NEWFOUNDLAND AND LABRADOR

AN ORDER OF THE BOARD OF COMMISSIONERS OF PUBLIC UTILITIES

NO. P.U. 37 (1981)

IN THE MATTER OF THE PUBLIC
UTILITIES ACT, CHAPTER 322,
R.S.N. 1970, AS AMENDED.

AND

IN THE MATTER OF THE APPLICATION
OF NEWFOUNDLAND LIGHT & POWER CO.
LIMITED THAT:

(i) A rate base be fixed and determined;

(ii) A just and reasonable rate of return be determined;

(iii) Rates of depreciation be approved;

(iv) Allowance for working capital be approved;

(v) A schedule of rates tolls and charges with rules and regulations relating thereto be approved.

THE APPLICATION

On September 21, 1981 Newfoundland Light & Power Co. Limited (NLP) filed an application for an Order of the Board:

(i) fixing and determining the average rate base for the year ending December 31, 1980 at $203,229,000 and estimated average rate bases for the years ending December 31, 1981 and December 31, 1982 at $218,564,000 and $238,630,000, respectively.

(ii) Determining that a rate of return for 1981 be between 12.2% and 13.2% and for 1982 be between 12.7% and 13.7% and that a just and reasonable rate of return on common equity is 18%.

(iii) Determining that, effective January 1, 1982, rates of depreciation based on the unit summation procedure should be applied to all plant in service and not only to plant placed in service after 1978, and that the said rates shall be as follows:

ACCOUNT	RATE OF DEPRECIATION %
Generation	
Hydro	1.8
Steam	4.6
Diesel	3.7
Gas Turbine	4.0
Substations	4.3
Transmission	2.8
Distribution	4.1
Communications	6.5
General Property	2.9
Transportation	13.8

(iv) Fixing and determining that the allowance for working capital be taken as 2.5% of total operating expenses (including power purchases) plus current income tax.

(v) Approving a new schedule of rates, tolls and charges, including street and area lighting rates and rules and regulations relating thereto, to be effective on service supplied on and after December 1, 1981.

(vi) Approving the repeal of Regulation # 10 of the General Rules and Regulations and substituting therefore a revised Regulation # 10.

(vii) Granting such other relief as the Board may deem proper.

NOTICES APPEARANCES AND HEARINGS

At the same time as NLP submitted its application it filed with the Board the evidence and exhibits it intended to enter through its witnesses at the hearing. Public notice of the application was given in newspapers circulated in NLP's service territory and in the advertisement the Board gave notice that it would conduct a Pre-Hearing Conference on the application in its Hearings Room, St. John's on October 5, 1981.

The Pre-Hearing Conference was called by the Board to bring together NLP and the Intervenors of record at the time to give each of them an opportunity to indicate the nature of their evidence, to obtain or give notice of their intentions to obtain information, to indicate whether they intended to call expert witnesses and to agree on a time, date and place for continuation of the public hearing into the application. At the Pre-Hearing Conference Mr. D. C. Hunt, Q.C., appeared for NLP and the Newfoundland and Labrador Federation of Municipalities (FOM) was represented by its Executive Director (Acting), Mr. D. Smith.

It was decided to continue the public hearing in the Hearings Room of the Board at 10:00 a.m. on November 2, 1981 and as subsequent to the Pre-Hearing Conference advertisements were placed in the newspapers circulated in NLP's service territory, informing the public of the time, date and place for the commencement of the public hearing.

The application was heard by the Board on November 2, 3, 4, 5, 6, 16, 17 and 18, 1981.

The appearances were as follows:

D. C. Hunt, Q.C. Counsel for NLP

O. Noel Clarke, LL.B. Counsel for FOM.

During the hearing the Board was assisted by its counsel D. W. K. Dawe, Q.C. and R. G. Noseworthy of R. G. Noseworthy & Associates Ltd, the Board's Accounting consultants.

Evidence was given by the following officers and officials of NLP:

D. S. Templeton, Vice-President and General Manager

A. F. Ryan, Assistant General Manager

A. D. Cameron, President

G. J. Adams, Director of Finance

A. E. O'Reilly, Director and Assistant Manager of the Management Consulting Division of Montreal Engineering Company Limited.

K. S. Warr, Treasurer

C. R. Vivian, Manager of Customer Services.

NLP also called as a witness:

D. H. L. Buntain, Vice-President, Underwriting of Merrill Lynch, Royal Securities Limited.

FOM called as a witness:

P. J. N. Halpern, Professor of Finance and Economics, University of Toronto, Faculty of Management Studies.

The Board called as witnesses:

R. G. Noseworthy, R. G. Noseworthy & Associates Ltd.

Peter T. Brown, Vice-President, Dominion Securities Ames

Letters opposing the proposed increase in NLP's rates were received from the Gander District Progressive Conservative Association; T. J. Furey, St. George's; G. Giles, Swift Current; E. P. Hudson, Grand Falls; A. Steinbergs, Corner Brook and C. Locke, Grand Falls.

The Board has given careful consideration to all the evidence and representations submitted but reference will be made herein to only those matters required to explain the reason for its Decision.

BASIS OF APPLICATION FOR INCREASED RATES

In August, 1980 NLP filed an Application with the Board requesting a 4.7% increase in rates effective September 1 together with a further increase of 1.7% effective on November 1, 1980. The Board reduced the requested September 1 increase to 3.2%. After public hearings the Board issued Board Order No: P.U. 21 (1980) which confirmed the interim rate increase and approved a new schedule of rates effective November 1, which increased NLP's rates by 5% over the levels in effect prior to September.

In April of 1981 NLP filed an application with the Board requesting certain basic changes in the methods of setting rates for its street lighting customers and asking for approval of a new schedule of rates. While the Board approved the general principles proposed, the schedule of rates was not accepted and NLP was directed to introduce the new rates over a three year period.

June 4, 1981, at the request of the Board, NLP presented evidence regarding a proposal to rebase the fuel clause to a new level from the existing base price of $7.50/barrel. This hearing was adjourned sine die pending the availability of further information.

On August 14, 1981 Newfoundland and Labrador Hydro was permitted to increase the price that they charge NLP for purchased power from 20.7 mills to 23.97 mills per kwh. In order to cover the increase in operating expenses NLP filed for a 7% increase in its rates effective August 14, 1981. After a public hearing the Board issued Board Order No: P.U. 22 (1981) which ordered a new schedule of rates for NLP effective October 1, 1981 and incorporating a 7% increase.

By Order No: P.U. 21 (1980) the Board ordered that the rate base of NLP for the year ending December 31, 1979 be $192,064,000 and that the estimated average rate base for the year ending December 31, 1980 be $204,980,000 and the estimated average rate base for the year ending December 31, 1981 be $224,343,000.

Since the issuance of Order No: P.U. 21 (1980) NLP has added certain properties and retired others and various factors have affected the amount of the rate base as it was fixed and determined and NLP proposes that the average rate base for the year ending December 31, 1980 should be fixed and determined at $203,229,000, and that estimated average rate bases for the years ending December 31, 1981 and December 31, 1982 should be $218,564,000 and $238,630,000, respectively.

By Order No. P.U. 21 (1980) the Board determined that a just and reasonable rate of return on the average rate base as fixed and determined for NLP be in a range of 11.25% to 11.50% for the year 1981 and that a just and reasonable rate of return for the Applicant on average common equity in 1981 lay in the range of 14.5% to 15.25%.

Since the issuance of Order No. P.U. 21 (1980) there have been various factors which have affected the rate of return required by NLP so that it can earn annually a just and reasonable return on the rate base as fixed and determined by the Board and maintain a sound credit rating in the financial markets of the world. NLP submits that the rate of return required by it for 1981 lies in the range of 12.2% to 13.2% and for 1982 lies in the range of 12.7% to 13.7% and that a just and reasonable rate of return on average common equity is 18%.

By Order No. P.U. 20 (1978) the Board ordered that rates of depreciation calculated by the unit summation procedure should be applied to NLP's various classes of depreciable property with effect from January 1, 1979 on all plant placed in service on or after January 1, 1979 and that the rates of depreciation for all plant placed in service prior to January 1, 1979 should continue to be those prescribed in Order No. 34 (1977) which were calculated by the average life procedure.

By Order No. P.U. 21 (1980) the Board ordered that, as regards plant placed in service prior to January 1, 1979, the rates of depreciation based on the average life procedure should remain in effect until a new depreciation study had been completed and submitted to the Board.

Since Order No. P.U. 21 (1980) NLP has completed a new depreciation study and, as a result thereof, NLP submits that since rates of depreciation based on the unit summation procedure more nearly match the accrual of depreciation to the service lives of units of property included in any class of property than do rates of depreciation based on the average life procedure, then, effective January 1, 1982, rates of depreciation based on the unit summation procedure should be applied to all plant in service and not only to plant placed in service after 1978.

By Order No. P.U. 21 (1980) the Board in accepting NLP's method for calculating an allowance for working capital to be used in determining the rate base, authorized allowances of $2,807,000, subsequently changed to $2,684,000 for 1980 and $3,665,000 for 1981.

Since Order No: P.U. 21 (1980) was issued NLP has investigated its actual cash flows for 1980 and submits that for 1981 and 1982 the allowance for working capital should be taken as 2.5% of its total operating expenses (including power purchases) plus current income tax.

By Order No. P.U. 21 (1981) the Board, while rejecting an application by NLP for a new schedule of rates, tolls and charges and Rules and Regulations for Street and Area Lighting, indicated its agreement with the concept of uniform rates for such service and ordered that NLP develop a uniform rate structure that would encourage the use of a more efficient light and would be designed to be phased in over a three year period.

Since Order No. P.U. 21 (1981) was issued NLP has proceeded to develop the Schedule of rates, tolls and charges and Rules and Regulations for Street and Area Lighting.

By Order No. P.U. 21 (1980) and by Order No. P.U. 22 (1981) the Board approved schedules of rates, tolls and charges for NLP. NLP has reviewed the schedules in relation to conditions under which NLP now operates and expects to operate in the future and submits that the said schedules are not now adequate for NLP.

NLP has prepared estimates of its revenues and expenses for the years 1981 and 1982 and on the basis thereof believes that it will not be able to earn the just and reasonable return to which it is entitled under Section 77 of the Act. In order to earn in 1982 such a just and reasonable return it estimated it will require additional revenue of $12,898,000 and in order to earn in 1981 a return approaching such a just and reasonable return will require additional revenue of $590,000. NLP submits that these additional revenue requirements can be obtained by the implementation on December 1, 1981 of the schedule of rates, tolls and charges filed as Schedule "B" of the Application. The proposed rates would result in an overall increase of 8.9% in the rates approved in Order P.U. 22 (1981).

NLP submits that Regulation # 10 of the General Rules and Regulations of the Applicant set out in Part 1 of Section "C" requires some change and that therefore the same should be repealed and replaced by that set forth in Part 11 of Schedule "C" of the Application.

On November 16, 1981, NLP submitted revised financial forecasts as Consent # 8.

The forecasts took into account:

(1) Updating of the Financial Program and Interest Charges.

(2) 1981 numbers were revised to include October actuals and to incorporate changes arising from an October, 1981 review.

(3) 1982 numbers were revised to incorporate the results of the 1982 preliminary budget.

(4) 1981 and 1982 numbers were further revised to recognize changes arising from the November 12, 1981 Federal Budget. The corporate surtax will be extended to December 31, 1983 with a continuation of the 5% surtax for 1982 but reducing to 2.5% for 1983. Capital cost allowance claimable on most depreciable property acquired after November 12, 1981 will be reduced by one-half of the amount that previously was claimable in the year of acquisition.

The revised financial forecasts have been used in the findings of the Board.

TEST YEAR

NLP requested approval of a 8.9% increase on December 1, 1981 in its rates, tolls and charges. This was changed to 9.7% because of the revised forecasts submitted November 16, as Consent # 8. NLP stated that this increase would provide a just and reasonable rate of return in 1982 and a return approaching such a just and reasonable return in 1981.

NLP made its request for an increase in this manner so that the percentage increase in 1981 would be the percentage estimated to be required in 1982. As final rates cannot come into effect until December 1st., 1981, 1982 is the year of primary concern to both the customers and investors of NLP.

The Board is satisfied from the report of R. G. Noseworthy & Associates Ltd put in evidence as R.N. # 1 that reliance can be placed on NLP's forecast for the proposed test year.

Therefore the Board will adopt for the test year the calendar year 1982 as the most suitable prediction of the future relationship of revenues, expenses, rate base and rate of return.

FINANCIAL OBJECTIVES OF NLP

In NLP's rate hearing in September and October 1980 Mr. Cameron set out the financial objectives of NLP as follows:

(i) Maintain a debt ratio in the range of 50-55%, a common equity ratio of 30-35% and a preferred ratio of 10-15%.

(ii) Maintain an interest coverage on total debt in the range of 3.0 to 3.4 times and coverage of total debt interest and preferred dividends in the range of 2.0 to 2.4 times.

(iii) Improve the quality of NLP's earnings.

He stated that "These objectives have been set in the context of current market conditions and in all likelihood will require modification in the future as market conditions change. They are not bench marks that will remain unchanged for all time."

In the spring of 1980 the Dominion Bond Rating Service increased its rating of NLP's first mortgage bonds from B++ to A (high).

In the late fall of 1980 the Canadian Bond Rating Service increased its rating of NLP's first mortgage bonds from B++ to A.

Mr. Cameron testified that "NLP must now consolidate the position of its first mortgage debt in the A rating category in the present unusually difficult markets by ensuring that the levels it has attained in the financial ratios are improved".

He set out the financial objectives of NLP at the present time in the context of existing market conditions as follows:

(a) Attain a debt ratio in the range of 45 to 50 per cent, a common equity ratio of 35 to 40 per cent, and a preferred ratio of 10 to 15 per cent.

(b) Attain an interest coverage on total debt in the range of 3.4 to 3.8 times and coverage of total debt interest and preference dividends in the range of 2.1 to 2.5 times.

(c) Improve the quality of NLP's earnings.

(d) Improve the marketability of NLP's common equity.

He pointed out that "at the moment we are in an extremely unsettled debt market in which it is difficult for NLP to finance under acceptable terms and conditions. It is quite possible that if and when a long term debt market emerges again, the conditions required of successful borrowers will be even more rigorous. As it is, these objectives include a lower debt ratio, a higher common equity ratio and improved coverages as compared with those which NLP advised at the 1980 rate hearing. In addition, at the time the market value of NLP's common shares was at a satisfactory level. Now, for the first time since 1977, its common shares are selling on the market at less than book value, and we have to be concerned about their marketability."

Mr. Cameron submitted schedules comparing NLP's ratios with other Canadian investor owned utilities.

Mr. Buntain pointed out that a public utility must compete for funds in the marketplace. Investors attempt to assess the risk-reward relationships of various alternatives prior to committing their funds. If the utility cannot offer a competitive return for a given level of risk, especially when compared with other Canadian utilities, it will be unable to attract sufficient funds to carry out its plans.

A capital raising program must be supported by an adequate return so as not to impair the sound financial structure of the Company. If the permitted rate of return on common equity is not adequate to attract new common equity, the financial integrity of the Company will eventually weaken.

Financial integrity refers to the ability to cover interest and other obligations of the trust indenture securing long term debt, the ability to satisfy dividend requirements and the obligations to preferred shareholders and to attract debt and equity capital at reasonable costs. It also implies fairness to common shareholders.

Mr. Buntain submitted schedules which he summarized as follows:

NLP's financial condition has continued to improve since the last hearing. The debt ratio has continued to decline from 52.2% at December 31, 1979 to 49.6% at December 21, 1980. The common equity component of capitalization has continued to increase from 33.4% to 34.7% over the same time period. The decrease in the debt ratio has been partially offset by the increase in the preferred equity component from 14.4% in 1979 to 15.7% in 1980.

From 1979 to 1980 the interest coverage improved from 3.0x to 3.4x. The total fixed charges coverage (interest and preferred dividends), has continued its steady improvement from 2.2x to 2.3x.

Although the coverages and the debt/equity ratios have improved in terms of magnitude, the change has not been that dramatic relative to changes within the rest of the electric utility industry. In the electric utility industry, debt ratios have decreased from an average of 48.7% to 48.1% from 1979 to 1980. Common equity for the industry dropped from 36.9% to 36.0% after increasing steadily in previous years. This decrease in the common equity component was due to a substantial increase in the preferred equity component. NLP's debt ratio still exceeds that of the industry average, while the common equity has not reached the level of the industry. Interest coverage for electric utilities dropped from 3.6x to 3.4x and total fixed charges coverage from 2.5x to 2.4x between 1979 and 1980. It is important to realize that NLP's coverages have been increasing at the same time as industry averages have been decreasing. However NLP's interest coverage has just reached that of the industry average and the total fixed charges coverage is still slightly less than the average of the electric utility industry.

Cash flow as a percentage of capital expenditures has been maintained at a level of 59.4% compared to the 1979 level of 59.5% after experiencing a period of continual improvement. Relative to the industry, NLP fared well because of the decline in the industry average figure from 40.3% to 31.5% after an overall steady increase in previous years.

Mr. Buntain asserted that the financial performance of NLP in the near term will affect its ability to raise capital in the future. Investors look at historical results in order to assess investment merit. For NLP's capital to be viewed as an attractive and secure investment, it is important that it achieve satisfactory coverage ratios, exhibit consistent earnings growth and maintain a sound capital structure. NLP currently has a good record in this respect and it is necessary that it maintain this record.

Mr. Brown stated that he believes the capital markets would be favourably disposed towards ratios that were at the upper end of NLP's proposed debt and preferred targets and at the lower end of its common equity position and that ratios approximating those estimated for 1981 i.e. debt 49%, preferred 17% and common equity 34% would be acceptable.

He pointed out that NLP's financial structure and fixed obligation financial coverages have recorded steady improvement over the last few years and are appropriate today for an A rated utility in Canada. NLP must exhibit and maintain a strong overall financial performance, maintain its "A" grading on its debt securities and improve the standing of its common shares in the market.

Mr. Brown believes that a significant improvement in per common share earnings in conjunction with the maintenance or some marginal improvement in the recent capitalization and earnings coverage ratios would confirm the recently upgraded debt and preferred ratings.

DEPRECIATION

During the hearing NLP submitted through A. E. O'Reilly a depreciation study by Montreal Engineering Company Limited.

The study is based on depreciation calculated on a straight line basis using both the average life and unit summation procedures. In conformity with the Board Order P.U. 20 (1978), one set of calculations was made by applying the average life procedure to all plant placed in service before January 1, 1979 and the unit summation procedure to all plant placed in service on or after January 1,1979. A second set of calculations was made using the unit summation procedure for all plant in service.

The study gave estimates of accumulated depreciation at December 31, 1980 of $65,736,000 following the practice approved in 1978 of calculating depreciation using a combination of average life and unit summation procedures and of $81,695,000 using the unit summation procedure for all plant in service. Accumulated depreciation recorded in NLP's accounts at December 31,1980 was $68,943,000. The estimate of accumulated depreciation calculated following the practice first approved by the Board in 1978 is 4.7% lower than the amount recorded in the accounts.

In Order No. P.U. 21 (1980) the Board ordered that rates of depreciation approved in Order No. P.U. 20 (1978) should remain in effect until a new depreciation study has been completed and submitted to the Board for approval.

NLP is now applying to have rates of depreciation based on the unit summation procedure apply to all plant in service effective January 1, 1982.

The rates of depreciation are shown below. This schedule lists the current rates of depreciation together with the rates of depreciation determined in the study. The first two columns of rates are those first approved in 1978 with the average life based rates of depreciation being applied to pre 1979 property and the unit summation based rates to post 1978 property. The remaining rates are those determined in the study with the next two columns of rates being rates based on the 1978 practice and the final column the rates based on the unit summation procedure for all property. This last column shows the rates NLP has asked the Board to approve effective January 1, 1982.

Composite rates of depreciation on depreciable property are shown on this schedule. The composite rates are 3.5% for both sets of rates applied under the 1978 practice and 3.9% under the proposed unit summation rates.

NEWFOUNDLAND LIGHT & POWER CO. LIMITED

RATES OF DEPRECIATION

	Current Rates - %		Rates Determined in Study - %		
			Practice Approved in 1978		
Class of Property	Average Life	Unit Summation	Average Life Pre 1979 Property	Unit Summation Post 1978 Property(1)	Unit Summation for All Property
Steam(2)	3.3	3.3	4.6	4.6	4.6
Hydro(2)	2.0	2.0	1.8	1.8	1.8
Diesel(2)	3.5	3.5	3.7	3.7	3.7
Gas Turbines(2)	4.0	4.0	4.0	4.0	4.0
Substations	3.3	4.6	3.4	5.4	4.3
Transmission	2.6	2.8	2.5	3.1	2.8
Distribution	3.5	4.0	3.2	5.1	4.1
General Property	3.2	3.4	2.8	2.7	2.9
Transportation	15.1	15.4	12.3	16.9	13.8
Communications	6.2	6.3	6.2	8.4	6.5
Composite Rate	3.5		3.5		3.9

Notes: (1) The unit summation rates are based on data to 31 December 1980 and would require recalculation for each succeeding year.
(2) The life span method was used for these classes of property.

The composite rates of depreciation for 1982 and 1983 are calculated to be 3.6% using current practices and rates and 3.9% using the unit summation based rates from the study.

The increase in revenue requirement is as follows:

	Increase in Depreciation Expense	Rate of Income Tax	Increase in Revenue Requirement
	($'000)	(%)	($'000)
1982	904	51.0	1,845
1983	866	51.0	1,767

The above figures overstate the increase in revenue required as the unit summation based rates of depreciation now in effect for post 1978 property were calculated on the basis of all plant in service rather than post 1979 plant to which they applied. If the unit summation calculations had been based on post 1978 plant only, the rates of depreciation would have been higher.

During the hearing Mr. O'Reilly prepared figures which estimate that the actual increase in revenue requirement would be as follows:

	Increase in Depreciation Expense	Rate of Income Tax	Increase in Revenue Requirement
	($'000)	(%)	($'000)
1982	610	51.0	1,245
1983	477	51.0	973

The increase in depreciation expenses is estimated to be $350,000 in 1984, $307,000 in 1985, $286,000 in 1986 and $225,000 in 1987 based on plant balances used in the 1982 financial forecast and on projected plant balances beyond 1982.

If the depreciation rates proposed by NLP are approved it will only be necessary to monitor the rates from year to year between depreciation studies at a annual cost of between $4,000 to $6,000 since the composite rate of depreciation calculated from year to year using the unit summation procedure for all plant does not tend to vary.

However if the current practice of applying unit summation based rates to post 1978 property only is continued, it will be necessary to recalculate the rates of depreciation each year since the rates will vary from year to year, tending to decline over time. One possible method of doing this would be to apply the rates calculated using actual data from one year to the succeeding year. Alternatively the final rate of depreciation for each year could be calculated during the second half of the year using a combination of actual and forecast data. The cost of the first alternative would be about $4,000 to $6,000 per year but the second would be relatively expensive, possibly in the order of $60,000 to $120,000.

Mr. Clarke argued that if the unit summation procedure is applied to all plant in service the increase in the depreciation expense should be charged to the accumulated depreciation recorded in NLP's accounts each year until the excess over the estimate of accumulated depreciation is eliminated.

The Board accepts the depreciation study by Montreal Engineering Company Limited submitted by Mr. O'Reilly.

The Board orders that NLP submit its next depreciation study in 1986.

Because of the change in the capital cost allowance announced in the Federal budget and also because the annual income tax expense under the tax allocation procedure is levelized, the Board is inclined to the view that the depreciation expense should also be levelized.

As a result, the Board will not approve any change in the present depreciation policy and puts NLP on notice that it will be required to justify at the next rate hearing, the use of the tax allocation procedure in conjunction with the unit summation procedure. In the meantime the present procedure for calculating the annual depreciation expense will be continued.

NLP is directed to recalculate the rates of depreciation each year by applying the rates calculated using actual data from one year to the succeeding year.

WORKING CAPITAL ALLOWANCE

During the 1979 hearing Mr. Adams submitted into evidence a study of actual cash flows. The study was concerned with a more precise determination of the Allowance for Working Capital to be included in rate base than that derived from the traditional formula of one and a half months operating expenses which had been used in the past. The study was designed to calculate NLP's continuous average investment in operating expenses not simultaneously recovered from the revenue stream supplied by its customers. This was done by separating expenses into elements with like characteristics and computing the annual average daily investment for each element by means of a time correlation of the cash outflows for expense with cash inflows from revenue starting from the point of coincidence of the underlying transactions.

Board Order No. P.U. 21 (1980) accepted the method used by NLP for calculating a working capital allowance to be a more accurate way to estimate the amount to be allowed and accepted the amount of $2,807,000 for 1980 and $3,665,000 for 1981 as the allowance for working capital to be used in calculating the rate base for those years.

These amounts were 3% of NLP's then estimated operating expenses plus income tax. When NLP's actual expenses and tax for 1980 were determined to be $89,455,000 rather than the estimated $93,554,000 the Board in Order P.U. 10 (1981) revised the allowance to $2,684,000 or 3% of the actual amount.

Board Order P.U. 10 (1981) was issued on April 7, 1981, before the actual study for 1980 was completed in August, 1981 as it is necessary that NLP's annual report to the Board be presented on or before April 1, following each fiscal year.

The results of the study indicated the actual percentage of average daily investment was 1.75% of 1980 operating expenses plus income tax.

Mr. Adams presented evidence and schedules which carried forward the operating cash flow analysis presented in 1979, through to the end of 1980, based on balances carried forward from that study and actual data collected during the year.

Mr. Adams' schedule 16 calculates the estimated required working capital allowance to be 2.55% of total operating expenses and income tax in 1981 and 3.14% in 1982.

He recommended that the Board accept 2.5% for both years as he believed that the forecast of 3.14% for 1982 should be discounted to the 1981 amount since it does not recognize the effect of the proposed rebasing of excess fuel cost.

The report of R.G. Noseworthy and Associates states that:

"We feel the study for 1980 showing an average daily investment of 1.75% presented by Mr. Adams is still a more precise way to determine the allowance and the Board should continue to approve the dollar amount of the allowance calculated by using the percentage rate determined from the study. The allowance should be treated the same as plant in service and be estimated and approved for future years, but adjusted when the actual results are available.

If the actual investment rate of 1.75% were used for 1980 the rate of return on rate base would be 11.21% instead of 11.14%.

It is anticipated that the 1981 investment rate will rise from 1.75% to 2.55% partly because of the effect of the mail strike on the cash flow. This rate could be used to determine the estimated allowance for 1981 and 1982 but should be finally approved when the actual average rate base is approved and the actual rate of investment in working capital is determined."

Mr. Noseworthy testified that it should be possible for NLP to use a period other than the calendar year for estimating its actual investment in working capital.

The Board agrees with Mr. Noseworthy and orders NLP to calculate its Working Capital Allowance for the 12 months ending June 30, each year commencing in 1981. This will enable NLP to have its actual percentage of average daily investment available prior to making its report to the Board.

The Board will order NLP to use 2.5% of total operating expenses (including power purchases) plus current income tax to determine the estimated allowance for working capital in 1981 and 1982. But the actual investment for the 12 months ending June 30, each year is to be used for reporting the annual rate of return on rate base.

CAPITAL EXPENDITURE BUDGET

The total number of customers supplied at the end of 1980 was 156,595. This represents a growth of 2.4% over 1979 as compared with the forecast figure of 2.7%. The growth rate of 2.4% matches the growth rate for 1979 which was a record low for NLP. Included in the growth for 1980 was the connection of the customers in the Grand Le Pierre-English Harbour East and Gallants-Spruce Brook areas. These areas were previously supplied by the Power Distribution District of Newfoundland. NLP's forecast projects an increase of 2.7% in the number of customers in 1981 and 2.6% in 1982.

The actual growth in sales in 1980 was 5.9%, however, when the results are normalized to remove the effects of weather the growth was only 1.6%. It is necessary to remove the effects of weather to obtain the true picture since approximately 40% of NLP's load is used for space heating.

The annual normalized use of electricity for domestic customers with electric heating has declined from 22,416 kilowatt hours (kwh) in 1978 to 21,076 kwh in 1980 and is estimated to decline to 20,865 kwh in 1981 and 20,382 kwh in 1982. This reduction in consumption reflects conservation effort because of rising electricity costs and improved insulation.

In 1976 and 1977, 9% of NLP's total requirements was produced from thermal sources. This increased to 19% in 1978 and was 30% in 1979 and 1980. It is estimated to be 30% in 1981 and 38% in 1982.

The bulk of NLP's energy requirements is supplied by Newfoundland and Labrador Hydro (Hydro) which supplied 82% in 1980 and an estimated 84% in 1981 and 87% in 1982.

Growth in kwh sales is expected to be 0.9% in 1981 and 8.4% in 1982 in actual terms (5.4% in normalized terms).

CAPITAL EXPENDITURE SINCE 1975

	1975	$30,468,000
	1976	$32,465,000
	1977	$28,919,000
	1978	$19,701,000
	1979	$20,528,000
	1980	$23,170,000
projected	1981	$30,500,000
projected	1982	$34,000,000

The actual 1980 capital expenditures are 6.1% below the forecasted expenditure of $24,686,000. Mr. Ryan explained that this was due to the fact that the growth in customers only reached 2.3% rather than the 2.7% forecast.

Mr. Ryan submitted into evidence the following information.

Board Order No. P.U. 27 (1980) authorized NLP to spend $33,290,000 during 1981. As a result of a review of that budget in preparation for this application the original total was reduced to $31,445,000. The total 1981 capital budget exceeded the 1980 budget by approximately 8 million dollars. In addition to the increase due to inflation the 1981 forecast has increased as a result of the inclusion of three major projects. Under Production NLP is replacing the penstocks at Lawn and Topsail plants at a cost of $2,284,000. In the area of Substations NLP is building the new System Control Centre in St. John's at a cost of $1,350,000, $1,130,000 of which is to be expended in 1981. The third project is the construction of a new 138 kv transmission line from Gander to Bishops Falls, a distance of 80 kilometers for a total cost of approximately $3,337,000.

The capital forecast for 1982 indicated a further increase of approximately \$6,000,000 to \$37,119,000 with approximately half of this increase caused by inflation. Major projects contributing to the increase in 1982 include initial work on the construction of a new hydro development on the Southern shore with an ultimate cost of \$3,282,000 and a 1982 expenditure of approximately \$1,250,000. NLP is also budgeting to rebuild the generating station at Lawn on the Burin Peninsula with a 1982 expenditure of \$470,000 and a total cost of \$840,000. NLP is planning to replace two old hydro units at the Lookout Brook plant near Stephenville for approximately \$1,050,000 with a 1982 expenditure of \$525,000. At Lookout Brook NLP is investigating the installation of a new plant upstream of the existing installation for a total cost of \$2,775,000 with a 1982 expenditure of \$900,000. On the Burin Peninsula NLP plan to extend the 138 kv line from Linton Lake to Salt Pond for approximately \$880,000.

Recognizing the concern expressed at last year's hearing that NLP's capital budget is usually underspent and also recognizing the fact that with its approach to budgeting this situation was not likely to change, NLP decided that it should examine the budget results again before including them in its financial forecast.

When preparing the capital budget, expenditures are reviewed (and usually reduced) at five different levels of NLP. When the completed budget is submitted to the Public Utilities Board for approval it includes sufficient funds to provide adequate service, making allowance for any factors which may reasonably be anticipated, always remembering that a large percentage of NLP's capital expenditures is not within its control. NLP has to respond to the requirements of new customers with little advance knowledge and has to spend whatever funds are required to deliver adequate service.

Once the budget is prepared however, and as the year progresses the requirement for each project is reassessed based on more up to date information. These reviews usually result in some projects being deferred with a resultant reduction in capital expenditures. This approach which ensures that nothing gets built unless it is absolutely required is the basis of NLP's overall strategy to keep capital expenditures at the lowest possible level consistent with providing reasonable and adequate service. To do otherwise would be to inflate its rate base and increase rates.

In addition to projects which are deferred by decision of NLP, many projects cannot be completed for various reasons; delivery problems, land acquisition problems, problems related to the unanticipated shortage of construction crews all contribute to the situation which makes it extremely difficult to complete all the work listed in the budget.

In order to arrive at a more realistic level for capital expenditures NLP reviewed the capital budget as presented and identified certain items which for various reasons might be deferred or delayed. NLP also reviewed the historic rate of completion of its budget. Based upon this review it was decided to reduce the 1981 estimates by 3% and the 1982 estimates by 4%. After applying these reductions the forecasts were rounded to $30,500,000 for 1981 and $35,650,000 for 1982. The 1982 figure was further reduced to $34,000,000 during the hearing.

The funds required by NLP for 1981 and 1982 and its external financing plans are shown below.

Funds required	1981	1982
Capital Expenditure	$30,500,000	$34,000,000
Preferred Dividends	2,937,000	4,005,000
Common Dividends	5,971,000	7,040,000
Reduction in long term debt	1,862,000	2,342,000
Reduction in bank loans	8,199,000	5,284,000
OTHER ITEMS*	7,577,000	-1,817,000
	$57,046,000	$50,854,000
less: funds generated internally	25,677,000	32,296,000
TOTAL EXTERNAL REQUIREMENT	$31,369,000	$18,558,000

* Includes repayment of notes payable, purchase of preferred shares, contributed plant-Government, increase in deferred charges, increase in working capital.

External Financing Plans		
Bond Issue	$17,000,000	10,000,000
Preferred Shares	10,000,000	
Common Share Rights Issue		6,300,000
OTHER ITEMS*	4,369,000	2,258,000
TOTAL	$31,369,000	$18,558,000

* Includes proceeds from employee share purchase, Dividend reinvestment plan, miscellaneous, contribution in aid of construction, contribution rural, salvage of plant retired.

The Board finds that NLP's estimated expenditure for capital construction in 1981 and 1982 is required to enable it to meet its service obligations.

INTEREST DURING CONSTRUCTION

R. G. Noseworthy and Associates Ltd reported that NLP has adopted the following policy:

Interest during construction is charged on work orders in the following categories which have a construction period in excess of three months:

(1) Distribution Work Orders with an estimated expenditure of $50,000 or more.

(2) Other Capital Work Orders with an estimated expenditure of $10,000 or more.

This interest is calculated mainly by applying to the cost to date of the previous month an interest rate not exceeding the maximum rate of return on rate base and to the current month costs an interest rate not exceeding one-half the maximum rate of return on rate base.

Interest is also applied to all other distribution work orders at a rate not exceeding the maximum rate of return on rate base on an estimated monthly average of Distribution Work-In-Progress.

The current rate used is 11.5% which is the top of the approved range of rate of return on rate base.

Mr. Noseworthy submitted that the Board should review this policy in the light of the present interest costs and the extent of NLP's capital budget. He testified that while the annual reports of Canadian Utilities indicate it is generally accepted that the rate used to calculate interest during construction is related to the cost of long term debt and/or cost of equity capital, it is obvious from a review of the cash flow reports of the Applicant, that work in progress is financed from current borrowing from banks at current interest rates and said that

NLP should show why operations are charged with interest on current borrowing at short term rates while capital projects are limited to an interest rate equal to the rate of return on rate base.

He added that should the Board decide that NLP may continue to capitalize interest at its rate of return on rate base, the 1981 interest should be charged at the top of the rate base approved by the Board in its Order on this application.

Mr. Hunt argued that NLP has consistently followed what it feels is normal regulated utilities practice for investor owned utilities to include an imputed cost of equity in the capitalized cost of funds used for construction and deemed the allowed rate of return on rate base to be a reasonable rate to use for calculating interest charged to construction. This would be the cost to the customer if construction work in progress were included in the rate base.

The Board has concluded that it would be more appropriate to use the mid point of the rate of return on rate base on the percentage of funds generated internally and used for net capital expenditures and the prime bank rate on the balance of the funds used. This calculation is to be determined monthly.

In 1976 the Public Utilities Act was amended to add paragraph fA to subsection (2) of Section 75. It reads:

> "an allowance, as determined by the Board for the cost of a plant of a public utility under construction"

may be included in fixing a rate base.

NLP is directed to submit, for consideration by the Board, at the next rate hearing, an estimate of its average plant under construction, as an alternative to including in income "Interest During Construction".

RATE BASE

R. G. Noseworthy & Associates Ltd. Report to the Board stated that a review of the code of accounts and the accounting system has confirmed there has not been any major changes from that approved by the Board in 1978.

The Board therefore accepts the average rate base of $203,229,000 for the year 1980 filed by NLP as Exhibit K.S.W. # 1, Schedule 1. After adjusting the 1981 and 1982 rate bases for the changes outlined under the headings depreciation and interest during construction, the Board finds that the estimated average rate base for 1981 is $ 218,354,000 and for 1982 is $239,162,000.

RATE OF RETURN

Capital Structure

NLP's net investment in property and assets used and useful in rendering electrical service constitutes the rate base. This investment includes long term debt, demand notes payable to chartered banks, preferred shares and common equity. The just and reasonable return to which NLP is entitled is influenced therefore, by the ratio of each of these components to the total investment, the embedded cost of debt and preference shares, the earnings required on common stock to maintain its marketability at a price at least equal to its book value and provide adequate coverage of interest and of preferred dividends.

NLP's average capital structure is shown below:

Newfoundland Light & Power Co. Limited

Average Capital Structure

	Total Debt %	Preference Shares %	Common Equity %
Actual			
1977	55.3	14.7	30.0
1978	54.4	13.1	32.5
1979	53.3	13.5	33.2
1980	50.8	15.1	34.1
Estimate as proposed by NLP			
1981	49.01	17.06	33.93
1982	46.93	17.34	35.74

For the purpose of determining a just and reasonable rate of return on rate base NLP proposed that the Board use NLP's estimated average capital structure for 1981.

Embedded Cost of Capital

NLP's embedded cost of total debt in 1980 was 9.68% and with the revenue and capital structure to be approved by the Board the estimated cost of average long term debt in 1981 and 1982 will be 10.90% and 10.76% respectively. NLP issued $7,000,000, 14¼%, Seven (7) year first mortgage bonds in January 1981 and plans an issue of $10,000,000 in Seven (7) year first mortgage bonds on December 1, 1981 at a coupon rate of 18¼% and a $10,000,000 issue of 17% first mortgage bonds August 1, 1982. For reasons given below on Page 72 there will be a further borrowing of $6,300,000 in 1982.

The embedded cost of average Preferred Equity in 1980 was 8.47% and the estimated cost of average Preferred Equity in 1981 and 1982 is 7.83% and 9.66% respectively. NLP obtained $10,000,000 in October, 1981 through an issue of preferred shares retractable at the end of 3 to 8 years at a dividend rate of 14¼%.

In 1981 NLP expects to receive $815,000 from the employee share purchase plan and the dividend investment plan and in 1982 expects to receive $1,130,000 from these plans.

In November 1982 NLP proposes to issue, 1 for 12 common shares as a rights issue which is forecast to raise $6,300,000 of common equity.

The cost of debt and preferred equity capital is negotiated in the capital market and to a large degree is beyond the control of NLP because of:

(i) the need to finance the capital construction program approved by the Board to meet the demand from customers, and

(ii) the conditions in the capital market at the time of issue.

The Board has taken into consideration all of the foregoing and has determined that 10.90% in 1981 and 10.76% in 1982 for total debt, and 7.83% in 1981 and 9.66% in 1982 for preferred shares are fair and reasonable cost rates to use in determining a just and reasonable Rate of Return for NLP.

Common Equity

Mr. Cameron testified that since the underwritten issue of common shares in 1977, which raised $11,625,000, NLP has been able to maintain an acceptable common equity ratio without having to market common equity securities. The additional common equity investment required has been obtained from the retention of earnings and proceeds from the Dividend Reinvestment Plan, Employee Share Purchase Plan and Stock Dividend Programme. NLP will require an additional $15.5 million in common equity by the end of 1982, and it will be necessary to supplement these sources by a common share rights issue estimated at $6.3 million.

Mr. Cameron testified that all of these stock purchase programmes, as well as the retention of earnings, are dependent upon the shareholder expecting a fair return on his additional investment in NLP and growth in earnings in his investment. If the common shareholder feels he is not being fairly treated and his return is inadequate, his perception will lead him to withdraw from the plans in favour of alternative investments and result in decreasing participation. Similarly, if the shareholder sees inadequate earnings, he is going to be unwilling to see the earnings to which he is entitled retained in NLP earning a lower return than he would earn with the cash which he might have received in dividends. The prospect of a common share rights issue heightens the need for NLP to show adequate earnings on its common equity, in the first place, to maintain the market price of the shares above book value to avoid dilution and, in the second place, to attract the shareholders to exercise their rights to purchase additional shares in NLP.

This year, particularly the past summer and more particularly at the present time, the financial markets have been in a condition that makes it extremely difficult to predict the required returns which will be necessary in order to permit companies to raise equity capital. The changes that have occured have been so rapid that historical statistics have been out of date within the period of a month, the Bank of Canada average yield on long term Government of Canada bonds having increased from 12.96 per cent in January to 17.07 per cent in July and, in fact, from 15.03 per cent in June to 17.07 per cent in July, and the fall of the Company's common share market price from $22.25 in July to $17.50 on September 17. Accordingly, the customary first approach of examining rates of return that have been ordered by regulatory commissions and that have been actually earned by public utilities in the recent past offers very little indication of the returns that would be required for financing today.

In attempting to deal with this difficult situation, unpredictable on the basis of past data, Mr. Cameron chose to place the most weight on an estimate of the rate of return on common equity that would be necessary in order to permit NLP to sell common shares on a rights basis at this time. Actually NLP's financial plan calls for a rights issue in 1982. However, rather than attempt to predict market conditions in 1982 he took NLP's normal approach of basing his estimate on current conditions. It is necessary for NLP to issue common shares as a rights issue since the market price of the shares has now dropped well below the book value. The average market price of the common shares in the month of

August was \$18.88 per share, and the book value at the end of August 1981 was \$19.81 per share. In order to preserve the integrity of the shareholders' investment, NLP cannot make a public issue of common shares at below book value.

Mr. Cameron estimated the cost to NLP in terms of the rate of return on common equity required in order to sell the rights issue to be 19.2% using a 8% dividend yield and a \$1.50 dividend per share at a 50% payout of earnings was deduced after examination of the dividend yields of the group of electric and gas public utilities selected for analysis in his schedule 16, omitting those located in Ontario and Quebec.

He stated that this calculation supports NLP's current indicated dividend of \$1.50 per share but that under current market conditions, even this is insufficient as NLP's shares are selling on the market at less than book value.

Mr. Cameron expressed the opinion that considering the extremely rapid escalation in the cost of debt, rates of return on common equity being applied for currently and supported by a number of decisions already handed down and rates of return actually earned, the minimum rate of return on NLP's average common equity that would be considered adequate by the market under current conditions is 18 per cent. Due to the extreme difficulty of predicting required rates of return even from day to day at the present time, and the fact that he has given the greatest weight to an estimate of the cost of raising a common share rights issue, he has not attempted to set a range about this rate of return on common equity.

He pointed out that the yields required on NLP's additional debt and preference share financing are significantly higher than the average embedded cost of NLP's existing financing and it is this fact together with the presently required higher rates of return on common equity that have forced NLP to conclude that the present range of rate of return on rate base is inadequate.

Mr. Buntain testified that although the coverages and the debt/equity ratios of NLP have improved in terms of magnitude, the change has not been that dramatic relative to changes within the rest of the electric utility industry, where debt ratios have decreased from an average of 48.7% to 48.1% from 1979 to 1980. At December 31, 1980 NLP's debt ratio was 49.6%. Common equity for the industry dropped from 36.9% to 36.0% after increasing steadily in previous years. At December 31, 1981 NLP's common equity was 34.7%. This decrease in the common equity component was due to a substantial increase in the preferred equity component. NLP's debt ratio still exceeds that of the industry average, while the common equity has not reached the level of the industry. Interest coverage for electric utilities dropped from 3.6x to 3.4x (NLP increased from 3.0x to 3.4x) and total fixed charges coverage from 2.5x to 2.4x between 1979 and 1980 (NLP increased from 2.2x to 2.3x). It is important to realize that NLP's coverages have been increasing at the same time as industry averages have been decreasing. However NLP's interest coverage has just reached that of the industry average and the total fixed charges coverage is still slightly less than the average of the electric utility industry.

Cash flow as a percentage of capital expenditures has been maintained at a level of 59.4% compared to the 1979 level of 59.5% after experiencing a period of continual improvement. Relative to the industry, NLP fared well because of the decline in the industry average figure from 40.3% to 31.5% after an overall steady increase in previous years.

During the last hearing the market testimony indicated that considerable concern regarding inflation and the state of the economy existed and that the raising of substantial amounts of long term debt in the future would be extremely difficult. Since the last hearing the conditions in the capital markets have deteriorated further.

The major implication of the uncertainty associated with the rapid movements in bond yields concerns the availability of long term debt capital. The hesitancy to commit to fixed rates has substantially decreased the supply of long term, fixed coupon debt. In addition, institutional and other investors have chosen to upgrade their portfolios and have become highly selective with respect to the quality of the borrower and the terms of new issues. No single issuer which was rated less than "A" by both rating agencies issued long term (greater than 10 years) debt securities to the public in 1980. This trend has continued into 1981. The difficult markets make the public long term financing of lower rated companies virtually impossible.

Therefore, it is imperative that NLP be allowed to earn a satisfactory rate of return on common equity to ensure that its coverage ratios do not deteriorate. Deteriorating coverages could result in reduced credit ratings which would have a serious effect on NLP's ability to raise debt capital on a reasonable basis.

The financial performance of NLP in the near term will affect its ability to raise capital in the future. Investors look at historical results in order to assess investment merit. For NLP's capital to be viewed as an attractive and secure investment, it is important that it achieve satisfactory coverage ratios, exhibit consistent earnings growth and maintain a sound capital structure. NLP currently has a good record in this respect and it is necessary that it maintain this record. In order to be able to raise common equity in the future, it will be necessary for NLP to have the financial results that would support the market price of its stock. As the market price of the common shares increases, a proposed rights offering to raise common equity would become more attractive for NLP. A strong equity base is necessary to enable it to raise debt and preferred equity when it is required. Increased growth in the Province due to successful oil and gas exploration could substantially increase the requirements for capital expenditures by NLP, thus necessitating additional external financing.

At existing rates NLP's forecasts in Consent # 8 indicate the following:

	For the 12 months ended Dec. 31		
	Actual	Forecast	
	1980	1981	1982
Interest Coverage - long term debt	3.8x	3.5x	2.8x
Interest Coverage - total debt	3.4x	3.0x	2.6x
Earnings Coverage - total interest & preference dividends	2.3x	2.1x	1.7x
Earnings per common share	$2.60	$2.71	$2.08
Return on common equity	14.41%	14.23%	10.22%

Investors would consider these coverages inadequate, particularly when one considers the deterioration of the figures over time. NLP's credit rating could suffer which would have the effect of increasing the yields demanded by investors which in turn would further impair the coverages. The marketability of the common, preference and debt securities of NLP would suffer.

The earnings per share figures are unsatisfactory and the rate of return on common equity insufficient to attract investment capital. Thus the price of its common shares would drop. NLP would then find it difficult to raise the additional common equity capital required for it to have the necessary financial flexibility in difficult markets.

At proposed rates NLP's forecasts in Consent # 8 indicate the following:

	For the 12 months ended Dec. 31		
	Actual	Forecast	
	1980	1981	1982
Interest Coverage - long term debt	3.8x	3.6x	3.9x
Interest Coverage - total debt	3.4x	3.1x	3.9x
Earnings Coverage - total interest & preference dividends	2.3x	2.1x	2.5x
Earnings per common share	$2.60	$2.79	$3.83
Return on common equity	14.41%	14.60%	18.00%

In Mr. Buntain's opinion, investors would judge these results to be satisfactory under current market conditions. The strong coverage ratios in 1982 reflect a return to 1980 levels, which he believes are necessary to the retention of the "A" rating on the First Mortgage Bonds. The increased earnings per common share and the resultant yield forecast for 1982, should be sufficient to enable the Company to issue shares via a rights issue in late 1982 at a price equal to or greater than book value.

The financial condition of NLP has improved in recent years. This has resulted in the upgrading of its credit rating. The improvement in financial condition and credit rating is an achievement that will be maintained if a satisfactory rate of return on common equity is allowed. Such a return will permit NLP to remain competitive in the financial market place when it must raise additional funds that are required for its capital expenditure programme.

The strength of common equity in NLP's capital structure is particularly important in difficult financial markets because it provides the financial flexibility for future debt and preferred equity financing. A rate of return on common equity must be allowed that will be sufficient to support NLP's earnings and thus the market price in order that its financial condition is strong enough to raise the additional common equity it will require in 1982.

On the basis of the competitive rates of return available from investments with comparable risk, Mr. Buntain believes that an appropriate rate of return on common equity for NLP would be in the 18.00% to 18.50% range.

Mr. Brown testified that the growth in earnings per common share of NLP over the last several years has been unsatisfactory and well below that experienced by industry in general. The low growth in earnings per share reflects a modest decline in the return on equity.

The growth in NLP's dividend has on the surface seemed reasonable however the higher growth in dividends per share compared to earnings per share has been achieved via an increase in the pay out ratio and has not totally been supported by higher earnings.

An increase in the allowable return on common equity resulting in a significant improvement in earnings per share is clearly warranted if NLP is to attract equity capital on reasonable and equitable terms. He is not convinced, however, that a return on average equity of 18% (the equity base to include a rights issue of common shares in 1982), as requested by NLP, is warranted at this time. He does not believe that the resultant growth in earnings per share and sharp uptick in the return on equity provided by an 18% return is required to restore investor confidence in the common shares of NLP. He also questioned the methodology employed by Mr. Cameron in deriving a cost of rights issue.

A conclusion with respect to a reasonable earnings performance of NLP cannot be made in isolation from the impact of the resultant earnings and equity position on those ratios key to the ability to issue fixed income securities, both debt and preferred. In his opinion, a return on common equity of 18% as requested plus the comtemplated rights issue in 1982, would result in financial ratios in excess of those required at the present time to maintain the credit rating of the NLP's securities.

He said that from a financial markets viewpoint, the key year is 1982. Financial markets, however, will not ignore 1981, and approval of higher rates by December 1 as requested is, in his opinion, appropriate.

He concluded that if NLP were to receive a rate increase that permitted it to actually earn a minimum return of 17% on average common equity in 1982, its financial performance would be such to enable it to attract capital on reasonable terms. He has also concluded that the proposed rights issue in November 1982 is not required, and has excluded such additional equity from the estimated 1982 average equity base. Debt financed at the forecasted short term rates in NLP's evidence has instead been assumed.

He calculated, based on the financial information contained in the September 21 application, that the specific financial performance of the Company based on such 17% return would be as follows:

(a) Earnings Per Share:

1977	$2.32
1978	2.38
1979	2.51
1980	2.60
1981E	2.81
1982E	3.50

(b) Earnings Per Share Annual Compound Growth

1977-1982E	7.7%/yr.
1978-1982E	9.2
1979-1982E	11.4
1980-1982E	16.0
1981E-1982E	24.6

(c) Dividend Per Share:

		Pay-Out Ratio
1977	$1.05	45.3%
1978	1.225	51.5
1979	1.30	51.8
1980	1.40	53.8
1981E	1.475	52.5
1982E	1.75	50.0

(d) Dividend Per Share Annual Compound Growth

1977-1982E	9.5%/yr
1978-1982E	8.8
1979-1982E	9.9
1980-1982E	11.8
1981-1982E	18.6

(e) Trend in Return on Equity:

1977	14.51%
1978	15.26
1979	15.00
1980	14.41
1981E	14.75
1982E	17.00

(f) Trend in Interest Coverage:

1977	2.3x
1978	2.8
1979	3.0
1980	3.4
1981E	3.1
1982E	3.5

(g) Average Capitalization 1979-1982

	1979	1980	1981E	1982E
Total Debt	53.3%	50.8%	49.3%	48.6%
Preferred	13.5	15.1	17.0	17.4
Common Equity	33.2	34.1	33.7	33.9
	100.0	100.0	100.0	100.0

In light of the comments made by the rating agencies in their recent upgradings, he believes that the continued improvement in the capitalization ratios and interest coverage as indicated above would firmly sustain the current upgraded credit ratings.

With respect to the common shareholder, the return of not less than 17.0% will result in trends in earnings, dividends and in return on equity, that should enable NLP to attract equity capital on reasonable terms, including the forecasted reinvestment of dividends under NLP's dividend reinvestment plan.

Dr. Halpern used the discounted cash flow model (dcf) to estimate the cost of equity capital for NLP. This method measures the cost of equity capital as the sum of the expected dividend yield on NLP stock and the expected growth rate in dividends per share.

The basic principle of the dcf approach is that the cost of equity capital for a particular enterprise must measure the opportunity costs of capital for the equity investor. Opportunity cost of equity capital is the price that an investor is willing to pay to purchase a share of a corporation. This stock price reflects the markets current expectations of the company's profitability and the risk of the earnings available to the common equity of the company. Stocks of the same risk will be priced so as to yield the same cost of equity capital; that cost of equity capital is the opportunity cost. If the regulator sets rates such that the regulated company can be expected to earn its opportunity cost of equity and there are no costs of issuing securities, then the earnings will be sufficient to preserve the credit standing of the company, the company will be able to issue new equity without dilution and the shareholders will be treated fairly.

The relationship of the market price to the book value of equity per share will depend on the rate of return on equity that investors expect the firm to earn relative to the cost of equity capital.

Dr. Halpern stated that if the actual price of NLP's shares is above the book value of equity per share then the dcf model would imply that the rate of return on equity expected to be earned by NLP is above the cost of equity capital. Conversely, if the price per share is below the book value, the rate of return expected to be earned by NLP is below the cost of equity capital. As of the end of 1980, the market to book ratio was above unity. However, at the end of August 1981, the market to book ratio was .95. Since the market to book ratio is less than unity, investors expect that under the existing set of product prices, the firm will earn below its cost of equity capital.

In estimating the cost of equity capital Dr. Halpern referred only to NLP data and did not use a set of comparable companies to calculate the cost of equity as he felt that NLP information should be given the greatest weight. The determination of a group of companies comparable in risk to NLP is difficult and is not required as the comparison has already been done by the investors in the market whose assessment is reflected in the current market price.

Dr. Halpern measured the dividend yield of NLP by taking the approximate market price of NLP's shares as at the end of August 1981 of \$18.50 and a dividend of \$1.60 per share in 1982 (a 6.7% increase over the 1981 dividend of \$1.50, which Dr. Halpern felt, is the increase investors will expect) to arrive at a dividend yield of 8.65% (i.e. 1.60/18.50).

He measured the expected growth rate of dividends per share by utilizing the ten year growth rates in dividends in earnings per share to 1980, a retention rate over the ten year period of .49 and an expected rate of return on equity investment at the end of August 1981, in the range of 15% to 16%.

The following table shows the range of growth rates in dividends per share.

RANGE OF GROWTH RATES, RETENTION FINANCING

	Expected Retention Ratio	X	Expected Rate of Return on Equity Investment	=	Growth Rate
Lower Limit	.49	X	.150	=	.0735
Upper Limit	.49	X	.160	=	.0784
Mid-Point	.49	X	.155	=	.0760

Dr. Halpern took a simple average of the retention growth rate of 7.6% and the average of the ten year geometric growth rate of 9.63% for dividends and earnings per share to obtain a value of 8.62% and chose a range of expected growth rate of dividends per share between 7.6% and 8.6%. He calculated the cost of equity capital as follows:

COST OF EQUITY CAPITAL

	Dividend Yield	+	Growth	=	Cost of Equity (k)
Lower	8.65%		7.6%		16.25%
Upper	8.65%		8.6%		17.25%
Mid-point	8.65%		8.1%		16.75%

He stated the relationship of the market price and book value of equity per share depends on the rate of return on equity that investors expect to earn and the cost of equity capital. Since the former (15.5% on average) is below the mid-point cost of equity (16.75%), he expects the price per share to be below the book value of equity.

As at the end of August 1981, long-term interest rates averaged 17.16% and the cost of equity for NLP, at the mid-point, was equal to 16.75, this is just below the bond rate. This appears to be counter to the normal pattern where the cost of equity capital is in excess of the risk-free rate to reflect the business and financial risk premiums. However, we are not in normal times and the normal relationships do not hold. With uncertain inflation the risk premium will narrow and, in fact, may become negative.

The reason for this relationship is that investors in financial securities are interested in the real purchasing power from their investment. This is measured by taking the nominal rate of return earned on a financial asset and deflating by the actual rate of inflation over the time period; this is called the real rate of return. In normal times, the real rate of return on equity will be higher than on bonds, and both will be positive. In addition, the risk, measured by the variability in the real rates of return, will be higher for equity than for debt.

Investors in Government bonds may have a riskless investment in terms of default risk but the risk in terms of real purchasing power is substantial. One dramatic example of the risk faced by bond investors can be seen in the annualized rates of return earned on Government Bonds in 1981. This occurs because once a bond is issued, the payments can not be altered as inflation rates differ from expected. Common stocks, however, have some properties of an inflation hedge since product prices can be changed with the inflation rates.

He pointed out that NLP common equity has many aspects of a security which has inflation protection. First, the forecast test year includes an estimate of the expected inflation rate. The inflation risk then reflects only deviations of actual inflation from that expected. Second, with substantial increases in inflation, NLP can seek rate relief. Third, the use of a fuel adjustment clause ameliorates the impact of inflation in earnings on a significant portion of the company's operating expenses. Thus, comparing inflation risks for bonds and NLP stock, it is not surprising that the risk premium has narrowed and is marginally negative.

With regard to the $6.3 million dollars of new equity that NLP proposes to raise through a rights issue he said that as a percent of total equity outstanding, this is not a substantial increase and he does not believe that any market pressure adjustment is necessary.

Dr. Halpern asserted that capital markets are currently in a state of flux. His estimate of 16.75% reflects the market's best estimate of the very uncertain future course of interest rates. Many forecasters anticipate decreases in the long-term Government of Canada bond rate.

If interest rates were to return to a level of, say, 15%, there would be a reduction in the dividend yield for NLP of approximately 15. This would reduce the cost of equity capital for NLP to 15.75%. If 16.75% is used and interest rates do fall, then the rates charged to customers will be too high. It is his suggestion that the Board phase in any rate increase based on the course of future interest rates and NLP dividend yields over 1982. The initial cost of equity could be at the low end of the range, say, 16.25% and it could be revised early in 1982 based on changes in the dividend yield for NLP. This procedure could only be used over a short period, since using a longer period runs the risk of changes in growth expectations which will have an impact on the price and hence dividend yield which are not related to changes in interest rates.

NLP requested a *minimum* rate of return on average common equity of 18%.

Mr. Buntain recommended an appropriate rate of return on common equity in the range of 18% to 18.50%.

Mr. Brown recommended a minimum return of 17% on average common equity.

Dr. Halpern estimated that 16.75% return on common equity reflects the market's best estimate of the very uncertain future course of interest rates. He calculated a range of between 16.25 and 17.25% as the cost of equity capital.

Counsel for FOM argued that a rate of return of 16% on common equity would be sufficient.

In the judgement of the Board, the weight of evidence supports a finding that a rate of return of 17% on common equity will allow NLP to maintain its credit rating and attract capital on reasonable terms. Accordingly the Board will order rates that are estimated to allow NLP the opportunity to earn this return on common equity.

Mr. Brown recommended that NLP raise 6.3 million in the form of short term debt instead of the common rights issue proposed by NLP.

The Board believes that the trend in interest coverage resulting from a 17% rate of return on average common equity is adequate and therefore finds that for rate making purposes borrowing is an appropriate method of raising the 6.3 million dollars. This will reduce NLP's revenue requirement in this application.

This debt will result in a change in the capital structure proposed by NLP and accordingly the average capitalization submitted by Mr. Brown, adjusted for changes resulting from the decisions in the Order and the revised financial forecasts of NLP submitted as Consent # 8 will be used as a proxy for the rate base.

The average capital structure of NLP is estimated to be as follows:

	Total Debt %	Preference Shares %	Common Equity %
1981	49.01	17.06	33.93
1982	48.76	17.26	33.98

The estimated average rate base for the years 1981 and 1982 differs from estimated capital employed by .74% in 1981 and .45% in 1982, therefore the capital structure will be used for the ratio of each component of capital in the rate base.

The Board calculates the following financial forecasts:

	For the 12 months ending December 31		
	Actual	Forecast	
	1980	1981	1982
Interest Coverage-Long Term Debt	3.8x	3.6	3.7
Interest Coverage-Total Debt	3.4x	3.1	3.6
Earnings Coverage-Total Interest & Preference Dividends	2.3x	2.1	2.3
Earnings Per Common Share	$2.60	$2.79	$3.50
Return on Common Equity	14.41%	14.6%	17.00%

The ratios resulting from the decision of the Board meet or approach all of NLP's financial objectives and in the judgement of the Board will be accepted positively by the financial markets.

RATE OF RETURN ON AVERAGE RATE BASE

When the foregoing findings on capital structure, the cost of debt and preferred stock and the return on common equity are combined, the composite rate of return on NLP's average total invested capital in the test year, based on information submitted by NLP and calculations made by R. G. Noseworthy & Associates Ltd., the rate of return is calculated as follows:

Estimated Composite Cost of Average Capital
In the Year 1982

Component	Capital $'000's	Average Capital Structure %	Cost %	Weighted Cost %
Debt	117,148	48.76	10.76	5.25
Preferred Equity	41,472	17.26	9.66	1.67
Common Equity	81,635	33.98	17.00	5.77
	240,255	100.00		12.69

Since the close of the hearing the Bank of Canada rate has dropped from 20.69% on August 31 to 15.32% on November 26 and in response the market price of NLP's shares increased from $18.50 on August 31, to $20.25 on November 26.

Accordingly the Board has decided to approve a rate of return on rate base within the range of 12.25% and 12.75%. For the purpose of approving a rate schedule the Board will use a rate of return of 12.5% on average rate base.

The Board is also aware that within this range of return on rate base, the rate of return on average common equity has an implicit range but these limits can be achieved only if the estimated capital structure and the cost of debt and preferred stock remains at the estimated values. This is unlikely to occur and in any event because six variables are involved in the calculation it is not possible to allow a reasonable range of return on rate base and specify a fixed rate of return on common equity.

While the Board is aware that NLP cannot achieve this return on average rate base in 1981 the Board will approve the same return as for the year 1982.

REVENUE REQUIREMENTS

Consent # 8 showed revenue requirements of $190,436,000 in 1982 to support NLP's requested rate of return. To produce this revenue NLP submitted for approval a schedule of rates, tolls and charges which were on average 9.723% higher than the rates approved in Board Order P.U. 22 (1981) to be effective October 1, 1981.

The Board has not approved rates of depreciation for all of NLP's plant in service based on the unit summation procedure, the method of calculating interest during construction has been changed, the capital structure proposed by NLP has been adjusted, the cost of the common equity rights issue has been disallowed and the rate of return on common equity has been reduced from 18% to 17%, for the purpose of fixing rates. Therefore the Board finds that NLP's estimated revenue requirement for 1982 should be disallowed and that a requirement of $186,680,000 is adequate.

These requirements represent an increase of 7.1% instead of 9.723% over the rates approved by Board Order P.U. 22 (1981).

Accordingly a schedule of rates designed to increase rates approved by Board Order P.U. 22 (1981) on average by 7.1% will be approved.

FUEL AJDUSTMENT CHARGE

Fuel costs up to \$7.50 per barrel are included in the rates of NLP. Fuel costs in excess of this are charged to the customers by way of a fuel adjustment charge added to the monthly bill to cover the cost of the fuel used in the previous month. This amount varies from month to month depending on the amount of thermal energy generated.

Not only is the percentage of thermal energy increasing but the cost of fuel is also increasing.

NLP's Fuel Adjustment Charge

	1977	\$1,003,000
	1978	\$4,005,000
	1979	\$8,915,000
	1980	\$5,036,000
Nfld Hydro estimate	1981	\$4,414,000
Nfld Hydro estimate	1982	\$31,287,000

The cost of the 1981 fuel adjustment charge is considerably lower than the amount estimated last fall.

This variance is attributed to lower Bunker "C" oil prices than estimated and lower thermal production than anticipated due both to lower sales because of warmer than normal weather conditions and to higher hydro production due to higher than normal precipitation.

The fuel adjustment charge is expected to increase the cost to the consumer in 1982 over 1981 by about 17% with no change in NLP's present rate.

STUDY OF NLP'S CORPORATE PRODUCTIVITY

Mr. O'Reilly put in evidence as Exhibit AEO'R-3 a report by Montreal Engineering Company Limited on NLP's corporate productivity for the period 1967 to 1979.

The report showed that total corporate costs excluding fuel and purchased power, expressed in 1975 unit prices have declined each year since 1967 and NLP has managed to control its costs at least as effectively as the Canadian and United States comparison groups.

FOM argued that increases in general expenses are large and the Board should examine the 14 new positions established in 1981 and 16 in 1982. The evidence of Mr. Noseworthy states that the increases are reasonable.

The Board accepts the report and will not interfere with the discretion of management in this matter.

RATES

Mr. Vivian testified that the proposed increase in revenue requirements when applied to the rates should vary among the rate classes in order to further reduce the variation in the revenue to cost ratio which presently exists.

The process of flattening the Domestic rate will be continued and some changes are proposed in the kwh blocks in several of the rates.

The increase for Street and Area Lighting has been determined from a detailed analysis of the costs of providing this service and in accordance with guidelines established by the Board in its Order No: P.U. 21 (1981). NLP have taken 95% of the cost of service as being the appropriate electricity charge to use in the street and area lighting cost calculations. The increase required to reach this cost of service for poles and underground wiring is to be phased in over a period of 3 years.

NLP have taken December 1, 1981, January 1, 1983 and January 1, 1984 as the implementation dates of the increases and have requested approval for the increases by approximately one-third of the difference between October 1, 1981 rates and the costs calculated for this hearing on December 1, 1981 and by approximately another one-third on January 1, 1983. It is anticipated that the rates for poles and underground wiring on January 1, 1984 will reflect the full costs of providing these components of street and area lighting service as may be calculated at that time.

Changes for fixtures are to be implemented in full on December 1, 1981 with the exception of the Cities of St. John's and Corner Brook. Because of the amount of the increases these charges to the cities are being phased in, in two stages, December 1, 1981 and January 1, 1983.

In designing the new rate structure, Mr. Vivian was guided by a 1980 cost allocation study done by Montreal Engineering Company Limited put into evidence by Mr. O'Reilly as Schedule 3. This study is summarized below.

1980 COST ALLOCATION STUDY RESULTS

Rate Classification	Categories Included	Revenue as a % of Cost Allocation at Existing Rate	
		Category	Class
Domestic	Regular	87.2	
	All-Electric	91.4	89.5
Gen. Service 0-10 kw	-		116.0
Gen. Service 10-100 kw	-		133.7
General Service Over 100 kw	110 to 350 kVA	125.4	
	350 to 1500 kVA	133.1	127.2
	Over 1500 kVA	121.0	
Elect. Heat Gen. Service	-		75.6
All-Elect. Gen. Service	0 to 350 kVA	100.1	
	Over 350 kVA	117.9	106.3
Street Lighting	-		92.3

NLP has a long term objective of about 95% cost coverage by the Domestic class and about 110% by the General Service classes.

The specific guidelines which governed the allocation of the additional revenue among the customer classes other than Street and Area Lighting were:

1. All rate classes should share in the increase.

2. The Domestic class, which includes the Regular Domestic and All-Electric categories, should be increased by more than the overall percentage increase on all rates in order to move this class closer to 95% of cost coverage, and in such a manner as to flatten the rate structure further.

3. Those General Service classes which are providing revenue in excess of 110% of cost should be increased by less than the overall percentage increase and those General Service classes which are providing revenue below 110% of cost should be increased by more than the average percentage increase on all rates.

4. No class should receive on an annual basis an increase greater than double the overall average percentage increase on all rates.

The Board has noted FOM's argument that until the new cost of service study is completed and assessed increases arising out of this application be implemented on an across the board basis rather than in a manner that will flatten the rate structure and reduce the difference between the initial and end blocks.

It is the policy of the Board, at the urging of FOM and NLP, to approve flattening of rates. This has been done mainly to reduce oil consumption.

The present policy will be continued until the 1982 cost of service study has been submitted to the Board at the next rate hearing.

FOM argued that P.U. 21 (1981) directed NLP to phase in rates for street and area lighting over a three year period and that this meant from December, 1981 to January, 1985 rather than January 1, 1984.

The Board agrees with the way NLP has phased in these rates by using three increases at intervals of one year each, the first increase to take place on the effective date of this Order.

The Board approves NLP's overall rate structure and agrees with the submission of Mr. Vivian.

The Board finds that the revised schedule of rates, requested by the Board, set out in Scehdule "A" attached are just and reasonable.

RULES AND REGULATIONS

No objections were raised to NLP's proposed changes in Regulation # 10 and the Street and Area Light Service Rules and Regulations. These will be approved as submitted.

COSTS AND EXPENSES

Leave will be granted to FOM to file with the Board a detailed statement of its claim for costs and the amount of the claim as approved by the Board will be paid by NLP.

NLP will be ordered to pay the expenses of the Board arising out of this application.

IT IS THEREFORE ORDERED THAT:

1. The calendar year 1982 be used as the test year for the purpose of this application.

2. The accumulated depreciation on NLP's fixed assets as at December 31, 1980 be and it is hereby approved in the amount of $68,943,000.

3. The following rates of depreciation calculated by the Average Life Procedure for NLP's pre 1979 property and by the Unit Summation Procedure for NLP's post 1978 property shall be applied to NLP's various classes of property effective January 1, 1982.

Class of Property	Average Life Pre 1979 Property	Unit Summation Post 1978 Property
Steam	4.6	4.6
Hydro	1.8	1.8
Diesel	3.7	3.7
Gas Turbines	4.0	4.0
Substations	3.4	5.4
Transmission	2.5	3.1
Distribution	3.2	5.1
General Property	2.8	2.7
Transportation	12.3	16.9
Communications	6.2	8.4

4. NLP shall submit its next depreciation study in 1986.

5. NLP will use 2.5% of total operating expense (including power purchases) plus current income tax to determine the estimated allowance for working capital in 1981 and 1982.

6. NLP will compute the rate to be applied to total operating expenses in determining its working capital allowance by calculating the average daily investment in expenses for the 12 months ending June 30th, each year commencing in 1981.

7. For the purpose of calculating the rate to be used in determining Interest During Construction NLP will use the mid point of the rate of return on rate base on the percentage of funds used for net capital expenditures generated from operations and the prime bank rate on the balance of the funds used. This calculation is to be determined monthly.

8. NLP's average rate base for the year ending December 31, 1980 be and it is hereby fixed at $203,229,000; that the estimated average rate base for the year ending December 31, 1981 be fixed at $218,354,000 and that the estimated average rate base for the year ending December 31, 1982 be fixed at $239,162,000.

9. A just and reasonable rate of return for NLP be and it is hereby determined to be between 12.25% and 12.75% on its average rate base for 1981 and 1982.

10. Approval be and it is hereby granted to the Schedule of Rates, Tolls and Charges with Rules and Regulations relating thereto, attached hereto and marked Schedule "A", with effect on and after December 1, 1981. Meter readings on and after December 1, 1981 are to be pro rated on the basis of the average daily usage and service supplied prior to that date is to be billed at the rates approved by Board Order No. P.U. 22 (1981).

11. The expenses of the Board incurred in connection with this application shall be borne by NLP.

12. FOM be and it is hereby granted to submit a detailed statement of its costs as a party to this application.

DATED at St. John's, Newfoundland, this 30th., day of November, 1981.

J.A.G. MacDonald, P.Eng.,
Chairman.

R.E. Good,
Vice-Chairman.

C.W. Earle, C.A.,
Vice-Chairman.

G.F. Lawrence,
Commissioner.

Carol Horwood,
Clerk.