,785	98,133
	717,570	593,529
Income before interest and exchange	239,884	262,778
Interest and exchange	233,560	235,672
Less income from sinking funds and other investments	55,544	49,995
	178,016	185,677
Interest on nuclear liabilities	10,940	6,660
Provincial government guarantee fee	9,002	10,008
Amortization of debenture discount and expense	2,328	3,097
Amortization of unrealized foreign exchange	3,959	(1,207)
	204,245	204,235
Less interest capitalized	6,746	3,818
Total interest and exchange - net	197,499	200,417
Income before the following	42,385	62,361
Generation equalization adjustment	(3,182)	(2,270)
Transfer to export sales stabilization account	(13,083)	(12,494)
	(16,265)	(14,764)
	26,120	47,597
Minority interest in losses of subsidiary company	58	8
Net income for the year	$ 26,178	47,605

THE NEW BRUNSWICK ELECTRIC POWER COMMISSION

Consolidated Balance Sheet
As at March 31, 1990
($000's)

ASSETS	March 31, 1990		March 31, 1989	
Fixed Assets:				
Land, building, plant, and equipment, at cost		$ 3,314,023		3,208,628
Less:				
Contributions in aid of construction		(17,539)		(16,507)
Government grants		(58,000)		(58,000)
		(75,539)		(74,507)
		3,238,484		3,134,121
Less accumulated depreciation		(893,259)		(809,410)
		2,345,225		2,324,711
Construction-in-progress		110,829		64,194
Total fixed assets - net		2,456,054		2,388,905
Current assets:				
Cash and short-term investments		9,006		47,392
Accounts receivable		118,522		107,045
Material, supplies and fuel		85,334		78,142
Prepaid expenses		3,937		3,209
Total current assets		216,799		235,788
Deferred charges:				
Unrealized foreign exchange differences	$ 144,003		143,737	
Less amounts amortized	(113,725)		(111,997)	
		30,278		31,740
Nuclear unit decommissioning:				
Balance at beginning of year	51,392		53,533	
Add adjustment to liability	66,093		0	
	117,485		53,533	
Less amounts collected from customers	(4,895)		(2,141)	
Balance at end of year		112,590		51,392
Debenture and note discount and issue expenses less amounts amortized		16,992		17,920
Other deferred charges		3,838		5,207
Total deferred charges		163,698		106,259
		$ 2,836,551		2,730,952

THE NEW BRUNSWICK ELECTRIC POWER COMMISSION
Consolidated Balance Sheet
As at March 31, 1990
($000's)

LIABILITIES AND EQUITY		March 31, 1990		March 31, 1989
Long-term debt:				
Guaranteed by the Province of New Brunswick:				
Debentures and notes issued by the Commission		$1,170,024		1,305,633
Note payable to Atomic Energy of Canada Limited		321,516		327,426
Loans from Northern Canada Power Commission		35,712		37,886
		1,527,252		1,670,945
Other long-term debt - not guaranteed		333,140		242,133
		1,860,392		1,913,078
Less payments due within one year		(129,399)		(99,731)
Total long-term debt		1,730,993		1,813,347
Current liabilities:				
Short-term indebtedness		30,042		9,573
Accounts payable and accruals		171,333		162,916
Current portion of long-term debt		129,399		99,731
Other		3,541		4,868
Total current liabilities		334,315		277,088
Deferred liabilities:				
Generation equalization account:				
Balance at beginning of year	$104,850		102,580	
Adjustment for the year	3,182		2,270	
Balance at end of year		108,032		104,850
Export sales stabilization account:				
Balance at beginning of year	23,287		10,793	
Adjustment for the year	13,083		12,494	
Balance at end of year		36,370		23,287
Irradiated fuel management, nuclear unit decommissioning and fuel channel removal				
Balance at beginning of year	142,091		108,939	
Adjustment for fuel channel removal	0		13,300	
Adjustment to decommissioning liability	66,093		0	
	208,184		122,239	
Charges for the year	7,127		13,192	
Interest	10,940		6,660	
Balance at end of year		226,251		142,091
Other deferred liabilities		11,030		6,848
Total deferred liabilities		381,683		277,076
Equity:				
Minority interest in subsidiary company		(99)		(40)
Generation equalization reserve		176,000		176,000
Earnings invested in the business:				
Balance at beginning of year	187,481		153,176	
Adjustment for nuclear fuel channel removal	0		(13,300)	
	187,481		139,876	
Net income for the year	26,178		47,605	
Balance at end of year		213,659		187,481
Total equity		389,560		363,441
		$2,836,551		2,730,952

THE NEW BRUNSWICK ELECTRIC POWER COMMISSION

Calculation of Capital Structure

	As at March 31, 1990 ($000's)	%	As at March 31, 1989 ($000's)	%
As calculated by the Commission				
Long-term debt	1,860,392	77.4	1,913,079	80.3
Short-term debt	30,042	1.3	9,573	0.4
Pension liability	10,161	0.4	6,172	0.2
Nuclear liabilities	113,661	4.7	90,698	3.8
Total debt	2,014,256	83.8	2,019,522	84.7
Retained earnings	213,659	8.9	187,482	7.9
Generation equalization reserve	176,000	7.3	176,000	7.4
Total equity	389,659	16.2	363,482	15.3
Total capital	2,403,915	100.0	2,383,004	100.0
As calculated by the Board				
Long-term debt	1,860,392	82.2	1,913,079	84.3
Short-term debt	30,042	1.3	9,573	0.4
Pension liability	0	0.0	0	0.0
Nuclear liabilities	0	0.0	0	0.0
Total debt	1,890,434	83.5	1,922,652	84.7
Retained earnings	197,659	8.7	171,482	7.6
Generation equalization reserve	176,000	7.8	176,000	7.7
Total equity	373,659	16.5	347,482	15.3
Total capital	2,264,093	100.0	2,270,134	100.0

THE NEW BRUNSWICK ELECTRIC POWER COMMISSION

SUMMARY OF EXPORT SALES STABILIZATION ACCOUNT

	Account Detail ($000's)			Annual Excess or Deficiency ($000's)										
Year	Debit	Credit	Balance	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
1980 Excess		9,200		9,200										
Balance			9,200											
1981 Excess		9,300			9,300									
Amortization	(3,067)			(3,067)	0									
Balance			15,433	6,133	9,300									
1982 Excess		21,657				21,657								
Amortization	(6,167)			(3,067)	(3,100)	0								
Balance			30,923	3,066	6,200	21,657								
1983 Excess		8,637					8,637							
Amortization	(13,385)			(3,066)	(3,100)	(7,219)	0							
Balance			26,175	0	3,100	14,438	8,637							
1984 Excess		14,393						14,393						
Amortization	(13,198)				(3,100)	(7,219)	(2,879)	0						
Balance			27,370		0	7,219	5,758	14,393						
1985 Deficiency	(6,270)								(6,270)					
Amortization	(14,895)					(7,219)	(2,879)	(4,797)	0					
Balance			6,205			0	2,879	9,596	(6,270)					
1986 Deficiency	(2,529)									(2,529)				
Amortization	(5,587)						(2,879)	(4,798)	2,090	0				
Balance			(1,911)				0	4,798	(4,180)	(2,529)				
1987 Excess		4,044									4,044			
Amortization	(1,865)							(4,798)	2,090	843	0			
Balance			266					0	(2,090)	(1,686)	4,044			
1988 Excess		8,940										8,940		
Amortization		1,585							2,090	844	(1,349)	0		
Balance			10,793						0	(842)	2,695	8,940		
1989 Excess		15,979											15,979	
Amortization	(3,485)									842	(1,348)	(2,979)	0	
Balance			23,288							0	1,347	5,961	15,979	
1990 Excess		22,737												22,737
Amortization	(9,654)										(1,347)	(2,980)	(5,327)	0
Balance			36,370								0	2,981	10,652	22,737