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Q. Ref: PUB-117 NP. Provide a copy of the entire actual pension report authored by Mercer Human Resource Consulting.

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A. Attachment A contains a copy of the entire actual pension report authored by Mercer Human Resource Consulting.

July 2002

# Report on the Actuarial Valuation for Funding Purposes as at December 31, 2000

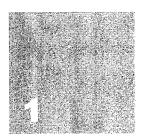
NEWFOUNDLAND POWER INC.
RETIREMENT INCOME PLAN

**MERCER** 

**Human Resource Consulting** 

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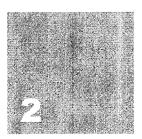
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## **Summary of Results**

Going Concern Financial Position	December 31, 2000	December 31, 1998
Actuarial value of assets	\$158,105,000	\$123,189,000
Actuarial liability	(186,024,000)	(142,480,000)
Funding excess/(unfunded liability)	\$(27,919,000)	\$(19,291,000)
Solvency Financial Position	December 31, 2000	December 31, 1998
Market value of assets	\$162,491,000	\$126,353,000
Termination expense provision	(100,000)	(100,000)
Present value of special payments	27,595,000	19,737,000
Adjusted solvency assets	\$189,986,000	\$145,990,000
Solvency liabilities	135,063,000	(125,946,000)
Solvency excess/(deficiency)	\$54,923,000	\$20,044,000
Transfer/Solvency Ratio	100%	100%
Wind-Up Financial Position	December 31, 2000	December 31, 1998
Market value of assets	\$162,491,000	\$126,353,000
Termination expenses	(100,000)	(100,000)
Total wind-up liabilities	(135,063,000)	(125,946,000)
Wind-up excess/(deficiency)	\$27,328,000	(\$307,000)

Funding Requirements (annualised)	2001	1999
Total current service cost	\$4,186,000	\$3,233,700
Estimated member required contributions	(1,167,000)	(1,214,000)
Estimated Company current service cost	\$3,019,000	\$2,019,700
Company current service cost as a percentage of member pensionable earnings	9.65%	6.11%
Minimum special payments	\$7,834,000	
Estimated minimum employer contribution for year	\$10,853,000	
Estimated maximum employer contribution for year	\$30,938,000	



#### Introduction

Report on the Actuarial Valuation as at December 31, 2000

#### To Newfoundland Power Inc.

At your request, we have conducted an actuarial valuation of the Newfoundland Power Inc. Retirement Income Plan (the "Plan") as at December 31, 2000. We are pleased to present the results of the valuation.

The purpose of this valuation is to determine:

- the funded status of the Plan as at December 31, 2000 on going concern and solvency bases, and
- the minimum funding requirements for 2001 and thereafter.

The next actuarial valuation of the Plan will be required as at a date not later than January 1, 2004 or as at the date of an earlier amendment to the Plan, in accordance with the minimum requirements of the Pension Benefits Act.

This valuation reflects the provisions of the Plan as at December 31, 2000. Since the date of the previous valuation, the Plan was amended to provide early retirement programs effective October 20, 1999 and July 13, 2000. A summary of the Plan provisions is provided in Appendix D.

We have revised the going concern valuation assumptions and methods from those used for the valuation as at December 31, 1998. The assumed investment return was reduced from 7.0% per year to 6.0% per year. Future increases to salary and the Yearly Maximum Pensionable Earnings (YMPE) are assumed to be 4.5% per annum, changed from the assumption of 5.0% per year used in the December 31, 1998 valuation. We have used a projected Group Annuity Reserving Mortality Table (GAR94), changed from Group Annuity Mortality Table (GAM83) used for the valuation as at December 31, 1998. These changes have resulted in an increase of \$29,585,000 in the actuarial liability as at December 31, 2000. The assumptions used for the purposes of this valuation are described in detail in Appendix B.

After checking with representatives of Newfoundland Power Inc. (the "Company"), to the best of our knowledge there have been no events subsequent to the valuation date which, in our opinion, would have a material impact on the results of the valuation.

This report will be filed with the pension authorities in Newfoundland and with Canada Customs and Revenue Agency.

Respectfully submitted,

Anii Narale

Fellow of the Society of Actuaries

Fellow of the Canadian Institute of Actuaries

M. Scott Cushing

Fellow of the Society of Actuaries

Fellow of the Canadian Institute of Actuaries

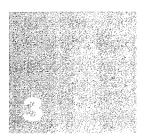
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Newfoundland Power Inc. Retirement Income Plan

Registration number in Newfoundland: 75241

Registration number with the Canada Customs and Revenue Agency: 0486365



## **Financial Position of the Plan**

## Valuation Results — Going Concern Basis

When conducting a valuation on a going concern basis, we determine the relationship between the respective values of assets and accumulated benefits, assuming the Plan will be maintained indefinitely.

#### **Financial Position**

The results of the valuation as at December 31, 2000 in comparison with those of the previous valuation as at December 31, 1998 are summarised as follows:

## Financial Position — Going Concern Basis

	12.31.2000	12.31.1998
Actuarial value of assets	\$158,105,000	\$123,189,000
Actuarial liability		
Present value of accrued benefits for:		
<ul> <li>active and disabled members</li> </ul>	\$84,447,000	\$65,161,000
<ul> <li>pensioners and survivors</li> </ul>	100,683,000	77,001,000
<ul> <li>outstanding termination payments</li> </ul>	0	0
<ul> <li>deferred pensioners</li> </ul>	894,000	318,000
Total liability	\$186,024,000	\$142,480,000
Funding excess/(unfunded liability)	\$(27,919,000)	\$(19,291,000)

**December 31, 2000** 

#### **Reconciliation of Financial Position**

The Plan's financial position, an unfunded liability of \$27,919,000 as at December 31, 2000, is reconciled with its previous position, an unfunded liability of \$19,291,000 as at December 31, 1998, as follows:

#### **Reconciliation of Financial Position**

Funding excess/(Unfunded liability) as at December 31, 1998	\$(19,291,000)
Interest on unfunded liability at 7.0 % per year to December 31, 2000	(2,795,000)
Company special payments for Early Retirement Windows and the unfunded liability, with interest	19,333,000
Cost of Early Retirement Windows amendments #1 and #3	(5,559,000)
Net experience gains over 1999-2000 *	9,978,000
Impact of change in interest rate	(24,000,000)
Impact of change in mortality table	(10,500,000)
Impact of change in salary/YMPE rates	4,915,000
Funding excess/(Unfunded liability) as at December 31, 2000	\$(27,919,000)

<sup>\*</sup> Net experience gains (losses) are detailed below.

## **Experience Gains/ (Losses)**

Gain due to investment income different from expected	\$12,545,000
Gain due to termination different from expected	79,000
Loss due to retirements different from expected	(2,252,000)
Gain due to pre-retirement mortality different from expected	187,000
Gain due to Salary and YMPE increase different from expected	128,000
Expense payments	(680,000)
Net impact of other elements of gains and losses	(29,000)
Net experience gains	\$9,978,000

Report on the Actuarial Valuation for Funding Purposes as at December 31, 2000

#### **Special Payments**

The present value as at December 31, 2000 of the annual special payments that were determined in the previous valuation and annual special payments established to amortize unfunded liabilities created by early retirement programs in 1999 and 2000 is as follows:

# Present Value of Annual Special Payments Determined as at December 31, 1998 (Including Special Payments Established for Early Retirement Programs)

Type of Deficit	Effective Date	Current Special Payment	End of Amortization Period	Present Value of Remaining Payments as at December 31, 2000
Initial Unfunded Liability	Apr. 1, 1984	\$4,188,000	Dec. 31, 2001	\$4,014,000
Early Retirement Window	Jan. 1, 1986	129,000	Dec. 31, 2001	124,000
Early Retirement Window	Jan. 1, 1987	116,000	Dec. 31, 2001	111,000
Early Retirement Window	Jan. 1, 1991	140,000	Dec. 31, 2001	134,000
Data Correction/ Experience Loss	Jan. 1, 1992	256,000	Dec. 31, 2001	245,000
Assumption Change/ Experience Loss	Jan. 1, 1993	158,000	Dec. 31, 2001	151,000
Early Retirement Window	Jan. 1, 1994	1,205,000	Dec. 31, 2001	1,155,000
Early Retirement Window	Jul. 1, 1997	775,000	Dec. 31, 2001	743,000
Early Retirement Window	Jan. 1, 1998	258,000	Dec. 31, 2001	247,000
Pensioner Upgrade	Jul. 1, 1998	88,000	Dec. 31, 2001	84,000
Sub Total		7,313,000		7,008,000
Early Retirement Programs	Dec. 31, 1999	521,000	Dec. 31, 2009	3,543,000
Total		\$7,834,000		\$10,551,000

The special payments and the experience gains during 1999 and 2000 have completely eliminated the existing unfunded liability.

In accordance with the Pension Benefits Act of Newfoundland, the new net unfunded liability (\$27,919,000), created due to the change in assumptions, can be amortised over a period not exceeding 15 years. In this case we have continued with current annual special payments of \$7,834,000 until February 28, 2005 to amortise this unfunded liability.

Report on the Actuarial Valuation for Funding Purposes as at December 31, 2000

The present value, as at December 31, 2000, of the revised annual special payments is as follows:

## Present Value of Annual Special Payments Determined as at December 31, 2000

Type of Deficit	Effective Date	Current Special Payment	End of Amortization period	Present Value of Remaining Payments as at December 31, 2000
Early Retirement Window and Changes in Assumptions	Jan. 1, 2001	\$7,834,000	Feb. 28, 2005	\$27,919,000
Total		\$7,834,000	***	\$27,919,000

## Valuation Results — Solvency Basis

When conducting a solvency valuation, we determine the relationship between the respective values of the Plan's assets and its liabilities on a solvency basis, determined in accordance with the Pension Benefits Act of Newfoundland. The values of the Plan's assets and liabilities on a solvency basis are related to the corresponding values calculated as though the Plan were wound up and settled on the valuation date.

As at December 31, 2000, the solvency ratio of the Plan, being the ratio of solvency assets to solvency liabilities, is 100%. The Plan's solvency position as at December 31, 2000, in comparison with that of the previous valuation as at December 31, 1998, is determined as follows:

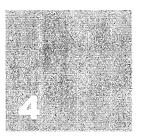
## **Solvency Position**

	12.31.2000	12.31.1998
Market value of assets	\$162,491,000	\$126,353,000
Present value of special payments for next 5 years	\$27,595,000	\$19,737,000
Termination expense provision	(100,000)	(100,000)
Market value of assets available to provide benefits	\$189,986,000	\$145,990,000
Actuarial liability		
Present value of accrued benefits for:		
<ul> <li>active and disabled members</li> </ul>	\$38,952,000	\$38,557,000
<ul> <li>pensioners and survivors</li> </ul>	95,322,000	87,001,000
<ul> <li>outstanding termination benefits</li> </ul>	0	0
<ul> <li>deferred pensioners</li> </ul>	789,000	388,000
Total liability	\$135,063,000	\$125,946,000
Solvency excess	\$54,923,000	\$20,044,000
Solvency ratio	100%	100%

## **Impact of Plan Wind-Up**

In our opinion, the value of the Plan's assets would exceed its actuarial liabilities if the Plan were to be wound up on the valuation date.

Specifically, assets would exceed the actuarial liabilities of the Plan by \$27,328,000. This calculation includes a provision for termination expenses that might be payable from the pension fund.



## **Funding Requirements**

## **Current Service Cost**

The estimated value of the benefits that will accrue on behalf of the active members during 2001, in comparison with the corresponding value determined in the previous valuation as at December 31, 1998, is summarised below:

## **Employer's Current Service Cost**

	2001	1999
Total current service cost	\$4,186,000	\$3,233,700
Estimated members' required contributions	(1,167,000)	(1,214,000)
Estimated company current service cost	\$3,019,000	\$2,019,700
Company current service cost expressed as a percentage of members' pensionable earnings	9.65%	6.11%

Report on the Actuarial Valuation for Funding Purposes as at **December 31, 2000** 

An analysis of the changes in the employer's current service cost follows:

## **Changes in Employer's Current Service Cost**

Employer's current service cost as at December 31, 1998	6.11%
Demographic changes	0.52%
Change in interest rate	2.52%
Change in mortality table	1.00%
Change in salary/YMPE rates	(0.50)%
Employer's current service cost as at [vdate.n]	0.00%

## **Special Payments**

The following minimum annual special payments must be made to the plan to eliminate the unfunded liability as at December 31, 2000 within the periods prescribed by the Pension Benefits Act of Newfoundland.

#### **Minimum Annual Special Payments**

Type of Deficit	Effective Date	Current Special Payment	End of Amortization Period	Present Value of Remaining Payments as at December 31, 2000
Early Retirement Window and Change in Assumption	Jan. 1, 2001	\$7,834,000	Feb. 28, 2005	\$27,919,000
Total		\$7,834,000		\$27,919,000

## **Company Contributions**

There is an unfunded liability of \$27,919,000 and a solvency ratio of 100% as at December 31, 2000. As such, we recommend that Newfoundland Power Inc. make annual contributions to the Plan for 2001 as follows:

#### **Annual Company Contributions**

For current service: 9.65% of member pensionable earnings
Minimum special payments for unfunded liability: \$7,834,000

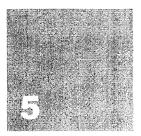
Report on the Actuarial Valuation for Funding Purposes as at December 31, 2000

On the basis of the member estimated pensionable earnings, we have estimated the Company current service contribution for 2001 to be \$3,019,000, or \$251,600 per month. We have estimated the total member contributions for 2001 to be \$1,167,000.

## Estimated Minimum Company Contributions until December 31, 2001

Year Ending	Current Service Cost	Minimum Special Payments	Minimum Company Contribution
2001	\$3,019,000	\$7,834,000	\$10,853,000

Contributions for current service must be made no less frequently than quarterly.



## **Actuarial Opinion**

#### **Actuarial Opinion with Respect to**

the Actuarial Valuation as at December 31, 2000

#### of the Newfoundland Power Inc. Retirement Income Plan

Pension Commission of Newfoundland Registration No. 75241 Canada Customs and Revenue Agency Registration No. 0486365

Based on the results of this valuation, we hereby certify that, as at December 31, 2000:

- The Company current service cost for 2001 and subsequent years, up to the next actuarial valuation, should be calculated as 9.65% of Member pensionable earnings.
- The Company current service cost for 2001 is estimated to be \$3,019,000. Member required contributions for 2001 are estimated to be \$1,167,000.
- The Plan would be fully funded on a going concern basis if its assets were augmented by \$27,919,000. The unfunded liability may be liquidated by annual special payments of \$7,834,000 until February 28, 2005.
- The total special payments prior to the next valuation should not exceed \$27,919,000.
- The Plan has a solvency excess of \$54,923,000 as at December 31, 2000. No special payments are required for solvency purposes.

- The solvency ratio of the Plan is 100%.
- In our opinion,
  - the data on which the valuation is based are sufficient and reliable for the purposes of the valuation,
  - the assumptions are, in aggregate, appropriate for the purposes of determining the funded status of the plan as at December 31, 2000 on going concern and solvency bases, and determining the minimum funding requirements, and
  - the methods employed in the valuation are appropriate for the purposes of determining the funded status of the plan as at December 31, 2000 on going concern and solvency bases, and determining the minimum funding requirements.
- This report has been prepared, and our opinions given, in accordance with accepted actuarial practice.
- All assumptions made for the purposes of the valuation were reasonable at the time the valuation was prepared.

Anil Narale

Fellow of the Society of Actuaries Fellow of the Canadian Institute of Actuaries M. Scott Cushing

Fellow of the Society of Actuaries
Fellow of the Canadian Institute of Actuaries

Date

Date



## **Plan Assets**

#### Sources of Plan Asset Data

The pension fund is managed by Barclays Global Investors Canada Limited and by Northern Trust Global Advisors Inc. and held in trust with Royal Trust.

We have relied upon fund statements prepared by Royal Trust for the period from December 31, 1998 to December 31, 2000.

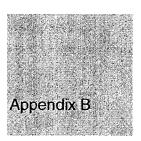
## Reconciliation of Plan Assets

The pension fund transactions for the period from December 31, 1998 to December 31, 2000 are summarised as follows:

## **Reconciliation of Plan Assets (Market Value)**

	1999	2000
January 1	\$126,353,000	\$148,008,000
PLUS		
Member contributions	\$1,258,000	\$1,216,000
Company contributions	1,500,000	2,050,000
Company past service contributions	7,373,000	10,801,000
Investment income	20,861,000	10,965,000
	\$30,992,000	\$25,032,000
LESS		
Pensions paid	\$8,626,000	\$9,369,000
Lump-sum refunds	313,000	948,000
Administration and investment fees	398,000	232,000
	\$9,337,000	\$10,549,000
December 31*	\$148,008,000	\$162,491,000

We have tested the pensions in course of payment, the lump-sum refunds and the contributions for consistency with the membership data for the Members of the Plan who have received benefits or made contributions. The results of these tests were satisfactory.



## **Actuarial Methods and Assumptions**

Actuarial Valuations Methods — Going Concern Basis

#### Valuation of Assets

For this valuation, we have continued to use an adjusted market value method to determine the actuarial value of assets. Under this method, realised and unrealised capital gains/(losses) arising during a given year are spread on a straight line basis over two years. As a result, the asset value produced as at December 31, 2000 recognises the following percentages of the realised and unrealised fund returns in excess of the assumed valuation interest rate that arose during the past two years:

1000 -	0.70/
1999 :	67%
2000 :	33%

The asset values produced by this method are related to the market value of the assets, with the advantage that, over time, the market-related asset values will tend to be more stable than market values. To the extent that more capital gains than losses will arise over the long term, the actuarial value will tend to be lower than the market value.

The actuarial value of the assets determined as at December 31, 2000 under the adjusted market value method is \$158,105,000.

This value was derived as follows:

#### Actuarial Value of Assets as at December 31, 2000

Market value of assets		\$162,491,000
LESS		
Unrecognised returns in excess of assumed returns	1999: \$11,989,000 x 33% =	\$3,996,000
	2000: \$585,000 x 67% =	390,000
		\$(4,386,000)
Actuarial value of assets		\$158,105,000

#### **Valuation of Actuarial Liabilities**

Over time, the real cost to the Company of a pension plan is the excess of benefits and expenses over Member contributions and investment earnings. The actuarial cost method allocates this cost to annual time periods.

For purposes of the going concern valuation, we have continued to use the *projected unit credit actuarial cost method*. Under this method, we determine the actuarial present value of benefits accrued in respect of service prior to the valuation date, including ancillary benefits, based on projected final average earnings. This is referred to as the *actuarial liability*. For each individual Member, accumulated contributions with interest are established as a minimum actuarial liability.

The funding excess or unfunded liability, as the case may be, is the difference between the actuarial value of assets and the actuarial liability. An unfunded liability will be amortised over no more than 15 years through special payments as required under the *Pension Benefits Act of Newfoundland*. A funding excess may, from an actuarial standpoint, be applied immediately to reduce required Company current service contributions unless precluded by the terms of the Plan or by legislation.

This actuarial funding method produces a reasonable matching of contributions with accruing benefits. Because benefits are recognised as they accrue, the actuarial funding method aims at keeping the plan fully funded at all times. This promotes benefit security, once any unfunded liabilities and solvency deficiencies have been funded.

#### **Current Service Cost**

The *current service cost* is the actuarial present value of projected benefits to be paid under the Plan with respect to service during the year following the valuation date.

The Company current service cost is the total current service cost reduced by the Member required contributions.

The Company current service cost has been expressed as a percentage of the Member pensionable earnings to provide an automatic adjustment in the event of fluctuations in membership and/or pensionable earnings.

Under the projected unit credit actuarial cost method, the current service cost for an individual Member will increase each year as the Member approaches retirement. However, the current service cost of the entire group, expressed as a percentage of the Member pensionable earnings, can be expected to remain stable as long as the average age of the group remains constant.

## **Company Contribution**

Accordingly, the Company contributions for this purpose are determined as follows:

#### **Company Contributions**

With a funding excess	With an unfunded liability
Current service cost	Current service cost
MINUS	PLUS
Any funding excess applied to cover the Company current service cost	Payments to amortise any unfunded liability

## Actuarial Assumptions — Going Concern Basis

The actuarial value of benefits is based on economic and demographic assumptions. At each valuation, we determine whether, in our opinion, the actuarial assumptions are still appropriate for the purposes of the valuation, and we revise the assumptions if necessary.

In this valuation, we have used the same assumptions as in the previous valuation except as noted. Emerging experience will result in gains or losses that will be revealed and considered in future actuarial valuations. For this valuation, we have used the following assumptions:

#### **Economic Assumptions**

#### Investment Return

We have assumed that the investment return on the actuarial value of the fund will average 6.0% per year over the long term. As at the previous valuation, December 31, 1998, an assumption of 7.0% per year was used.

#### Expenses

The second secon

No allowances have been made for expenses and other contingencies in this valuation.

#### Increases in Pensionable Earnings

The benefits ultimately paid will depend on each Member's final average earnings. To calculate the pension benefits payable upon retirement, death or termination of employment, we have taken 2001 earnings and assumed that such pensionable earnings will increase at 4.5% per year. An assumption of 5.0% per year was used in the previous valuation as at December 31, 1998.

#### Increases in the YMPE

Since the benefits provided by the plan depend on the final average Year's Maximum Pensionable Earnings (YMPE) under the Canada Pension Plan, it is necessary to make an assumption about increases in the YMPE for this valuation. We have assumed that the YMPE will increase at the rate of 4.5% per year from its 2001 level of \$38,300. An assumption of 5.0% per year was used in the previous valuation as at December 31, 1998.

Increases in the Maximum Pension Permitted under the Income Tax Act

The Income Tax Act stipulates that the maximum pension that can be provided under a registered pension plan will be increased, starting in 2005, in accordance with general increases in the average wage.

For this valuation, we have assumed that the maximum pension payable under the plan will increase at the rate of 4.0% per year starting in 2005.

#### Indexation of Pensions in Payment

For this valuation, no assumptions have been made with respect to indexing pensions in payment.

#### **Demographic Assumptions**

#### Retirement Age

Because early retirement pensions are reduced in accordance with a formula, the retirement age of Members has an impact on the cost of the Plan. We have assumed that Members will retire one year after the later of the date they would have attained age 60 and age plus service would total 95 (age where the Member is entitled to an unreduced early retirement) but not later than age 65.

#### Termination of Employment

We have made an allowance for projected benefits payable on the termination of employment before retirement for reasons other than death.

We have used termination rates that are based on 50% of the turnover rates under the Ontario Light termination table. We have not used rates of termination after age 39. Sample rates are shown in the following table:

#### **Termination Rates**

Age	Percentage
25	5.0%
30	2.8%
35	1.6%
39	1.2%
40 – 64	0.0%

#### Mortality

The actuarial value of the pension depends on the lifetime of the Member. We have assumed mortality rates, both before and after retirement, in accordance with the projected Group Annuity Reserving (GAR 94) Table for 1994. The Group Annuity Mortality (GAM) Table for 1983 was assumed in the previous valuation as at December 31, 1998.

#### Disability

We have not made an allowance for incidence of disability prior to retirement.

## Family Composition

Benefits in case of death, before and after retirement, depend on the Member's marital status.

For this valuation, we have assumed that 80% of Members will have an eligible spouse on death and that the male partner will be 3 years older than the female partner.

## Actuarial Valuation Methods and Assumptions — Solvency Basis

We have used the market value of assets in our valuation of the Plan for solvency purposes.

To determine the solvency actuarial liability, the benefits valued are those that would have been paid had the Plan been wound up on the valuation date, with all Members fully vested in their accrued benefits.

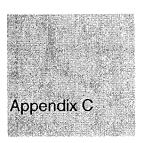
We have considered that Members eligible for early unreduced retirement would retire immediately. Members who do not meet the early unreduced retirement provisions as at December 31, 2000 will be entitled to a deferred pension payable from age 65. For each individual Member, accumulated contributions with interest plus 50% of the present value of the pension accumulated after December 31, 1997 are established as a minimum actuarial liability.

The value of the benefits accrued on December 31, 2000 is based on the assumptions described in the Recommendations for the Computation of Transfer Values from Registered Pension Plans of the Canadian Institute of Actuaries applicable for December 31, 2000 for the purposes of Section 61 of the *Pension Benefits Act* for benefits expected to be settled through transfer in accordance with relevant portability requirements. For benefits expected to be settled through the purchase of annuities, an estimate of the cost of settlement through purchase of annuities has been made. Assumptions used in the solvency valuation are as follows:

#### **Actuarial Assumptions**

Mortality rates:	GAM-1983
Interest rates for benefits to be settled through transfer:	6.50% per year for the first 15 years following Dec. 31, 2000, 6% per year thereafter
Interest rates for benefits to be settled through annuity purchase:	6.25% per year
Family composition:	Same as for going concern valuation
Termination expenses:	\$100,000

In a solvency valuation, the accrued benefits are based on the Member's final average earnings on the valuation date, therefore no salary projection is used. Also, the employment of each Member is assumed to have terminated on the valuation date, therefore, no assumption is required for future rates of termination of employment.



## **Membership Data**

## Analysis of Membership Data

The actuarial valuation is based on membership data as at December 31, 2000 provided by Newfoundland Power Inc.

We have applied tests for internal consistency, as well as for consistency with the data used for the previous valuation. These tests were applied to membership reconciliation, basic information (date of birth, date of hire, date of membership, sex, etc.), pensionable earnings, credited service, contributions accumulated with interest and pensions to retirees and other members entitled to a deferred pension. Contributions, lump sum payments and pensions to retirees were compared with corresponding amounts reported in financial statements. The results of these tests were satisfactory.

Plan membership data is summarised below. For comparison, we have also summarised corresponding data from the previous valuation.

## **Membership Data**

	12.31.2000	12.31.1998
Active Members		
<ul><li>Number</li></ul>	634	701
Average age	43.7	43.1
<ul> <li>Average years of pensionable service</li> </ul>	19.7 yrs.	18.6 yrs.
<ul> <li>Total pensionable earnings</li> </ul>	\$31,277,318	\$32,169,500
<ul> <li>Accumulated contributions with interest</li> </ul>	\$19,487,717	\$18,647,900
Disabled Members		
<ul><li>Number</li></ul>	26	22
<ul> <li>Average age</li> </ul>	48.5	46.0
<ul> <li>Average years of pensionable service</li> </ul>	23.5 yrs.	20.6 yrs.
<ul> <li>Total pensionable earnings</li> </ul>	\$1,044,591	\$879,500
<ul> <li>Accumulated contributions with interest</li> </ul>	\$630,091	\$437,800
Deferred Pensioners		
<ul><li>Number</li></ul>	8	6
Average age	58.2	58.9
<ul> <li>Total annual pension</li> </ul>	\$105,584	\$46,844
Pensioners and Survivors		
<ul><li>Number</li></ul>	609	549
<ul> <li>Average age</li> </ul>	65.89	65.6
<ul> <li>Total annual lifetime pension</li> </ul>	\$6,799,071	\$5,900,353
<ul> <li>Total annual bridge pension</li> </ul>	\$3,874,831	\$3,017,303

The membership movement for all categories of membership since the previous actuarial valuation is as follows:

**Reconciliation of Membership** 

	Actives	Disabled	Deferred Vested	Pensioners and Beneficiaries	Total
Total as at 12.31.1998	701	22	6	549	1278
New Entrants	36	_	_	_	36
Return from Disabled	_	(6)	_		(6)
To Disabled	(14)	14	_	_	_
Deferred	(2)	_			(2)
Terminations, transfers/refunds	(20)	(2)	2	-	(20)
Deaths, no benefits outstanding	(3)	-	-	(7)	(10)
Retired	(64)	(3)		67	_
Correction		1	_	_	1
Total as at 12.31.2000	634	26	8	609	1,277

The distribution of the active members by age as at December 31, 2000, is summarised as follows:

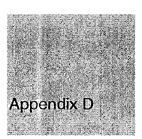
Distribution of Active Members by Age Group and Pensionable Service as at December 31, 2000

	Years of Pensionable Service							
Age	0-4	5-9	10-14	15-19	20-24	25-29	30+	Total
25 - 29	14	1						15
30 - 34	23	15	24	1				63
35 - 39	5	8	54	27	5			99
40 - 44	9	4	26	26	57	35		157
45 - 49	1	2	18	13	- 31	124	10	199
50 - 54	0	1	4	4	5	54	12	80
55 - 59	2	0	1	0	5	7	4	19
60+	0	0	0	2				2
Total	54	31	127	73	103	220	26	634

The distribution of the inactive members by age as at December 31, 2000, is summarised as follows:

# Distribution of Inactive Members by Age Group as at December 31, 2000

Age	Deferred Pensioners		Pensioners and Survivors	
	Number	Average Annual Pension	Number	Average Annual Lifetime Pension
40 - 45	1	\$17,737	<del>-</del>	_
45 - 49	_	_	_	
50 - 54	_	-	84	\$13,318
55 - 59	4	\$17,541	107	\$12,642
60 - 64	3	\$5,893	126	\$11,536
65 – 69		_	100	\$11,170
70 - 74		_	74	\$9,774
75 +		_	118	\$8,856
Total	8	\$13,198	609	\$11,183



## **Summary of Plan Provisions**

#### Introduction

The Newfoundland Power Inc. Retirement Income Plan became effective April 1, 1984.

This valuation is based on the Plan provisions in effect on December 31, 2000. The following is a summary of the Plan's main provisions in effect on December 31, 2000. It is not intended as a complete description of the Plan.

## Eligibility for Membership

Each employee hired before the effective date of this Plan is eligible to participate. Each employee hired on or after the effective date shall become a Member of the Plan on the first day of employment.

Membership is optional for employees transferred from an affiliated company or for employees hired or designated as manager or executive.

#### Contributions

The Members are contributing to the plan at the rate of 3 1/3% of their salary up to the Year's Maximum Pensionable Earnings (YMPE) and 5% of their salary in excess of the YMPE. For 1984, the Members were contributing at the rate of 60% (2%/3%) of their full rate starting on April 1st.

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No contributions shall be required to be made beyond 35 years of service, however, such contributions of up to the maximum of \$1,000 can be made to attain higher final average earnings.

Interest shall be credited on Member contributions at a rate not less than the rate at issue of the last Canada Savings Bond issued prior to the start of the calendar year. Effective January 1, 1997, interest shall be credited based on the average of the yields on 5-year personal fixed term chartered bank deposits published in the Bank of Canada Review as CANSIM Series B14045, the averaging to be done over a reasonable recent period, not exceeding twelve months.

Additional voluntary contributions are not permitted after January 1, 1992.

The Company is contributing the remaining cost for current service and the cost for past service.

The YMPE, or Year's Maximum Pensionable Earnings, refers to the maximum annual amount of earnings upon which an employee and an employer contribute to the Canada/Québec Pension Plan (C/QPP).

#### Retirement Dates

#### **Normal Retirement Date**

The normal retirement date is the first day of the month coincident with or next following the Member's 65th birthday.

#### **Postponed Retirement**

An active Member may not postpone retirement beyond the normal retirement age of 65 years.

#### Retirement Benefits

#### **Normal Retirement**

Upon normal retirement a Member is entitled to an annual pension equal to 1 1/3% of the average of his best 36 months of earnings during which contributions were made up to the final average YMPE plus 2% of such best average earnings in excess of the average of the final 36 months YMPE for each year of credited service (up to a maximum of 35 years).

#### **Early Retirement Pension**

An early retirement pension without reduction is payable if the Member has both attained age 60 and has a combined total years of age plus service of 95.

An early retirement pension with a subsidized reduction is permissible if the Member's age plus service is 85 or greater.

The amount of the reduction is:

- 1. if the Member's total years of age plus service total 95 or more 1/4% for each month before age 60, and.
- 2. if not 1/3% for each month before the earliest date at which the Member could have elected unreduced retirement.

Early retirement is permitted after attaining age 55 with a pension that is actuarially reduced from age 65.

#### **Maximum Pension**

The total annual pension payable from the Plan upon retirement, death or termination of employment cannot exceed the lesser of:

- 2% of the average of the best three consecutive years of total compensation paid to the member by the Company, multiplied by total credited service; and
- \$1,722.22 or such higher amount as prescribed by the Rules and Regulations of the Income Tax Act, Canada multiplied by the Member's total credited service.

#### Survivor Benefits

#### **Death Before Retirement**

On death of a Member before retirement, his/her surviving spouse shall be entitled to 50% of his/her accrued pension payable immediately for life.

If the surviving spouse is more than 15 years younger than the participant, the entitlement is reduced by 1.5% of each full year in excess of 15.

If there is no surviving spouse, the beneficiary shall receive a refund of the Member's accumulated contributions with interest.

Notwithstanding the above, if a Member or former Member who has completed 2 years of membership in the Plan dies after December 31, 1996, the surviving spouse or beneficiary is entitled to the minimum death benefit equal to the actuarial value of the vested pension benefits accrued after December 31, 1996.

#### **Death After Retirement**

The normal form of payment is a joint and survivor pension with 50% of the Member's pension continuing to the surviving spouse. However, the Member may elect to receive an optional form of pension on an actuarial equivalent basis.

#### **Termination Benefits**

## Pension Benefit Accrued Prior to January 1, 1997

#### 1. Prior to Completion of 5 Years of Service

A Member who terminates his/her employment after December 31, 1996 but prior to completing 5 years of service will receive a refund of his/her accumulated contributions made prior to January 1, 1997 with interest.

#### 2. After Completion of 5 Years of Service

- A. A Member who terminates his/her employment after December 31, 1996 and after completing 5 years of service will receive a termination benefit equal to the greater of:
  - 2 times his accumulated Member's contributions made prior to January 1,
     1997 with interest, or
  - the actuarial value of his vested pension accrued prior to January 1, 1997.

- B. For a Member with age plus service totalling 45 or more, the Member has the choice of receiving:
  - a deferred pension, or
  - a refund of his contributions and the balance of his/her termination benefit under this Section (i)(a) is transferred to a locked-in RRSP.
- C. Notwithstanding the above, a Member who has attained age 45 and has 10 years or more of service is entitled to either a deferred pension or a transfer to a locked-in RRSP of the value of his termination benefits under this Section (i)(a).

#### Pension Benefits Accrued After December 31, 1996

#### 1. Prior to Completion of 2 Years of Membership Service

A Member who terminates his/her employment after December 31, 1996 before completing 2 years of membership service will receive a refund of his/her accumulated contributions made after December 31, 1996 with interest ("Post 96 Accumulated Member Contributions").

### 2. Completion of 2 Years of Membership Service

- A. A Member terminates his/her employment after December 31, 1996 with 2 years of membership service will receive the termination benefit equal to the greater of:
  - 2 times his/her Post 96 Accumulated Member Contributions provided he/she has completed 5 years of service; and
  - the sum of:
    - (1) the actuarial value of his pension benefit accrued after December 31, 1996.
    - (2) the excess, if any, of the Post 96 Accumulated Member Contributions over 50% of the actuarial value of his/her pension benefit accrued after December 31, 1996 ("Excess Member Contribution").

- B. The Member has the choice of receiving:
  - a deferred pension with respect to his pension benefit accrued after December
     31, 1996 plus a refund of his/her Excess Member Contribution; or
  - a refund of his/her Excess Member Contributions plus a transfer of the balance of the termination benefit under this Section (ii)(a) to a locked-in RRSP.

#### 3. **Disability Benefits**

During a Member's disability the earnings are deemed to be equal to the amount earned at the time of becoming disabled and the Member continues to accrue service. A Disabled Member shall not be required to contribute to the Plan. The Company contributes the entire cost of the benefits.

## 4. Bridging of Service Benefits

A Member who terminated employment and is then later rehired can be credited with some (or all) of the prior service if the value of the prior service benefit was not transferred out of the Plan or if the value was transferred out of the Plan and is transferred back into the Plan. The rules for this crediting are as follows:

- A. There is a waiting period prior to any recovery of service being done, equal to the break in service.
- B. After this waiting period, the Member accrues prior service at the rate of one year for each year of current service worked.



## **Company Certification**

With respect to the report on the actuarial valuation of the Newfoundland Power Inc. Retirement Income Plan, as at December 31, 2000, I hereby certify that, to the best of my knowledge and belief:

- a copy of the official plan documents and of all amendments made up to December 31, 2000, were provided to the actuary;
- the membership data provided to the actuary includes a complete and accurate description of every person who is entitled to benefits under the terms of the plan for service up to December 31, 2000, and
- all events subsequent to December 31, 2000 that may have an impact on the results of the valuation have been communicated to the actuary.

Report on the Actuarial Valuation for Funding Purposes as at December 31, 2000 Newfoundland Power Inc.

147.2(2) of the Income Tax Act the amo	to claim as eligible contributions under Section bunt paid into this Plan in accordance with Section the period from January 1, 2001 to December 31,	
Date	Signed	
	Name	•