P.U. 16 (1998-99)

P.U.16 (1998-99)

IN THE MATTER OF THE PUBLIC UTILITIES ACT, R.S.N. 1990, CHAPTER P-47, ("THE ACT")

AND

IN THE MATTER OF A PUBLIC HEARING ("THE HEARING") CALLED BY THE BOARD OF COMMISSIONERS OF PUBLIC UTILITIES ("THE BOARD") ON ITS OWN MOTION FOR THE PURPOSE OF CONSIDERING:

(i) the appropriate capital structure of Newfoundland Light & Power Co. Limited;
(ii) the appropriate rate of return on common equity and rate base for Newfoundland Light & Power Co. Limited;
(iii) the appropriate frequency of a full cost of capital review and whether certain financial market benchmark parameters should be put in place to trigger a hearing on the matter; and
(iv) whether an automatic annual adjustment mechanism for resetting the rate of return in years subsequent to a test year would be appropriate in order to reflect changes in financial market benchmarks.

INTRODUCTION

The Preliminary Investigation

Pursuant to Section 82 of the *Act*, the Board commenced an investigation into the above noted matters on November 10, 1997.

On November 21, 1997, the Board received correspondence from the City of St. John's requesting that a hearing be held to set rates for 1998 and beyond, pursuant to Section 84(1) of the *Act.*

In order to confirm the necessity of a hearing, the Board continued its investigation pursuant to Sections 82-89 of the *Act*. Upon the conclusion of the preliminary investigation, the Board ordered a hearing into, *inter alia*, the matter of rate of return and capital structure of NLP, in accordance with Section 88 of the *Act*.

This investigation included, amongst other things, commissioning of a report on these matters from the Board's Financial Consultants, Doane Raymond, on December 9, 1997.

Mr. William R. Brushett, C.A., of Doane Raymond, was requested by the Board to conduct a review of the 1998 Rate of Return of Newfoundland Light & Power Co. Limited ("NLP"). The review was limited to determining the effect on revenue requirement, regulated net income and the overall impact on rates under the following assumptions:

- forecast for 1998 using the midpoint of the approved rate of return on equity;

- adjusting the approved rate of return to reflect the December 31, 1997, 10 year and 30 year Canada Bonds as the risk free rate; and

- adjusting the approved rate of return to reflect the average rate of 10 year and 30 year Canada Bonds during 1997 as the risk free rate.

On February 10, 1998, the Board received the report of Doane Raymond whose financial analysis was based on NLP's projected results for 1998, as provided to the Board at the 1998 Capital Budget Hearing.

Doane Raymond stated that the inherent risk premium in the approved 1997 rate of return (midpoint) on common equity of 11%, as calculated on a 30 year bond yield is:

Benchmark Canada bond yield	
- Long term (30 years) - July 1996	8.06%
Inherent risk premium	2.94%

Doane Raymond noted that the next step in the analysis was to obtain the current Canada bond yields from Bank of Canada publications, as follows:

Benchmark Canada Bond Yields	30 years	Inherent Risk Premium	Rate of Return on Common Equity
- At December 31, 1997	5.95%	2.94%	8.89%
- Average for 1997	6.66%	2.94%	9.60%

The effect of the adjusted rate of return on regulated net income, revenue requirement and rates can be summarized as follows:

	Rate of Return on Common Equity	Change in Regulated Net Income (000's)	Change in Revenue Requirements (000's)	% Overall Impact on Rates
Appendix D - 30 year Canada Bond Yield - Dec. 31, 1997	8.89%	$(4,919)	$(8,481)	(2.49%)
Appendix E - 30 year Canada Bond Yield - 1997 Average	9.60%	$(3,219)	$(5,550)	(1.63%)

The above summary shows that Doane Raymond's analysis results in decreases to NLP's rate of return on equity of up to 2.05%. These decreases in rate of return on common equity would result in an overall reduction in revenue requirement and rates in the range of 1.63% to 2.49%.

Doane Raymond stated that, in their analysis, the impact on revenue requirement provides for the income tax effect of a change in net income but does not give effect to changes that may arise in other expenses as a result of a decrease in revenue (e.g. finance charges would be impacted by resulting changes in cash flow and short term borrowing). The effect of such changes in other expenses are not expected to be significant.

The scope of the investigation by Doane Raymond was expanded to cover a review of adjustment formulas which have been used in other Canadian jurisdictions to adjust the rate of return on equity. These adjustments have been based upon forecasts of long Canada bond yields.

These jurisdictions include the British Columbia Utilities Commission (BCUC), National Energy Board (NEB), Public Utilities Board of Manitoba (PUBM), and the Ontario Energy Board (OEB). The decisions are contained in a volume presented by NLP as evidence and labelled, "Additional Materials", May 22, 1998

Doane Raymond summarize the workings of those adjustment mechanisms as follows:

"The automatic adjustment mechanism or formula adopted is essentially the same in all three decisions. The underlying features or methodology are as follows:

- based on the equity risk premium method;
- forecast 10 year Canada bond yields are determined in November for the next year (information on 3 month and 12 month forecast yields obtained from Consensus Forecasts of London and averaged);
- the current yield spread between 10 year and 30 year Canada bonds is added to the forecast yield for 10 year bonds to arrive at a projected yield on long term Canada bonds;
- the initial adjustment factor is the difference between the current projected yield on long term Canada bonds and the forecast yield as specified in the decision with respect to rate of return;
- a sliding scale adjustment factor is applied to the approved rate of return for the respective utilities to determine an adjusted rate of return for each utility for the subsequent year.

"The sliding scale factor is incorporated into the formula to reflect the inverse relationship between long term bond yields and equity risk premium. In the decisions of the BCUC and the PUBM a 100 basis point change in long term bond yields results in an 80 basis point adjustment in

ROE. In the NEB decision the ratio is 75 basis point adjustment in ROE for a 100 basis point change in bond yields."(Doane Raymond Report, p.5)

On March 17, 1998, the Board gave notice of a pre-hearing conference.

In preparation for the hearing of this matter, the Board engaged Drs. William R. Waters and Ralph A. Winter, Financial Experts, to prepare a report.

The pre-hearing conference was held on April 2 & 6, 1998 at Irwin's Court, Main Floor, Arts and Culture Centre, Allandale Road, St. John's, Nfld.

At the pre-hearing conference on April 2, 1998, the Consumer Advocate, Dennis M. Browne, Q.C., made a request that the hearing additionally address other issues held over from the last rate hearing held in1996.

After hearing the request from the Consumer Advocate, the Board advised that the outstanding issues arising as a result of Board Order No. P.U. 7 (1996-97), namely those outlined in:

- Paragraph 13 - "Industrial Inflation Index";
- Paragraph 14 - "Executive and Management Compensation";
- Paragraph 25 - "Cost of Service Methodology";
- Paragraph 33 - "Basic Customer Charge";
- Paragraph 35 - "Curtailable Rates";
- Paragraph 37 - "Rate Design"; and
- Paragraph 38 - "Demand Energy Rate from Hydro"

would be dealt with at a public hearing beginning in October of 1998.

On the basis of the submissions of the parties present at the pre-hearing conference, the Board decided to focus the hearing on the issues contained in the public notice.

The parties identified as participants at the hearing were: NLP; the Consumer Advocate and Abitibi-Consolidated Inc. The Board set the schedule for the filing of documents and exhibits as well

as information requests and replies to those requests. The order of appearance of intervenors was also fixed.

The following were in attendance at the pre-hearing conference on April 2 & 6, 1998:

Mr. V. Randell J. Earle, Q.C., on behalf of the Board;

Messrs. Ian Kelly, Q.C. & Peter S. Alteen, LL.B., on behalf of NLP;

Ms. Janet Henley Andrews, LL.B., on behalf of Abitibi-Consolidated Inc.(Abitibi);

Mr. Dennis M. Browne, Q.C., Government-Appointed Consumer Advocate, assisted by Mr. Mark Kennedy, LL.B. Counsel;

Mr. William R. Brushett, C.A., Doane Raymond, Financial Consultants to the Board;

Ms. G. Cheryl Blundon, Clerk of the Board; and

Ms. Doreen Dray, Financial and Economic Analyst of the Board.

Ms. Janet Henley Andrews, Intervenor, representing Abitibi, made a request, under Section 90 of the *Act*, that Abitibi's costs in relation to the hearing should be paid by the Board.

After hearing the request from Ms. Henley Andrews, on April 27, 1998 the Board issued Order No. P.U. 4 (1998-99) which dealt with the foregoing request and ordered that the issue of costs of Abitibi will be considered at the conclusion of the hearing.

It was agreed that the hearing would begin on May 25, 1998, at 9:30 a.m. in the hearings room of the Board, Prince Charles Building, 120 Torbay Road, St. John's. Notice of the hearing was subsequently advertised in local newspapers circulated throughout the Province.

The Hearing

The hearing was held on May 25, 26, 27, 28, 29, June 4, 5, 8, 9, 10, 11, 12 and 18, 1998.

The following were in attendance at the hearing:

Messrs. Ian Kelly, Q.C. & Peter S. Alteen, LL.B., appearing as counsel for NLP

Ms. Janet Henley Andrews, LL.B., appearing as counsel for Abitibi

Mr. Dennis M. Browne, Q.C., Government-Appointed Consumer Advocate

Mr. Mark Kennedy, LL.B. appearing as counsel for the Consumer Advocate.

During the hearing, the Board was assisted by its counsel, Mr. V. Randell J. Earle, Q.C., and by Ms. G. Cheryl Blundon, Clerk of the Board. Mr. William R. Brushett, C.A., Dr. William R. Waters, and Dr. Ralph A. Winter were expert witnesses appointed by the Board.

The following witnesses were called by the Board:

Mr. William R. Brushett, C.A., of Doane Raymond, Financial Consultant to the Board.

Dr. William R. Waters, William R. Waters Limited; and Dr. Ralph A. Winter, Rotman School of Management, University of Toronto.

Evidence was given for NLP by:

Mr. Philip Hughes, C.A., President and Chief Executive Officer of NLP;

Mr. Karl W. Smith, C.A., Vice-President Finance and Chief Financial Officer of NLP;

Ms. Kathleen McShane, Senior Consultant and Vice-President of Foster Associates, Inc.; and,

Dr. Roger A. Morin, Professor of Finance, College of Business Administration, and Professor of Finance for Regulated Industry at the Centre for the Study of Regulated Industry, Georgia State University.

Evidence was given for the Consumer Advocate by:

Dr. Basil A. Kalymon, Professor of Finance, Rotman School of Management, University of Toronto and Consulting Associate with Coopers & Lybrand Consulting; and

Dr. James Feehan, Associate Professor of Economics, Memorial University of Newfoundland.

In addition to the sworn evidence given at the hearing and pre-filed evidence circulated in advance, the interested parties replied to and filed additional information by way of exhibits and consents. Responses were also provided to information requests submitted by parties to the hearing.

Final summations were presented by Mr. Earle for the Board, Mr. Kelly for NLP, Ms. Henley Andrews for Abitibi, and Mr. Browne and Mr. Kennedy for the Consumer Advocate.

STATUTORY POWERS AND RESPONSIBILITIES

The Board is guided by Section 80 of the *Act*, with respect to the utility's entitlement "to earn annually a just and reasonable return as determined by the Board on the rate base ...". Further guidance is provided by the June 15, 1998, opinion of the Supreme Court of Newfoundland, Court of Appeal, on a Stated Case of the Board regarding rate of return and capital structure.

In addition to the provisions of Section 80 of the *Act,* the Board is also provided with guidance concerning an appropriate rate of return through the *Electrical Power Control Act, 1994, (S.N. 1994, Chapter-E-5.1)* particularly Section 3 which sets out the power policy of the province. In setting an appropriate rate of return on rate base, the Board is charged with balancing the competing interests of consumers and of investors in the utility. *The Electrical Power Control Act, 1994* provides that the rates charged for power should provide sufficient revenue to the utility to enable it to earn a just and reasonable return "so that it is able to achieve and maintain a sound credit rating in the financial markets of the world".[*Electrical Power Control Act, 1994* Section 3(a)(iii)]

This protects the utility and its investors.

In order to protect consumers, the *Electrical Power Control Act ,1994* provides that the rates charged to consumers should be "reasonable and not unjustly discriminatory".[*Electrical Power Control Act, 1994* Section 3(a)(i)] Furthermore, facilities should be managed and operated in a manner that will result in power being delivered to consumers "at the lowest possible costs consistent with reliable service".[*Electrical Power Control Act, 1994*, Section 3(b)(iii)] Not only are prices to be "reasonable" but a utility must provide services and facilities which are "reasonably safe and adequate and just and reasonable".[*the Act*, S. 37(1)]

In carrying out its role, the Board must implement the power policy of the province and "apply tests which are consistent with generally accepted sound public utility practice".(*Electrical Power Control Act, 1994*, Section 4)

In addition to the statutory principles which guide the Board there are a number of well accepted principles of public utility regulation which are used to estimate the required rate of return. These principles have been endorsed not only by regulators but also by appellate courts in both Canada and the United States. A public utility must be able to assure its financial integrity, so that it can maintain a sound credit standing and be able to attract additional capital when required. In order to maintain access to capital financing it must achieve earnings comparable to those of other companies with similar risks. The rate of return on capital must be high enough to attract capital but electric power should be delivered to customers at the lowest possible costs consistent with reliable service. These principles apply to all forms of capital, whether in the form of debt or equity. As a general rule it is easier to assess the opportunity cost of capital raised in the form of debt than it is to measure the return required to attract equity capital. It is for this reason that more evidence was

heard at the hearing on the return on equity than on the required return on debt capital. Financial market conditions will play a large part in determining what return is required by investors.

The Board is required not only to assess current return requirements but also to forecast what rate of return expectations and financial market conditions will be during the forecast period. Rates are set prospectively on the basis of forecast revenues and costs, including the cost of capital.

Public utilities are not guaranteed a fair rate of return. The regulator must avoid arbitrary action but, subject to its statutory obligations, has no responsibility to protect the utility from normal business and financial uncertainties.

The rate base of the utility is financed through both equity and debt capital. The cost of capital depends not only on the allowed returns but also on the capital structure which describes the composition of financial capital and the relative shares financed by equity and by debt. Typically, the return required on equity is higher than on debt. This suggests that high reliance upon debt capital is cost effective. However, the financial strength of the Company depends to a large degree on the magnitude of the equity ratio, which represents the contribution by risk-bearing shareholders. If the equity ratio is too low then the financial risk will be deemed high and the cost of capital will be higher than would be the case with a higher equity ratio. A cost efficient capital structure requires a balance between the financial strength added by higher equity and the higher cost of equity in relationship to debt.

The Board has considered the evidence and representations submitted during the hearing, but reference will be made only to matters required to explain the reasons for the Board's decision.

ECONOMIC FORECASTS

During the hearing, the witnesses offered extensive evidence and opinions relating to the economic future of Newfoundland, that NLP's performance is intimately bound up with the economic growth of the province and the country, and must be viewed in that broad perspective.

Exhibit CA-4 - The Economy 1998 - A Report of the Government of Newfoundland and Labrador, gives the following outlook for 1998:

> " This year is expected to mark the beginning of a period of strong economic growth. Forecasters are predicting that the Province will be among the top achievers in economic growth this year. Real GDP is forecast to grow 4.5 percent, led by exports and megaproject development activity."

The economic outlook for 1998, according to the Report, is very encouraging and major forecasters expect real growth between 2.7% and 5.1% in provincial gross domestic product (GDP).

Drs. Waters and Winter stated in their pre-filed evidence that Canada is forecast to be the highest growth country among the G-7 countries, and Newfoundland is forecast to have the highest 1998 growth of any of the provinces. They said that economic conditions have changed significantly in a way that reduces the business risk of NLP and that the risk of a downturn in the economy is very low. The elimination of the Federal government's budget deficit and the dramatic lowering of the Provincial government's budget deficit are the foundation for an increase in consumer and investor confidence and a reduction in economic uncertainty generally. They state in their evidence that

> "the current economy is characterized by an extraordinary combination of continued growth and low interest rates, reflecting the confidence that the Bank of Canada will maintain its low inflation policy"....and that.... "investor's confidence in continued growth and low inflation is perhaps higher than at any time since the 1960's".(Evidence, p.9)

In support of this opinion they point out that a clear signal of reduced investor perceptions of risk in the economy is the long term Canada bond yield at well under 6% as of April 1998, a lower rate than in more than a quarter century. Consequently, an examination of the general economic environment facing NLP shows that it has changed favourably and significantly and that the Newfoundland economy is stronger than could reasonably have been forecast in 1996. Both the Newfoundland and Canadian economies in general are more stable.

Ms. McShane, in describing the economic prospects for Newfoundland and their impact on NLP, stated that Hibernia oil production, the Terra Nova Project and Voisey's Bay Nickel operations will have limited direct impact on the Newfoundland economy in 1998. She said Newfoundland is expected to experience the lowest personal income growth and retail sales growth in the country. The Conference Board of Canada, she said, projects the population of Newfoundland will decline from 565,000 in 1997 to 537,000 in 2015 due to loss of job opportunities and the collapse in the fishery. This decline in population, she concludes, will reduce sales growth substantially, raising the probability of NLP being unable to meet increasing expenses without increasing rates. Ms. McShane, in commenting on the growth in Canada's GDP, points out that most economic indicators are positive, consumer confidence is high and strong job growth has driven the unemployment rate in Canada from 9.7% in 1996 to 8.5% currently. She is also of the opinion that small surpluses in the federal government's budget over the next couple of years may be used to reduce debt levels, which remain relatively high as a percentage of GDP. Ms. McShane believes that the major risks to the growth forecast for Canada include a greater than expected slowdown in the U.S. economy, as a result of the Asian economic crisis, and a potential slowdown in domestic demand, e.g., as a result

of low commodity prices, and increases in interest rates. She also notes that over the past 12 months the Bank of Canada has raised interest rates five times to boost a sagging Canadian dollar, which has slipped to its lowest level in recent history.

Dr. Morin, in testifying on behalf of NLP, agreed that the local economy has improved and that the prospects are more favourable than in recent years. However, he observes that the regional economy is relatively weak, unemployment is high and population growth is stagnant. In the medium term, significant development of natural resources will result in higher than average economic growth. He states, in the longer term, the economic impact of Hibernia, Terra Nova and Voisey's Bay will diminish considerably upon completion, while population out-migration is expected to resume along with lower demand for electricity.

Dr. Kalymon, appearing for the Consumer Advocate, opened his pre-filed testimony by stating that the cost of capital in financial markets is determined by three factors:

(1) The level of inflation in the economy;

(2) The level of returns available to risk-free investment; and

(3) The level of risk to which the investor is exposed.

Dr. Kalymon went on to state that each of these factors is generally acknowledged to influence the terms and conditions on which capital is provided and that if the returns available to investors are to be determined they must be placed within the context of the general economic conditions which influence all of the above three factors.

In giving his assessment of current economic conditions, Dr. Kalymon states that, since 1996, there has been a radical change in economic conditions in Canada, affecting inflation, the returns on risk-free investments and the level of risk compensation to investors. Corporate profits have shown renewed growth after five quarters of decline and unemployment rates continue to fall. Dr. Kalymon believes that the Canadian economy has now clearly established a pattern of very low inflation levels to the extent that Canada's inflation record is now "outstanding" by global comparisons.(Evidence, p.7) He cites the elimination of the federal budget deficit and the narrowing of provincial budget deficits, unprecedented in the past twenty years, as major contributing factors to the low inflation levels.

The one negative factor, according to Dr. Kalymon, is weakness in the Canadian dollar which, if continued, could lead to upward pressure in short term interest rates.

Dr. Kalymon states that the main business risk of NLP is its exposure to the general economic conditions of the Province. The downturn in the provincial economy in 1997 resulted in almost no growth in electricity sales by NLP. The continued shutdown of a substantial part of the fishery imposes some economic hardships on the province, even though growth in both volumes and landed value have occurred. New mine discoveries, the development of off-shore oil resources and the potential for expanding hydro-electric capacity in Labrador, offer the prospect of future growth. As a result, the province is expected to have a growth rate in 1998 which will exceed the national average. These factors, according to Dr. Kalymon, are influencing investor perceptions of the provincial economy, which has strong future growth potential. He cautions, however, that investors will perceive NLP's operations as riskier than those of utilities operating in a more diversified and less resource-based economic environment.

Dr. Feehan gave evidence relating the near-term economic prospects to NLP's sales of electricity. In discussing the general economic outlook Dr. Feehan states in his pre-filed evidence that "prospects are positive and are the best they have been in some years".(Evidence, p.2) He testified that, with the elimination of the federal deficit and continuing low inflation and low interest rates, the economic climate is conducive to business and consumer confidence. Prior to the recessionary year of 1991, inflation ranged from a high of 12.4% in 1981 to a low of 3.9% in 1985, but, since 1992, inflation has held between 1% and 2%. Interest rates have declined and we are seeing an "investment boom" (Evidence, p.3) in spending on construction and machinery and equipment. The likelihood of these economic trends continuing is strong according to major forecasters.

Dr. Feehan observes that long term forecasts are also favorable; that the Conference Board of Canada is forecasting annual real GDP growth rates to range between 2.9% and 3.4% for the years 1998-2002, and, that continued improvement in national economic factors will have a positive impact on the provincial economy since there is less likelihood of further cuts to transfer payments.

Dr. Feehan noted the impact of several resource based projects which are in the planning, developmental or operational phases, e.g., Terra Nova, Hibernia and Churchill Falls. He points out that these projects are important because they entail substantial investment spending over the next several years and offer the Province the prospect of large resource royalty revenue for many more years. Other positive economic highlights, according to Dr. Feehan, include the recent agreements regarding Churchill Falls and the ongoing diversification of the fisheries. These projects, he claims, when combined with the Conference Board of Canada forecasts for continued improvement in GDP, employment, personal income and inflation will translate into an increase in demand for electricity.

Dr. Feehan concludes by saying that the downside risk to NLP's electricity sales, due to economic conditions, is negligible and that if NLP could manage small increases in sales during the economic troubles of 1990-1997 then it is well positioned to see more sizeable increases in sales volume in a growing economy characterized by low inflation, low interest rates and a favorable medium term outlook.

The Board finds that in its assessment of the evidence on the economic outlook the short to medium term economic environment for NLP has improved significantly.

Capital Market Conditions

Drs. Waters and Winter, in their evidence and under direct examination by Board Counsel, stated that since 1996 there has been an increased confidence by the capital markets that low inflation is now firmly established.

In summarizing their review of current interest rate levels compared with those prevailing in July, 1996, the time of the Board's most recent review of NLP's rate of return, Drs. Waters and Winter provided the following table.

Canadian and U.S. Interest Rates, 1996 and 1998 (1)

	As of July 5, 1996	As of Apr. 10, 1998	**Change** Apr 10/98 from July 5/96 (basis points)
Canada	(1)	(2)	(3)
Chartered Banks prime rate	6.50%	6.50%	0
3 month Govt of Canada treas. bills	4.69	4.57	-12
1 year Govt. of Canada treas. bills	5.57	4.86	-71
Bank of Canada 10 years and over Govt. of Cda. series	7.91 (Jul. 3)	5.42 (Apr. 8)	-249
Selected Govt. of Canada long term issues			
8.75% of 2005	7.78	5.20	-258
9.00% of 2011	8.13	5.37	-276
9.75% of 2021	8.25	5.58	-267
United States			
Prime rate at major commercial banks	8.25	8.50	25
3 month U.S. Govt. treasury bills	5.12	4.96	-16
30 year U.S. Govt. treasury bonds	7.18	5.88	-130

(1) Page 12 of Pre-filed Evidence of William R. Waters/Ralph A. Winter

Ms. McShane, in her testimony on the condition of capital markets, acknowledges that most Canadian indicators are positive in respect of continuing low interest rates, improvements in GDP, consumer confidence and low unemployment. She observes, however, that over the past twelve months the Bank of Canada has raised interest rates five times to boost a sagging Canadian dollar which, since January 1997, has slipped to its lowest level in recent history and that the Bank of Canada rate was increased from 3.25% in 1996 to 5.00% in January 1998. In her testimony and comments on the decline in long term Canada Bond rates, Ms. McShane notes that the lower interest rates have come at the expense of a weaker currency and that a stabilization of the currency will require interest rates in Canada which are on a par with U.S. rates. Given the likelihood that U.S. and Canadian rates will converge, she believes that the forecasts for yields in Canada and the U.S. are consistent, and, therefore, a 6.0% long Canada bond yield is a reasonable estimate of the risk free rate to be used as the point of departure for purposes of applying the equity risk premium test.

Dr. Morin, in his evidence states:

> "While utilities enjoy varying degrees of monopoly in the sale of public utility services, they must compete with everyone else in the free open market for the input factors of production, whether they be labor, materials, machines, or capital. The prices of these inputs are set in the competitive marketplace by supply and demand, and it is these input prices which are incorporated in the cost of service computation. This is just as true for capital as for any other factor of production".(Evidence, Appendix, p.2)

The investor, he points out, expects a certain rate of return and if the Company doesn't produce that rate of return, that capital will flow elsewhere. Dr. Morin is of the opinion that the long term Canada bond yield will be at a 6.25% average for 1998.

Dr. Kalymon testified that since the time of the last hearing in 1996, there has been a radical

lowering of financial pressures in the Canadian economy, affecting risk free investments and the level of risk compensation to investors. He further states that the economic indicators clearly show that a major reduction in the cost of capital has occurred. Major shifts have been seen in both bond and equity markets. Corporate earnings growth has resumed, after five quarters of decline. The trends in interest rates since 1996 imply a greater confidence on the part of bond holders as to the risk of future increases in inflation and a corresponding reduction in the risk premium demanded. He notes , however, that short term interest rates continued to be volatile in 1997 but in early 1998 began trending upward. This, he believes, is generally viewed as being related to the sizeable gap in Canadian and U.S. interest rates which has resulted in downward pressure on the Canadian dollar and has forced the Bank of Canada to raise the bank rate. These upward adjustments of short term rates have supported the lowering of long term rates as investor confidence in monetary policies has been strengthened.

Regarding equity markets, Dr. Kalymon points out that the performance since the time of the last hearing has been quite spectacular with investors radically bidding up prices of shares and indicating a willingness to settle for much lower yields.(Evidence, p.10) During the past two years the price earnings ratio on the TSE increased from a level of 13.77, as of December,1995, to a December, 1997 level of 22.86, and that over the same period dividend yields fell to a level of 1.64%, in essentially a continuous decline. His opinion is that these figures imply a radical pricing shift in the market which is assigning a higher share value for a given level of earnings, which is consistent with a lowered cost of capital.

The Board finds that the evidence is substantial that capital market improvements over

the past two years have significantly reduced the cost of capital for the short to medium term.

Business vs Market Risk

In summarizing the risks faced by investors in a regulated utility, Drs. Waters and Winter define business risk as the basic risk that the utility's operating income may not be sufficient to service all its obligations, including the provision of the return on equity the investor regards as fair and expects to receive, in one or more future periods. This risk, they testify, is shared between the utility's lenders and owners. Since the interest return to lenders is assured while the dividend return to shareholders is uncertain, lenders bear a lower than proportionate share of the utility's total business risk. On the other hand, they observe that a greater-than-proportionate share must be borne by the owners; i.e. by the common equity shareholders. This amplification by the use of borrowed funds of the risks borne by common equity investors is labelled "financial risk". The witnesses went on to describe "investment risks" as representing the combined results of (1) the risks emanating from the economic activity of operations engaged in by the corporation, i.e. from its business risks and (2) the risks which arise through the corporation's financing and capital structure.

In describing, more specifically, the business risks borne by the creditors and owners of a regulated utility Drs. Waters & Winter divided the risks into three categories:

1. the risk that the rates will not be set at a level sufficient to provide a fair rate of return on total capital invested;

2. the risk that a particular period's operating and/or financial costs will exceed those

utilized in setting the rates, or that the revenues will fall short of those projected; and

3. the risk that, at some point, the utility will become uneconomic and will be shut down completely or will be unable to recover fully its fixed costs, including those related to financing.

In describing the main sources of risk since the last Board decision, and potential sources of change in the risk level for NLP, Drs. Waters & Winter said there are two principal sources: the impact on growth prospects of general economic conditions, and the extent of competition in the heating market. Taking each in turn, the evidence of Drs. Waters & Winter points to the improvements in the national and provincial economy as well as the reduction in uncertainty associated with the elimination of the federal budget deficit and the reduction of the provincial budget deficit. As to competitive fuel substitution which, in the case of NLP, refers to the conversion of space heating from electricity to other heating fuels, Drs. Waters & Winter consider the risk to be "negligible".(p.21, William Waters' evidence)

The total investment risk of NLP as reflected in its historical ability to earn its allowed rate of return, according to Drs. Waters & Winter, is low. They note that over the period 1989-1997, the realized return has averaged 38 basis points below the allowed rate of return.(Evidence, Table 17) In the view of Drs. Waters & Winter, investors attach significant weight to the record of a utility in achieving a stable return. Therefore, short term risk for NLP, as reflected in the volatility of earnings, is low.

Messrs. Hughes and Smith, in testifying on the question of business risk associated with NLP, stated that NLP is generally seen as having relatively stable revenues. However, this relative stability

must be viewed in light of the economy in which the Company operates, and the competitive nature of its sales. They cite growth in housing starts, growth in personal income and service sector growth as long term economic factors that will influence NLP revenue growth. In addition, continued net out-migration, population shifts to urban communities, fishing industry problems and the lack of employment opportunities will require investment to maintain aging and less viable systems and provide services to growing communities.

Messrs. Hughes & Smith also testified regarding the major risk associated with the fact that more than one half of the Company's total energy sales are to competitive end uses, such as space and water heating. They believe the Company could absorb losses in these markets in the short term. However, in the longer term, the loss of these markets would significantly impact revenue flows and the Company's ability to meet its financial obligations. Furthermore, the most recent rating reports from both Canadian Bond Rating Service (CBRS) and Dominion Bond Rating Service (DBRS) continue to note competition as an issue.

In commenting on the principal expense risks of the Company, they state, that purchased power from a single supplier, i.e. Newfoundland Hydro, the evolution of the Company's business from an expansion mode to an operating and maintenance mode, and the Company's increasing tax rate are major risks.

As a result of the factors mentioned above, the witnesses view NLP's business risk in comparison to other Canadian utilities as relatively high and the pressure on NLP to manage expenses effectively will continue to be seen by the capital market as risks to achieving its allowed return.

Ms.McShane, in commenting on business risks, submits that risk refers to the probability that the actual return will fall short of the expected return, and that the total risk of a common stock

investment is comprised of both the business risk and financial risk to which the stockholder is exposed. She states that an electric utility's business risk has both short and long-term aspects; that the regulator has the ability to compensate the shareholder for the longer-term risks when they are experienced; and that the regulatory mode provides a high degree of assurance of achieving the allowed return in each successive test year.

The short term business risks, as cited by Ms. McShane, are largely related to a combination of the regulatory framework, including rate design, and factors such as weather, competition, economic conditions and conservation which can lead to higher or lower than anticipated sales. As to long term risks, she testifies that the focus should be on the factors that may impair the capital investment, foremost among which are longer term economic and demographic trends and competitive forces which could preclude raising rates to recover the capital investment.

With specific reference to NLP's business risks, she observes that the assessments by investors, creditors and rating agencies are influenced by:

(1) the relative small size of NLP, which limits its access to capital markets;

(2) NLP's market, which lacks economic diversity and is relatively weak, with limited growth prospects;

(3) the Province of Newfoundland having the lowest debt rating of any of the provinces in Canada, the highest unemployment rate and a lagging GDP growth;

(4) the trend in out-migration;

(5) slow sales growth, raising the probability of the Company being unable to meet increasing expenses without increasing rates;

(6) high variable cost of purchased power;

(7) geographic isolation; and

(8) the pressures exerted by NLP's exposure to harsh climate conditions.

Ms. McShane concludes that because of the risk factors outlined above, NLP's business profile is somewhat weaker than average.

Dr. Morin testifies that the local economy has improved and that prospects for NLP are more favourable, with an improved provincial economy, but that the same can be said in the case of most other utilities elsewhere. He further states that the structural parameters of the province's economy remain fundamentally unchanged: a relatively weak regional economy, high unemployment and stagnant population growth. The Company, he adds, continues to be vulnerable to competition in the space and water heating markets and, therefore, its prospects for growth are restricted. He notes that competition is present in energy markets elsewhere as regulatory barriers are removed and sweeping regulatory reform is attracting new participants. Dr. Morin considers NLP unaffected by such trends at this time in view of the nature of its insular service territory and the absence of viable competitors. On balance, Dr. Morin considers NLP's business risk to be high.

NLP's financial risks, according to Dr. Morin, relative to other Canadian utilities, remain high given some deterioration in past years with the common equity ratio falling from 48% to below 45% and interest coverage ratios deteriorating as well.

The Board finds that, as a result of improvements in the economic climate and capital markets, as well as NLP's overall business performance, the degrees of both business and

financial risks have been substantially reduced.

CREDIT WORTHINESS

Background on NLP's Credit History

NLP has maintained a single "A" rating by the CBRS since 1981 and has experienced significant growth since that time. Sales have grown from $131 million in 1981 to $344 million in 1997. During the same period, total assets have demonstrated similar growth from $272 million to $582 million. In 1981, debt comprised 48.17% of the total capital, preferred equity was 18.05%, and common equity was 33.78%. This contrasts with the 1997 figures where debt comprised 53.55%, preferred shares 1.93%, and common equity 44.52%.(Annual Report to the Board, Newfoundland Light & Power Co. Limited, A Fortis Company, Return 17, 1981 and 1997)

Interest coverage ratios have also changed during this period. In 1981, interest coverage was 3.0, using CBRS methodology, rising to 3.6 in 1982 and remaining above 3.0 until 1987. From 1987 to 1997, NLP has maintained coverage in the 2.7 to 2.9 range, with most recent years at 2.7.

This hearing focused particular attention on changes in the Company's credit worthiness, since the last hearing in 1996. A review of 1996 figures indicates debt comprising 52.54% of total capital and common equity representing 45.47%.(Annual Report to the Board, Newfoundland Light & Power Co. Limited, A Fortis Company, Return 17, 1996) Interest coverage was 2.73 and the rate of return on common equity ("ROE") was 11.21%. (Annual Report to the Board, Newfoundland Light & Power Co. Limited, A Fortis Company, Return 19, 1996) For that fiscal period and that economy, the bond rating services and the market recognized NLP as an "A" rated Company. On January 8, 1996, DBRS changed NLP's bond rating from "A High" to "A." On April 18, 1996,

following this downgrading, Mr. Angus Newman, Vice President of Richardson Greenshields, advised the Board, in evidence at a hearing on an NLP bond issue, that he did not believe the downgrade had impacted on the 68 basis point spread above Government of Canada long bond yields expected on the issue of Series AH bonds. Mr. Newman characterized such a yield as "very, very good" and he was not aware of any other bond issue of NLP with such a low spread. Hence, the Company has enjoyed access to the financial markets at favorable terms in recent years.

Electrical Power Control Act

The Board must implement the power policy set out in the *Electrical Power Control Act, 1994,*as declared in Section 3(a)(iii) which states:

> "3. It is declared to be the policy of the province that
>
> (a) the rates to be charged, either generally or under specific contracts, for the supply of power within the province....
>
> (iii) should provide sufficient revenue to the producer or retailer of the power to enable it to earn a just and reasonable return as construed under the *Public Utilities Act* so that it is able to achieve and maintain a sound credit rating in the financial markets of the world, ..."

Clearly, it is the Board's responsibility to implement the power policy declared in Section 3 and utilize tests consistent with generally accepted sound public utility practice in so doing. These tests include, among others, review of key financial indicators and trends, consideration of expert testimony and review of credit agency reports.

CBRS Assessment

CBRS provides an updated credit assessment report of the Company at least annually as well as reporting on the utility industry as a whole, from time to time. Entered as responses to information requests at this hearing are CBRS reports entitled: "CBRS Credit Analysis- Newfoundland Light & Power Co. Ltd., December 24, 1997"(DMB-9, pp.11-14) and "CBRS Credit Analysis- Newfoundland Light & Power Co. Ltd., October 7, 1996" (DMB-9, pp. 15-18) as well as a Summer of 1994 report entitled CBRS METHODOLOGY OF RATING DEBT SECURITIES OF REGULATED UTILITIES.(DMB-13, Tab 1-7) These reports indicate the benchmarks this agency considers in assessing credit worthiness of utilities.

On December 24, 1997, CBRS considered that market risk affecting NLP is relatively low, while the business risk indicated was "relatively high." CBRS attributes these conclusions to the small size of the Company, high electric rates, weak franchise area, provincial government debt rating of BBB, and low provincial growth in a resource dependent economy. Offsetting these negative factors, according to CBRS, were strong levels of financial ratios, NLP's downsizing initiatives, cost control measures and good operating performance. (DMB-9, p.11)

CBRS states that low sales growth is influenced by the competition from oil and propane gas as well as energy efficiency. Basic customer rates have been held relatively constant. Low growth has brought low capital investment and good cash flows. (DMB-9, p.11)

DBRS Assessment

DBRS reports entitled: "Bond, Long Term Debt & Preferred Share Ratings- Newfoundland Light & Power Co. Limited, March 17, 1998" (DMB-9, pp.2-6) and "Bond, Long Term Debt & Preferred Share Ratings- Newfoundland Light & Power Co. Limited, January 30, 1997" (DMB-9, pp.7-10), are filed as responses to information requests at this hearing. DBRS have also issued: The Electric Utilities Industry in Canada, dated February 1998, which has been filed as evidence. (DMB-31, Tab 1-5) These reports support the analysis and conclusions made by CBRS.

DBRS lists as strengths of NLP:

- regulatory pass through of purchased power costs;
- geographic isolation from competitive pressures;
- strong balance sheet, including staggering of debt maturities;
- weather normalization account and Rate Stabilization Adjustment ("RSA");
- low fixed costs, giving considerable flexibility to withstand a weak economic environment, and
- NLP has a denser service area than Newfoundland and Labrador Hydro ("Hydro")

Challenges identified by DBRS are:

- NLP operates in a weak provincial economy;
- NLP has the lowest electric utility growth over the last six (6) years in Canada. Declining population and public service sector restraint contribute to low economic growth;
- oil continues to compete well for space and water heating;
- Revenue Canada reassessment may be significant;
- return on equity is sensitive to interest rate changes, and
- the new investment in a hydro-electric plant at Rose Blanche may weaken interest coverage until the plant begins to generate earnings.

DBRS expects NLP to continue demonstrating a strong balance sheet, in spite of an increase in capital expenditures for Rose Blanche. Ratios remain favourable, compared with other investor owned utilities. (DMB-9, pp.2-6)

Credit Ratings

In summary, the issues that appear to influence bond rating agencies are:

(a) market size and strength;

(b) competition;

(c) management strength;

(d) business outlook, and

(e) financial performance.

The Board will consider the evidence on each factor in coming to its own conclusion regarding the Company's credit worthiness and access to financial markets.

Market Size and Strength

The position of NLP is that their market size does not appear to be growing, due to out migration, decline in population and significant decline in the population under 44 years of age. Hughes and Smith provide statistical information regarding forecast gross domestic product in the service producing industries, which is the lowest in Canada and whose growth is forecast at 1.4% for the period 1997 - 2015. While growth forecast of GDP in goods producing industries is the highest in the country, the impact of the goods producing industry on NLP is minimal.(Hughes & Smith, p.3 and pp.10-11) In spite of the lack of growth, along with the rural-urban shift and decline in

population, Hughes and Smith state that NLP is obligated under the regulatory compact to maintain its existing distribution network to a declining sales base. (Hughes & Smith, p. 12)

Ms. McShane identifies short term risk of deviations from forecasts and long term risks related to the economy, demographic trends and competitive risks as factors affecting access to capital markets. In her opinion, NLP's small size limits its access to capital markets. She also indicates that NLP serves a low growth, relatively weak, undiversified economy. The fact Newfoundland is believed to lead the country in GDP growth must be interpreted carefully, in her opinion, since she concludes that major projects such as Hibernia and Voisey's Bay will have limited impact on the Newfoundland economy. Population decline and lack of job opportunities will negatively impact NLP's market, in her opinion. Also, McShane states that NLP has shown low sales growth and low customer growth.

Ms. McShane discusses longer term competitive risk, which impacts NLP's credit worthiness, referring to the province's isolation from the North American Grid. In her opinion, this isolation shelters NLP from some competitive pressures. However, Ms. McShane cautions that possible natural gas competition may threaten market share loss. Also, she states that harsh weather conditions are a factor that requires ready access to the capital market following major storm damage. Ms. McShane concludes that NLP has a somewhat weaker than average business profile. Also, she concludes there is no indication that the level of business risk has changed materially since October 1996.

Dr. Morin agrees that NLP's smaller size and higher business risk requires that NLP compensate for these items with a higher relative common equity ratio than other utilities.

Dr. Waters and Dr. Winter view the Newfoundland market as being more positive than in 1996. They believe this is due to a commitment to balance the budget. Both of these experts believe that this is a big change from July 1997, when the economy was seen to be in recession. They also believe that the general economic environment has changed favourably and significantly. Drs. Waters and Winter conclude that these favourable factors are complemented by low inflation levels and low long term interest rates.

Drs. Waters and Winter point to stable sales as a risk-mitigating factor by virtue of NLP's high concentration of residential sales and low reliance upon industrial customers who would be affected by volatility in industrial activity. With respect to risk of competitive fuel substitution, Drs. Waters and Winter state this is a short term risk, corrected by year to year forecasting updates based upon the actual extent of competitive fuel substitution. They predict this risk is negligible.

Dr. Feehan provides testimony that the outlook for the economy is positive and the best he has seen in some years. He also cites several mega-projects to the Province's favour. Dr. Feehan states that a major determinant of electricity sales is the overall state of the economy, which is now much improved. Hence, in Dr. Feehan's opinion, this will typically result in an increase in demand for electricity. Dr Feehan expects a growth trend for electricity sales in line with the high growth experienced in the 1985 - 1989 period. The Company's downside risk, he believes, is negligible.

Dr. Kalymon supports the position that the market is benefiting from general economic strength, nationally and provincially, with low levels of inflation and low interest rates. Dr. Kalymon believes the only negative influence nationally is the value of the Canadian dollar. He states that investors perceive NLP operations as riskier than other utilities who operate in a diversified and less resource based economy.

Dr. Kalymon agrees NLP's concentration in sales to residential customers also makes it less risky. Dr. Kalymon explains that further risk reduction is provided through the rate stabilization account (RSA) and weather normalization reserve. He believes competition from alternative modes of home heating and water heating is not as onerous for NLP as it is for utilities who compete against natural gas. Dr. Kalymon states that NLP's low growth environment is mitigated by reduced cash flow requirements from a reduced capital program.

The Board finds that NLP's market size and strength is based upon its small market, with limited growth opportunities. This electricity market is sheltered from much of the North American competition, due to geography. While demographic shifts are obviously unfavorable, improved GDP overall and future project opportunities should offset this negative. As compared with 1996, the market appears more stable and it has strengthened.

Competition

Competitive fuel substitution in the case of NLP refers to the conversion of electric space heating to other heating fuels. During the 1996 hearing, NLP expressed concern that competitive fuel substitution would create uncertainties in its sales forecasts and place NLP's customers and equity holders at risk.

Drs. Waters and Winter testified that the uncertainties in demand for NLP's electricity sales associated with competitive fuel substitution can be classified as follows:

- the short run uncertainty in forecasting the extent of competitive fuel substitution at the beginning of each year;

- the medium term uncertainty as to the extent of substitution from electricity to other fuels over a five (5) to ten (10) year period;

- the long run impact of fuel substitution.

They state that these uncertainties do not all engender risks for NLP's shareholders. The medium term uncertainty, which is the entire focus of NLP's discussion of competitive fuel substitution, creates no risk for NLP equity holders, in their opinion. Revenue requirement for NLP is determined on the basis of a forecast of demand, including a forecast of the extent of fuel substitution, for the test year. A decrease in forecast demand, derived from a lower demand for space heating, can simply be reflected in the revenue requirement through an application for a rate increase and, therefore, the return to shareholders is completely insulated in the medium term against uncertainty in fuel substitution. (Waters & Winter, pp. 19-21)

Drs. Waters and Winter point out, however, that in some cases, competition may lead to a long run risk that a utility's product will be rendered non-economic by substitutes, but that this is not the case for NLP, whose continued existence does not rely on electric space heating. This leaves as the sole risk, according to Drs. Waters and Winter, the impact on revenues of the error in year to year forecasts of the extent of competitive fuel substitution, which they estimate would not be more than one tenth of one percent, which they consider to be "negligible".(Evidence,p.21)

Ms. McShane, in her evidence, points out that recent declines in fuel oil prices make oil a more competitive option. This is significant for NLP, in her assessment, since 54% of the Company's

sales are for space heating. Ms. McShane also describes longer-term competitive concerns with respect to natural gas as a competitive alternative, which could lead to loss in market share.

Mr. Hughes states that the reduction in the competitive gap, relative to oil, continues to be a concern to NLP, although the Company's "doing better than holding our own at the moment". (Transcript, June 5, 1998, p. 14)

Dr. Morin considers NLP vulnerable to competition in the space and water heating markets, which restricts growth prospects and makes the Company vulnerable to volatile fuel prices.

As discussed under market size and strength, the Company is sheltered from much of the competitive challenges of North American interconnected utilities. While the probability of availability of natural gas in the Province has increased, suppliers of natural gas are not likely to compete directly for domestic customers due to lack of infrastructure. Should competition from natural gas enter the wholesale generation arena, then it is most likely to lower the purchase power costs for the Island. With NLP only producing 10% of its own power, lower cost of purchase power would be beneficial.

The Board finds that ordinary competition from oil companies for water and space heating markets does not appear to have escalated since 1996. This competitive risk appears stable.

Business Outlook

The credit rating agencies and witnesses all suggest that NLP's earnings outlook is influenced

by the Province's economic growth. This economy has undergone many improvements due to mega-projects and emerging fishery opportunities, but these opportunities are tempered by the effect of the fishing moratorium, reduced income support benefits and out-migration.

The Board finds that NLP can expect positive but low growth prospects in sales and number of customers. In comparison with 1996, the business outlook has improved noticeably, based both on its own past performance, as well as relative to the rest of Canada.

Financial Performance

CBRS and DBRS both cite as strengths the Company's financial performance. Both agencies stress the interest coverage ratio, noting its decline from 3.1 (DBRS method, for 1993) to the current level of 2.7. (DMB-9, p.4 and 11) On March 17, 1998, DBRS stated:

> "Ratios, however, remain favourable compared to other investor owned utilities." (DMB-9 -p.4)

Similarly, CBRS provided the following report:

> "Newfoundland Power's good quality ratings reflect its relatively low market risk, good operating performance and stable financial position." (DMB-9 - p.11)

They also state:

> "To partly offset the higher risk primarily associated with the provincial economic base, Newfoundland Power has traditionally maintained a strong level of financial ratios, which measure at the upper range of our financial benchmarks and are necessary to maintain its good quality credit standing." (DMB-9, p.11)

Contained on DMB-9, page 12, is a description of protective covenants on First Mortgage Bonds. This includes an "Earnings Test", which, in simple terms, states that earnings must be at least 2.0 times the maximum annual interest charges on all bonds before any new additional bonds may be

offered. Such a protective covenant places a floor on the level of interest coverage and is indicative of when access to capital markets would become problematic.

Dr. Waters, Dr. Winter and Dr. Kalymon agree that the Company has demonstrated strong financial performance. In the opinion of these experts, earnings and interest coverage are higher than the market requires. (Waters and Winter, p. 26 and Kalymon, pp.20, 25) Dr. Morin and Ms. McShane disagree that performance is in excess of that required by the market for accessibility. Ms. McShane believes that interest coverage in the range of 2.6 - 2.8 would be slightly below CBRS's expectation. (McShane, p.27) Dr. Morin describes the Company's financial performance as on the cusp of an "A" rated company and considers that interest coverage, in particular, is marginal. (Morin, p.19)

The Board finds that the Company's current financial performance provides a sound credit rating and access to capital markets.

Other factors that were cited during the hearing, which would impact on the Company's credit worthiness include: corporate size, operating expense risks and interest coverage specifically.

Corporate Size

NLP experts at this hearing refer to NLP's size as a factor respecting credit worthiness. Both bond rating agencies cite size as a factor as well. Ms. McShane and Dr. Morin make a point of indicating the Company's small size warrants a more conservative capital structure than other larger

investor owned electrics. CBRS in its December 24, 1997 report indicates the Company's relatively small size, as compared with other single "A" rated utilities, offsets the Company's other strong points. (DMB-9, p.11) Dr. Waters did not agree that size of the utility is a factor.

The impact of corporate size is evident from the manner in which NLP issues its bonds. In comparison with many utilities, the dollar amount of each bond series is small and the periods between issues are longer. NLP agrees to sell its bonds to its underwriters, who in turn distribute each issue to the public. As a result, the Company's financial flexibility is reduced, as compared with larger utilities, with more frequent bond issues, and higher total dollar issues.

The size of the Company is used by CBRS as a benchmark. For utilities in the gas and electric industry, CBRS uses a minimum of $100 million common equity to receive an "A" rating.(DMB-13, Tab 1-7, Appendix IV)

DBRS also includes size as a determinant of risk level in evaluating the Canadian electric utility industry. "Medium/medium high" risk is a utility of small size with weakness in the area served. (DMB-31, Tab 1-5, p.2)

The Board finds that the relatively small size of NLP reduces its financial flexibility.

Operating Expense Risk

In evaluating the credit worthiness of NLP, its ability to recover its operating costs through rates was considered to be a factor. The evidence of Hughes and Smith in this area highlighted the

following issues: weather and climate; power quality standards; information technology services; the purchased power contract with Hydro; and corporate taxation. Offsetting risk in operating expenses are regulatory mechanisms such as the Rate Stabilization account, Municipal Tax account and weather normalization reserves.

The relevance of these expenses and regulatory mechanisms is their impact on the Company's risk of revenues not being sufficient to cover operating obligations, including a reasonable rate of return. This view was expressed by Drs. Waters & Winter. Mr. Hughes (Transcript, June 4, 1998, pp. 13-15) modified the definition of operating expense risk to reflect relativity of risk and the effect of compounding long term risk. This latter view was shared by Ms. McShane.

Risk of major storm damage was an example of operating expense risk provided by the Company. (Hughes & Smith, p. 4 & Transcript, June 5, 1998, pp. 3-12) The severe wind and ice conditions can be difficult to predict, and they may give rise to an immediate need for financing, according to Mr. Hughes(Transcript, June 5, 1998, p.3) NLP mitigates its risk through its operating and maintenance programs, special programs to correct systems, such as insulator replacements, and shortening spans between poles, to better withstand the weather. In the event of a major storm, the Consumer Advocate stated, in final argument, the Company could apply to the Board for relief, in accordance with Section 75 of the *Act*, as well as apply for federal and provincial disaster assistance.

The purchase agreement with Hydro was seen as an operating risk in so far as 90% of its power requirements are controlled by another company. DBRS and CBRS include this as a strength, since, for regulatory purposes, this is treated as a flow through cost. (DMB-9, p.3 & p. 12) Yet the downside of this agreement is included as a challenge according to DBRS. Rate increases, as a result

of a pass through from Hydro, is identified by DBRS as a concern from a space heating market share perspective.(DMB-9, p.3)

Corporate taxation was also specifically identified as an operating expense risk. Once again, DBRS recognized the impact of corporate tax issues in January1997, when it explained 1996 income tax expense was abnormally low due to pension contributions and again in March 1998, when it highlighted Revenue Canada's potential $20 million reassessment. Messrs Hughes and Smith cited the effect of changes to general expenses capitalized and timing differences, not previously recorded as deferred income taxes, as creating concerns for increased tax costs.

NLP has had the benefit of regulatory mechanisms such as the weather normalization reserve, RSA and the Municipal Tax Account. The purposes of these accounts are to smooth the variations in the following: volatility in weather; purchased power volatility due to load; price of fuel; fluctuations in the level of hydro production, and variation in municipal taxes.

The Board finds that NLP's operating expense risks are comparable with low risk industrial companies and better than average with respect to most other utilities, insofar as they have protection through the regulatory adjustment mechanisms cited above.

Interest Coverage

When evaluating the credit worthiness of NLP, financial theory suggests that interest coverage can be used to demonstrate that financial performance, leverage and debt coverage are sound. From the perspective of a bond holder, the investor wishes to be assured that the Company can meet its

cash flow obligations for interest and other fixed charges. Dr. Winter agreed that the level of interest coverage is one of the most important quantitative tests for bond rating agencies in assigning a rating.

Interest coverage provides a form of protection for possible adverse conditions in future years, the greater the coverage, the greater the margin of safety. For an "A" rated utility the range is 2.0 to 3.2 , according to CBRS. (Appendix IV- Utility Financial Benchmarks, DMB-13, Tab 1-7) As stated earlier, bond covenants require a minimum interest coverage of 2.0. Dr. Morin and Ms. McShane state the interest coverage of 2.7 is lower than considered acceptable or at the low end of acceptability. Indeed, CBRS suggests that items listed as benchmarks (e.g., common equity ratios, debt leverage, interest coverage and cash flow as a percentage of total debt) are all relative in the determination of a credit rating and must be considered with other elements of risks.(DMB-13, Tab 1-7, p.9)

When CBRS established these guidelines in May, 1994, interest rates for 10 year long term Canada bonds were 8.55%. Today the rate for 10 year long term Canada bonds is approximately 5.5%, representing a 3% drop and the lowest rate in 30 years. Such a fundamental change in the long term rates must ultimately translate into a change in the acceptable range of interest coverage for any utility, including NLP.

If it were necessary to maintain a narrow band of interest coverage to maintain a utility's credit standing, then the recommended rate of return on equity would not change unless the underlying embedded cost of debt changed, all else being equal. In NLP's circumstances, its next bond series to mature is series "AB" which is not due until 2005. Also, its requirement to access the

bond market is infrequent, due to its minimal capital program and healthy cash flow from operations. This would suggest that the embedded cost of debt is not likely to change significantly for some time. It is difficult, therefore, to accept the position that no change in rate of return on equity is needed, in spite of a recorded decrease in the risk free rates, because of a stringent requirement to maintain interest coverage at the top of the 1994 CBRS range. In fact, DBRS makes this comment in its 1997 Annual Report (PUB-13):

> "In summary, DBRS believes that there is more value to the investor when a rating does not fluctuate purely with the fortunes of the economy. Therefore, DBRS strives to look through the cycles when considering the impact of economic cyclicality. In short, DBRS emphasizes structural vs cyclical change." (p.7)

This supports the Board's view that the economic and market fundamentals can dictate changes in return consistent with the remainder of the market. This is to be expected and therefore, the range of acceptable interest coverage may shift. An interest cover of 2.0 is too low, not only because it is the bottom of the CBRS range, but also because it is the minimum allowed by the protective bond covenant. This level would not provide a sufficient downside safety net.

The Board finds that, using CBRS Methodology, a reasonable range of interest coverage is between 2.4 and 2.7, given today's interest rates and the Company's level of risk.

Credit Worthiness and Bond Rating Categories

During the hearing, evidence was provided on optimal capital structures and bond rating categories. Attention focused upon "A" rated companies and "B^{++}" rated companies. Dr. Waters, Dr. Winter and Dr. Kalymon were not convinced that the cost of a downgrade would be detrimental to the Company's shareholders or ratepayers. NLP and its experts, Dr. Morin and Ms. McShane,

argued that an "A" rating would provide an optimal capital structure and to drop to "B^{++}" would be more costly than proposed by Dr. Waters and Dr. Winter. It is interesting to note that Dr. Winter refers to a downgrade as from "A" to "A low" and does not contemplate the likelihood of a downgrade below "A low".

DBRS defines these two categories of bond ratings as follows (PUB-13, p.10):

"**A** Bonds rated "A" are of **satisfactory credit quality**. Protection of interest and principal is still substantial, but the degree of strength is less than with "AA" rated entities. While a respectable rating, entities in the "A" category are considered to be more susceptible to adverse economic conditions and have greater cyclical tendencies than higher rated companies."

"**BBB** Bonds rated BBB are of **adequate credit quality**. Protection of interest and principal is considered adequate, but the entity is more susceptible to adverse changes in financial and economic conditions, or there may be other adversities present which reduce the strength of the entity and its rated securities."

"**("high", "low")** grades are used to indicate the relative standing of a credit within a particular rating category. The lack of one of these designations indicates a rating which is essentially in the middle of the category."

CBRS defines these categories as follows (DMB-13, p.3):

"**A** **Good Quality**: Securities rated **A** are considered to be of good quality and to have favourable long-term investment characteristics. The main feature that distinguishes them from the higher rated securities is that these companies are more susceptible to adverse trade or economic conditions. Consequently, protection is lower than for the categories of A^{++} and A^{+} .

In all cases, companies with **A** rated securities have maintained a history of adequate asset and earnings protection. However, certain elements exist which may impair this protection sometime in the future. Confidence that the current overall financial position will be maintained or improved is slightly lower than for the securities rated above."

"**B^{++}** **Medium Quality**: Securities rated B^{++} are classified as medium or average grade credits and are considered to be investment grade. Companies with B^{++} rated securities are generally more susceptible than any of the higher rated companies to swings in economic or trade conditions that would cause a deterioration in protection in the event that the company enters a period of poor operating conditions. There may be factors present either from within

> or without the company that may adversely affect the long-term level of protection of the debt. These companies bear closer scrutiny but, in all cases, both interest and principal are adequately protected in the short term."

Also, DMB-13, Tab 1-7, CBRS, Summer 1994, p.2, provides an estimate of the difference in interest costs according to bond classification. These differences were estimated as follows: "A^{+}" versus "A", 25-35 basis points, "A" to "B^{++}", 75-80 basis points. Dr. Winter did not agree with these ranges in 1998, as the interest spreads between bond rating categories have narrowed. Dr. Winter explains that it depends upon general economic conditions prevailing in the bond market.

Exhibit PGH-8 compares NLP's bond yields on the date of issue with "B^{++}" bond yields on about the same date. Over a 10 year period and five (5) issues, the spread fluctuated from a low of 12.5 basis points in June of 1992 to a high of 88 basis points later in October 1992. Drs. Waters and Winter estimate the spread between "A" and "A low" rated bonds in April 1998 to be between 10-15 basis points.

Dr. Winter states:

> "An A rating overall is a sound credit rating. The risk of a change to a Triple B rating, for example, to be, I think is minimal. So in terms of meeting that clause of the Act, I think the bond rating agencies do set the ratings but there's not a, there shouldn't be a big cause for concern about a drop in rating below what would, could be described as a sound credit rating." (Transcript, May 26, 1998, p. 38)

A downgrade in bond rating is generally believed to bring additional costs and restrictions. According to Dr. Morin and Ms. McShane, these effects include: higher interest costs on new debt, restrictions in access to certain buyers in the capital markets (institutional investors) as a bond slips below "A", and stricter bond covenants and bond characteristics.

Dr. Morin provides empirical research which suggests that the optimal capital structure would be found in an "A" rated company. (Exhibit NLP-20) Dr. Morin suggests if NLP has a strong "A"

rating, then it has an optimal capital structure, or very close to one. However, Dr. Morin cautions that a company's capital structure and credit worthiness must be designed to meet the demands of operating in adverse economic times. He comes to his conclusion, on this basis, that the benefits experienced in the current economy are not sufficient to justify a reduction in the Company's equity ratio or in its interest coverage. Instead, he believes that NLP must continue to design the capital structure to survive a less favourable economy.

Dr. Morin also disputes the wisdom of not worrying about a downgrade, due to its low cost. Even though the penalty for issuing bonds as a "B^{++}" rated company is not severe today, if the economy was worse, such a ranking could bring significant increases in interest and restrictive access.

The Board finds that NLP has been able to maintain its credit worthiness with its financial performance to date. The Board has consistently found that an "A" bond rating is indicative of a least cost, appropriate capital structure. NLP should maintain an "A" bond rating. As a result of fundamental declines in the long term Canada bond rates, the interest coverage range acceptable for NLP is subject to change. While NLP's interest coverage needs to be strong, it need not be as high as the top quartile of the 1994 range of 2.0 to 3.2, particularly in light of low inflation, low long term interest rates and NLP's staggered date bond portfolio. The Board finds an interest coverage range of 2.4 to 2.7 to be suitable for this economic environment.

CAPITAL STRUCTURE

History of the Capital Structure

In Order No. P.U. 1 (1990), the Board accepted capital structure objectives that were

believed necessary, at that time, to maintain the Company's "A" rating. These financial objectives were: debt ratio of 45%-50%, preferred share ratio of 6%-9% and a common equity ratio of 42%-47%. The rate of return on rate base, together with this range of capital structure, was designed to yield a range of interest coverage of 3.0-3.4.

Similarly, in Order No. P.U. 6 (1991), the capital structure proposed and adopted was: a debt ratio of 45%-50%, preferred share ratio of 5%-10% and a common equity ratio of 40%-45%. The allowed rate of return, together with this capital structure, were designed to yield interest coverage, in 1992, of 2.87. In the 1991 order, the Board was concerned with NLP's actual level of common equity. At that time, common equity was forecast to be 45.7% in 1992. The Board cautioned the Company to move back within the range.

During the 1996 rate case of NLP, the Company was forecasting a common equity ratio for 1996 of 46.37%. It was the Company's proposal to modify its capital structure at that time by strengthening its common equity component to 47%-53%, substantially reducing the range for preferred equity to 2%-3% and leaving its debt ratio at 45%-50%. The Board was not convinced that this approach was necessary. While it recognized that the use of preferred equity was less attractive, due to changes in the Tax Act and the Canadian Institute of Chartered Accountants (CICA) handbook, the Board did not believe it was in the best interest of all parties that the minimum common equity component be raised by 7%. The Board approved, for rate setting purposes, a capital structure with debt ranging from 47%-55%, preferred equity from 3%-6% and common equity from 40%-45%. Any common equity above 45% would be deemed to be preferred equity with a return for rate setting purposes of 6.33%.

Pursuant to Section 101 of the *Act*, the Board, by its own motion, requested and received

from the Supreme Court of Newfoundland, Court of Appeal, a ruling on the matter of a case by the Board to the Court of Appeal for its hearing and opinion on the jurisdiction of the Board. The Reference was heard on March 11 & 12, 1997 and an opinion rendered on June 15, 1998.

Among other matters, the Coram provided opinion regarding the Board's jurisdiction to set and fix the level of return on common equity, as well as whether the Board has jurisdiction to require a public utility to maintain ratios within its capital structure.

The Coram described the process of establishing rates of return on each component of capital structure and then rate of return on rate base. On page 28 of Justice Green's opinion, he writes:

> "....The costs associated with long term debt and preference shares are generally static over the period covered by a particular rate hearing. Accordingly, they are often described as "embedded costs". The rate of return necessary to be earned on rate base to cover the cost of debt and preference shares can therefore usually be easily determined based on the interest rates or dividend rates applicable to such instruments. In the case of common equity, however, the cost to the utility of this source of funds depends upon a number of factors, especially current market conditions which, by nature, can be volatile."

On page 56 of the opinion, Mr. Justice Green writes:

> "All of these considerations favour an approach that, in principle, should limit the degree of intrusion by the Board into the managerial control by the utility over financial decision-making. As emphasized earlier the powers of the Board should be generally regulatory and corrective, not managerial."

On page 57 of the opinion, Mr. Justice Green writes:

> "An alternative to actual intrusion into the utility's financial affairs in the form of a direction as to how the enterprise should be structured is for the regulator, for the purpose of setting rates, to base its estimates of the cost of capital on a hypothetical appropriate capital structure, thereby disregarding the utility's actual capitalization."

The Board has consistently used such an approach for rate setting purposes and will follow such an approach now. The inter-relationship between rates of return and capital structure is quite strong and, therefore, selecting a point within a range for capital structure is a critical component of the decision for all parties. As pointed out by Mr. Smith, a dividend penalty occurs, to the detriment of the shareholder, if a corporation chooses to maintain common equity at a level above that on which the Company is allowed to earn a rate of return. Hence, the utility in such a circumstance would move to reduce its common equity to the lower ratio deemed acceptable by the Board for rate setting purposes.

The Company has experienced lower levels of capital expenditures over the past seven years. As a result, the Company has not needed to issue much new capital over the corresponding period. Long term debt has increased causing an increase in the debt ratio from 48.6% to 53.6%.(Annual Report to the Board, Newfoundland Light & Power Co. Limited, A Fortis Company, Return 17, 1990 and 1997) Common equity, on the other hand, has grown only from 44.1% to 44.5%.(Annual Report to the Board, Newfoundland Light & Power Co. Limited, A Fortis Company, Return 17, 1990 and 1997) The growth in the debt ratio appears to be caused entirely from a shift of preferred equity to debt over the seven year period

As at December 31, 1997, the Company's capital structure was comprised of 53.55% debt, 1.93% preferred shares and 44.52% common equity. (Annual Report to the Board, Newfoundland Light & Power Co. Limited, A Fortis Company, Return 17, 1997) The Company's proposed capital structure is: debt between 53%-60%, preferred equity, 0%-2% and common equity with a range of 40%-45%. (Hughes & Smith, p.33) Hughes and Smith provided evidence indicating that, in order to maintain required interest coverage, common equity must be between 44% and 45%. (Hughes &

Smith, p. 33) NLP's 1997 Annual Report to the Board indicates the embedded cost of debt during 1997 (Return 16) was 9.36% before tax (5.48 % after tax), the cost of preferred shares was 6.33% and the regulated cost of common equity was 11.16% (Return 19).

CBRS's Utility Financial Benchmarks for Gas and Electric Utilities (DMB-13, Tab 1-7, Appendix IV) indicate that the appropriate range for "A" rated utilities includes debt of 50%-65%, implying the remainder of capital would be 35%-50% preferred shares and common equity. CBRS qualifies its guidelines by stating that: "the optimum level of debt: equity is highly dependent upon the quality of business risk and the type of operations in which a utility is involved." (DMB-13, Tab 1-7, p.8) Also evident in their guidelines is that the lower the debt percentage, the better the bond rating. (DMB-13, Tab 1-7, Appendix IV) Hence, it is logical to assume that if business risk is relatively high for a company within a rating level, then a compensating factor could be a relatively lower percentage of debt.

Appropriate level of debt

Considerable attention has been paid to the level of debt recommended for NLP. Debt has the lowest cost in a normal capital structure. (NLP has a 5.48% after tax cost of embedded debt.) This is because it provides a tax deductible cost, while the cost of shareholders' equity does not. As can be seen from the 1997 costs indicated earlier, the after tax cost of debt is approximately half the cost of common equity.

This cost advantage generally encourages companies to leverage their capital structure as

much as possible, thereby reducing the overall cost of capital. However, the higher the debt as a proportion of total capital, the greater the risk to shareholders. Debtors rank ahead of shareholders for cash flow and in the event of liquidation. The strict timing of interest requirements of debt is more onerous on companies than declaration of dividends. The perpetual nature of share capital is distinct from the finite life of debt. As the level of debt increases beyond an optimum capital structure, the incremental risk of additional debt is reflected in the increased cost of capital overall. In other words, a point exists where additional debt increases the overall cost of capital. (Brealey and Myers, *Principles of Corporate Finance*, Chapter 17, McGraw-Hill Inc., N.Y., 1984)

The Board's objectives in establishing capital structure for rate setting purposes is to reflect the mix of capital that would provide the least cost of capital overall and maintain the Company's credit worthiness in the financial markets of the world. In arriving at its decision, the Board has considered the evidence set out during the hearing.

Long term debt is comprised of seven bond series maturing over a period spanning from 2005 to 2026, in increments of approximately $38 million. (1997 Annual Report to the Board, Newfoundland Light & Power Co. Limited, A Fortis Company, p. 23) This portfolio is such that it is unlikely to demonstrate any significant change in the embedded cost of debt until 2005 -2007. As a result, the impact of reduced long term interest rates will not noticeably improve its interest coverage ratio, all things being equal, until 2005- 2007.

As stated earlier, CBRS suggests a range of debt ratios of 50%-65% for an "A" rated electric utility. (DMB-13, Tab 1-7, Appendix IV) DBRS does not provide a range or rating matrix which would specify ratings on the basis of key ratios. However, they do provide characteristics that they believe would result in difficulty in being rated as investment grade. These characteristics include net

debt to total capital ratio above 40%. (PUB-13, p.6) DBRS also describes financial risk as "aggressive" if the proportion of debt is high or if the balance sheet is deteriorating. (DMB-31 tab 1-5, p. 2) DBRS describes NLP as having a stable financial risk profile and a debt ratio of about 50%. At the time DBRS released its rating assessment on NLP, February 1998, the agency was forecasting little change in NLP's debt ratio. (DMB-31, Tab 1-5, p.7)

Drs. Waters and Winter have not recommended a specific range of debt, but instead concentrated on the appropriate percentage of common equity. Dr. Winter states:

> "For Newfoundland Power, the capital structure could be summarized by the decision on the appropriate equity ratio. The equity ratio should be chosen to allow adequate access to debt financing at reasonable levels but should not be excessive." (Transcript, May 25, 1998, p.24)

These experts believe that a strong "A" rating is indicative of acceptable levels of debt, but the optimal equity level and debt level, in practice, is difficult to pinpoint. However, by modifying the level of common equity downward and thereby impacting on the Company's debt ratio, Drs. Waters and Winter recognize there is a potential risk of a debt rating downgrade. They believe that while there is a potential risk of a downgrade, it is not likely. In today's market, Drs. Waters and Winter believe that the after tax cost of such a downgrade would be less than 4 basis points and no meaningful problems are likely to arise with respect to accessibility to the capital markets.

Dr. Kalymon points out that, based on existing rates, NLP's forecast debt ratios for 1998 and 1999 are within the range of his regulated utility sample and indicate comparable leverage risk. His evidence also indicates that the Company's equity ratio is at or above the approved common equity ratio of all regulated companies in his sample. Dividend coverage ratios indicate to Dr. Kalymon that the Company is able to operate with a higher degree of debt and preferred capital. Dr. Kalymon believes the existing capital structure is considered to be financially viable, as supported by its credit

ratings and the trading price of the Fortis shares. Consequently, Dr. Kalymon recommends that common equity be deemed at a maximum of 40% and the balance of the capital structure be made up of debt and preferred shares.

Ms. McShane and Dr. Morin recommend a range of common equity from 45%-50%, with no change in preferred equity, consequently implying a range of debt from approximately 48%- 53%. Ms. McShane described her reasons for this conclusion on page 29 of her direct evidence. In her view, maintenance of a solid "A" rating requires financial flexibility for downside risk. This argues against more debt, in her opinion. Also contributing to her conclusions, NLP's small size warrants a somewhat more conservative capital structure. In her opinion, NLP's relative business position and size require it to be in the lower one third of the range for debt established by CBRS. CBRS uses a range of 50-65% for "A" rated companies.[DMB-13, Appendix (IV)] It is also noted by Ms. McShane that the lower debt ratio and higher equity ratio will have the necessary favourable impact on interest coverage. In the opinion of Ms. McShane, without such a strong capital structure, interest coverage will be at an unsatisfactory level from the viewpoint of bond rating agencies.(McShane, p.30)

Dr. Morin provides similar advice to that given by Ms. McShane and supports his conclusion with reference to his published theory on bond ratings and optimal capital structure. Dr. Morin states in his direct evidence:

> "Given that NLP's bond rating of single A is average among Canadian utilities and given its marginal interest coverage, one can only conclude that the company's stronger capital structure offsets its higher business risk and small size, and that its total investment risk is comparable, and possibly higher, relative to other utilities." (Morin, p.19)

Dr. Morin characterizes the Company as a small utility, with a business risk at the upper end

of the spectrum for utilities. This suggests to Dr. Morin that the Company should maintain the lower end of CBRS's recommended debt range and the upper end of the coverage range. Dr. Morin believes that if you decrease equity (or, in other words, increase debt), this will weaken the balance sheet, cause deterioration in interest coverage and "flirt" with downgrade danger. (Transcript, June 9, 1998 pp. 46-47)

Preferred Shares

Preferred equity in Canada has been under increased scrutiny during the 1990s. Both in 1996 and again in this hearing, Dr. Kalymon emphasized the under utilization of preferred shares in the Company's capital structure. In response to DMB-10, NLP has indicated that it has no plans to issue any new preferred shares, nor has its parent. A review of DMB-28 indicates that NLP has steadily decreased the dollar value of preferred shares since 1981.

Dr. Waters and Dr. Winter had recommended that common equity be capped at 40%. At the time of the hearing, common equity represented 43.76%. The excess of actual common equity above the cap, for rate setting purposes, was proposed by Drs. Waters and Winter to be treated as preferred

shares with a return of 6%. During cross examination of Dr. Winter, NLP inquired as to the ultimate action expected if a cap was established. Dr. Winter suggested that preferred shares or debt could be issued. He was not strongly recommending either. However, Dr. Winter agreed that when the current accounting treatment of non-perpetual preferred shares was considered, the effect for accounting purposes of choosing debt or preferred shares is the same. Dr. Winter agreed the cost of preferred shares would then be treated as interest when preparing the income statement and

interest coverage calculation.

Ms. McShane's evidence regarding preferred shares was that the market has not changed since the 1996 hearing. On page 21 of her direct evidence, she explained the reason she believes utilities such as Canadian Utilities had issued significant sums of preferred shares. Essentially, her opinion is that the Public Utilities Income Tax Transfer Act provided a rebate to customers in the Province of Alberta. In her opinion, this made preferred shares economic for that utility. However, with the repeal of this legislation, further issues are unlikely and substitution of debt and common shares for existing preferred shares are likely, according to Ms. McShane. During Ms. McShane's examination in chief, she explained that the market for preferred shares is for term preferred shares with retraction provisions. Given the treatment by the CICA, these preferred shares represent a high cost form of debt. In such circumstances, debt issues would be a more reasonable choice. Dr. Morin does not specifically address preferred shares in his testimony.

Dr. Kalymon put forward the opinion that the Company should be issuing preferred shares as an equity component of its capital structure. This would strengthen the capital structure without increasing the most expensive form of capital, common equity, and without a detrimental effect on interest coverage. Dr. Kalymon believes this position is applicable as well under the CICA requirements and the new tax requirements. The key, in Dr. Kalymon's opinion, will be to issue long term preferred shares.

Common Equity Ratio

Common equity has been set out as a range in past orders of the Board. In 1990, the Board accepted a range of 42%-47%. The range established in 1991 for common equity was 40%-45%.

The most recent order reconfirmed the range of common equity of 40%-45%. [P.U. 7 (1996-97)] As stated earlier, NLP proposes to maintain this range but points out that, in their opinion, it will be necessary to maintain its actual ratio within the 44%-45% band. Dr. Waters, Dr. Winter and Dr. Kalymon put forward a 40% cap for common equity. Ms. McShane and Dr. Morin believe that the appropriate range should be 45%-50% for common equity.

CBRS states in its report entitled, CBRS Methodology of Rating Debt Securities of Regulated Utilities (Gas, Electric, Pipelines and Telecos), Summer 1994:

> "In the past few years, while inflation subsided and interest rates came down, the decline in awarded rates of return reflected changes in the current economic environment. From a credit quality perspective, however, the worrisome aspect is the development of the viewpoint that utility businesses are of relatively lower risk, and could justify a lower common equity component." (p.7)

Dr. Waters and Dr. Winter base their recommendation on the improved business risk of the Company. NLP is rated by the bond rating agencies as a solid "A" Company. These experts believe that use of a 40% cap will not bring a high risk of a downgrade. They state that while there is potential risk of a downgrade to an "A" low, it is not likely.

Dr. Winter agrees that the strength of the balance sheet is one of the factors which helps NLP maintain its "A" rating. However, he qualifies his response by explaining the same result occurs at excessive levels of equity. Dr. Winter states, in response to the bond rating agencies' requirement for a strong balance sheet, that an equity ratio of 40% is within the range approved in the Board's last decision and, in his opinion, would be regarded as a high level of financial strength.

Exhibit PGH-13 indicates interest coverage ratios using the CBRS method, at 40% common equity, as ranging from 2.4 with 11.25% rate of return to a low of 2.1 at a rate of return of 8.25%. Drs. Waters and Winter believe this still meets the CBRS overall guideline of an "A" rated company

having interest coverage between 2.0 and 3.2. It is their view that the bond rating agencies consider more factors in assessing a bond rating than merely interest coverage. Therefore, the risk of a downgrade is not high. Even if a downgrade occurred, Dr. Waters and Dr. Winter estimate the after tax effect to amount to not more than 4 basis points, based on a downgrade to "A" low. Therefore, the benefit to ratepayers outweighs the cost of the downgrade.

Dr. Kalymon agrees that the common equity ratio should be a maximum of 40%. This is based on his assessment of the business risk, capital structure risk and overall volatility. This point is within the range approved previously by the Board. The present equity component indicates to Dr. Kalymon that the common equity ratio is extremely managed, excessively rich and not cost efficient. Dr. Kalymon recognizes investors will perceive NLP as operating in a riskier jurisdiction than other Canadian utilities, due to the provincial economy. However, in comparison to 1996, Dr. Kalymon considers that the Newfoundland economy has improved notably. In his opinion, short term volatility and competitive pressures are not excessive. Dr. Kalymon believes that while the utility is experiencing low growth, this has a positive impact on cash flow through a reduced capital expenditure program. Dr. Kalymon determines the financial risks are average, as compared with other utilities. Hence, Dr. Kalymon concludes that NLP can operate with a 40% equity ratio and remain financially viable and comparable to other companies. By deeming a 40% common equity, this will remove the arbitrariness in allocating equity capital and the cross subsidization he believes exists with Fortis.

Ms. McShane has an opposing view. She warns that the market will react unfavourably if the Board changes the rules of the game, such as setting a 40% cap on equity. She views such a movement as "investor entrapment".(McShane, p. 18 & Transcript, June 8, 1998, p. 4) Changes in

capital structure should not be treated as a short term variable, in the opinion of Ms. McShane. Also important, according to Ms. McShane, are consistency in bond ratings and investor confidence. Another consideration of Ms. McShane is that reducing common equity by 5% would result in a significant variance in earnings, thereby providing a marginal downside safety net. Further demands on the size of equity, according to Ms. McShane are: NLP is a small utility, operating in a weak economy. It is experiencing low growth trends, competition in space and water heating and its major variable cost, purchased power, is outside of its control. Consequently, Ms. McShane concludes that the Company's weak business profile, and small size, along with rating agency requirements, lead to a recommendation of a strong common equity ratio of 45%-50%. Unlike Dr. Waters, Dr. Winter and Dr. Kalymon, Ms. McShane believes that a downgrade is likely at a common equity ratio of 40%. She also believes that the estimated 4 basis point cost of a downgrade is short sighted and ignores the impact of "investor entrapment"on existing investors.(McShane, pp. 57-59 & Transcript, June 8, 1998, p. 4)

Dr. Morin supports the views of Ms. McShane. Dr. Morin believes 45% common equity is a minimum necessary to maintain an "A" rating, an optimal capital structure and optimal cost of capital. He came to these conclusions on the following basis: (a) the actual common equity ratio of Canadian publicly traded electric utilities averages 42.5%; (b) U.S. equivalents have an average common equity ratio of 47%; (c) there have been no upgrades or downgrades by CBRS, while interest coverage was 2.7; (d) a 40% equity ratio produces alarming interest coverage; (e) NLP has interest coverages slightly lower than other Canadian electric utilities, which NLP offsets with their strong capital structure; (f) an optimal bond rating of an "A" rated Company; (g) CBRS guidelines suggest 35-50% equity ratio with a mid-point of 42%; and (h) NLP's small size requires it to be at

the upper end of the range.(Transcript, June 9, 1998, p. 48)

Dr. Morin believes a higher equity ratio is required to produce strong financial performance in order to compensate for NLP's small size and business risk profile. He states that smaller utilities suffer from a lack of liquidity for their securities. Also, he indicates that companies with higher business risk must present stronger balance sheets and interest coverage to attract capital. In Dr. Morin's view, the Company's current balance sheet and coverage do not provide much room to spare. This leads to Dr. Morin's conclusion that the range of common equity be increased to 45%-50%. Like Ms. McShane, he does not believe there is any evidence to support a lowering of common equity and characterizes a 40% cap as based on simplistic foundations and not consistent with mainstream financial theory.

During the hearing, the consequence of a 5% decrease in common equity on the required rate of return on equity was estimated as 35 basis points. This was deemed to be necessary to compensate the shareholder for the increased leverage risk. Drs. Waters and Winter established the value of the tax shelter on debt financing that would be lost with an extra 5% of equity as 15 to 20 basis points. Ms. McShane explained her recommendation is consistent with a high grade or benchmark utility. She considers her range to be 5% higher than the currently approved range. This suggests that the midpoint of her range is 7.5% higher than the return recommended by Waters, Winter and Kalymon. Ms. McShane testified that a 5% decrease in the range of common equity would increase her return on common equity recommendation between 35 to 50 basis points. Dr. Morin suggests for every percentage change in debt to equity ratio, shareholders expect a 7 to 10 basis point change in return on equity. While Dr. Kalymon did not provide a similar estimate in basis points, he did agree with the general theory. Hence, in comparing each expert's recommended rate of return on equity, it will be

necessary to make adjustments to reflect the same ratio of common equity. Otherwise, a straight comparison would not be reflecting comparable capital structure risks.

Conclusion

The Board is comforted by the fact that the common equity range accepted by the Board in 1996 includes both schools of common equity recommendations, 40% and 45%, albeit at the extreme ends of the range. The Board has considered the criteria of the bond rating agencies presented in the responses to information requests in assessing credit worthiness.

The Board believes that, in order to maintain an "A" rating and appropriate access to the capital markets, as a small utility, NLP will require a stable and strong capital structure.

For the purposes of setting interim rates utilizing 1997 test year data, pursuant to Section 75 of the *Act,* the Board will deem a common equity ratio of 45%. Common equity above this level will be treated as preferred equity.

The return allowed on preference shares, for the purposes of setting rates pursuant to Section 75 of the *Act,* will be applied to the average forecast value of preferred equity for the 1997 test year and the value of the average common equity in excess of 45%.

For the purposes of applying an automatic adjustment formula, the common equity ratio will be the lower of the forecast average common equity ratio for the test year and 45%.

Where applicable, any common equity in excess of 45% will be treated as preferred equity.

RATE OF RETURN ON EQUITY

Summary of Expert Opinion and Position of Parties

The experts who appeared before the Board generally agree on the principles which should apply in determining the required rate of return. They agree that investors in NLP should expect a rate of return equivalent to investments of comparable risk. They agree that the rate of return should enable the Company to attract new capital without impairing the position of existing investors. They agree that the financial integrity of the Company and its access to capital should be preserved. There was general recognition that one of the goals of regulation is to emulate the rate of return of a competitive electrical power market and of a competitive market for financial securities. They endorsed the "stand alone" principle that NLP has to be viewed as a free standing commercial enterprise without any form of cross subsidization.

Experts generally place primary reliance on the equity risk premium approach to estimating the required return on equity. Some experts ascribe little or no weight to the comparable earnings approach or to the discounted cash flow methodology. Most experts were of the view that the Board ought not to be looking to the awards made by other tribunals as a means of estimating required returns. The opinions of the experts differed as to the required return, ranging from 8.25% to 9.0% (Drs.Waters and Winter) to 10.5% to 11.5% (Ms. McShane). These significant differences in applying similar tests arose from differences in assumptions and in the methods used to carry out the tests.

EVIDENCE OF DOANE RAYMOND

Mr. Brushett's prefiled evidence, summarized at the beginning of this Decision, was adopted at the hearing. He was examined by Mr. Earle and cross-examined by the parties and the Board.

EVIDENCE OF DRS. WATERS AND WINTER

Comparable Earnings Test

Drs. Waters and Winter determined that the comparable earnings approach was not reliable. This test is an accounting based standard which examines earnings on book common equity, applied to an original cost rate base. It requires comparisons of return on common equity between regulated and non-regulated alternatives. The true economic status of companies is not always disclosed by financial accounting reports or by book values. There are many factors which influence share values and the values of the underlying assets. The result is that comparisons of returns on book values between regulated and non-regulated companies are not meaningful. Drs. Waters and Winter are of the view that there is no theory that strongly connects the rate of return on book value for non-regulated companies to the required return on capital. They also reject a comparable earnings approach based on the return allowed to other regulated companies as being circular reasoning. They conclude that the comparable earnings test is best ignored.

Discounted Cash Flow (DCF)

The DCF approach determines the expected rate of return based upon share prices and estimates of cash flows. It is formulated as the sum of the expected dividend yield and the estimated rate of growth in dividends. Waters and Winter found that historical growth rates were not a reliable

guide for forecasting return expectations. Instead they made an explicit forecast of expected rates of return from Canadian utilities and combined these with the estimated earnings retention rate. The estimate thereby derived is in the range of 7.8% to 8.2%. In light of the assumptions made to derive this result, no weight is assigned to this DCF test.

Equity Risk Premium

This approach is the principal standard used to measure the return required by investors who purchase shares in NLP. The starting point is an estimate of a risk free interest rate, to which is added an estimate of the risk premium associated with holding equity in NLP shares. Waters and Winter consider these two elements to be additive, without adjustment. Some experts argue that there is an inverse relationship between the risk premium and the level of long term bond yields which is used as a proxy for risk free debt instruments.

Drs. Waters and Winter agree that there is an inverse relationship. However, they argue that for long term interest rates below 9%, the risk premium remains unchanged. Above 9% the bond yield includes an inflation component which has the effect of making such bonds subject to risk. At high levels of inflation, bond yields have to reflect not only anticipated inflation but also the risk that inflation may be higher than anticipated. It is this purchasing power risk premium which varies with inflation and with the level of bond rates. Empirical observation of the equity risk premium reveals that at relatively high levels of inflation and bond yield, the measured premium is narrower than observed when bond yields and inflation are low.

Drs. Waters and Winter take the view that inflation levels will likely be relatively low in the foreseeable future and that variations in the bond yield will require no adjustment in the equity risk

premium. They believe that the yield on 30-Year Government of Canada Bonds should be used as the benchmark and that the risk premium should be simply added to the 1998 forecast of bond yields in estimating the cost of equity capital for 1998.

The long term bond rate used is the projected average yield of three Government of Canada long term bond issues. As of April 19th the average yield on these three bond issues was 5.4%. The average up to the date of their testimony was 5.7%. They projected a range of 5.75% to 6.25%, thereby allowing for some increase later in the year. However, they consider the range to be conservative, in light of their judgement that a significant increase is unlikely in the near future.

Having set the baseline bond yield at 5.75% to 6.25%, Drs. Waters and Winter then estimate the risk premium required by investors in the common shares of NLP, beginning with a measurement of the total equity risk premium for the equity market as a whole. They examine the historical rate of return on shares and bonds over the period 1926 to 1996. The geometric means of returns for shares and bonds are calculated for holding periods of one, five, seven and ten years. The average premium for the Canadian market was found to be 3.8%, while the comparable market risk premium for the United States was 5.8%. They used these historical data for realized returns in Canada and the U.S. to impute an expected risk premium for the equity market as a whole of 4.5%.

Having estimated the equity risk premium for the market as a whole, Drs.Waters and Winter then attempt to allow for the lower relative risk associated with utilities. They take a sample of the ten lowest risk utilities. They use five risk measures to estimate the relative risk, which they find to be one-half of the risk of the equity market as a whole.

Drs. Waters and Winter regard NLP as a high grade, low risk utility which has the same risk as the lowest risk sample of ten utilities selected for their analysis. Their view is that the business

risk of NLP has diminished since the 1996 rate hearing. On this basis, they use 2.25% (50% of 4.5) as their estimate of the equity risk premium for investment in NLP. This gives them an estimate of 8% to 8.50% as the basic cost of equity.

Costs of Financing, Market Pressure and Allowance for Unforeseen Circumstances

To this range they add an additional 25 to 50 basis points. This represents an allowance for underwriting and issue costs and for possible dilution of share value. This allowance also covers the risk that the equity risk premium may be too low. Their recommended return is therefore 8.25% to 9.00%. This range is based upon an equity ratio of 40%. Drs. Waters and Winter believe a higher equity ratio would reduce the overall risk and thereby recommend that a lower return, of 8.00% to 8.67%, be allowed if rates are set for an equity ratio of 45%, rather than the 40% which they recommend.

NEB and BCUC

Drs. Waters and Winter compare their recommended returns with those which have been allowed by the National Energy Board (NEB) and the British Columbia Utility Commission (BCUC), in the context of formula based adjustment mechanisms for setting the allowed rate of return on equity on an annual basis. There are two factors which account for most of the difference. One factor is the higher bond yield used when these tribunals set their initial allowed rates of return. At that time the yields were higher than those which prevailed in the spring and early summer of 1998. The other factor is the higher risk premium used by the National Energy Board and the British Columbia Utility Commission. These Boards had initially set a higher level of equity risk premium

(namely 3.00%) in 1994 when the formula approach was adopted. Furthermore, those Boards adopted a formula which increased the risk premium by 25 basis points for every 1% reduction in the long term Canada rate. Drs. Waters and Winter show that if the British Columbia Utility Commission and the National Energy Board were setting returns today, using their initial risk premium of 3.00% and a bond yield of 6%, the allowed return would be close to 9%. Drs. Waters and Winter use this analysis in order to corroborate the conclusion which they reached with respect to the required rate of return.

Range of Return

During the hearing, Drs. Waters and Winter were asked to comment on the range of return which should be allowed. Some experts argued for a range higher than the 50 basis points used by the Board in 1996 and previously. Notwithstanding the fact that their recommended range of allowed return was presented as 8.25% to 9.00% (a range of 75 basis points), they maintained that the Board should select a specific return on equity somewhere in the 8.25% to 9.00% range and set that return for rate making purposes as the mid-point of an allowed range of plus or minus 25 basis points. (See transcript, May 28th, pp.10 & 11)

Interest Coverage

The net interest coverage (CBRS method) based upon forecast data for 1998 associated with their recommended return would be 2.1 to 2.2 using Exhibit PGH-13. This is based upon an equity ratio of 40%. Drs. Waters and Winter consider this to be within the range of acceptability of 2.0

to 3.2 as set out by the CBRS.

Return on Rate Base

Based upon their recommended rate of return on equity of 8.25% to 9.00% and a common equity ratio of 40%, the return on rate base would be 8.48% to 8.78%.

This calculation of return is a weighted cost of capital and does not conform with the methodology used by the Board.

Adjustment Mechanism

Drs. Waters and Winter support a formula based approach whereby, starting in November, 1998, a rate of return would be set for the following year. They recommend that the allowed return should adjust one-for-one with changes in the long term bond rate. The risk premium should not be adjusted as interest rates change.

They support such an automatic adjustment mechanism for reasons of cost and efficiency as well as predictability. They cite the example of other Canadian jurisdictions where this approach has operated effectively. However, they disagree with those tribunals who allow for an expanded risk premium when risks on long term bonds are low.

Drs. Waters and Winter support the approach taken by other tribunals in forecasting the long term interest rate. They note that the National Energy Board, the British Columbia Utility Commission, the Public Utilities Board of Manitoba and the Ontario Energy Board use forecasts published by Consensus Forecasts. These forecasts are based upon the average of forecasts by

prominent economic forecasters. The allowed rate of return is based upon the average of the three month ahead forecast and the twelve month ahead forecast of ten-year Canada bonds, plus the observed difference in yields between the ten-year and thirty-year bonds. They recommend that the same approach be adopted.

Trigger for Review

A review of the proposed automatic mechanism should be undertaken when there is a major change in capital market conditions. Dr. Waters and Winter propose that a full cost of capital hearing be held in the event the long term bond yield increases beyond 8.00% and remains in that range for more than six months.

EVIDENCE OF MS. MCSHANE

The conclusions reached by Ms. McShane with respect to capital structure and required rate of return are based upon her assessment that NLP is of relatively high risk compared with other Canadian investor owned electric utilities. She views the Newfoundland economy as being relatively weak, so that the long term business risk is higher than average. She also believes that NLP is disadvantaged by virtue of its small size.

Ms. McShane uses the comparable earnings test and the equity risk premium test in deriving her conclusions. She assigns a greater weight (75%) to the equity risk premium approach.

Comparable Earnings

To apply this test, Ms. McShane compiled a sample of twenty-one (21) consumer oriented companies with risk comparable to utilities. A time period of 1988 to 1996 was selected so as to cover a full point to point business cycle. She found that the average earnings over the 1988 to 1996 business cycle were 11.5% to 12%.

Over the period 1988 to 1996, the rate of inflation was 2.9%, compared with the Concensus Forecast of 1.9% over the next decade, while the economic growth forecast over the same period is 2.6%, compared with experienced growth from 1988 to 1996 of 1.8%. Lower inflation will be offset by higher real growth and she takes this as a confirmation of the estimate of 12%. Projected returns by Value Line for 1997 and 1998 are used to support the expectation that improved earnings in 1996 will persist.

Her evidence recognizes the need for a risk adjustment in light of the higher investment risk for the sample of twenty-one (21) industrial companies. This adjustment produces a range of 11.0% to 11.5%. A sample of forty-six (46) U.S. industrials was used as a further test. This produced an adjusted expected return of 12.5%. She concludes that the fair return , based upon the comparable earnings test, is in the range of 11.25% to 11.75%. In her final assessment she gives the comparable earnings test a weight of 25%.

Discounted Cash Flow (DCF) Test

The DCF model is based upon constant growth assumptions which, in the opinion of Ms. McShane, are not appropriate. The limitations include the inability to measure investor expectations of dividend growth rates. DCF estimates are fair only when market value is close to book value.

When market values significantly exceed book values, the DCF approach would lead to capital losses, as market value declines toward book value. In examining low risk industrials, the DCF approach uses past dividend growth rates as a proxy for investor expectations. Ms. McShane notes a sharp drop in five-year dividend growth rates from 1987 to 1997. She concludes that "reliance on these recent growth rates, in conjunction with the recent dividend yield, would produce an unrealistic result". Accordingly, no DCF result is estimated.

Equity Risk Premium

Ms. McShane relies upon a forecast of the long (thirty year) Canada bond yield of 6%, derived from the Concensus Forecast of April, 1998. To this forecast she adds the risk premium for the market, adjusted to reflect the risk of NLP relative to the market as a whole. Her view is that the required risk premium should be adjusted upward as long term bond yields decline. This is based upon the existence of a purchasing power premium, which is included in bond yields and which is of significant magnitude as yields and inflation increase.

Ms. McShane looks to four studies of Canadian and U.S. returns on stocks and bonds. While she believes that reliance on long data series is essential, she focuses upon returns subsequent to World War II, in recognition of structural changes in the economy in the post war era. Toronto Stock Exchange data available for the 1956 to 1997 period show a risk premium of 3.4%. Ms. McShane rejects these data as being too narrow in scope. Data for the Task Force on Retirement Income Policy for 1947 to 1997 produce a risk estimate for one year holding periods of 5.2%. U.S. data from the Ibbotson and Sinquefield Study for the same, 1947 to 1997 period, produce a risk premium of 8.2% for one year holding periods. Some of the differential between Canadian and U.S.

risk premiums can be explained by higher Canadian bond yields, but most of the difference reflects a stock return in the U.S. of over 200 basis points higher than in Canada. Ms. McShane uses the 1947 to 1996 data, based upon arithmetic averages, to conclude that the minimum premium is no less than 5%. This 5% becomes the lower band of a range which is estimated to be 5% to 8%.

In estimating the upper end of the range (i.e. 8%), Ms.McShane employs a DCF type approach. While Ms. McShane does not use a DCF test for direct estimation of the required return, she does use this test to derive an equity risk premium. This test draws upon monthly growth projections of earnings forecasted by brokers (Consensus Forecasts compiled by the Institutional Brokers Estimate System "IBES" for December, 1997). The market return estimated is 13.8% and a market risk of 7.8% is calculated by deducting the expected bond rate of 6% from 13.8%. Ms. McShane undertakes a further refinement by estimating a regression equation based upon monthly market premiums and long bond yields for both Canada and the United States. These Canadian and U.S. estimates are weighted to produce a forward looking market risk premium of 8%.

Ms. McShane combines her 5% estimate based upon historic values with her higher estimate of 8% based upon forward looking values. This produces an estimate of 6.5% for the equity risk premium, which represents a balance between the possible understatement of ex ante returns associated with historic Canadian risk premiums, and possible over optimism associated with forward looking risk premiums.

Her next step is to look at the relative risk of NLP. She disputes the use of an unadjusted beta for Fortis for a number of reasons. Betas tend to estimate volatility in the stock market only and she believes that other risk factors should be reflected through an upward adjustment. Adjusted betas are a better estimate of relative risk. She also finds that the volatility of utility stocks relative

to the market as a whole has increased over the past ten years.

In order to estimate relative risk, she calculates a regression equation between achieved utility returns, as the dependent variable and stock market and bond market returns, as the independent variables. These achieved utility returns reflect the decisions of regulatory tribunals. From this she derives a risk adjustment factor of 0.70. Ms. McShane believes that the risk premium varies with the long term bond yield. Using a long term Canada yield of 6% and a relative risk factor of 0.70, combined with a market premium of 6.5%, she concludes that the risk associated with the Company is 4.5%. To validate this estimate Ms.McShane calculates the achieved historic risk premiums over the period 1956 to 1997. These are based upon the decisions of regulators as documented in the TSE-300 Electric and Gas Index. These results are taken as confirmation of a utility risk premium of approximately 4.5%.

Financing Cost and Other Factors

Ms. McShane adds a 4.5% equity risk premium to the forecast long Canada bond rate of 6% to produce a cost of equity of 10.5%. To this, Ms. McShane adds 50 to 70 basis points to cover financing and market pressure cost and to provide a margin of safety. She determines the resulting fair return on equity, based upon the equity risk premium test, is in the range of 11.0% to 11.2%. This compares with her comparable earnings test, which suggests a range of 11.25% to 11.75%.

Range of Return

Ms. McShane recommends that the range of allowed returns be widened to 100 basis points. She recommends that 11% be set as the mid-point, for rate setting purposes, with a range of 10.5%

to 11.5%. This would provide an incentive for greater efficiency.

Interest Coverage

Ms. McShane concludes that her recommended return and capital structure would maintain acceptable interest coverage levels of at least 2.7.

Adjustment Mechanism

Ms. McShane supports the introduction of an automatic adjustment mechanism based upon the potential for greater efficiency and improved predictability. However, she points out that automatic adjustments in the rate of return on equity may have the effect of compromising interest coverage levels. She also believes that adjustment formulas in Canada have produced an inappropriately low return to Canadian utilities, in comparison with their American counterparts.

Ms. McShane's recommendation is that the Board should adopt a formula whereby the allowed return is adjusted by 75 basis points for every 1% change in the long Canada bond rate. This effectively means that her risk premium of 4.50% would be reduced by 25 basis points for every increase of 100 basis points in the long Canada bond rate.

Her recommendation regarding a trigger for review is that a full cost of capital hearing would not be required until interest rates rose above 10% and remained at that level for six months. However, if access to capital or NLP's credit worthiness were impaired, the Company would have the option to seek a hearing.

Ms. McShane proposes that, for 1999 and subsequent years, the allowed return be adjusted by 75 basis points for every change of 1% in the forecast long Canada bond rate. The rate used for

this purpose should be the average of the three and twelve month ahead forecasts of ten year Canada bonds from the November issue of Concensus Forecasts. This is adjusted for the actual spread between ten and thirty year Canada bonds. In calculating this average, Ms. McShane suggests compilation of an average of the daily spreads reported for all trading days in November.

EVIDENCE OF DR. MORIN

Dr. Morin believes the business risk faced by NLP is relatively high. Its high business risk is the result of its small size compared with other "A" rated utilities, combined with a weak provincial economy.

CAPM and ECAPM Risk Premium Tests

Dr. Morin notes the limitations of the comparable earnings and DCF tests and relies principally on the Capital Asset Pricing Model (CAPM) and the Equity Risk Premium Approach. In order to implement the risk premium method, an estimate of the risk free return is required. Dr. Morin uses a forecast for long term (thirty year) Canada bonds. This forecast is based upon the forecast yields on ten year long term Canada bonds from Consensus Forecasts. To these yields, Dr. Morin has added the historical spread between ten year and thirty year long term Canada bonds.

The March 1998 issue of Consensus Forecasts provides a long term Canada ten year bond yield of 5.70% for March 1998. Using an average spread of 55 basis points between thirty year and ten year bonds, this gives 6.25% as the 1998 forecast used by Dr. Morin.

Dr. Morin subscribes to the theory that risk premiums vary inversely with the level of interest rates. He cites a number of Canadian and U.S. estimates which lead him to conclude that, for each 1% change in the bond yield, the risk premium changes by 0.25% in the opposite direction.

The market risk premium used by Dr. Morin is 6.5%. This estimate is derived from five studies. The Hatch and White Study shows that a broad market sample of common stocks out-performed long term Canada bonds by 6.9% over the period 1950 to 1987. The update to the Canadian Institute of Actuaries Study shows a risk premium of 5.8%. The Ibbotson Associates Study of U.S. Capital Market Returns for 1926 to 1996 produces a market risk estimate of 7.4%. Dr. Morin prefers to measure realized returns over long periods of time, covering a variety of inflationary and economic conditions. He has found no evidence that market risk has changed over time and his judgement is that the best estimate of the future risk premium is the arithmetic mean. In his opinion, only arithmetic means should be used in estimating the cost of capital and his estimates are derived from the use of an arithmetic mean to measure the expected return.

While Dr. Morin does not conduct a full DCF analysis, he does estimate a prospective market premium of 6.8% based on TSE data from Value Line. This calculation is made by adding the expected dividend yield on the TSE Index to the projected growth in dividends and earnings for common stocks. A similar prospective approach applied to U.S. market data from Value Line U.S. produces a market risk premium of 5.8% over U.S. Treasury Bonds.

Dr. Morin takes his five different market risk premiums and adopts the average of 6.5% as his final estimate of the market risk premium.

Dr. Morin believes that low value betas tend to be underestimated. To correct for this, he uses an adjustment factor which produces a revised beta value of 0.65. Multiplying this value by his market risk premium of 6.5% produces a CAPM risk premium for Newfoundland Power of

4.23%. An allowance of 30 basis points flotation costs raises the risk premium to 4.5%.

Dr. Morin believes that this CAPM estimate does not capture the full risk associated with a utility. Accordingly, he employs an empirical CAPM risk premium test, (ECAPM), which produces a risk premium of 5.1%, including an allowance of 30 basis points for flotation.

The U.S. market plays an important role and Dr. Morin believes some weight should be given to U.S. risk premium data. He concludes that the U.S. risk premium is close to 4%, based upon prospective and historical data for the electric utility industry.

Allowance for Small Size

Combining the CAPM estimate of 4.5% and the empirical CAPM estimate of 5.1% with the American utility estimates, Dr. Morin derives an average risk premium of 4.3%. Using a forecast yield of 6.25% on thirty year long term Canada bonds as an estimate of the risk free rate, combined with a risk premium of 4.3%, produces a return on equity of 10.5%. Dr. Morin adds 20 basis points for NLP's small size which brings the risk premium to 4.5% and his recommended return to 10.75%.

Allowed Range

Dr. Morin recommends a rate of return on equity of 10.75% be used for rate making purposes for 1998. He also recommends an allowed range of 75 basis points as an incentive device. The recommended range becomes 10.375% to 11.125%.

Dr. Morin summarizes recent rates of returns on equity in the Canadian energy industry and finds an average of 10.70%. He takes this as confirmation of the reasonableness of his recommendation of 10.75%. He finds that the rate of return on equity for U.S. electric utilities is

11.4%.

Interest Coverage

Dr. Morin finds the interest coverage of at least 2.7 associated with his recommended return and capital structure to be acceptable. This is based upon the use of 1998 forecast data using the CBRS methodology.

Adjustment Mechanisms

Dr. Morin is cautious on the use of automatic adjustment formulas. Formulas tend to eliminate the exercise of informed judgement. A formula approach would reduce the cost of regulation but would, in itself, provide no incentive for improved efficiency. Dr. Morin does not believe that the use of a formula adjustment for pipelines by the National Energy Board should be taken as a model which could be applied to Newfoundland Power, which he considers to be riskier. Having expressed his caveats, Dr. Morin sets forth his views as to how an automatic mechanism could be instituted. The risk free rate should be derived from the average forecast yield on 10 year Canada bonds for three months and twelve months forward, as published in Consensus Forecasts. This forecast should be increased by the average spread between ten year and thirty year bonds over the past year to arrive at the forecast yield on thirty year long term Canada bonds. The next step is to add a risk premium, beginning with a premium of 4.5% for 1998. This premium should be indexed to the level of interest rates so that for each 1% change in the bond yield, there would be a net change of 25 basis points in the opposite direction. In the event that the Company's financial integrity is compromised by the results arising from the adjustment mechanism then they can apply

for a review. Preset trigger points are not necessary. Dr. Morin recommends that if a formula approach is adopted, it be reviewed after a period of five years.

EVIDENCE OF DR. KALYMON

Dr. Kalymon believes that current economic conditions, and particularly the low inflation level, have produced a reduction in the risk premium demanded by investors. He considers NLP to be comparable in risk to the average regulated utility company in Canada, but that the risk has fallen since the last hearing. He believes that the level of returns on equity earned by NLP are in excess of market expectations. Based upon a deemed equity ratio of 40%, the current cost of equity capital to NLP is in the range of 8.5% to 9.0%.

Dr. Kalymon believes that no single test should be used exclusively and he applies tests based on comparable earnings, the DCF approach and the risk premium method.

Adjusted Comparable Earnings Test

Dr. Kalymon uses two samples of companies, one being a sample of low risk Canadian industrials and the second, a sample of regulated, privately-owned utilities. He places principal reliance on the period 1991 to 1996, in light of the economic shifts which have taken place since the 1990-91 recession. He notes a major increase in the market to book ratio, which he takes as a signal that shareholders do not today require the historically achieved rates of return. Measured returns are adjusted downward to reflect this assessment. His sample of industrial companies is of similar risk to his utility sample and no adjustment for risk is needed. The results, based on the industrial sample of fourteen (14) companies, are a required return of 6.77% to 7.80%.

Turning to his sample of eight regulated utilities, Dr. Kalymon notes that the market to book ratios over the 1986 to 1996 period were well above one, but, since 1996, these values have risen significantly above the level of the last ten years. This is taken as a substantial shift downward in investor return expectations. It is also taken as evidence of overearning by regulated companies and of excessive regulatory lag in reducing allowed rates of return. The current market to book ratios have become "completely unacceptable".(Evidence, p. 47)

Dr. Kalymon applies the same adjustment procedure to normalize returns for these utilities, based upon a market to book ratio of one, thereby producing a current return requirement of 6.41% to 6.98%. He observes that the decline in the cost of equity suggested by the adjusted comparable earnings approach is consistent with the decline of long term bond rates, which fell by about 250 basis points since the 1996 hearing.(Evidence, p.48) In light of the dramatic shift in the market to book ratio over the past year, he adopts the upper end of the range and finds a cost of equity of 6.98%. In his opinion, to use the comparable earnings test without adjustment for market to book ratios would lead to gross overstatement of the current cost of equity capital.

DCF Approach

Dr. Kalymon applies a DCF test to his sample of eight utilities for the 1986 to 1996 period. Current dividend yields are approximately 2.45% lower than the 1986 to 1996 average. Kalymon adjusts projected average dividend and book value growth to account for reduction in the inflation rate of 2.5%. His DCF based cost of equity is 6.63%.

To avoid regulatory circularity, Dr. Kalymon applies the DCF test to his sample of low risk industrials. A similar adjustment for inflation is carried out to produce a DCF based assessment of 6.72% to 8.22%.

Risk Premium Approach

Dr. Kalymon uses the current fifteen year Canada bond yield of 5.45% in his risk free rate. This is based upon the spot rate for April 17th, 1998. He notes a decline from a high of 8.07% in April, 1996.

The essence of his approach is to examine the historical spread between returns from equity shares on the Toronto Stock Exchange over the yields on long term bonds, for the 1977 to 1997 period. He prefers to use the most recent 20 year period rather than the longer periods used by other experts. The results show a risk premium of 1.1%, as measured by the geometric average, and 2.68%, as measured by the arithmetic average. Dr. Kalymon notes that these premiums suggest a narrowing of the historical risk difference between stocks and bonds. He concludes that the risk premium is 2.5% to 3.0%. Combining this with his Canada bond forecast of 5.45% produces a required return of 7.95% to 8.45%. No further adjustment is required to adjust for the lower relative risk of utilities.

Financing, Market Pressure and Other Factors

Dr. Kalymon recommends a provision of 50 basis points for financing, market pressure and underwriting costs. With this allowance, NLP's equity can be valued in the range of 1.0 to 1.10 on a market to book basis.

He recommends a return of 8.50% to 9.00% for the deemed maximum equity component of 40%. The return on excess equity above 40% should be set at the current cost of preferred shares, namely, 5.6%. This recommendation provides an effective spread over the 5.45% current yield on

15 year Canada bonds of 3.05% to 3.55%.

Interest Coverage

Dr. Kalymon's recommended capital structure and return would provide an interest coverage of 2.1 to 2.2 based upon a 1998 budget forecast and Exhibit PGH-13.

Range of Returns

Dr. Kalymon believes that the current range of return of 50 basis points should be retained. He disagrees with the notion that a broader range should be used in order to encourage higher productivity and cost reduction.

Adjustment Mechanisms

Dr. Kalymon opposes the use of an adjustment mechanism. He believes that it would eliminate regulatory lag and would benefit Newfoundland Power and not its customers. In his view, the Company enjoyed the benefits of regulatory lag when interest rates were falling and should not benefit from an immediate adjustment as rates begin to rise. Setting the proper equity risk premium at this time may lock in excessive rates of return, according to Dr. Kalymon. A more gradual and judgmental approach may be needed in order to avoid unacceptably low interest coverage ratios. There is a need for equity markets gradually to validate the lower returns indicated by his DCF and comparable earnings tests, particularly in light of recent major shifts in market conditions.

Dr. Kalymon also believes that the relationship between the cost of equity and the bond rate is complex and not amenable to a simple formula. Rather than being a risk free financial instrument,

the risk level of bonds has been highly variable. Inflation has in the past been a major contributor to this variability.

Dr. Kalymon does not support the use of forecasts in order to estimate the long term Canada bond rate. He believes that current spot rates are the most accurate forecast of their future level.

In his opinion, the National Energy Board formula has given pipeline companies an excessive level of return. The adoption of the National Energy Board formula would be, in his opinion, an act of regulatory circularity.

POSITION OF THE COMPANY

NLP is seeking a comparable return for comparable risk, based upon returns allowed for other Canadian utilities. The benchmark 1998 rate set by the National Energy Board is 10.21%. To this has been added 20 basis points for the smaller size and risk of NLP. This is the basis for a requested return on equity of 10.375%. In future years, the National Energy Board type formula should be applied, according to the Company. NLP believes that this approach is consistent with the following principles:

(a) The opportunity cost principle which requires that allowed returns be equivalent to the return on investments of comparable risk;

(b) The allowed return should be sufficient to attract capital; and

(c) The allowed return should maintain financial integrity and creditworthiness.

NLP places considerable emphasis upon its interest coverage. The proposed rate of return on equity combined with an equity ratio of 45% would maintain an interest coverage rate at, or close

to, 2.7. This coverage is deemed by the Company to be essential in maintaining its credit rating.

NLP recommends that the range of rate of return on equity be widened from 50 to 75 basis points. This position is based upon a number of arguments, including efficiency and allowance for unforeseen circumstances.

NLP supports an automatic adjustment mechanism. It cites the wide use of such formula driven mechanisms by other Canadian tribunals such as the British Columbia Utility Commission, the National Energy Board, the Public Utilities Board of Manitoba and the Ontario Energy Board. In its opinion, such a mechanism has the following advantages:

(a) It reduces regulatory costs and burden;

(b) It shortens regulatory lag;

(c) It is transparent and predictable;

(d) It facilitates consistency and comparability among utilities in Canada; and

(e) It is similar in nature to other adjustment mechanisms allowed by the Board such as the Rate Stabilization Plan. NLP proposes that the formula be reviewed every five years.

NLP proposes that the risk premium be adjusted by 25 basis points in the opposite direction for every 1% change in the long term Canada bond rate. This position is based upon the principle of comparability with the National Energy Board approach. NLP also proposes that the implementation of the formula be linked with the forecast thirty year long term bond rate, following the procedure employed by the National Energy Board.

POSITION OF ABITIBI

In establishing the appropriate rate of return, Abitibi recommends that 6% be adopted as the long term Canada rate. Ms. Henley Andrews takes the view that we have to take as a given the average long term rate for the first half of the year 1998. Noting that the current rate is 5.6%, she recommends acceptance of the 6% rate supported by Drs. Waters and Winter and by Ms. McShane. She emphasizes that such a forecast contains a safety margin of 25-50 basis points.

Abitibi disagrees with NLP that the Company should be allowed to earn a rate of return consistent with the rates of return allowed in other jurisdictions. Ms. Henley Andrews cites expert testimony in arguing that the approach taken was circular and inappropriate. In light of the fact that NLP has not fully adopted the conclusions of their own witnesses, it is also her view that the only evidence left before the Board is that of Drs. Waters, Winter and Kalymon.

She submits that the maximum mid-point of a range on common equity justified by the evidence is 9%. This is comprised of a long Canada bond rate of 6% and a risk premium of 3%.

With respect to the question of the range and whether it should be increased from the current 50 point spread, Abitibi proposes that the status quo remain until a full hearing is held on the issue of incentive rates. It is not appropriate in their opinion to provide an incentive program without a mechanism to ensure that the ratepayers benefit therefrom.

Abitibi sees no compelling evidence that a formula is necessary or desirable. They recommend that no formula be adopted at this time but, should a formula be adopted, it be based upon the 80 basis point adjustment, rather than 75. This is intended to bridge the advocates of a one for one adjustment with those who favor a 75 basis point formula.

POSITION OF THE CONSUMER ADVOCATE

The Consumer Advocate supports the rate of return recommendations of Dr. Kalymon. Dr. Kalymon proposes that the 15 year spot bond yield be employed rather than 30 year bond forecasts. This suggests a yield of about 5.45% and an allowed return of 8.5% to 9 %.

The Consumer Advocate submits that interest coverage associated with the reduction in returns should be met through the greater use of preferred shares. The use of preferred shares by Fortis, he says, supports the use of this form of equity in lieu of debt.

The Consumer Advocate does not support expansion of the 50 basis point range for allowed returns on common equity.

The Consumer Advocate disagrees with the use of a formula adjustment mechanism. He cites the views of experts, such as Dr. Morin, who has a concern that a formula approach eliminates the exercise of judgement and provides no incentive for efficiency unless accompanied by an incentive plan. The Consumer Advocate also questions whether the Board has jurisdiction to put a formula mechanism in place.

Mr. Browne notes that regulatory reform beneficial to consumers should be considered and that a hearing under Section 83 of the Act would be an appropriate forum. Mr. Browne also draws an analogy between the use of a formula for adjusting the rate of return on equity with the bi-monthly estimates in lieu of meter readings. He noted that the latter was problematic for consumers.

The Consumer Advocate does not accept the awards of other regulators as an appropriate guide to the Board in its decisions. He also questions the wisdom of adopting the formula approaches which are in use by other Canadian regulatory tribunals.

METHODOLOGICAL ISSUES

There are a number of differences in methodology among expert witnesses which have an impact on their results. These will be briefly noted as follows.

Market to Book Ratios

Drs. Waters and Winter consider a market to book ratio higher than 1.1 to 1.2 to be evidence of over earning.(Transcript,May 28, p.31) Dr. Kalymon, in his comparative earnings test, makes an adjustment to normalize for rates that are "completely unacceptable".(Evidence, p. 47). Ms. McShane believes it is appropriate for market values to reflect replacement value rather than book value and she estimates such replacement value to confirm that market values are not inordinately high. Dr. Morin does not consider market to book values higher than one (1) to be problematic.

Choice of Historical Time Periods

Drs. Waters and Winter use the period 1926 to 1997 in their assessment of equity risk premiums and explicitly state a preference for using time series covering a long period of time. Dr. Morin similarly uses studies which cover historical returns going back to 1924 for Canada and to 1926 for the United States. Ms. McShane uses post war data. Dr. Kalymon prefers to use data for the past twenty years. Clearly, these choices are matters of judgement but they impact significantly on the results.

Relationship between Bond Yields and Risk Level

There was general agreement among experts that there is an inverse relationship between the long term bond rate and the equity risk premium. Drs. Waters and Winter believe that the

relationship operates only at higher rates of return, above 9%. Other experts believe that risk premiums should be adjusted by 25 basis points for every 1% change in the long bond yield. This is the position taken by Dr. Morin and Ms. McShane. Dr. Kalymon takes the position that risk premiums are currently low even though interest rates are also at historically low levels.

Arithmetic versus Geometric Averages

Drs. Water and Winter use geometric averages in estimating the equity risk premium for long term data on returns from stocks and bonds. Dr. Morin and Ms. McShane favor the use of arithmetic averages. Dr. Kalymon believes that both are useful. This methodological difference can impact significantly on the estimated magnitude of the equity risk premium.

The Term of Long Canada Bonds

Drs. Waters and Winter favor the use of thirty (30) year Government of Canada Bonds. Dr. Morin and Ms. McShane take a similar position. Dr. Kalymon prefers a fifteen (15) year bond. This is based upon several arguments. Government of Canada bonds for thirty (30) years are not always available as a ready reference. Also, the time series studies on long term returns cited by other experts tend to use bond yields of fifteen, seventeen and up to twenty years (DMB-43). Drs. Waters and Winter believe that the selected bond maturity should correspond to the maturity of the asset you are dealing with. The asset is equity and the duration of equity is estimated at twenty-three (23) years, which corresponds roughly to the duration for a thirty (30) year bond (Transcript, May 26th, p.6-7).

Spot versus Forecast Bond Rates

Drs. Waters, Winter, and Morin and Ms. McShane recommend the use of forecast bond yields as compiled by Consensus Forecasts. Dr. Kalymon prefers to use spot rates as a forecast. Over the past four years "there is no question that the actuals towards the end of the year gave much better indications of what the interest rate would be than any Consensus Forecasts".(Transcript, June 11th, p. 31). In the hearing, Dr. Kalymon reviews examples to substantiate this comment .(Transcript, June 11th, pp 45-47). Ms. McShane concludes that there was no significant difference between using the spot rate or the forecast.(Transcript June 9th, p. 18)

Relevance of U.S. Returns

In assessing the equity/risk premium, Drs. Waters and Winter looked at the U.S. market over the period 1926 to 1996 and used the result to adjust their estimates of the risk premium.(Evidence, p. 60) They also cite a U.S. Study for the period 1982-1992 (Evidence, p. 70) to suggest that equity risk premiums are likely to be lower than they were in the 1940 to 1980 period. Dr. Morin and Ms. McShane also use U.S. data in their estimates. Dr. Kalymon uses Canadian data exclusively.

Measurement of Relative Risk

Experts use different approaches to measure relative risk. Drs. Waters and Winter do not adjust the beta value of 0.45 which was reported to them. They do not find a movement systematically toward the mean which other analysts found. Dr. Morin and Ms. McShane do use adjusted betas and also felt that measures of the volatility of the stock market did not fully capture the risk associated with NLP. Dr. Kalymon does not adjust his results by using a beta factor.

Instead, he confines his attention to a group of low risk companies whose returns can be compared directly with NLP.

Use of Investor Forecasts

Most experts in the hearing relied upon historical data to impute investor expectations. Drs. Waters and Winter use long time series data covering the period 1926 to 1996. In their DCF estimate, they look at the historical pattern of earnings and inject their own assessment of the upper limit on prospective rate of return levels. They also corroborate their DCF results by looking at growth estimates by financial analysts (i.e. the IBES Service). In his examination of the risk premiums on securities issued by the U.S. electric utility industry, Dr. Morin uses growth forecasts by analysts to derive a U.S. prospective estimate of 3.8% for the risk premium.(Evidence, Appendix B, p. 10 and RAM-2). Ms. McShane uses forward looking data in estimating the market risk premium, based upon five year forecasts of earnings growth for companies on the Toronto Stock Exchange Index. These forecasts are compiled by the Institutional Brokers Estimate System (IBES).

Reliance on a Variety of Tests

Drs. Waters and Winter relied primarily on the risk premium test but presented the results of a DCF Test without giving it any weight. Ms. McShane presents an equity risk premium test to which she assigns a weight of 75% and a comparable earnings test to which she gives a 25% weight. Dr. Morin conducts a variety of risk premium tests using the capital assets pricing model (CAPM) and the empirical capital assets pricing model (ECAPM). Dr. Kalymon presents tests based upon (a) the equity risk premium model; (b) comparable earnings; and (c) DCF. He places greater

reliance on the risk premium and the DCF tests.

Use of Other Regulatory Decisions

The experts all stated that it would be inappropriate and circular to look to the decisions of other regulators to determine what return should be allowed to NLP. However, the evidence presented to the Board is replete with references to other regulatory allowances, both in Canada and in the United States. Drs. Waters and Winter compare the returns they recommend with returns awarded by other regulators, adjusting for changes in the long term bond rate since the dates of these decisions. In their DCF test they look at decisions of other regulators to set an upper limit to the returns which investors expect utilities to achieve.

In her estimates of relative risk, Ms. McShane estimates a regression equation of utility returns upon stock market and bond returns. These utility returns are influenced by regulatory decisions. Ms. McShane also calculates achieved risk premiums for the utility industry, both in Canada and the United States as an indication of what they can expect in the future. In estimating the relationship between risk premiums and interest rates, utility allowed returns were used as a proxy for the cost of equity. The circularity associated therewith is acknowledged by Ms. McShane.(Evidence, Appendix A, p.A-21)

Dr. Morin looks at risk premiums earned by the U.S. electric industry, both from a prospective and historical basis. Dr. Morin conducts a study of the risk premium and how it varies with bond yields by looking at Canadian regulatory awards for the period 1980 to 1994.

In his comparable earnings test, Dr. Kalymon studies a sample of regulated utilities which he notes “might be open to the possibility of circular reasoning”. (Evidence, p. 45) Dr. Kalymon also conducts a DCF test based upon a sample of regulated companies. Dr. Kalymon notes that “any concern over regulatory circularity is avoided by the use of a low risk industrial sample”. (Evidence, p. 56)

The positions of the experts on each of these methodological issues is summarized is Table 1 below. It should be noted that the order in which these issues are listed is not intended to reflect their importance or the impact which these methodological differences may have had upon the conclusions reached.

TABLE 1

Views of Expert Witnesses on Methodological Issues

	Waters & Winter	McShane	Morin	Kalymon
Market to Book Ratio should be 1	Yes	No	No	Yes
Reference Period for Equity risk Estimate	1926-96	1947-87	1924-96	1977-97
Inverse Relationship Risk/Bond Yields	No (only above 9%)	Yes	Yes	Yes
Arithmetic vs. Geometric Means	Geometric	Arithmetic	Arithmetic	Both
Spot or Forecast Bond Yield	Forecast	Forecast	Forecast	Spot
U.S. Returns Weighted	Yes	Yes	Yes	No
Adjustment for beta	No	Yes	Yes	No
Use of Investor Forecasts of Equity Returns	No	Yes	Yes	No
Tests Presented: Comparable Earnings DCF Equity Risk Premium	 No Yes Yes	 Yes No Yes	 No No Yes	 Yes Yes Yes
Use of Regulatory Allowances by Other Tribunals	Yes	Yes	Yes	Yes

SUMMARY OF CONCLUSIONS AND ASSUMPTIONS BY EXPERT WITNESSES

In the following Table 2 the Board has compiled the recommendations of the experts with respect to the rate of return on equity, which should be allowed to NLP by the Board. This Table shows the assumptions which are made by the experts in reaching their conclusions. The Table also summarizes the position of the experts with respect to the range of returns which they believe should be allowed and the midpoint value which should be set for rate making purposes.

Table 2 also summarizes the position of the experts with respect to automatic adjustment formulae and the trigger which should be used for a full cost of service hearing in the event that such an automatic adjustment mechanism is adopted by the Board.

TABLE 2

SUMMARY OF EXPERT OPINION ON RETURN ON EQUITY
AND AUTOMATIC ADJUSTMENT MECHANISM

	Waters & Winter	**McShane**	**Morin**	**Kalymon**
Equity Ratio Recommended	**40%**	**45-50%**	**45-50%**	**40%**
Return on Equity Recommended	**8.25 to 9.00%**	**10.5 to 11.5%**	**10.375 to 11.125%**	**8.5 to 9.0%**
Midpoint for Rate making	**N.A.**	**11.00%**	10.75%	**N.A.**
Range of Return	50 Basis Points	100 Basis Points	75 Basis Points	50 Basis Points
Test Results				
Comparable Earnings	N.A.	11.25 to 11.75%	N.A.	6.98%
DCF	7.8 to 8.2%	N.A.	N.A.	6.71 to 8.22%
Equity Risk Premium Approach(not including "cushion")	8.00% to 8.50%	10.5%	10.55%	7.95% to 8.45%
Market Risk Premium	4.5%	6.5%	6.5%	2.50 to 3.00%
Relative Risk	0.5	0.7	0.65	N.A.
NP Risk Premium	2.25%	4.5%	4.3%	2.50 to 3.00%
Financing Costs ("cushion")	25 to 50 Basis Points	50 to 70Basis Points	20 Basis Points(for size)	50 Basis Points
Associated Interest Cover	2.1 to 2.2	2.7 or higher	2.7 or higher	2.1 to 2.2
Formula Approach Recommended	**Yes**	**Yes**	**Cautious**	**No**
Adjustment Factor	1 for 1	75 BP	75BP	N.A.
Bond Yield				
Term	30 Year	30 Year	30 Year	15 Year
Forecast or Spot	Forecast	Forecast	Forecast	Spot
Level for 1998	6.00%	6.00%	6.25%	5.45%
Trigger for cost of equity hearing	Long bond yields above 8% for more than 6 months	Long bond yields above 10% for more than 6 months or when access impaired	After 5 years or when financial integrity compromised	N.A.
Allowed cost for preferred shares on common equity over 40%	6.0%	N.A.	N.A.	5.6%

RATE BASE REGULATION

The opinion of the Newfoundland Court of Appeal, in response to the case stated by the Public Utilities Board under Section 101 of the *Act*, on August 14, 1996 addressed the jurisdiction of the Board to regulate the return on rate base and on common equity. The first two of eight questions on which the Coram gave its opinion on June 15, 1998 were as follows:

> "(1) Does the Board have jurisdiction pursuant to the to set and fix the return which a public utility may earn annually upon:
>
> (i) the rate base as fixed and determined by the Board for each type of service applied by the public utility; and/or
> (ii) the investment by which the Board has determined has been made in the public utility by the holders of common shares.
>
> (2) Does the Board have jurisdiction to set the rates of return referred to in Question (1) as a range of permissible rates of return."(Opinion, June 15, 1998,p-5)

The Coram concluded that in "determining" a "just and reasonable return" under Section 80(1) of the *Act*, the Board prescribes a level of return and that this prescription is binding upon the utility and is not simply an intermediate step in approving rates, tolls and charges to ratepayers. The Coram recognizes that in determining the "just and reasonable return" on rate base the Board must

> "first determine the cost to the utility of the various components of its sources of funds,"(Newfoundland Court of Appeal Opinion, June 15, 1998, p.28)

The Coram also notes that the cost of debt and preference shares can be more easily determined than the rate of return on common equity. The required return on common equity depends upon current market conditions while the cost of debt is determined to a large extent by past market conditions whose effect becomes "embedded"until such time as the debt instruments reach their maturity.

The Coram's opinion is that there is nothing in the governing legislation which gives the

Board the power to prescribe or to set a rate of return on common equity, as a component of an overall return on rate base. The opinion states that the power to "determine" a "just and reasonable return", on rate base as contained in Section 80(1) does not include within it a power to set and fix a rate of return on common equity but

> "does contemplate that the analysis of appropriate rates of return on common equity will be undertaken and factored into the conclusion as to what is a just and reasonable return on rate base".(p.30, paragraph 61)

During the hearing, the Board was asked to rule on the appropriate test year to be used in implementing its decisions with respect to rate of return on rate base. The Board decided that it would be appropriate to use test year projections of revenues and expenditures which have already been reviewed by the Board at a public hearing. Accordingly, it was decided that any rate of return adjustments flowing from the current hearing should be applied to 1997 test year data which were tested by the Board in 1997.

The rate adjustments flowing from this hearing will result in interim rates under Section 75 of the *Act*. At a Fall hearing in 1998, the Board will review revenue and expenditure projections for both 1998 and 1999. In order to finalize its disposition of 1998 rates the Board will make a final Order under Section 70, based upon its assessment of the 1998 revenue and expenditure projections. At that time, the Board will also confirm a rate of return on rate base for 1998. During the same Fall hearing the Board will also review 1999 test year data and establish rates, tolls and charges for 1999, based upon a "just and reasonable return" on rate base for 1999.

It has become apparent over the years that the relationship between the level of common equity and the rate base is highly variable. There is no easily determinable one to one relationship. The Table below demonstrates the variation which has been observed since 1991.

TABLE 3

Relationship between Common Equity and Rate Base 1991 -1999

	Average Rate Base at Year End 1	Regulated Average Common Equity 2	2 ÷ 1 as percentage 3	Column 1 as Index with 1991 = 100% 4	Column 2 as Index with 1991 = 100% 5
1991	435,007	194,425	44.69%	100.00%	100.00%
1992	450,418	207,260	46.02%	103.54%	106.60%
1993	459,561	221,128	48.12%	105.64%	113.73%
1994	465,333	227,659	48.92%	106.97%	117.09%
1995	469,676	232,371	49.47%	107.97%	119.52%
1996	473,122	224,009	47.35%	108.76%	115.22%
1997	477,419	228,195	47.80%	109.75%	117.37%
1998*	483,016	228,660	47.34%	111.04%	117.61%
1999*	484,503	227,722	47.00%	113.38%	117.13%

* Forecast
Source: DMB-4 and KWS-5 (exhibit from Direct Evidence - 1996 Hearing)

In addition to this variability, regulated earnings as a percentage of rate base can be influenced significantly by management decisions with respect to capital structure. The latitude of management with respect to capital structure is a matter which was addressed by the Newfoundland Court of Appeal in its opinion of June 15th, 1998. Question 7 of the Stated Case put to the Court was as follows:

"(7) Does the Board have jurisdiction to require a public utility to maintain:

> (i) a ratio; or
> (ii) a ratio within a stated range of ratios
>
> of equity and debt, as the means of obtaining the capital requirements of the public utility."(Opinion, June 15, 1998, p.7)

The Coram's opinion on this question was "no". They concluded that there should be a limit on the degree of intrusion by the Board into the role of management of the utility in its financial decision making. The Coram said that:

> "... the powers of the Board should be generally regulatory and corrective, not managerial."(p.56, paragraph 136)

They acknowledged the problems of measuring the impact of changes in capital structure on the cost of capital and stated:

> "... the long term effects of changes on capital structure on the enterprise and on the future cost of capital may not be easily predictable. Capitalization decisions also have other business dimensions that transcend the considerations relevant to the issues directly presented in the regulatory process."(p.56, paragraph 135)

During the hearing, very little evidence was presented to the Board with respect to the return on rate base. DMB-4 presents historical and pro forma forecast data. Drs. Waters and Winter, in their pre-filed evidence, presented the Board with a recommended range of return on rate base(direct evidence, pp. 78-79 and Table 19). However, as noted earlier, their calculation does not conform with the methodology used by the Board.

The Board will be ordering that the parties to the Fall hearing present further evidence on the relationship between common equity and rate base and on the accounting methodology for calculating the allowed return on rate base. The Board wishes to hear such evidence before finalizing an allowed rate of return on rate base for 1998.

COMMISSION DECISION ON RATE OF RETURN ON EQUITY

The economic environment of the Province in which NLP operates has improved since 1996. The Board is of the view that the business risk of NLP is lower than it was in 1996. Financial market conditions have changed and expectations of returns on both debt and equity instruments have diminished.

Equity Risk Premium Approach

All of the experts relied heavily upon equity risk premium estimates. Drs. Waters, Winter and Morin relied exclusively on this method. Ms. McShane gave 75% weight to the equity risk premium test and only 25% to the comparable earnings approach. Dr. Kalymon believes that the comparative earnings test can easily be distorted by accounting biases. He is also reluctant (direct evidence, p. 64) to reflect fully the equity returns arising from his adjusted comparable earnings and his DCF tests.

The Board will rely principally on the equity risk premium test in establishing the appropriate return on common equity. In so doing, the Board will make an explicit determination with respect to the long term interest rate and the appropriate risk premium for NLP, in order to establish an appropriate rate of return on equity.

Long Term Bond Rate

In order to establish a long bond rate (30 years) for 1998, the Board has examined the bond

yields observed to date in 1998, along with various indicators of what the yields will be for the rest of the year. These indicators include a forecast by Consensus Forecasts, as well as spot rates observed during the hearing. The Board heard evidence that long term bond rates have declined by approximately 250 basis points since the middle of 1996. The following quotations from two of the experts who testified at the hearing confirm this dramatic shift.

Ms. McShane notes that:

> "long term (30-year) Canadas have declined from 8.1% in mid-June 1996 to 5.6% in mid-April 1998."(direct evidence, p. 32)

Dr. Winter notes that:

> "long term interest rates have fallen to their lowest level in more than thirty years and by more than 250 basis points since the last rate hearing for this Company. The yield on the thirty year Government of Canada bond is now in the order of 5.7%. The drop in interest rates reflects increased confidence by the capital market that low inflation is now firmly established."(transcript, May 25,1998, p.24)

In cross examination, Dr. Waters notes that:

> "currently long term Government of Canada bonds are selling to yield in the order of 5.7% presently and in fact, they have averaged that value throughout the year to date."(transcript, May 25, 1998,p. 35)

The Board has calculated an average of the yields as reported by the Globe and Mail on two long term bond issues (namely, the 8% Issue maturing June 1, 2027 and the 5.750% Issue maturing June 1, 2029) for the ten (10) trading days prior to final argument on June 18, 1998. This average was 5.49%. This represents a reduction from values observed earlier in the year by Dr. Waters.

The Consensus Forecasts for June 8, 1998 for the end of September, 1998 is 5.6% for ten (10) year Government of Canada bonds. For the ten (10) trading days prior to June 18th, the spread between thirty (30) year Government of Canada bonds and ten (10) year bonds averaged 18 basis points.

The Board determines that 5.75% is an appropriate forecast of the long term bond rate for 1998.

Risk Premium

The market risk premium estimates presented to the Board were in the range of 2.50% to 3.00% (Kalymon) to 6.5% (Morin and McShane). The relative risk factors presented by expert witnesses ranged from 0.5 to 0.7.

Based upon the evidence, and the findings stated throughout this report, the Board finds a risk premium of 3.00% based upon a market risk premium of 5.00% and a relative risk factor of 0.6 is appropriate in establishing the cost of common equity through the equity risk premium approach.

Rate of Return on Common Equity

The Board finds that an allowance of 50 basis points will be added to cover

underwriting costs, the risk of dilution of share value and unforeseen circumstances. This results in an appropriate rate of return of 9.25% on common equity, based upon a long term Canada yield of 5.75% and a total risk premium of 3.50%.

INTERIM RATE ADJUSTMENTS FOR 1998

Rate adjustments for 1998 arising from this Order will be based upon the 1997 test year financial data. The Board has determined that it is inappropriate to adjust customer rates based on 1998 forecast information, as these data have not been tested in a public hearing. The 1997 test year financial data, which were reviewed by the Board at the 1996 general rate hearing, is represented by the 1997 financial forecast included in the Company's amended 1996 application as adjusted by P.U. 7 (1996-97) and P.U. 8 (1996-97).

The Board has determined that the methodology used to calculate the adjustments to customer rates will be as follows:

1) The 1997 test year financial data is the base model for calculating the change in revenue requirement arising from the 1998 allowed rate of return on rate base;

2) The 1997 model is then adjusted to give effect to the 1998 allowed rate of return on rate base which will provide the Company with the opportunity to earn a rate of return on common equity of 9.25% based upon a capital structure which deems the common equity component at 45%; preferred equity is assigned a cost of 6.33%, as is common equity above the 45% capital structure;

3) The resulting change in regulated earnings, as determined above, is then tax effected to determine a pre-tax change in revenue requirement for the 1997 test year;

4) The change in revenue requirement in the 1997 test year model is then applied to reduce the Company's 1998 revenue requirement;

5) Changes in customer rates (energy and demand) for all rate classes, effective January 1, 1998 will be determined based upon the overall, average reduction in revenue requirement for 1998;

6) Customers will be given a rebate for the effect of the rate reductions for the period in 1998 up to the effective date of the revised rates.

In applying the above methodology to determine the change in revenue requirement, it is assumed that any changes to other revenue and expenses, other than income taxes, will not be significant.

For the purpose of setting interim rates and based upon an allowed rate of return on rate base of 9.91%, the revenue requirements in the 1997 test year are reduced by an estimated $7.1 million. When this amount is subtracted from the forecast revenue requirements for 1998, the result is an estimated reduction in rates for 1998 of 2.1%.

The Company will be ordered to submit adjusted rates to be effective January 1, 1998, based upon the allowed rate of return on rate base of 9.91% for the 1997 test year. The rate of return on rate base for 1998 will be finalized following the Fall 1998 hearing.

The Board will be ordering a reduction in rates for 1998. The rate adjustment will be effected under Section 75 of the *Act,* and will be interim rates. The Board will be ordering that this rate adjustment be reflected in monthly bills with effect from September 1st, 1998, and that refunds be paid to consumers before October 31, 1998 to reflect the rate reduction for the period January 1st, 1998 to the date of their last billing in the month of August.

The rate adjustment will apply to power consumed on or after January 1, 1998 and

without any adjustment for the one-half month revenue recognition lag.

Rate adjustments are to be made without any adjustment of revenue to cost ratios for the different rate classes.

The Board will hear further evidence at the Fall hearing on the accounting methodology for calculating the allowed return on rate base in the context of the relationship between rate of return on rate base and the cost of the various components of capital structure. The Board will also hear evidence with respect to 1998 financial projections. This evidence will be assessed by the Board in determining rates, tolls and charges through a final Order under Section 70 of the *Act*. In setting the allowed return on rate base for 1998, the Board will provide an opportunity to earn a rate of return on common equity of 9.25% for a common equity component deemed to be the lesser of 45% of the capital structure and the projected average common equity ratio in 1998. The Board will estimate the cost of preferred shares at 6.33%, and apply it to the forecast average value of preferred equity and the forecast average value of any common equity in excess of 45%.

COMMISSION DECISION ON ADJUSTMENT MECHANISM

The Board has heard divergent views on the need for an automatic adjustment mechanism. One of the concerns expressed by expert witnesses during the hearing relates to the complexity of the relationship between required returns and bond yields and the need for informed judgement to be exercised. Another concern was that the Company may benefit unduly if upward adjustments occur more quickly in the future than downward adjustments have occurred in the past.

The Board is of the view that there is merit to a formula, in light of the cost burden of a full

cost of capital hearing and the potential savings to consumers which could be realized. The Board also believes that the adoption of an automatic adjustment mechanism will create greater predictability, which will thereby reduce the risk of regulatory uncertainty. In the opinion of the Board, a mechanism to facilitate an annual review at modest costs will be of benefit to the ratepayer and to the Company.

The Board is of the view that the proposed adjustment mechanism is within its legislative competence. The wide acceptance of such a mechanism by other Canadian tribunals, to adjust the allowed rate of return, supports its use as being in accordance with "generally accepted sound public utility practice". Given that a formula approach accords with "generally accepted sound public utility practice" and is within the purpose and policies of the governing legislation it is appropriate to adopt such a mechanism. The Coram's opinion provides clarification and interpretation of the powers of the Board. The Coram set out the following general principles, *inter alia*, to be used in the interpretation and application of the legislation:

"1. The Act should be given a broad and liberal interpretation to achieve its purposes as well as the implementation of the power policy of the province;

2. The Board has a broad discretion, and hence a large jurisdiction, in its choice of the methodologies and approaches to be adopted to achieve the purposes of the legislation and to implement provincial power policy;

3. The failure to identify a specific statutory power in the Board to undertake a particular impugned action does not mean that the jurisdiction of the Board is thereby circumscribed; so long as the contemplated action can be said to be "appropriate or necessary" to carry out an identified statutory power and can be broadly said to advance the purposes and policies of the legislation, the Board will generally be regarded as having such an implied or incidental power;

4. In carrying out its functions under the *Act*, the Board is circumscribed by the requirement to balance the interests, as identified in the legislation, of the utility

against those of the consuming public;..."(pp. 21, 22, paragraph 36)

Adoption of a formula to revise the allowed rate of return on rate base does not limit the discretion of the Board to convene a hearing. The Board believes that there is sufficient flexibility in its governing legislation so that a hearing can be considered when ratepayers, the Company or the Board believe that circumstances so require. The Board will call a hearing if circumstances change, so as to render the use of an automatic adjustment formula to be inappropriate. Without attempting to enumerate all of the circumstances which might result in a hearing being convened, the following are intended as examples:

(a) deterioration in the financial strength of the Company, resulting in an inappropriately low interest coverage;

(b) changes in financial market conditions which would suggest that the formula is not accurately reflecting the appropriate return on equity; and

(c) fundamental changes in the business risk of the Company.

In exercising its discretion to convene a hearing, the Board will ensure that the interests of consumers are protected. The Board has a responsibility under the *Electrical Power Control Act*, 1994, to implement the Power Policy of the Province which requires that the power sources and facilities are managed and operated in a manner:

> "that would result in power being delivered to consumers in the Province at the lowest possible costs consistent with reliable service".[*Electrical Power Control Act*, 1994, Sec. 3(b)(iii)]

The *Act* provides that a complaint may be made to the Board by "an incorporated municipal

body or the Newfoundland and Labrador Federation of Municipalities or by five persons, firms or corporations .....".[*the Act,* Sec. 84(1)]

The Board also has the power to conduct an investigation and to convene a hearing upon its own motion.[the *Act,* Sec. 82 and 88]

While the Board believes that adoption of an automatic adjustment mechanism is desirable, the evidence heard at this hearing relates primarily to the adjustment of the appropriate rate of return on equity. Before articulating an adjustment formula to set the allowed rate of return on rate base for 1999 and subsequent years, the Board wishes to hear further evidence which bears directly on the derivation of the allowed return on rate base.

Recognizing that

> "the analysis of appropriate rates of return on common equity will be undertaken and factored into the conclusion as to what is a just and reasonable return on rate base".(Opinion of Newfoundland Court of Appeal, June 15th, p. 30, paragraph 61)

The following approach will be adopted in this Order:

(a) An automatic adjustment mechanism will be implemented based upon the equity risk premium model, using the long term (30 years) Government of Canada bonds as the risk free rate. The Board will take an average of the daily closing yields on long term Canada bonds for the last five trading days in the month of October and the first five trading days in the month of November. The Government of Canada bond issues used by the Board will be the 8.00% Issue maturing on June 1st, 2027, and the 5.750% Issue maturing on June 1st, 2029. This average of ten trading days will be adopted as the forecast long term bond rate for the following year to be used in implementation of the formula.

(b) In estimating the appropriate return on common equity the forecast long term bond rate for the following year will be subtracted from the current year's forecast value. The difference will be multiplied by a factor of 0.20 and the resulting product will be used to adjust the risk premium in the opposite direction. The adjusted risk premium will be added to the forecast long term bond rate to produce the rate of return on equity for the following year.

For example, if the forecast long term bond rate for 1999, as calculated in November,

1998 pursuant to (1) above, were to be 6.75%, then the difference (6.75% - 5.75%) between the current year's forecast and the coming year's forecast would be +1%. This would result in a downward adjustment of 20 basis points in the risk premium from 3.50% (the 1998 value) to 3.30% and an allowed return for 1999 of 10.05%(6.75% + 3.30%).

If the forecast long bond rate were 4.75% then the risk premium would be adjusted upward by 20 basis points so that the allowed return would be 8.45% (4.75% + 3.705).

(c) The resulting rate of return on common equity along with the appropriate rate of return on preferred equity and the embedded cost of debt will be factored into the determination of an allowed rate of return on rate base in a manner to be decided by the Board upon hearing further evidence on accounting methodology in the Fall as to how this can best be achieved.

(d) The mechanism will allow any change in the return on rate base to be determined by the Board through an automatic adjustment mechanism in November or December and any rate change would normally be effective on January 1st of the following year.

(e) The Board will issue an Order for revised rates to be filed for the following year if the change in the rate of return on rate base has the effect of moving the rate of return outside the previously approved range.

(f) With regard to a full cost of capital hearing, the Board determines that after the rate of return on rate base has been set for three consecutive years, by application of the formula, and without a hearing, that a hearing will be convened in the following year.

The Board is of the view that this approach will provide sufficient flexibility to address the concerns expressed at the hearing. The Board also believes that adjustments in the allowed return on rate base should be achieved without imposing upon ratepayers the cost burden of a full cost of capital hearing for each such adjustment.

The Board notes that the automatic adjustment mechanism does not contemplate modifications in the capital structure, which will, for purposes of rate setting, be based upon the lesser of the projected average common equity ratio in the test year, and 45%. The Board believes that the

capital structure should be modified with caution and on an infrequent basis. However, should a review of either the capital structure or the rate of return be required, the Board may, on its own motion, upon complaint or by application, conduct a hearing.

COSTS

Pursuant to Section 90 of the *Act*, Counsel for Abitibi requested an Order awarding costs to Abitibi. This application was initially made on April 2, 1998, and petitioned once again at the close of the hearing on June 18, 1998. P. U. 4 (1998-99) ordered that the issue of costs of Abitibi would be considered by the Board at the conclusion of the hearing.

Abitibi participated in the hearing on a limited basis, insofar as they received and reviewed all materials filed, cross-examined expert witnesses and provided final argument. The purpose of the intervention was put forth by Counsel for Abitibi as grounded in their interpretation that the hearing was generic, with effect on both NLP and Hydro. Abitibi, as an industrial customer of Hydro, believed they had an interest in the outcome of the hearing and any policies that might later apply to Hydro.

The Board served notice to the public that a hearing would be held with regard to NLP's current rates, tolls and charges and return on rate base pursuant to the *Act*. Hydro did not participate in this hearing. Abitibi, an industrial customer of Hydro, has a distinctly separate power and order contract with Hydro and Hydro's industrial customer rate will not change as a result of this order. Hydro has not received or reviewed the material filed, cross-examined witnesses nor provided final argument. The order provided on matters raised at this hearing are specific to NLP. Procedural fairness dictates any policies related to Hydro's rate of return and capital structure would require a

separate hearing.

Therefore, the Board will order that, in accordance with Section 90 of the *Act,* application for costs of Abitibi is denied.

ORDER

IT IS THEREFORE ORDERED THAT:

A. FOR THE PURPOSES OF AN INTERIM ORDER FOR 1998 UNDER SECTION 75 OF THE *Act*

1997 Test Year

(1) The 1997 test year financial projections submitted to the Board at the 1996 hearing, as adjusted by P.U. 7 (1996-97) and by P.U. 8 (1996-97), will be used to calculate adjustments in rates, tolls and charges, on an interim basis, for 1998.

Capital Structure

(2) In calculating 1998 interim rates, tolls and charges, utilizing the 1997 test year data, the Board will deem a common equity ratio of 45%. Common equity above this level will be treated as preferred equity. The return on preferred equity for the purpose of setting rates will be applied to the average value of preferred equity for the 1997 test year and to the value of any average common

equity in excess of 45%.

Return on Rate Base

(3) For the purpose of calculating adjustments in rates, tolls and charges for this interim Order, under Section 75 of the *Act,* using 1997 test year projections, the Board will allow a rate of return on rate base of 9.91%. This will provide the Company with the opportunity to earn a rate of return on common equity of 9.25% and a rate of return on preferred equity and on common equity in excess of 45%, of 6.33%.

Rate Adjustment

(4) NLP shall submit to the Board for approval, as interim rates under Section 75 of the *Act,* a revised schedule of rates, tolls and charges, based upon a reduction in revenue requirements, calculated using 1997 test year data.

(5) The revised rates will be reflected in monthly bills with effect from September 1, 1998. Refunds will be paid to consumers before the end of October, 1998 to reflect the rate reduction for the period January 1st, 1998 to the date of their last billing in the month of August. NLP is ordered to make refunds to all customers who purchased power during the period, including former customers. Former customers should be advised that they may apply for a refund.

(6) The rate adjustments will apply to all power consumed on or after January 1st,

1998.

(7) The rate reduction will be made without any adjustment of revenue to cost ratios for different rate classes.

B. FOR THE PURPOSES OF A HEARING WITH RESPECT TO A FINAL ORDER FOR 1998 UNDER SECTION 70 OF THE *Act*

1998 Projections

(8) In the Fall of 1998, the Board will test forecast financial projections for the purpose of setting final rates for 1998 under Section 70 of the *Act*.

Capital Structure

(9) In setting rates for 1998, the Board will deem the average value of common equity as the lesser of (a) a common equity of 45% and (b) the projected average value of common equity in 1998. The return on preferred equity will be applied for rate setting purposes to the projected average value of preferred equity during the year and to any projected average common equity in excess of 45%. The cost of debt will be the projected embedded cost.

Rate of Return on Rate Base

(10) The Board will hear evidence as to the accounting methodology for calculating the allowed rate of return on rate base in the context of the relationship between the rate of return on rate base and the cost of the various components of capital structure. The rate of return allowed for the interim Order will be subject to finalization at that time. In determining the rate of return on rate base, the

Board will provide an opportunity for NLP to earn 9.25% on deemed projected average common equity and 6.33% on projected average preferred equity and on any projected average common equity in excess of 45%.

C. FOR THE PURPOSES OF A HEARING TO SET RATES FOR 1999

1999 Test Year

(11) In the Fall of 1998 NLP will submit 1999 Test Year data for the consideration and assessment of the Board and for the determination of rates, tolls and charges for 1999.

D. FOR THE PURPOSES OF A MECHANISM TO ADJUST RATES ANNUALLY BASED UPON VARIATIONS IN THE RATE OF RETURN ON RATE BASE

Capital Structure

(12) For the purpose of setting rates through an automatic adjustment formula, the Board will deem the common equity component of the capital structure as the lesser of (a) 45%, and (b) the projected average value of common equity for the test year. Preferred equity will be calculated as the projected average value for the test year and the projected average value of any common equity in excess of 45%.

Return on Rate Base

(13) The Board will implement an adjustment formula and apply the following approach:

(a) Calculation of the appropriate return on common equity through the equity risk premium model, using the long term (30 years) Government of Canada bonds as the risk free rate. The Board will take an average of the daily closing yields on long term Canada bonds for the last five trading days in the month of October and the first five trading days in the month of November. The Government of Canada bond issues used by the Board will be the 8.00% Issue maturing on June 1st, 2027, and the 5.750% Issue maturing on June 1st, 2029. This average of ten trading days will be adopted as the forecast long term bond rate for the following year to be used in implementation of the formula.

(b) In estimating the appropriate return on common equity, the forecast long term bond rate for the following year will be subtracted from the current year's forecast value. The difference will be multiplied by a factor of 0.20 and the resulting product will be used to adjust the risk premium in the opposite direction. The adjusted risk premium will be added to the forecast long term bond rate to produce the rate of return on equity for the following year.

(c) The resulting rate of return on common equity, along with the appropriate rate of return on preferred equity and the embedded cost of debt will be factored into the determination of an allowed rate of return on rate base in a manner to be decided by the Board, upon hearing further evidence on accounting methodology in the Fall as to how this

can best be achieved.

(d) The mechanism will allow any change in the return on rate base to be determined by the Board through an automatic adjustment mechanism in November or December and any rate change would normally be effective on January 1st of the following year.

(e) The Board will issue an Order for revised rates to be filed for the following year if the change in the rate of return on rate base has the effect of moving the rate of return outside the previously approved range.

(f) With regard to a full cost of capital hearing, the Board determines that after the rate of return on rate base has been set for three consecutive years by application of the formula, and without a hearing, that a hearing will be convened in the following year.

E. FOR THE PURPOSE OF DETERMINING COSTS ARISING FROM THIS HEARING

(14) NLP shall pay the expenses of the Board arising out of the hearing, including the expenses of the Consumer Advocate as ordered by the Lieutenant-Governor in Council pursuant to Section 117 of the *Act.* The application for costs of Abitibi is denied.

L.S.

DATED at St. John's, Newfoundland, this 31st day of July, 1998.

David A. Vardy,
Chairperson.

Leslie E. Galway, C.A., M.B.A.,
Vice-Chairperson.

Raymond A. Pollett,
Commissioner.

G. Fred Saunders,
Commissioner.

John William Finn, Q.C.,
Commissioner.

Cheryl Blundon,
Clerk.