National Energy Board

Reasons For Decision

Foothills Pipe Lines Ltd.

RH-1-93

November 1993

Tolls

National Energy Board

Reasons for Decision

In the Matter of

Foothills Pipe Lines Ltd.

Application dated 28 May 1993 for Certain Orders Respecting the Tolls and Tariffs of Foothills Pipe Lines Ltd.

RH-1-93

November 1993

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Recital and Appearances

IN THE MATTER OF the *National Energy Board Act* ("NEB Act") and the Regulations made thereunder; and the *Northern Pipeline Act*;

IN THE MATTER OF an application by Foothills Pipe Lines Ltd. for certain orders respecting its tolls and tariffs under Part IV of the NEB Act; and

IN THE MATTER OF the National Energy Board Hearing Order RH-1-93;

HEARD at Calgary, Alberta on 23, 24, 25, 26, 27, 30, and 31 August and 3 September 1993.

BEFORE:

R. Illing	Presiding Member
R. Priddle	Member
R.L. Andrew	Member

APPEARANCES:

J. Lutes B.J. Pierce	Foothills Pipe Lines Ltd.
C.K. Yates	Canadian Association of Petroleum Producers
A.Z. Menzies D. Donaldson	Alberta Natural Gas Company Ltd
D. Hart	Natural Gas Pipeline Company of America Ltd.
L.G. Keough	North Canadian Oils Limited and Northern Border Pipeline Company
N. Mills	NOVA Corporation Of Alberta
K.F. Miller	Pan-Alberta Gas Ltd.
M.A.K. Muir	ProGas Limited
M.J. Samuel	TransCanada PipeLines Limited
W.M. Moreland	Alberta Petroleum Marketing Commission
J. Syme	Board Counsel

Abbreviations

APUB	Alberta Public Utility Board
Amoco	Amoco Canada Petroleum Company Ltd.
ANG	Alberta Natural Gas Company Ltd
ANGTS	Alaska Natural Gas Transportation System
APMC	Alberta Petroleum Marketing Commission
Applicant/ Company/ Foothills	Foothills Pipe Lines Ltd.
Board/NEB	National Energy Board
CAPP	Canadian Association of Petroleum Producers
CPP	Canada Pension Plan
CPUC	California Public Utilities Commision
DCF	discounted cash flow
ERCB	Alberta Energy Resources Conservation Board
FERC	Federal Energy Regulatory Commission
FTA	Canada/U.S. Free Trade Agreement
GPUARs	*Gas Pipeline Uniform Accounting Regulations*
IBES	Institutional Broker Estimation Service
IROR	Incentive Rate Of Return
IRR	Investor Required Rate of Return
km	kilometre
kPa	kilopascal
LDC	local distribution company
MMcf/d	million cubic feet per day
MOP	maximum operating pressure
Natural	Natural Gas Pipeline Company of America Ltd.

NEB Act	the *National Energy Board Act*
Northern Natural	Northern Natural Gas Company
NOVA	NOVA Corporation of Alberta
O&M	operating and maintenance
Pan-Alberta	Pan-Alberta Gas Lid.
Panhandle	Panhandle Eastern Pipeline Co.
PGT	Pacific Gas Transmission Company
PITCO	Pacific Interstate Transmission Company Ltd.
ProGas	ProGas Limited
psi	pounds per square inch
SOCAL	Southern California Gas Company Ltd.
TQM	Trans Quebec & Maritimes Pipeline Ltd.
TransCanada/TCPL	TransCanada PipeLines Limited
UIC	Unemployment Insurance Commission
United	United Pipeline Systems Inc.
U.S.	United States
Westcoast	Westcoast Energy Inc.
10^3m^3	thousand cubic metres

Glossary of Terms

We provide here definitions for some terms used in these Reasons and which appear infrequently in the Board's Reports. Terms which are in common use in the area of NEB toll regulation are not defined,

Eastern Leg	The portion of the Foothills pipeline from Caroline, Alberta to Monchy Saskatchewan consisting of Zone 6 in Alberta and Zone 9 in Saskatchewan.
Flow-through Income Taxes	The practice, for regulatory purposes, of accounting for income taxes on the basis of income calculated for income tax purposes rather than on the basis of income as calculated in accordance with generally accepted accounting practices.
Normalized Income Taxes	A provision for income taxes based on generally accepted accounting practices. To the extent that income for accounting purposes differs from income for the purpose of calculating income taxes, a deferred or prepaid income tax balance may be recorded.
Phase I/Prebuild	The portions of the Alaska Natural Gas Transportation System ("ANGTS") which have been prebuilt to transmit natural gas of Canadian origin before the pipeline is placed in service for the transmission of natural gas of Alaskan origin, being all or part of facilities in Zones 6 to 9.
Phase II	The remaining portions of the Alaska Natural Gas Transportation System which, when combined with the Prebuild facilities, will constitute the complete Mainline for the transmission of natural gas of Alaskan origin, being the facilities in Zones 1 to 5 and incremental facilities in Zones 6 to 9.
Special Charge	A charge included in Foothills' cost of service pursuant to TG-4-82, as amended, consisting of amortization of and return on the Phase II Preliminary Expenditures eligible for recovery ("Special Charge Amount").
Special Charge Amount	The Phase II preliminary expenditures eligible for recovery under the Special Charge pursuant to TG-4-82.
Western Leg	The portion of the Foothills pipeline from Caroline, Alberta to Kingsgate, B.C., consisting of Zone 7 in Alberta and Zone 8 in B.C.

Overview

(NOTE: This summary is provided for the convenience of the reader and does not constitute part of this Decision or the Reasons, to which the readers are referred for detailed text and tables.)

The Application

On 30 April 1993, the Board issued Order RH-1-93 announcing its intention to hold an oral hearing on matters relating to Foothills' tolls and tariffs. As required by that Order, Foothills filed an application with the Board on 28 May 1993. Issues identified for consideration in the hearing included capital structure, rate of return on common equity, the draw down of deferred income taxes, the amortization rate for the Special Charge, and a review of the forecast 1993 operating and maintenance expenses.

The Hearing

The hearing lasted a total of eight days and was held between 23 August and 3 September 1993 in the Board's hearing room in Calgary, Alberta.

Capital Structure

Foothills has operated since its inception in 1981 with an actual common equity component of 25 percent, plus or minus 5 percent. In this proceeding Foothills applied for a common equity ratio of 35 percent. **The Board has approved a common equity ratio of 28 percent.**

Rate of Return on Common Equity

Foothills originally applied for a rate of return on common equity of 13 percent, an increase of 0.5 percent over its previously-approved rate of 12.5 percent. At the commencement of the oral hearing Foothills reduced its applied-for rate of return on common equity to 12.5 percent in response to changes in economic conditions. **The Board has approved a rate of return on common equity for Foothills of 11.5 percent.**

Draw Down of Deferred Income Taxes

Foothills currently has a deferred income tax balance of $135,612,000, which is recorded as a credit to rate base, effectively reducing the rate base for toll-making purposes. In November, 1992 the Board approved a change in the methodology used by Foothills to provide for income taxes from the normalized method to the flow-through method. The change was effective from 1 January 1992. Intervenors proposed that a draw down of the deferred income tax balance should be considered. **The Board decided that the feasibility of such a draw down requires further study and has directed Foothills to undertake and provide the Board and interested parties with the results of such studies by 30 September 1994.**

Amortization of Special Charge

The Special Charge relates to the amortization of, and carrying charges on, a portion of the Phase II Preliminary Expenditures. This charge was originally approved by the Board in its TG-4-82 Decision which provided for amortization of the Special Charge Amount at the rate of 4 percent. CAPP and the

APMC proposed an amortization holiday starting 1 January 1993 for three years until the current balance of accumulated amortization represents 3 percent amortization since inception. **The Board has approved a reduction in the amortization rate to 2 percent until the balance of the accumulated amortization represents 3 percent since the inception of the Special Charge. At that time the amortization rate will be increased to 3 percent.**

Preliminary Survey and Investigation Costs

The Board has approved the inclusion in rate base of $765,000 in respect of preliminary investigation costs incurred in connection with studies undertaken in the mid-1980s relating to expansion opportunities on the Eastern Leg. The Board found that the work undertaken at that time contributed to the eventual expansion of the Eastern Leg.

Impact of Decision on Tolls

The approved common equity ratio of 28 percent and the approved return on common equity of 11.5 percent will have little impact on Foothills' cost of service when compared to the previously approved rate of return of 12.5 percent with a 25 percent (plus or minus 5 percent) common equity ratio. The reduction in the amortization rate for the Special Charge Amount results in an annual savings of $2,484,000, which represents approximately 1.6 percent of the annual cost of service.

The approved capital structure and rate of return will result in the total annual cost of service being approximately $10,850,000 less than it would have been under the applied-for capital structure of 35 percent common equity and a rate of return on common equity of 12.5 percent.

Foothills' tolls were made interim by the Board on 25 March 1993. Tolls charged in respect of service after that date will be adjusted to reflect the Board's decisions in this case.

Description of the Foothills System and its Cost of Service Tariff

The Foothills pipeline system is the prebuilt portion, in Canada, of the Alaska Natural Gas Transportation System ("ANGTS"). The prebuilt system, referred to as "the Prebuild"or "Phase I", carries Alberta natural gas east and west from Caroline, Alberta. The pipeline consists of four operating zones.

The Prebuild is owned by Foothills Pipe Lines Ltd. through three subsidiaries in each of which it holds a 51 percent interest. The pipeline is divided into Eastern and Western Legs with two zones in each Leg.

Eastern Leg

The Eastern Leg runs from Caroline, Alberta to the United States border near Monchy, Saskatchewan through Zones 6 and 9.

Zone 6	**Alberta**
Ownership:	Foothills Pipe Lines (Alta.) Ltd. - 51% Foothills Pipe Lines Ltd. - 49% NOVA Corporation of Alberta
Length:	378 km (235 miles)
Pipe:	1067 mm (42") 8690 kPa (1260 psi) MOP
Operator:	Operated for Foothills by NOVA

Zone 9	**Saskatchewan**
Ownership:	Foothills Pipe Lines (Sask.) Ltd. - 51% Foothills Pipe Lines Ltd. - 44% TransCanada PipeLines Limited - 5% Consolidated Pipe Lines Company
Length:	259 km (161 miles)
Pipe:	1067 mm (42") 8690 kPa (1260 psi) MOP
Operator:	Operated for Foothills by TransCanada PipeLines Limited

Western Leg

The Western Leg runs from Caroline, Alberta to the United States border near Kingsgate, British Columbia through Zones 7 and 8.

Zone 7	**Alberta**
Ownership:	Foothills Pipe Lines (Alta.) Ltd. - 51% Foothills Pipe Lines Ltd. - 49% NOVA.
Length:	284 km (176 miles) when completed; at present it consists of 124 km (77 miles) in 3 loops on the NOVA system.
Pipe:	914 mm (36") 8690 kPa (1260 psi) MOP
Operator:	Operated for Foothills by NOVA
Zone 8	**British Columbia**
Ownership:	Foothills Pipe Lines (South B.C.) Ltd. - 51% Foothills Pipe Lines Ltd. - 49% Alberta Natural Gas Ltd
Length:	171 km (106 miles) when completed; at present it consists of 165 km (102 miles) of pipeline looped to the Alberta Natural Gas system.
Pipe:	914 mm (36") 6250 kPa (911psi) MOP
Operator:	Operated for Foothills by Alberta Natural Gas Company Ltd

Cost of Service Tariff & Billings

Foothills operates on a full cost of service tariff with equalized billings for six-month periods. The cost of service is estimated in advance and the shippers are informed of the amount of their equal monthly billings for the six month periods starting with January and July. The shippers are given two months' advance notice of changes in billings.

Variances between the actual cost of service and the billed cost of service are recorded in a deferred billing adjustment account. The balance of this account, three months' prior to the billing adjustment date, is recovered or refunded during the next six month billing cycle. Interest, at the bank prime rate, is paid on over-billings and charged on under-billings.

Rate Base

Foothills forecast its rate base as of 31 December 1993 to be as follows:

Eastern Leg		Western Leg	
Zone 6	$292,468,000	Zone 7	$ 49,428,000
Zone 9	214,203,000	Zone 8	160,753,000
Total	$506,671,000	Total	$210,181,000

Chapter 1

Toll and Tariff Issues

1.1 Operating and Maintenance Expenses

Foothills operates on a full cost of service tariff. As required by Order TG-6-81, the Company is required to file, before 1 December each year, its annual Operations and Maintenance ("O&M") budget for the following year. An analysis of variances between the prior year's budgeted and actual O&M expenses is required to be filed by 28 February of each year. Additionally, Order TG-4-82, as amended, requires that Foothills obtain Board approval for all amounts included in its cost of service on account of O&M expenses. Budget overruns, therefore, cannot be recovered without Board approval.

1992 Budget Variance

Foothills' approved O&M budget for the year ended 31 December 1992 for all operating zones was $32,345,500. Actual 1992 O&M costs were $30,994,322 which was 4.2 percent or $1,351,100 lower than the approved budgeted amount. Most of this budget saving was achieved by Foothills' head office, where total charges to the zones were $1,570,900 or approximately 14 percent below budget.

Table 1.1

Foothills' 1992 O&M Expense
Actual vs. Budget
($000)

	Foothills (Alta.)		Foothills (South B.C.)	Foothills (Sask.)	Total
	Zone 6	Zone 7	Zone 8	Zone 9	
Actual	17,056.9	607.2	3,407.0	9,923.3	30,994.4
Budget	17,580.7	658.5	3,071.1	11,035.2	32,345.5
Over/(Under) Budget	(523.8)	(51.3)	335.9	(1,111.9)	(1,351.1)

All of the operating zones achieved below-budget results with the exception of Zone 8 in South B.C., which exceeded its budget due to unbudgeted in-line inspection costs of $39,000, and a 14 percent cost increase from ANG, its operator company, for a total budget overrun of $335,900. The cost increase from ANG was due to increased toll charges approved by the Board after the 1992 budget had already been prepared. No parties expressed any concerns in connection with the 1992 budget overrun in Zone 8.

Decision

The Board is satisfied that the 1992 O&M budget overrun for South B.C. (Zone 8) of $335,900 was prudently incurred. Foothills may recover these costs in future tolls together with carrying charges calculated in accordance with Order TG-4-82, as amended.

1993 Operating and Maintenance Expense Budget

Foothills filed its 1993 O&M Expense Budget on 30 November 1992 in accordance with Order TG-6-81, as amended. In its 1993 budget, the Company requested approval of a budget totalling $38,398,000 relating to Zones 6, 7, 8, and 9. The Company amended this application in two subsequent filings and in the latter of these, dated August 1993, requested approval of a total 1993 budget of $36,301,700 as detailed in Table 1.2.

Table 1.2

Foothills' Amended 1993 O&M Budget Application ($000)

	Foothills (Alta.)		Foothills (South B.C.)	Foothills (Sask.)	Total
	Zone 6	Zone 7	Zone 8	Zone 9	
Foothills Costs					
- Operating Expense	7,700.4	392.5	386.7	3,899.1	12,378.7
Zone 6					
- Operating Expense	14,192.5				14,192.5
Zone 7					
- Operating Expense		279.2			279.2
Zone 8					
- Operating Expense			1,146.8		1,146.8
- Gas Transportation Tariff			2,464.0		2,464.0
Zone 9					
- Operating Expense				5,840.5	5,840.5
Total Operating Costs	21,892.9	671.7	3,997.5	9,739.6	36,301.7

The proposed 1993 O&M budget at $36,301,700 is 17 percent higher than 1992 actual expenditures. The majority of this increase is forecast to take place in Zones 6 and 8 as a consequence of the major expansion taking place in Zone 8 during 1993, as well as Amoco compression costs and TransAlta Power costs in Zone 6 being operational for a full year. These operating increases are set out below in Table 1.3, and are partially offset by savings in Zone 9 operator charges and in reduced head office

overhead. The intervenors did not identify any specific areas of concern with respect to the 1993 O&M budget.

Table 1.3

Major Differences Between Foothills' 1993 O&M Budget Application and its 1992 Actual Expenditures ($000)

	1992 Actual	1993 Budget	Variance
Zone 6			
Amoco - operating and compression costs	3,327.8	3,875.5	547.7
NOVA - operating agreement charges	2,614.6	2,827.1	212.5
TransAlta Utilities - compressor operation	3,248.8	5,138.1	1,889.3
			2,649.5
Zone 7			
NOVA - operating agreement charges	104.7	188.4	83.7
Zone 8			
ANG - transportation of gas by others	2,020.6	2,464.0	443.4
ANG - operating agreement charges	772.7	1,021.7	249.0
			692.4
Zone 9			
TCPL - operating agreement charges	5,428.2	5,178.5	(249.7)
Insurance Claim re 1992 payment	0.0	(500.0)	(500.0)
			(749.7)
Foothills Charges			
Company overhead	13,359.5	16,108.4	2,748.9
In-line inspection costs	117.5	0.0	(117.5)
			2,631.4
Total All Zones	30,994.4	36,301.7	5,307.3

In its 1993 budget, the Company proposed that the base salary cost of full-time employees be increased by 2.5 percent for the year 1993. The effect of this would be to increase the cost of full-time employees in 1993 by $106,200 to a total of $4,368,400.

The Company had engaged a firm of consultants, Towers Perrin, to conduct a salary survey for 44 percent of the targeted positions within the Company. The projections made by Towers Perrin were used by the Company to establish the proposed 1993 salary increases. The Company has stated that it is its policy to base all salary increases on merit.

Employee benefits funded by the Company are forecast to increase from 13.76 percent of payroll in 1992 to 15.63 percent of payroll in 1993. Approximately one-third of this increase is due to higher UIC and CPP costs and the balance is explained by added costs associated with more employees with long service qualifying for more benefits, such as larger Company savings plan contributions.

The Company's actuaries had originally indicated that a contribution to its pension plan would be required for 1993, but upon review by the Company and its actuaries, it was determined that this was not necessary. Accordingly, $496,300 was removed from the original O&M budget. The actuarial valuation of the plan, dated 1 January 1993, showed a surplus of $1,495,500. The actuaries further advised that, should the Company continue to apply this surplus to fund the pension plan, the surplus would be exhausted by mid-1995.

Decision

The Board approves Foothills' 1993 Operating and Maintenance budget of $36,301,700 as applied for in the Company's August 1993 revised budget submission and summarized by Zone in Table 1.2.

1.2 Amortization Rate for Special Charge Amount

The Special Charge was originally approved in Order TG-4-82 to provide for the recovery, with carrying charges, of a portion of Foothills' Phase II preliminary expenditures. The Order provides for the amounts recovered under the Special Charge to be refunded to the Prebuild shippers when the Alaska Natural Gas Transportation System ("ANGTS") project is completed. In 1982 the Board approved $124,162,000 of Phase II preliminary expenditures for recovery under the Special Charge ("the Special Charge Amount") with an amortization rate of 4 percent.

At the request of CAPP, the issue of whether the current amortization rate of 4 percent for the Special Charge Amount continues to be the appropriate rate of amortization was included in this proceeding. It was CAPP's position that the amortization rate for the Special Charge should not exceed the overall rate for depreciation for plant in service. CAPP noted that in 1982 the amortization rate for the Special Charge and the depreciation rate for plant in service were both set at 4 percent and remained at that level until September 1989. At that time Foothills' depreciation rate for plant in service was reduced from 4 percent to 2 percent, and will increase to 3 percent in 1996 when the total accumulated depreciation will be equal to what it would have been had the depreciation rate for plant in service been set initially at 3 percent in 1982.

CAPP proposed that the amortization rate for the Special Charge should be reduced to zero from 1 January 1993 until approximately June 1996, and then continue at the rate of 3 percent per annum.

It was Foothills' position that there is no necessary or logical relationship between the amortization rate for the Special Charge and Foothills' depreciation rates for gas plant in service. In cross-examination, Mr. MacPherson, the witness for CAPP, acknowledged that the treatment of the Special Charge Amount is not the same as the treatment of other items in Foothills' rate base. In support of

the 4 percent amortization rate, Foothills made reference to the size of its investment and the fact that only a portion of the Phase II expenditures were included in the Special Charge Amount. By 1982 Foothills had incurred over $195 million of preliminary expenditures and deferred costs. After deducting income tax benefits which accrued to Foothills' sponsor companies and the Dempster Lateral costs, the Board authorized costs of $124 million to be amortized at 4 percent per annum. Foothills also noted that the recovery of the Special Charge was approved on a before tax basis and that the cash received by Foothills after payment of income tax is already closer to an amortization rate of 2 percent rather than 4 percent.

Foothills acknowledged that no approvals would be required from its bankers to reduce the amortization rate applicable to the Special Charge Amount. Foothills' witness, Mr. Dooley, testified that a change in the amortization rate for the Special Charge would reduce the Company's cash flow and increase the amount that would be outstanding at the date at which renewal of authority to recover the Special Charge will have to be applied for again (1 November 2000). Foothills noted that in November 1992 the Board approved an extension, to 31 October 2000, of the Company's authority to recover the Special Charge in tolls. It is the Company's position that, absent any change in circumstances, the terms surrounding the Special Charge should not be altered. The Board notes that the agreement dated 16 November 1992 between Foothills, CAPP and APMC and supported by all of Foothills' interested parties, provided that the rate of amortization and the applied-for rate of carrying charges would be subject to review by the Board during the term of the amendment. In the exercise of its mandate, the Board has concluded that it is appropriate to consider the amortization rate for the Special Charge Amount in this proceeding.

Views of the Board

The Board considers it appropriate to amortize the Special Charge Amount over the useful life of the pipeline. The Board notes that in its August 1982 Reasons for Decision it approved a 4 percent rate for both the amortization of the Special Charge and the depreciation rate for Foothills' pipeline assets.

CAPP's proposal to have an amortization holiday for approximately three and one-half years until the current balance of accumulated amortization is equal to what the balance would have been if the Special Charge had always been amortized at 3 percent, results in an immediate reduction in the annual cost of service of $4,968,000 which is approximately a 3.5 percent reduction in tolls. The resumption of amortization at a 3 percent level in mid 1996 would increase tolls at that time by approximately 2.6 percent. While this would not, of itself, be a large increase, the Board notes that depreciation rates are also scheduled to increase in January 1996 from 2 percent to 3 percent, increasing tolls by approximately 7.5 percent. A reduction in the amortization rate to 2 percent over a period of approximately 10.5 years would result in tolls which are more stable over time while achieving the eventual aim of reducing the accumulated amortization to a level representing an annual rate of 3 percent.

Decision

The amortization rate applicable to the Special Charge Amount shall be reduced to 2 percent until such time as the balance of accumulated amortization is equal to the amount that it would have been if the Special Charge Amount had always

been amortized at the rate of 3 percent. The rate of amortization shall then be increased to 3 percent.

1.3 Preliminary Survey and Investigation Costs

In its application Foothills applied to transfer to rate base $765,000 of deferred Preliminary Survey and Investigation Costs incurred in connection with the expansion of the Eastern Leg. These costs were incurred in connection with studies related to facilities design, transportation economics, cost/benefit analysis and a facilities application for a project known as the Can-Am Project which was subsequently abandoned. It was Foothills' evidence that this Project was part of a plan to expand the existing Prebuild facilities to take advantage of the favourable economics of expansion which would have resulted in lower tolls for shippers. While this project did not proceed, Foothills argued that the work undertaken demonstrated the attractive economics of expanding the Prebuild system and resulted in Foothills undertaking the expansion of the Eastern Leg.

CAPP took the position that certain of the applied-for costs should not be included in rate base as they had not added in any way to the value of the current facilities configuration. It argued that the Company should be required to show that the expenditures were in respect of matters that are used and useful in providing service. While accepting that costs such as engineering design costs could be considered as adding value and therefore be included in rate base, CAPP questioned the value of studies undertaken relating to the comparison of competing projects.

The APMC expressed a concern that the Company should be able to establish, to the satisfaction of the Board and interested parties, that there be a reasonable and sufficient connection between the costs incurred and the eventual expansion undertaken, and requested that the Board examine the costs carefully. On the basis of Foothills' assurance that all of the costs incurred resulted in the final project being constructed, the APMC did not oppose the inclusion of the costs in rate base.

Since 1985 when these costs were incurred and deferred in NEB Account 172, Foothills has been earning a return on the deferred balance at its rate of return on rate base plus the associated income taxes on the equity portion of the return. The APMC requested that the NEB clarify whether Foothills was entitled to collect carrying charges at the rate of return on rate base together with the associated income taxes in respect to the deferred amount. Foothills maintained that the recovery of carrying charges at the rate of return on rate base was in accordance with the provisions of its tariff.

Views of the Board

The Board has reviewed the nature of the expenses in question and is satisfied that all of the expenditures were incurred in an effort to pursue an opportunity to expand the Eastern Leg of the pipeline which would have resulted in lower tolls for all Eastern Leg shippers. The Board accepts Foothills' evidence that the work undertaken contributed to the eventual expansion of the Eastern Leg of its pipeline.

The Board notes that section 8.82 (a) of Foothills' tariff provides for the inclusion of the balance of NEB account 172, "Preliminary Survey and Investigation Costs", in Foothills' calculation of its monthly rate base.

Decision

Foothills is authorized to transfer $765,000 from NEB account 172, "Preliminary Survey and Investigation Costs", to NEB account 100, "Gas Plant in Service". The amount to be transferred shall be allocated 20 percent to Zone 6 and 80 percent to Zone 9.

1.4 Deferred Income Taxes

History of Board Treatment of Proposals to Draw Down Deferred Income Tax Balances

In considering this issue it may be helpful to parties to consider the Board's prior decisions in dealing with similar request relating to other pipelines that it regulates.

Of the Group 1 pipelines regulated by the Board, only TransCanada and Westcoast have been permitted to draw down deferred income taxes. In both instances, the provision for income taxes had been calculated on a normalized basis for only four years, during the period from 1979 to 1982, and each had accumulated a deferred tax balance of just under $75 million.

On three occasions, during the 1980s, TransCanada applied to draw down a portion of its deferred tax balance in order to minimize increases in its tolls. The Board's Decision in RH-3-86 read as follows:

> "The Board was not persuaded that the Company's current proposal is materially different from its proposals in previous years. The Board therefore continues to believe that the Applicant's proposal is a departure from cost-based tolls and that the use of accumulated deferred income taxes in this manner is contrary to sound accounting principles. Accordingly, TCPL's proposal is denied. The Board does not anticipate circumstances in the foreseeable future that would justify the use of accumulated deferred income taxes in this manner."

In the RH-3-86 Decision the Board maintained that, in accordance with good accounting practice, absent evidence of a cross-over of timing differences, no draw down of the deferred income taxes should occur. With the measurement of cross-over on the basis of all pipeline assets in TransCanada's rate base, and the constant additions to that rate base, the prospect of cross-over continued to be advanced into the future.

The same situation existed for Westcoast when, in the RH-1-92 proceeding, the Company applied to draw down a portion of its deferred tax balance, also with a view to reducing the increase in tolls. With the prospect of cross-over on a total asset basis not being likely to occur in the foreseeable future, the issue was re-examined. The Company was questioned on the cross-over status of the group of assets which were in service as of 31 December 1982, those being the assets on which the deferred tax balance was originally accumulated. Once it was established that, in fact, cross-over on those assets had occurred two years earlier, the Board approved a draw down of the deferred tax balance. The Decision reads as follows:

> "Westcoast shall amortize to the cost of service commencing January 1992 the amount required to reduce utility taxable income to zero in 1992 and subsequent years until the deferred tax balance is extinguished."

Since then, Westcoast has drawn down $7.3 million in 1993, but required no draw down in 1992, and is forecasting none for 1994.

Following release of the RH-1-92 Decision for Westcoast, TransCanada once again applied for a draw down of its deferred income tax balance. As in the Westcoast case, it was established that cross-over had occurred on the specific group of assets which had given rise to the deferred tax balance in the first place. In RH-2-92 TransCanada proposed, and the Board approved, that the deferred tax balance would be amortized to the cost of service over a three-year period commencing with 1993.

Draw Down of Foothills' Balance of Deferred Income Taxes

From commencement of operations in the early 1980s until the end of 1991, Foothills' provision for income taxes to be recovered in tolls had been calculated on the normalized basis. In 1992 the Board approved a change to the flow-through methodology of providing for income taxes in Foothills' tolls effective 1 January 1992. At that time, Foothills balance of deferred income taxes had grown to a total of $136.6 million. CAPP and the APMC raised the question of drawing down the deferred income tax balance as an issue for consideration in this hearing.

The deferred income tax balances as accumulated for each of Zones 6 to 9, and their relative size in relation to the forecast 1993 rate base, by zone, are as follows;

	Deferred Income Tax Balance (millions)	Percentage of Rate Base
Zone 6	$46.3	16%
Zone 7	$9.1	18%
Zone 8	$10.2	6%
Zone 9	$70.0	33%

In its application, Foothills specifically requested that it not be required to draw down the existing deferred tax balance.

The Company maintained that any proposal for a draw down of deferred income tax would require additional debt and equity financing and it argued that, under the present method of financing debt through its term bank loans, considerable lead time would be required to facilitate negotiation on the most favourable terms and conditions. The Company suggested that it would not be appropriate to consider a draw down of deferred taxes until those assets had reached cross-over. Foothills forecast that cross-over in each operating zone would occur no earlier than 1996.

In closing argument, the Company stated that the question of the draw down of its deferred taxes would have to be addressed by both Foothills' lenders and its equity investors. It argued that the appropriate time to initiate discussion with its lenders would be after the Board has rendered its decisions on rate of return and common equity ratio.

The intervenors were in general agreement that a draw down should not commence in 1993. CAPP and APMC maintained that it may be appropriate to draw down the deferred tax balance before the cross-over point is reached in 1996. They further recommended that Foothills be directed to consider the most appropriate parameters for draw down; whether draw down would create a material financing

impact, and if so, how that impact could best be mitigated; and provide the Board and interested parties with the results of this review by 31 December 1993. Natural Gas Pipeline Company of America supported the positions of CAPP and APMC and stressed the importance to the tollpayers whose toll payments created the deferred tax balance, of an appropriate allocation of deferred tax funds to the Foothills cost of service as soon as cross-over is reached.

Views of the Board

The Board considered the CAPP and the APMC proposal that Foothills should be directed to undertake a review of the financial impact of a draw down of its deferred tax balance and report its findings to the Board by 31 December 1993. The Board did not believe that any useful discussions could be undertaken between Foothills and its bankers until the Board's decision with respect to capital structure contained in this Decision was released. The Board notified Foothills and all interested parties of this view in a letter dated 15 September 1993.

The Board did not hear enough evidence in this proceeding to enable it to make a decision on the feasibility or appropriateness of any proposal to draw down Foothills' deferred income tax balances. While the Board has formed no opinion as to whether or not Foothills deferred income tax balance should be drawn down, it is of the view that the studies requested by CAPP would be useful to the Board and all Parties in considering this matter. Accordingly, Foothills is directed to conduct studies and enter into discussions with its shareholders and lenders on the feasibility and financial impact of drawing down all, or a portion of, its deferred income tax balance.

Foothills and interested parties should note that while the Board is prepared to consider any proposals put before it by Foothills or interested parties, it is not bound by any previous decisions with respect to an issue involving other companies. Each case must be decided upon its own merits.

Decision

Foothills is directed to conduct studies and enter into discussions with its shareholders and lenders on the feasibility and financial impact of drawing down all, or a portion of, its deferred income tax balance and to provide the Board and interested parties with the results of this review by 30 September 1994.

1.5 Incentive Rate of Return Scheme

The existing Foothills pipeline is a prebuilt portion of the Alaska Natural Gas Transportation System, which was provided for under an Agreement with the United States of America known as the Canada/U.S. Agreement which is found at Schedule I of the *Northern Pipeline Act* to carry natural gas from Alaska through Canada to the lower 48 States. This Agreement provided for, among other things, both the Canadian and American portions of the pipeline to have an incentive rate of return (IROR) scheme to provide a financial incentive to be cost efficient during construction of the pipeline. The intent of these schemes was to encourage cost savings and efficiencies during the construction of the pipeline facilities by offering a rate of return incentive if the construction was completed within the approved cost estimates. The requirement for such an incentive scheme to be applied to the Foothills

pipeline was provided for under the *Northern Pipeline Act* which in turn mandated the setting of the rate and consideration of the rate components to the Board. The Board set out its rules for calculating Foothills' IROR adjustment in Order TG-5-81.

The scheme provides for a one-time adjustment to be made to the Company's rate base, the size of which is determined by the degree of cost effectiveness achieved by Foothills in constructing the pipeline. The amortization of the one-time adjustment and the return on the unamortized balance is the financial reward earned by the Company.

The IROR scheme was applied to the original construction of the Prebuild in 1981 and 1982. Commencing in 1989, Foothills made several additions to the Prebuild system including the addition of Compressor Station 393 in 1990, Compressor Stations 363, 365 and modifications to Station 367 in 1992 and adding 77 kilometres of pipeline looping on the Western Leg in 1993, all of which were provided for in the original design certification for the ANGTS project. Foothills has declined to apply for an IROR amount on these expansions to the prebuilt pipeline. Foothills has asked the Board to include in the Order arising from this proceeding, a direction that the IROR scheme will not apply to the expansion of the Prebuild facilities which have occurred in Zones 6 through 9 since the in-service date of the original Prebuild facilities.

Foothills argued that the original intent of the incentive scheme was to provide an incentive for cost control on a project which, due to its size, had a significant potential for cost overruns. Foothills further argued that it did not believe that it was the intention of the Governments of Canada and of the United States nor of the *Northern Pipeline Act* that such a scheme would be applied except in the context of a major construction project. In support of this argument Foothills quoted the following excerpt from the Board's November 1979 Reasons for Decision:

> "This incentive rate resulting from good or bad cost control on the original pipeline construction should not apply to investments made years later on expansion of the system."

CAPP and APMC supported Foothills' position on this matter.

Views of The Board

The Board acknowledges that all parties were of the view that the IROR scheme should not be applied to expansions of the prebuilt portion of the Foothills pipeline system. However, that position was not supported by substantial legal arguments on the issue of whether or not the *Northern Pipeline Act* and the Canada-U.S. Agreement appended to it, require the Board to apply an IROR scheme to expansions of the prebuilt portion of the Foothills pipeline. That was a reflection, no doubt, of the complexity of the issue, since it involves not only questions of statutory interpretation but also of international law.

Decision

As an interim measure the Board is prepared to accept the position advanced by Foothills and interested parties that the IROR scheme should not apply to expansions of the prebuilt system. Nevertheless, the Board is concerned that this issue may not yet be satisfactorily resolved. Should the Board subsequently

determine that the IROR issue ought to be revisited, resort may be had by the Board to its powers under section 21 of the *Act* to review its Decision.

Chapter 2

Capital Structure

A major issue in this hearing was the appropriate common equity ratio, and hence capital structure, for Foothills. Foothills' capital structure has not been reviewed since it was approved in the late 1970s. In this proceeding, Foothills applied for a common equity ratio of 35 percent while CAPP/APMC recommended a common equity ratio of 25 percent.

Since its inception, Foothills has had an authorized capital structure of 25 percent common equity and 75 percent debt, with the equity and debt components allowed to vary by plus or minus 5 percent. Under this arrangement Foothills' actual common equity ratio has averaged 27.7 percent over the five-year period 1988 through 1992 with a high 29.15 percent in the third quarter of 1991 and a low of 25.7 percent in the fourth quarter of 1992.

There was broad agreement among the parties that Foothills' capital structure should be determined primarily on the basis of its business risks. Foothills further argued that it required financial flexibility in arranging the debt component of its capital structure. According to Foothills, the current capital structure has not provided the company with sufficient financial flexibility and has therefore restricted its available options for financing its debt. CAPP/APMC advanced the position that toll minimization was also a factor which the Board should consider when establishing Foothills' capital structure.

2.1 Business Risk

The parties in this proceeding debated Foothills' business risks in both a historical and a comparative context. Foothills took the position that, from a historical perspective, its business risks have never been higher than they are today. CAPP and the APMC, however, argued that Foothills' business risks have never been lower. The parties arrived at these conclusions by examining the same set of historical events, albeit from different perspectives.

On a comparative basis, Foothills and its expert witnesses concluded that Foothills' business risks are similar to Westcoast's and higher than those of TQM, TCPL and ANG. CAPP concluded that Foothills is most similar in business risk to TQM and lower than the other major pipelines regulated by the Board.

This Chapter is divided into three parts: the first part provides an overview of Foothills' history; the second summarizes how Foothills' business risks have evolved over time; and the third compares Foothills' business risks to other Canadian gas pipelines.

2.1.1 A Brief Chronology of Major Milestones in Foothills' History

In July of 1977, the NEB issued its Reasons for Decision on Northern Pipelines. That decision approved Foothills' application for construction of the Canadian portion of the ANGTS. At that time, Foothills proposed, and the Board accepted, a capital structure of 25 percent common equity and 75 percent debt.

During 1979, steps were taken to initiate the Canadian portion of the Prebuild Project. This involved building some elements of the ANGTS system ahead of the remainder in order to commence export of additional volumes of Canadian gas. These steps included:

- A provision for a "minimum revenue stream", created through regulatory and contractual arrangements;

- Long-term transportation contracts which were backed by long term sales contracts to four major U.S. interstate pipeline buyers (United, Panhandle, Northern Natural and PITCO) containing requirements to take and pay at a high load factor;

- The major U.S. buyers were allowed, by the U.S. regulatory agencies, to roll in the higher cost Canadian gas into their lower-priced U.S. system-wide supply; and

- U.S. government and regulatory assurances that they would not take any action to relieve the U.S. interstate buyers of their contractual obligations.

Also in 1979, the NEB approved a toll and tariff for the Prebuild project and indicated that the 75/25 debt/equity ratio was optimal since it would result in the lowest cost of service to customers. In its Reasons for Decision, the Board concluded that Foothills' financial risk (with 25% common equity) was lower than TransCanada's (with 41.03% total equity). The Board concluded that Foothills' tariff provided greater assurance of cost recovery than did TransCanada's. Foothills, however, was perceived to have higher business risks.

During 1981, Foothills began service on its Western Leg and the following year on the Eastern Leg (providing capacity of 240 MMcf/d and 975 MMcf/d, respectively). Within four months of the commencement of service on the Eastern Leg, United, the largest of the four U.S. interstate buyers, declared *force majeure* and wanted to be relieved of its minimum purchase obligations under its Prebuild agreement with Northwest Alaskan. The other major buyers shortly thereafter also indicated that they would reduce their purchases. New contract terms were negotiated and subsequently approved by the Federal Energy Regulatory Commission (FERC) in late 1983.

In 1984, the FERC issued Order 380, a generic rule relating to the recovery of variable costs through the minimum commodity bill provisions of pipeline tariffs. FERC followed with Orders 380-A, 380-B and 380-C which declared and reaffirmed that the rule was not intended and did not apply to the tariffs which underpinned the Prebuild project.

By 1984, load factors on both the Eastern and Western Legs had declined from the 1982 levels of 66 and 48 percent to 52 and 37 percent respectively. And when, in 1984, the Board held a toll hearing for Foothills, all the expert witnesses agreed that Foothills' business risks were greater than TransCanada's.

During 1985, United once again declared *force majeure*.

In 1986, the FERC issued Opinion 256. This opinion concluded that restrictions on the as-billed flow-through of demand charges were warranted in order to ensure that Canadian demand charges conformed with the ratemaking policies which applied to U.S. pipelines. In 1987, the FERC issued Opinion 256-A which exempted the Prebuild demand charges from the effects of Opinion 256. Foothills' Eastern Leg load factor reached its historical low of 25 percent in 1986.

By 1989, the volumes initially purchased by United had all been contracted to other buyers.

Since 1986 Foothills' load factors have progressively improved to more than 90% on the Western Leg and more than 80% on the Eastern Leg.

Most recently, in 1993, in response to petitions from Pan-Alberta and Foothills concerning the applicability of FERC Order 636, the FERC reconfirmed the agreements between the U.S. and Canadian governments and its previous Orders relating to the Prebuild.

2.1.2 Changes in Foothills' Business Risk Over Time

The parties to the proceeding made arguments on several aspects of the business risk facing Foothills including regulatory risk, supply risk, market risks, and risks as perceived by financial markets.

2.1.2.1 Regulatory Risk

According to Foothills, many of the new buyers who replaced the original U.S. interstate buyers, except for PITCO, are local distribution companies ("LDCs") subject to state regulation. Deregulation in the U.S. has increased the total regulatory risk faced by Foothills and FERC's assurances cannot be imposed on state regulators. Further, Foothills contends that deregulation has exposed it to competition from which it was shielded when it began operating. CAPP/APMC countered by asserting that the end buyers of the gas were always subject to state regulation and that deregulation has decreased the layers of regulation, thereby reducing regulatory risk. Further, CAPP/APMC suggested that the regulated era created distortions in the supply/demand balance which were unsustainable. Deregulated gas markets are more predictable because supply and demand will always balance, thereby lessening the possibility of adverse regulatory intervention.

According to CAPP/APMC, Foothills has been able to obtain special compliance or exemption from numerous changes to FERC policy, including Orders 380, 636 and Opinion 256. Foothills submitted that FERC's assurances have not shielded it from the changes which have transformed North American gas markets. Further, Foothills submitted that while the FERC has honoured its commitments to maintain the Prebuild interstate pipeline buyers' obligations to purchase Canadian gas, it has released the same interstate buyers' customers from their purchase obligations, setting them free to buy gas elsewhere.

Foothills noted that the CPUC has indicated that it intends to review the costs of Prebuild gas purchased by SOCAL from PITCO. CAPP/APMC, on the other hand, noted that the Western Leg volumes have been taken at very high load factors in recent years and were optimistic that the historically reliable PITCO volumes would continue to find a place in SOCAL's gas supply portfolio even after the CPUC review.

CAPP/APMC submitted that it is easier to obtain regulatory approval to export gas to the U.S. and easier to obtain U.S. regulatory approval to import Canadian gas than was the case when the Prebuild started operating. Further, the Free Trade Agreement (FTA) has reduced the regulatory risk associated with exporting gas to the U.S. While Foothills admitted that it was now somewhat easier to obtain export permits than before, it denied the FTA had decreased regulatory risk, at least in the U.S.

2.1.2.2 Supply Risk

When Foothills was first approved, Canada was seen to have a limited surplus of gas. According to CAPP/APMC, Canada currently has a much larger gas supply available for exports, reducing the possibility of curtailment. Foothills agreed that Canada has a large geological and economic gas potential but suggested that short-term deliverability problems could still create supply problems.

2.1.2.3 Market Risk

According to Foothills, the ability of the Prebuild contractual and regulatory structure to assure a minimum revenue stream was totally dependent on the continuation of the fully regulated gas markets that existed at the time the project was developed. Since Foothills commenced operations, gas markets in Canada and the U.S. have been deregulated, changing them beyond all recognition.

Foothills noted that the initial buyers of the gas transported on Foothills were large, creditworthy U.S. pipelines which could combine the then higher cost Canadian gas with their own lower cost gas. These large buyers could continue to pay Foothills' demand charges, even at low load factors. These initial buyers have now been completely replaced by a diverse group of buyers, such as LDCs, which are perceived by Foothills to be less creditworthy. Further, the initial buyers contracted for the gas on a long-term sales basis. Most of the gas currently transported on the Eastern Leg is sold on a spot or short-term basis. Foothills concluded that these developments have increased its business risks.

CAPP/APMC, however, submitted that the creditworthiness of the initial buyers was put into immediate doubt when United declared *force majeure* shortly after the pipeline commenced operations. Currently, according to CAPP/APMC, the inflexible contracts with the initial U.S. interstate buyers have been replaced with a more diverse group of buyers. Producers and shippers are now selling on a short-term and spot basis to take advantage of attractive prices for these types of sales. They also pointed out that the transportation contracts on Foothills are of even longer duration than when the pipeline commenced operations. Further, they submitted that the fact that there are now more shippers and buyers using the Prebuild lessens the risk of both supply and market failure. CAPP/APMC also noted that in the joint proposal to the Alberta Energy Resources Conservation Board ("ERCB") for the Foothills/ANG /PGT expansion, Foothills and its partners stated that the move to short-term sales with long-term transportation contracts has been of benefit to the Canadian natural gas industry, as demonstrated by the fact that Canadian exports are flowing at high load factors.

Foothills noted that the gas to be shipped on the Western Leg expansion (commencing 1 November 1993) would not have the same tariff protection as the original volumes with regard to minimum bill provisions. Further, many of the shippers who contracted for space on the Western Leg expansion had not yet found buyers for their gas. Under cross-examination, however, Foothills' witnesses admitted that they were more concerned about the original PITCO volumes than the new "expansion" volumes. CAPP/APMC noted that the Western Leg expansion volumes were supported by long-term transportation contracts which indicated producer and shipper confidence in the markets to be served by the expansion.

CAPP/APMC stated that Pan-Alberta, the major shipper on Foothills, has been very successful in modifying and restructuring the original sales contracts to meet the changing needs of the market. Foothills agreed but suggested that in doing so, Foothills, its lenders and equity investors have absorbed a significant reduction in the quality of the security underpinning the Prebuild financing.

CAPP/APMC noted that the extension of the Northern Border pipeline from Ventura, Iowa to Harper, Illinois has expanded Foothills' access to U.S. markets. Excess capacity in U.S. Midwest pipelines allows Foothills' shippers access to discounted interruptible service, making their gas competitive in many U.S. markets. Foothills countered by stating that the additional market access provided by the extension is of little value since the Prebuild remains the high cost transporter into the Midwest and the sales are on a short-term and spot basis. Foothills submitted that excess capacity in the Midwest is simply a sign of how competitive that market is and that this excess capacity increases Foothills' business risks.

CAPP/APMC pointed out that Foothills' tolls are lower now than ever, making the gas transported on Foothills more competitive than before. Foothills agreed but suggested that they are still the highest cost transporter into every market they serve.

NOVA is currently the only shipper on Zone 6, the Alberta portion of the Eastern Leg. Foothills' Zone 6 tolls are rolled into NOVA's tolls. CAPP/APMC submitted that this has reduced the risk that Foothills will not recover the costs associated with its Zone 6 facilities. Foothills countered by noting that NOVA can give just one-year's notice to Foothills that they will no longer roll the Pan-Alberta volumes into their total cost of service and four-years' notice on the remaining volumes. Thus, Foothills does not have a guarantee that NOVA would continue to pay the whole Zone 6 cost of service indefinitely.

Foothills submitted that the high cost Canadian gas shipped on the Prebuild could no longer be rolled into the low-cost system supply of U.S. buyers, making it less competitive. CAPP/APMC contended that the high load factors, higher volumes and queues for service indicate that gas flowing on the Foothills' system is now competitive without the need to be combined with lower cost U.S. gas supplies and that the pipeline is competitive on a stand-alone basis.

2.1.2.4 Risks as Seen by the Financial Markets

Foothills has reduced its cost of debt (the spread between its loan rate and the prime rate) and has been issuing commercial paper since 1989. According to CAPP/APMC, this indicates that lenders perceive Foothills to be less risky than in the past. Further proof of the banks' confidence in Foothills is evidenced by the fact that the banks renegotiated and extended their loans with Foothills in 1990. Foothills position was that the resulting lower spreads do not indicate less risk, just that the spreads were too high when the project began. Foothills also claimed that the only reason it can issue commercial paper is because this paper is backed by a line of credit with its banks. In their view, the banks renegotiated the loans because "the banks are into the project, for better or for worse".

Foothills advanced the view that the "basket clause" is a liability. The basket clause is a clause which would require that Foothills' fixed costs be depreciated over a four year period if the long-term export licences which originally underpinned the Prebuild are not renewed. This clause was originally required to secure bank financing for the Prebuild. CAPP/APMC pointed out that the basket clause has been extended several times; that its potential impact has been reduced through depreciation; and that it is not expected to be triggered. Further, according to CAPP/APMC, the basket clause is a safety valve which other pipelines do not have. The banks have extended it because of the uncertainty surrounding the marketability of gas moved on Foothills' system were it to be triggered.

2.1.2.5 Other Risk Factors

Foothills began operating with normalized income taxes and a higher depreciation rate (4 percent) than at present. According to Foothills, the move to flow-through taxes in 1992 and a lower depreciation rate (effectively 3 percent) in 1989, has lowered Foothills' cash flow and thus increased the business risk. CAPP/APMC submitted that the move to flow-through taxes and a lower depreciation rate has lowered unit tolls and thus made gas flowing on Foothills' system more competitive.

CAPP/APMC concluded their argument by stating that while Foothills is currently subject to the same competitive pressures as other pipelines, it continues to have a "protective umbrella" of U.S. governmental and regulatory protection which other pipelines do not have. Further, Foothills has been competitive because Alberta producers have historically been prepared to accept netbacks which have allowed them to compete in markets served by Foothills. In this regard, it is the shippers and not Foothills that have been, and continue to be, at risk. According to CAPP/APMC, Foothills' business risks are presently the lowest in the Company's history.

Foothills concluded its argument by stating that it now faces the full force of competition in its markets but submitted that it is no different from other Canadian pipelines in this regard. U.S. governmental and regulatory assurances have not shielded and will not shield the company from further market developments. In its view, the changes from a regime under which gas was sold to a few large creditworthy buyers to a large number of smaller buyers means that the pipeline faces greater risks now than previously.

2.1.3 Foothills' Comparative Business Risks

2.1.3.1 Foothills' Perspective

Foothills and its expert witnesses concluded that, comparatively, Foothills is closest in total risk to Westcoast and is more risky than TQM, TCPL and ANG. The primary basis for this conclusion is Foothills' risk exposure to U.S. markets. Virtually all of the gas transported on Foothills ends up in U.S. markets. This is a much higher proportion than for any other export-oriented Canadian gas pipeline. Further, they argue the export markets served by Foothills (the Midwest and California) are riskier than the export markets served by other Canadian pipelines. Foothills characterized itself as a high cost transporter of gas into every market it serves. Most of the gas transported on the Foothills system is sold on a short-term or spot basis, with only 300 MMcf/d sold through long-term sales contracts.

In Foothills' view, it is riskier than TCPL because only half of TCPL's throughput is sold in U.S. markets and TCPL's northeast U.S. market is a low risk export market. Domestic markets are, according to Foothills, inherently less risky. Foothills, on the other hand, exports most of its volumes and those are sold in the highly competitive Midwest and California markets with limited access to the Pacific Northwest. In the short run, Foothills acknowledges that its tariff provides it with slightly better cost recovery protection than does TCPL's. In the long run, however, these differences in tariffs are outweighed by market risks.

Foothills claimed that its market risks are greater than for ANG because Foothills' export markets are riskier than ANG's. ANG's existing markets in the Pacific Northwest and Northern California are served through pipeline facilities which are largely depreciated, giving them a toll advantage over Foothills' volumes on the Western Leg.

TQM, according to Foothills, is the least comparable pipeline to Foothills because it has only one shipper with a long-term contract and that shipper is TransCanada.

Foothills contends that it is most comparable to Westcoast. While it agrees that Westcoast has a high percentage of gathering and processing facilities in its rate base, Foothills argues that it has more exposure to the U.S. market and its markets are more competitive. Foothills argued that it faces higher operating risks than other pipelines (except Westcoast) because it has a single high pressure line.

Foothills also submitted that Westcoast is riskier than TCPL because:

- It has a higher percentage of export volumes;
- It has a high proportion of gathering and processing facilities in its rate base (which, it submitted, are inherently riskier than large diameter pipelines);
- Only 30 percent of its capacity is contracted for longer than one year; and
- Its export deliveries are to competitive U.S. markets.

Foothills also expressed the concern that excess pipeline capacity out of Alberta would give shippers alternative routes to transport their gas. As the high cost transporter, it is Foothills' view that it may not attract shippers at the margin and shippers may be discouraged from renewing their contracts if they have alternatives.

2.1.3.2 CAPP/APMC's Perspective

CAPP/APMC submitted that Foothills faces lower business risks than Westcoast, TCPL, ANG and NOVA because none of these pipelines have the same governmental and regulatory assurances as Foothills. They submitted that these assurances provide a minimum revenue stream for Foothills upon which no other pipeline can rely.

In CAPP/APMC's view, Foothills has better market access to the U.S. than does TCPL, ANG and Westcoast and demand for gas in the U.S. is forecast to increase. Further, no other pipeline, except for TQM, enjoys the protection of a full cost of service tariff. The fact that NOVA, TCPL and ANG operate portions of the Foothills system gives Foothills an operating advantage since it can take advantage of the flexibility offered by those pipelines.

Foothills, unlike other pipelines, is part of a larger undertaking, the Alaska Natural Gas Transportation System. This will ultimately give Foothills access to gas supplies unavailable to other pipelines and gives it a prospective lifespan longer than pipelines which can only access the Western Canadian Sedimentary Basin.

Excess transportation capacity out of Alberta is unlikely to affect Foothills because shippers have committed to long-term transportation contracts. Further, Foothills has queues for service on both its Eastern and Western Legs.

According to CAPP/APMC, the extension to the life of the Prebuild (in light of the delay of Phase II, the pipeline to Alaska) has reduced the overall risk of the project. Rapid completion during an

inflationary period may have produced cost overruns. A more orderly completion will likely be more cost-efficient.

CAPP/APMC's expert witnesses, Dr. Waters, stated that the specific business risks faced by Foothills are:

- The risk that the tolls will not be set at a level sufficient to provide a fair rate of return on total capital invested;

- The risk that a particular period's operating and/or financing costs will exceed those utilized in setting the tolls, or that the revenues will fall short of those projected; and

- The risk that, at some point, Foothills will be unable to set tolls which are sufficiently high to enable it to fully recover its fixed costs, including those relating to financing. The result would be impairment of Foothills' ability to service its debt, repay its debt, or both.

In evaluating the first risk, Dr. Waters stated, "In light of the experience to date, it is my view that investors will not be concerned that the Board's toll setting process will disadvantage them at some point in the future."

In evaluating the second risk, Dr. Waters stated that there is no risk that the income of Foothills will fall short of the expected level because of the cost-of-service toll methodology. While Foothills has always been able to achieve its allowed rate of return, even the lowest risk non-utilities experienced declines in profitability in 1991 and 1992.

Finally, in evaluating the third risk, Dr. Waters stated that the possibility of Foothills becoming uneconomic to the point of being unable to fully service its debt obligations is remote. In his view, Foothills, like most other NEB-regulated Group 1 pipelines, faces virtually no risk of insolvency.

CAPP submitted that Foothills is most similar in its business risk profile to TQM. CAPP supported this conclusion with the following:

- Both pipelines began as mandated pipelines;

- Both pipelines are sponsored by other pipelines and "enjoy the fruits of so-called double leverage";

- Both pipelines have received regulatory protection of their tariff structure;

- TQM's tolls are rolled into TCPL's cost of service while Foothills' Zone 6 tolls (representing almost 50 percent of its cost of service) are rolled into NOVA's overall cost of service;

- Both TQM and Foothills have maintained a 75/25 debt/equity ratio during their existence and have successfully financed their operations under this capital structure;

- TQM has been denied an increase in its equity component, partly because it would result in a toll increase, just as Foothills has suggested would be the case if its equity was increased; and

- TQM serves the Quebec market which has the risk of inter-fuel competition while Foothills serves a much broader U.S. market.

2.2 Financial Flexibility

Foothills stated that it requires a 35 percent common equity ratio to put its capital structure in line with its current business risks. Further, Foothills stated that it needed an increase in its common equity ratio to provide an allowance for financial flexibility. Foothills was of the view that lenders will require an "A" debt rating to continue to loan money to Foothills on reasonable terms. An "A" debt rating will also be required for Foothills to access public debt markets on reasonable terms. Dr. Sherwin, one of Foothills' expert witnesses, submitted that Foothills be given a capital structure which is consistent with other Canadian pipelines.

However, Mrs. McLeod, another of Foothills' expert witnesses, stated during cross examination that "It is very unlikely that anyone would agree to finance the company beyond the term of the existing licences and agreements".

CAPP/APMC submitted that there is no evidence that Foothills needs an "A" debt rating to obtain financing. Furthermore, even if it could be argued that more common equity was justified it is not, in their view, required at the present time. CAPP/APMC submitted that Foothills has been able to secure financing with its current capital structure and that the terms of its debt have improved with time.

CAPP/APMC noted that Foothills and its subsidiaries borrowed money to finance a joint exploration venture and submitted that this indicates that Foothills can effectively attract capital. Foothills disputed this and submitted that the loans were fully backed by the main sponsors of the joint venture.

2.3 Determination of the Capital Structure

2.3.1 Foothills' Position

Dr. Sherwin and Ms. McShane made their recommendation for a 35 percent common equity ratio based on business risks as well as a requirement for financial flexibility to provide access to public debt markets on terms similar to those available to TCPL and Westcoast. According to Dr. Sherwin, the capital structure should be based on business risks because "the capital structure, after all, should be, and is typically, a reflection of the risk to which the enterprise, whether it is a utility or an industrial company, is exposed". He suggested that the Board should give business risk 75 to 85 percent of the weight in setting Foothills' capital structure.

Dr. Sherwin also stated that the Board should not set the capital structure based on a desirable response on the part of debt rating agencies. According to Dr. Sherwin, this would not be a standard of reasonableness; rather, it would be only a standard of minimal financial integrity.

Mrs. McLeod's capital structure recommendation of 35 percent common equity is based on two considerations:

- Foothills' business risks; and

- The requirement that Foothills qualify for an "A" bond rating.

Mrs. McLeod submitted that, historically, Foothills has been compensated for its higher (than TCPL's) business risks through a premium to its rate of return on equity. She suggested that Foothills' common equity ratio now be established at a level consistent with those of traditionally financed,

investor-owned pipelines of comparable business risk and with the appropriate investment-grade debt rating.

In response to a Board information request, Foothills stated: "The optimal capital structure for a firm will be that combination of debt and equity which maximizes the total value of the firm. An alternative perspective is that the optimal capital structure for a firm will be that which minimizes the overall cost of capital of the firm."

Foothills expanded on this point by stating: "The optimal capital structure is that which balances the rewards and risks of increased leverage. As a practical matter, therefore, the optimal capital structure should be that which both maximizes the value of the firm and minimizes its overall cost of capital, subject to the maintenance of its financial integrity."

2.3.2 CAPP/APMC's Position

According to Dr. Waters, the appropriate capital structure for a utility depends on several factors:

- Business risks;
- The income tax regime and the potential for the utility's revenue requirements to be significantly affected by changes to the regime;
- The embedded cost of debt and level of embedded debt in relation to current debt and equity costs;
- Future expansion plans;
- The extent to which the utility will be required to replace existing financing; and
- Whether replacement debt be higher or lower in cost than embedded debt.

While recognizing the appeal of setting the capital structure based on business risks, Dr. Waters submitted that, in the context of a regulated pipeline, the common equity ratio should be kept as low as possible to minimize the pipeline's revenue requirements. He submitted that, because increases in the common equity ratio result in larger toll increases than occur with increases in the allowed rate of return on equity, it may be desirable to allow a somewhat higher rate of return on equity while keeping the common equity ratio as low as possible. According to Dr. Waters, the Board should not place much weight on prospective risks (which are unknown) in setting capital structure.

2.4 Views of the Board

This hearing has presented a unique opportunity for the Board in that it has allowed a complete review of Foothills' business risks from the time the pipeline first commenced operations. The Board is not generally provided with such a complete view of a company's change in risk exposure over time. This full review was most useful to the Board in arriving at its decision.

The Board notes that no commonly-accepted definition of business risk emerged at this proceeding despite the extensive discussion on this topic. The lack of a clear, widely accepted definition makes the analysis of business risk difficult. Furthermore, while

all of the parties discussed Foothills' business risk in relative terms, that is, relative to other pipelines and over time, none of the parties proposed a method of determining the absolute level of business risk for Foothills.

2.4.1 Changes in Foothills' Business Risk Over Time

In assessing Foothills' business risks, the Board is of the view that the primary risk in the current environment is market risk. With the deregulation of gas prices, the unbundling of gas sales and transportation functions, and the implementation of the FTA, the Board is of the view that regulatory risks and supply risks are less than in the past.

2.4.1.1 Market Risk

Foothills' throughputs, and therefore the fundamental viability of the pipeline, have always been affected by the competitiveness of the gas it carries in the markets it serves.

In the first half of the 1980s, Canadian gas export price regulation adversely affected the marketability of the gas stream moving via Foothills. This was demonstrated when the largest Eastern Leg purchaser, United, declared *force majeure* in 1983. The overall development of U.S. gas markets was adversely affected by the heavy regulatory interventions, including price intervention, which were also present in the first half of the last decade in the U.S.

Since the mid 1980s, however, the deregulation of gas prices and the unbundling of the sales and transportation functions of pipelines has greatly increased the flexibility and efficiency of the Canada/U.S. natural gas market. This is evidenced by the increase in the use of natural gas in both countries and the very rapid growth in exports from Canada which have roughly tripled since 1985.

The initial gas sales contracts which Pan-Alberta had, through an intermediary, with three large U.S. buyers subjected Foothills to significant market risk because the transactions took place at high regulated prices. This situation prevailled despite the apparent credit worthiness of those buyers. Now, no similar risk appears to be present: many buyers and sellers use Foothills' Eastern Leg; transactions are at freely-negotiated prices; and the risk is reduced of both supply and market failure.

The Board is of the view that the evidence shows that the gas transported on Foothills has become increasingly competitive over time. Thus:

- Foothills' Eastern Leg load factor has risen dramatically in recent years;
- The expansion of the Eastern Leg to accommodate expansion and extension of the Northern Border pipeline has been filled; and
- There is a long queue for service on the Eastern Leg.

The Board is of the view that the notion of "high cost" Canadian gas is outdated. When gas prices were depressed as a result of excess producing capacity relative to

demand, Alberta producers had to accept low netbacks on their sales to ensure that they remain competitive. However, the increase in load factors and the expansion of total sales and shipments via Foothills makes it clear that the gas transported is fully competitive in the market served. The competitiveness of these sales has been assisted by the fact that Foothills' tolls have declined over time.

The Board does not accept the argument put forward by Foothills that the presence of excess capacity on U.S. pipelines serving the Midwest is a factor which has increased its business risks. Rather, the Board views this excess capacity as in some senses advantageous to Foothills since it allows Canadian gas transported on the Foothills system to reach a broader market by onward shipment or displacement.

Foothills appears to be well-positioned to compete in U.S. gas markets. Its shippers have signed long-term transportation contracts and are thus fully liable for their portion of Foothills' cost of service. The fact that shippers are willing to sign such transportation contracts demonstrates the confidence of Alberta producers and marketers in the long-term prospects for sales in U.S. Midwest markets.

In this connection, Canadian gas still supplies only a very small proportion of total Midwest demand and there is considerable potential for expansion of the Canadian share of that market. High load factors are a reflection of the success of Foothills' shippers in consistently finding markets for their gas.

In regard to the Western Leg, which, at the time of the hearing, accounted for about one-sixth of Foothills' total capacity, the Board notes the evidence that the aggregate toll to reach Southern California markets with Alberta gas shipped via the Western Leg is a high one. However, shippers have been remarkably successful in maintaining sales to this market and therefore in achieving consistently high load factors for this portion of Foothills system. New market opportunities appear to be emerging in the U.S. Pacific Northwest and Foothills is well-positioned to take advantage of such opportunities.

In summary, the Board is of the view that the market risks facing Foothills are lower in the current environment than in the previous heavily-regulated environment characterized in part by inflexible government-mandated non-market pricing of gas from both Canadian and U.S. sources. The present well-functioning market permits buyers and sellers to rapidly change the terms and conditions of their sales arrangements, including the price, to ensure that gas sales and purchases are economically attractive to both parties.

2.4.1.2 Regulatory Risk

With respect to U.S. federal regulation, the Board agrees with Foothills that the FERC's assurances have not prevented it from facing a competitive market for gas. The governmental assurances have likely made the transition from regulation to competition easier than it might have been, but the end result has been the same. The assurances may give the investors some peace of mind, but they have not and do not provide Foothills with an "umbrella" for all eventualities. On balance, it is the Board's view that the governmental and regulatory assurances provide some

unquantifiable benefit for Foothills but do not significantly reduce Foothills' business risk.

The Board is in agreement with CAPP/APMC that the end buyers of gas transported on Foothills have always been subject to regulation at the state level. It is only recently that a single state regulator, the CPUC, has acted in a manner which has been regarded as counter to the interest of some Canadian producers. There is no evidence to suggest that other state regulators face the same set of historical and contractual gas-trade circumstances as did the CPUC.

The Board is of the view that the outcome of the CPUC's review of the PITCO Western Leg volumes is uncertain. Based on the evidence presented concerning Pan-Alberta's past record of successfully finding alternate buyers for the gas which was initially contracted to the U.S. interstate buyers, it seems reasonable to assume they will be able to continue to do so.

In summary: the Board finds that U.S. federal regulation provides some benefit for Foothills; that there is no evidence that state regulation has so far had adverse effects on Foothills' risk; and that in the light of the success of policies to deregulate markets and prices, the risks of adverse regulatory intervention in the market place appear to the Board to be less than in the past.

2.4.1.3 Supply Risk

Factors such as the FTA and other changes to the Government of Canada's export policy have made it is easier to obtain gas export approval than when Foothills commenced operating. Canada's large natural gas resource base, in combination with prospective Alaskan gas, ensure a large long term supply which can be transported by Foothills. It is the Board's view that Foothills' supply risks are minimal.

2.4.1.4 Risks as Viewed by Financial Markets

The spreads in Foothills' prime-based loans are lower now than in the past. The Board believes that this fact suggests that the banks now perceive Foothills to be of lower risk. Foothills was only able to issue commercial paper in 1989, after United was totally replaced as a buyer. Foothills' statement that it could only issue commercial paper with the backing of a line of credit from its banks is true but it is also true for most companies which issue commercial paper. From a financial market perspective, Foothills seems to be of lower risk than in the 1980s.

The Board is of the view that the basket clause is a legacy of a very different past. The fact that invoking the provisions of the basket clause might, in and of itself, cause financial stress for the Company is evidence that such provisions are unlikely to be triggered. Therefore, the basket clause represents an element of risk which, at this time, is not material.

2.4.1.5 Other Considerations

The Board accepts that the decrease in Foothills' depreciation rate and the move to flow-through taxes have reduced Foothills' cash flow with a corresponding reduction

in interest coverage ratios. Given Foothills' cost of service tariff, however, it is not clear that the impact on cash flow has led to a corresponding increase in business risks.

2.4.1.6 Summary of Changes in Risk

Foothills was conceived and constructed during the era of heavily-regulated natural gas markets. The Prebuild was initially seen as a short-term undertaking which was to become part of a much larger project to transport Alaskan gas to U.S. markets. The Prebuild portion of Foothills is no longer considered a short-term project because completion of Phase II, the pipeline from Alaska to Alberta, has been delayed, most likely into the next century.

It is the Board's view that Foothills' business risks peaked during the mid-1980s. At that time, the U.S. gas market was shrinking. Rapid changes in natural gas markets had created uncertainties about how the market would evolve. Many pipelines were straining under the weighty obligations of take or pay commitments. Foothills could not be shielded from these market uncertainties by its regulatory and governmental assurances. Up to 1986, its load factors were falling year after year. The declaration of *force majeure* by a major buyer clearly indicated Foothills' exposure to the then prevailing market uncertainties.

Since the mid-1980s, Foothills' business risks have declined. The deregulation of gas markets is almost complete and buyers, sellers and regulators now have a better understanding of the new market forces. The U.S. natural gas market has grown steadily since the mid 1980's and Canadian exports to this market have greatly expanded. Foothills' load factors have been rising since 1986. New buyers have been found for all of the gas previously contracted to the initial major interstate pipeline buyers and Foothills has been expanding its system in response to shippers' needs.

Gas transported on Foothills has been successfully marketed in the highly competitive Midwest market. Foothills appears to be well-positioned to compete effectively in the transportation of gas to major U.S. consumption areas, as evidenced by the willingness of shippers to commit to long-term transportation contracts. It is also notable that despite recent disputes with the CPUC, shipments to the California market have remained at high levels.

2.4.2 Foothills' Comparative Business Risks

In the Board's view, the fact that Foothills has wide access to diverse gas export markets reduces its overall risk. Further, Foothills' cost of service tariff provides the company with a higher level of confidence that it will recover all prudently incurred costs than that which would be obtained by a pipeline with a forward test year toll determination. The Board has placed relatively little weight on the pipeline-to-pipeline comparative analysis presented during this proceeding in determining the appropriate capital structure for Foothills. Despite the amount of discussion on this topic, there was very little evidence put on the record as to the absolute levels of market risks faced by the different pipelines cited in the comparisons. Further, if the Board were to make such company-to-company comparisons it would encourage other NEB-regulated

pipelines which appeared in subsequent toll proceedings to rely on such comparative findings. Under the Board's current process of holding sequential hearings, this could lead to circularity in the evidence presented before the Board.

2.4.3 Financial Flexibility

The Board is of the view that Foothills should no longer be viewed as the first stage of a larger undertaking but rather as a stand-alone system. When Foothills was first constructed, it was not expected to be a stand-alone operation for more than four or five years, after which time its finances would be rolled into those of the larger pipeline from Alaska. Now, as a stand-alone pipeline, Foothills has specific financing requirements which were not foreseen when the Prebuild was initially constructed: for example, the Company must periodically refinance its existing debt and must raise new capital to finance expansions on the basis of present assets and operations.

In light of these changes in circumstances, the Board is of the view that Foothills should be provided with the flexibility to renegotiate its existing debt with its current lenders or, alternatively, should be put in a position to access alternative financing sources from those which it currently employs. To this end, the Board accepts that the common equity ratio is too low, at this time, for Foothills to adequately address its financing requirements as a going concern.

Mrs. McLeod's comments on the limitations of the long-term financeability of Foothills within the terms of the existing licences and agreements, however, raise doubts as to whether Foothills could access long-term bond markets until the basket clause is modified or the underlying export licences are extended for a longer term. Both of these changes would require a corporate initiative by Foothills and its principal shipper, Pan Alberta Gas Ltd.

2.4.4 Determination of the Capital Structure

Three different views on how capital structure should be determined were presented in this proceeding. None of the parties advocated relying solely on only one of the following views; rather, they suggested some combination of them. The first suggests that the Board should set Foothills' capital structure based primarily on an assessment of its business risks. The second perspective suggests that the optimal capital structure is that which minimizes the overall cost of capital and, thus, the tolls which must be paid by shippers. A third point of view is that the Board should set that combination of capital structure and return on equity which ensures that the pipeline can obtain financing on reasonable terms with multiple options.

The Board is of the view that the starting point for the determination of the appropriate capital structure should be an analysis of the firm's business risks. Financial theory suggests that this is the appropriate starting point, as have the expert witnesses in this hearing.

However, as noted earlier, none of the parties provided evidence on the absolute risk faced by Foothills, nor is there, to the Board's knowledge, any well-developed financial theory which could permit linking specific levels of risk to specific capital structures. Therefore, although the Board is of the view that Foothills' business risks

have declined over time, it is difficult to make a direct quantitative assessment of the appropriate capital structure.

In the absence of a theoretical framework which links business risk and capital structure, the Board is of the view that the changes in Foothills' business risk over time provide the best indication of the appropriate capital structure for the company. Changes in the capital structure which reflect real changes to the business risk of the company should be seen as appropriate if the original capital structure was perceived by the investment community as appropriate.

The Board also has a responsibility to ensure that tolls are just and reasonable. It is the Board's view that in determining Foothills' capital structure, consideration must be given to minimizing tolls consistent with the requirement to provide Foothills' with financial flexibility and Foothills' investors with the opportunity to earn an adequate return.

2.4.5 Summary

The Board is of the view that Foothills' business risks are lower at this time than they were through most of 1980s. At the same time, the Board believes that the nature of the Company has changed from a "Prebuild" to a mature pipeline operating in the competitive North American natural gas market. Foothills' financial requirements are therefore not now the same as when the pipeline was first constructed. The Board is of the view that, in these circumstances, Foothills should be given sufficient flexibility to refinance its existing debt and raise new debt to finance expansions.

Balancing the reduced business risks that the company now faces, the need for financial flexibility and the need to keep tolls at a minimal level, the Board is of the view that a common equity ratio of 28 percent is warranted. The Board believes that this common equity ratio will have a positive impact on Foothills' flexibility in financing its operations.

Decision

The Board approves a deemed common equity ratio of 28 percent.

Chapter 3

Return on Common Equity

Foothills initially applied for a rate of return on common equity of 13.0 percent, commencing 25 March 1993, but reduced this to 12.5 percent at the outset of the hearing. CAPP/APMC submitted that Foothills should be awarded a rate of return on common equity of 10.5 to 11.5 percent but reduced this to 10.5 to 11.0 percent during the hearing. In this chapter, the evidence regarding the factors and techniques to be considered in determining the appropriate return on common equity for Foothills is discussed.

3.1 Expert Witnesses' Evidence

3.1.1 Comparable Earnings Test

Foothills' Witnesses

Mrs. McLeod, providing evidence in support of the applicant's case, provided a range of returns based on the comparable earnings test of 12.5 to 14.3 percent. According to Mrs. McLeod, the comparable earnings test showed that the lowest rate of return on equity required by Foothills is 12.5 percent.

Foothills' other expert witnesses, Dr. Sherwin and Ms. McShane, forecasted the average returns for comparable companies over the period 1992 to 2000 to be in a range of 11.8 to 12.3 percent. According to these witnesses:

> "These projections are highly speculative; their principal merit lies in demonstrating that the current cycle is unlikely to be representative of a "normal" earnings level, i.e., a level of earnings that can be reasonably expected after the ongoing restructuring is completed. In our view, that level will be in the range of 13.0-13.5%; allowing for a decline during a typical recession would bring the cycle average return level to about 12.5-12.75%, which after a 30 basis point adjustment for risk differentials, reduces the comparable earnings test to 12.25-12.5%."

However, in their Additional and Reply Evidence, Dr. Sherwin and Ms. McShane stated:

> "While it constitutes "our best effort", we do not regard the results as sufficiently reliable to provide a basis for utility return awards. Indeed, we view it as unlikely that the current cycle will produce a representative level of returns that may reasonably be expected after the current industrial restructuring is completed and the companies have adjusted to the new international competitive environment. We therefore have doubts that the current business cycle will provide a basis for applying the comparable earnings test."

CAPP/APMC's Witness

With regard to the comparable earnings test, Dr. Waters, on behalf of the CAPP/APMC, was of the view that:

- The concept of comparable earnings does not necessarily have any relationship with the concept of a fair return for a utility; and

- The measurement of comparable earnings (based on accounting data) provides results which are difficult to compare meaningfully across companies and across time.

In Dr. Waters' view, the continued use of the comparable earnings test as a standard of comparable returns which is somehow different than the financial integrity standard or the capital attraction standard is premised on the incorrect notion that these standards are distinct. According to Dr. Waters:

> "The test purports to measure something distinct from the cost of capital, as if the comparable return standard were an independent and unrelated concept. In reality, it is logically evident that the return which satisfies the opportunity cost of investors (the cost of capital) must be the same as the return from investments of comparable risk (the comparable return)."

In other words, the other return on equity tests used in toll proceedings fulfil the requirements that investors in a utility be given a return which is commensurate with the returns they could achieve on other investments of equivalent risk.

Dr. Waters summarized his criticism of the comparable earnings test as follows:

> "Prior to the advent of high and volatile levels of inflation in the 1970s, rates of return earned by non-utilities on common book equity, if used in conjunction with market-to-book ratios, were capable of providing an important and useful factual basis for regulatory rate of return determinations. In my view, however, the lengthy period over which significant rates of inflation were experienced has simply placed too great an interpretive load on these data. Not only must consideration be given to the likelihood of past rates of return continuing, and whether or not they were above or below competitive levels, consideration must also be given to whether the measurement process itself has any particular validity today. The data available on the impact of inflation on corporate earnings indicate that the impact is neither minor nor homogeneous among companies. On the positive side, the substantial reduction in the inflation rate since mid-1983 has ameliorated the distortion of earnings data attributable to depreciation policies and in the measurement of book equity due to the cumulative build up of distorted retained earnings values."

APMC's Argument

The APMC argued separately that recent and current earnings levels for industrial companies, together with the uncertainties for Canadian industries, make the comparable earnings test too unreliable to use at the present time. Further, the use of the Institutional Brokers Estimation Service (IBES) for forecasting returns for Canadian companies is unreliable because of an upward bias. Therefore, according to the APMC (and CAPP), no weight should be given to the comparable earnings test.

3.1.2 Discounted Cash Flow Test

Foothills' Witnesses

Mrs. McLeod's DCF approach used the same sample of low-risk industrials companies created in the application of the comparable earnings test. The growth component of the formula ranged from 5.7 to 11.7 percent with an average of 9.2 percent. Mrs. McLeod concluded that, because 1992 represented a cyclical trough in corporate profitability, investors' growth expectations are closer to the upper end of the growth range. The dividend yield was calculated as 2.62 percent.

Combining the dividend yield and growth rates estimates produced an investor required rate of return of at least 11.5 percent. In order to ensure that Foothills can attract capital with no reduction in its financial integrity, Mrs. McLeod adjusted upward the investor required rate of return ("IRR") to offset the effects of market pressure and the costs of issuing new equity. Mrs. McLeod's adjustment was based on the actual cost of issuing new equity for a broad sample of 72 Canadian corporations. Mrs. McLeod's study supported the need for an adjustment to Foothills' "bare-bones" cost of capital sufficient to ensure a market-to-book ratio of at least 1.10 times to 1.15 times. Combining this market-to-book ratio target, a payout ratio of two-thirds, and an IRR of 11.5 percent, returns on book equity of 12.25 percent to 12.50 percent were obtained.

Dr. Sherwin and Ms. McShane's estimation of the growth factor was based on the premise that investors' expectations of prospective dividend growth rates are approximately equal to the 9.0 percent achieved during the last business cycle. They use the dividend yield of the first quarter of 1993 adjusted for growth to estimate the dividend yield for 1993. Adding the growth estimate of 9.0 percent to an adjusted dividend yield of 2.8 percent gives a "bare-bones" cost of 11.8 percent. This value was then reduced to 11.5 percent to reflect Foothills' lower risk. In order to achieve a 115 percent market/book ratio, the "bare-bones" cost of 11.5 percent was adjusted upward to 12.6 percent.

Dr. Sherwin and Ms. McShane gave little weight to the DCF technique primarily because there are no objective measurements of investors' growth expectations, and, hence, its application is highly subjective.

CAPP/APMC's Witness

Dr. Waters' presented a DCF analysis in his written evidence but placed no weight on the results because he did not view them as reliable.

3.1.3 Equity Risk Premium Test

Foothills' Witnesses - Mrs. McLeod

Based on four different studies which attempted to quantify the risk premium demanded by investors in common shares versus other investment vehicles, Mrs. McLeod concluded that equity returns over long periods of time outstrip long-term government bond returns by 5.0 to 7.0 percent. Because common share returns from the Canadian market have been depressed since 1987, Mrs. McLeod has given greater weight to those studies which measure common share returns and risk premia for the Canadian market up to 1987 and for the U.S. market up to 1992.

Mrs. McLeod noted that a downward adjustment is required to reflect the lower riskiness of Foothills relative to the market portfolio. In her view, an equity risk premium between 300 and 350 basis

points over the yield on long term Government of Canada Bonds is considered appropriate at the present time for a pipeline with Foothills' risk characteristics.

Combining a value of 8.2 percent for the long term Canada bond rate for 1993 with an equity risk premium between 300 and 350 basis points, Mrs. McLeod estimated the required rate of return to be between 11.2 percent and 11.7 percent. Making the same adjustment as for the DCF test to cover the impact of market pressure and issuance costs yielded a return on book equity for Foothills of between 12.0 percent and 12.5 percent.

Foothills' Witnesses - Dr. Sherwin and Ms. McShane

Dr. Sherwin and Ms. McShane performed four different risk premium studies, two of which were based on the DCF methodology and two of which were based on historically experienced risk premiums.

In the first study, Dr. Sherwin and Ms. McShane used a multiple regression which included interest rates and five-year betas as independent variables and the annual calculated equity risk premium as the dependent variable. The most recent beta for the five utility sample (five years ending year-end 1992) was 0.42. Assuming a beta reflecting the mid-point of the 1991 and 1992 values (.37) and a long Canada forecast of 8.25 percent, the risk premium is 4.1 percent.

An alternative DCF-based risk premium study was based on the same sample of utilities, but on a different measure of investor growth expectations. The resulting risk premiums (DCF cost minus the corresponding quarterly long Canada bond yield average) were then regressed on long Canada bond yields. The results indicated a required risk premium of 4.2 percent at a bond yield of 8.25 percent.

In summary, the results of the two DCF-based risk premium studies indicated a risk premium of no less than 4.0 percent at a bond yield of 8.25 percent.

For their third risk premium test, Dr. Sherwin and Ms. McShane provided the results of three studies which measured historically experienced equity risk premiums. In estimating the required market premium from the historical differentials, they concluded that investors would reasonably require a market premium of no less than 4.5 percent based on achieved returns and are more likely to expect a premium of no less than 5.0 percent in the current market environment.

Dr. Sherwin and Ms. McShane relied on three factors (betas, standard deviations and achieved market returns) to adjust the market risk premium for Foothills' lower risk. In their view, a downward adjustment of approximately 30 percent is appropriate for Foothills. Based on a 5.0 percent market risk premium, this adjustment resulted in a risk premium for Foothills of 3.5 percent (at a 35 percent common equity ratio).

The fourth and last risk premium approach used by Dr. Sherwin and Ms. McShane was to look directly at the achieved differentials between utility stock returns and government bond returns. Because utilities are more stable than other industries, the achieved returns are more likely to be closer to investor expectations than the returns for riskier industries such as oil and gas, metals and minerals, etc. Giving consideration to the trends in the relative risk of utilities, the data suggested that a risk premium of no less than 3.5 percent would be expected by investors for a relatively low risk utility.

Dr. Sherwin and Ms. McShane concluded that the risk premium for Foothills, with a 35 percent common equity ratio, falls in a range of 3.5 percent to 4.0 percent. In their Additional and Reply

Evidence, Dr. Sherwin and Ms. McShane lowered their long-term bond yield forecast from 8.25 to 8.0 percent. They did not think that this decrease in the bond yield required a revision in their estimated equity risk premium for Foothills of 3.5 to 4.0 percent. By combining the mid-point of the range for the risk premium, that is 3.75 percent, with the forecast long Canada bond yield of 8.0 percent, they arrived at an estimate of the "bare-bones" return on equity of 11.75 percent. They recommended an adjustment for financing flexibility to achieve a market/book ratio of 115 percent, which would raise the required return on common equity to 12.8 percent.

CAPP/APMC's Criticism of Dr. Sherwin and Ms. McShane's Equity Risk Premium Test

Dr. Waters expressed several concerns regarding Dr. Sherwin's and Ms. McShane's risk premium tests. First, he saw the two sets of tests performed as being internally contradictory. He noted that in the first set of tests, a "beta" factor was considered relevant because of the secular decline in the risk premium since 1982, but, in the second set of tests, realized risk premiums over long time periods were used without adjustment for this secular decline.

According to Dr. Waters, the decline in the risk premium is not evidence of a true decline in risk premiums as suggested by Dr. Sherwin and Ms. McShane, but rather it is evidence that the computed risk premiums are losing an upward bias as the values computed for the earlier years are offset by more realistic values in the years subsequent to 1982.

Dr. Waters expressed concerns about the small number of observations used in the regression analysis. Also, the inclusion of data from the late 1970s and early 1980s, when interest rates were relatively high, can lead to a misleading inference with respect to prospective circumstances. Dr. Waters also questioned the reliability of their regression results and their consequent inferences, given the instability of the regression parameter estimates. He perceived the inclusion of the beta variable to be meaningless and misleading.

With regard to the last two risk premium tests, Dr. Waters argued that full weight should be given to the beta value in adjusting the market risk premium down to reflect the lesser risk of utilities relative to common stocks in general. This would indicate a reduction by some 60 to 65 percent, instead of the 30 percent recommended by Dr. Sherwin and Ms. McShane.

CAPP/APMC's Witness - Dr. Waters

Dr. Waters estimated equity risk premiums for three different group of companies. He estimated premiums for the Canadian equity market as a whole, for the lowest risk non-utilities, and for the lowest risk utilities. Based on the results of five different studies on the rates of return which could have been achieved between 1920 and 1992 from investments in portfolios of Canadian common stocks and investments in long term bonds, Dr. Waters estimated the equity risk premium required by investors for the market as a whole to be in the range of 4.0 to 4.5 percent. Primary weight was given to the fact that the average premium for the Canadian market over the period 1926 to 1992 was 3.7 percent. The higher results (5.4 percent) for the U.S. market over the same period, and the Canadian result of 4.3 percent for the 1950 to 1992 period led Dr. Waters to use a value of 4.5 percent.

Dr. Waters concluded that the risk exposure of the lowest risk utilities is no more than one-half that of the equity market as a whole. This implies an incremental risk premium value of 2.25 percent for low risk utilities. Providing an incremental premium of 25 to 50 basis points for Foothills' incremental investment risks, if any, yielded an equity risk premium for Foothills of 2.5 to 2.75 percent.

Dr. Waters forecasted the long-term bond yield for 1993 to be in the range of 7.75 to 8.0 percent. Dr. Waters used the long-term (30-year) bond yield which is listed in the Globe and Mail. According to Dr. Waters, bonds for which yields are reported in the Globe and Mail have coupon values which are closer to current yields than bonds listed in the Bank of Canada's review average for over 10-year bonds. In arriving at a fair rate of return for Foothills' common equity investors, Dr. Waters added a 25 to 50 basis point "cushion" as a safety factor. Including this "cushion", Dr. Waters' estimate of a fair rate of return for Foothills based on the equity risk premium test was 10.5 to 11.0 percent.

Foothill's Criticism of Dr. Waters' Equity Risk Premium Test

Dr. Sherwin and Ms. McShane disagreed with Dr. Waters' equity risk premium approach on the basis that it made no attempt to quantify the relationship between interest rates and the cost of common equity. Having concluded that there is no relationship, Dr. Waters placed exclusive reliance on investors' experienced returns over long term periods as a proxy of investors' expected returns. In Dr. Sherwin's and Ms. McShane's view, reliance on investor experienced returns is too narrow a basis to provide either an exclusive or a reliable measure of the cost of equity.

According to Dr. Sherwin and Ms. McShane, Dr. Waters' 50 percent adjustment to the expected market risk premium for the lowest risk utilities group is excessive because it focuses solely on measures of price and earnings volatility. Although these are relevant factors, weight should also be given to either the standard deviation of experienced returns or the investors' experienced returns in utility investments.

3.1.4 Results of Experts' Analyses

The three tests performed by Mrs. McLeod yielded returns in a range of 12.0 to 12.5 percent. According to Mrs. McLeod, the equity risk premium test is the test which most closely reflects current financial market conditions and thus warrants the heaviest emphasis at this point in time. Giving some weight to all three tests but primary weight to the equity risk premium, she concluded that the appropriate return on equity falls at the upper end of the range.

Giving 60 percent weight to the risk premium test, 30 percent weight to the comparable earnings test, and 10 percent weight to the DCF test, Dr. Sherwin and Ms. McShane calculated the fair rate of return on common equity for Foothills as 12.625 percent.

Dr. Waters provided evidence on why the comparable earnings test would not provide useful information in determining the appropriate cost of capital for Foothills. Dr. Waters did not give any weight to his own DCF analysis because he believes it to be unreliable at this time. Dr. Waters' final return on equity recommendation of 10.5 to 11.0 percent is based on his risk premium analysis which, like the other expert witnesses in this proceeding, was applied to his forecasted bond yield.

3.2 Views of the Board

The Board is of the view that, in light of the recent and prevailing financial market conditions, neither the DCF nor the comparable earnings tests currently yield results on which the Board can confidently rely. The Board notes, however, that these tests may, nevertheless, prove useful under different economic conditions.

The Board is of the view that the equity risk premium test is useful in gauging investors' required returns in the circumstances of this case. Further, it appears to the Board that the most appropriate long-term bonds to use in the equity risk premium analysis are those bonds whose coupon yields most closely resemble the prevailing yields. According to Dr. Waters, the 30-year bonds listed in the Globe and Mail more closely approximate this standard than do the long-term bonds used in the Bank of Canada review.

Long-term bond yields had declined since 25 March 1993, the date of the Board's Order TGI-1-93 making Foothills' tolls interim, and averaged 7.9 percent between that time and the close of the evidentary portion of this hearing on 31 August 1993. By then long term bond rates were about 7.5 percent. On balance for the year, the Board is of the view that the appropriate long term bond rate to use for the equity risk premium test in this proceeding is 7.75 percent.

The market equity risk premiums evaluated by the expert witnesses range from 4.5 percent (Dr. Waters) to a high of 7.0 percent (the high end of Mrs. McLeod's range). The Board notes that Dr. Sherwin and Ms. McShane calculation of the market equity risk premium is 5.0 percent. Based on these estimates, and the fact that Mrs. McLeod apparently relies on the low end of her market equity risk premium range of 5.0 percent, the Board is of the view that the current market equity risk premium in Canada, as represented by the Toronto Stock Exchange 300 Index, is in the range of 4.5 to 5.0 percent.

The final step in the equity risk premium test is to adjust the market equity risk premium for Foothills' lower risk, relative to the market as a whole. Dr. Waters estimated that the equity risk premium for Foothills is between 2.50 to 2.75 percent, or about 60 percent of the market as a whole. Mrs. McLeod estimated the equity risk premium for Foothills to be 300 to 350 basis points or 60 to 70 percent of the market premium of 500 basis points. Dr. Sherwin and Ms. McShane estimated the equity risk premium for Foothills to be from 350 to 400 basis points, or 70 to 80 percent of that for the equity market as a whole.

The Board notes that Foothills' common equity is not publicly traded, thereby complicating the task of estimating Foothills' risks relative to the market. This implies that some judgement is required in estimating the appropriate equity risk premium for Foothills. The Board is of the view that, based on the business risk evidence presented in this proceeding, and based upon the statistical risk factors for other low-risk utilities employed by all of the expert witnesses, Foothills is much less risky than the market on average. Allowing for some uncertainty with respect to the overall investment risks associated with Foothills, the Board is of the view that an appropriate equity risk premium for Foothills is in the order of 275 to 300 basis points.

The Board is also of the view that Foothills must be in a sufficiently strong financial position to have access to alternative sources of debt financing, including long-term debt. The Board is of the view that Foothills is appropriately considered as a stand-alone company and thus requires sufficient flexibility to ensure that it can finance ongoing operations as well as expansions of its system. The Board notes that the current situation of relatively favourable debt markets could change in the future.

At the same time, this decision should ideally stand until there are significant changes in financial markets. Accordingly, the Board is of the view that some allowance should be added to Foothills' authorized return on equity for unforeseen financial circumstances. For Foothills, the Board is of the view that this allowance be 75 basis points.

Based on the foregoing considerations, the Board is of the view that an appropriate rate of return on common equity for Foothills is 11.50 percent.

Decision

The Board approves a rate of return on common equity for Foothills of 11.50 percent.

Chapter 4

Disposition

The foregoing chapters together with Orders AO-12-TG-4-82 and TG-2-93 constitute our Decisions and Reasons for Decision on this matter.

R. Illing
Presiding Member

R. Priddle
Member

Calgary, Alberta
November 1993

4.1 Dissenting Opinion of Mr. R. L. Andrew

With the exception of the majority's reasons and decision respecting capital structure and the majority's reasons respecting rate of return on common equity, I concur fully with the reasons and decisions set out herein.

I do not agree with the majority decision regarding the common equity ratio for Foothills. In my opinion, the majority has not given due weight to the inter-pipeline risk analyses which various parties presented in this hearing. As a result of this omission, the majority opinion fails the test of fairness because the authorized common equity ratio differs from that awarded to pipelines of similar risk for a similar time period. Finally, it is my view that a common equity ratio of 28 percent may not be sufficient to ensure that Foothills has the required flexibility to manage its debt as it sees fit.

The majority opinion on Foothills common equity ratio is premised on the idea that a pipeline's business risks should be a prime factor in determining its capital structure. CAPP and APMC, the two main intervenors in this case, indicated that an assessment of Foothills' business risks requires two comparisons: one is to compare the current business risk of the pipeline versus its risk in 1984 and 1986, and the second is to compare Foothills' risks relative to other Canadian gas pipelines. The majority opinion endorses the historical comparison but places little weight on the inter-pipeline comparative analysis.

In dealing with the first test, the historical comparison, it is important to put Foothills' capital structure in perspective. In 1979, the Board established a common equity ratio for the company of 25 percent, plus or minus 5 percent. That equity ratio (which has averaged about 28 percent over the past five years) has remained unchanged until now. The evidence indicates that the initial setting of the capital structure had much to do with the fact that it was a "mandated" pipeline as well as being part of a larger undertaking which required unique, short-term financing arrangements. Further, it is clear from the evidence that the company's risk has fluctuated markedly during its 15 year history. All parties in this proceeding agreed that Foothills has become a fully-operational, market-oriented pipeline, or in other words, it has become a pipeline not unlike the other four major exporting Canadian gas pipelines. In my opinion, it should be treated in a similar manner to the other major export-oriented gas pipelines for toll determination purposes.

In the 1984 and 1986 Foothills' decisions, it was found that, based on the evidence of both the company and the intervenors, Foothills' business risks were higher than that of TCPL's. Instead of modifying Foothills' capital structure to reflect this risk differential, the Board compensated for the increased business risk by setting Foothills' rate of return on equity 50 basis points higher than it had awarded TCPL in the same years. It should be noted that Foothills likely did not apply for a higher equity ratio at that time since it would have made its relatively high tolls even less competitive at a time when it could ill afford to do so. Thus, while I agree with the majority opinion that Foothills business risks are lower than in either 1984 or 1986, I think that the comparison is unfair. Foothills' business risk likely peaked in the mid-1980s and yet the company's common equity ratio was not increased to reflect the changed circumstances at that time. Setting the capital structure based solely on analysis of the business risks since the mid-1980s while excluding what has happened to other pipelines in that time frame is, in my opinion, telling only half the "story": the other half of the "story" being a comparative analysis.

The majority opinion gives little weight to the second test advanced by the parties in this hearing, that being an inter-pipeline comparative risk analysis. This decision was based on the finding of a lack of useful evidence, as well as a concern that such a test could lead to circularity in the evidence presented in Board hearings. I agree that the evidence of inter-pipeline business risk, while voluminous, left much to be desired in terms of completeness or usefulness. Much of it was anecdotal and much of it was incomplete.

However, while the argument that inter-pipeline comparisons could lead to circularity in regulatory decisions has some theoretical validity, it is overshadowed by what actually transpires. The parties in this proceeding did consider inter-pipeline comparisons relevant. All parties submitted evidence and devoted much of their cross-examination to the issue. A review of the transcript in this proceeding shows that the Board also posed questions on the subject. Any review of previous decisions by this Board or other regulatory boards clearly establishes the precedent that inter-pipeline comparisons are important or even paramount elements in arriving at capital structure decisions. The reality is that people do in fact make such comparisons in arriving at decisions or advancing arguments. One reason why such comparisons are made is the desire to treat regulated firms in an even-handed and fair manner while determining just and reasonable tolls. Gas pipelines in this country are not classic monopolies. They compete with each other for capital and for further incremental expansions. Their capacity to generate profits and to attract capital are obviously important in this competition. It is for these reasons that inter-pipeline comparisons are relevant.

As I have said, the evidence on the market risk faced by each major Canadian gas pipeline was weak. In the absence of comprehensive data which compares the business risks of all major gas pipelines regulated by the Board, it is difficult to make any reasonable comparison of Foothills' business risks with those of the other gas pipelines with an export component. In my view, it is not clear that Foothills' business risks are significantly different from TCPL, ANG or NOVA, all of which have a common equity ratio of 30 percent. In fact, Dr. Waters said as much, stating that all gas pipelines have about the same risk, and, of course, that, in his view, the risk is virtually nil.

Fairness must be meted out in a way that balances the interests of both the tollpayers and the pipeline companies. For 1993, this Board awarded TCPL and Westcoast a deemed common equity ratio of 30 percent and 35 percent respectively, along with a return on common equity of 12.25 percent. The Alberta Public Utility Board (APUB), which has regulatory jurisdiction over NOVA, recently set that company's capital structure at 30 percent common equity with a rate of return on equity of 11.75 percent. ANG, another major Canadian gas pipeline, is operating on a 30 percent equity ratio and a 12 percent rate of return for 1993. While these variations can be explained away because of differences in timing for the respective hearings as well as differences in the toll methodology ("forward test year" as compared to a "full cost of service"), the widespread use of deferral accounts makes these explanations ring somewhat hollow. In the end, the ultimate result must stand the test of fairness. The majority ruling in this case gives Foothills a capital structure where its deemed equity of 28 percent is 2 percent lower than the 30 percent allowed for TCPL, ANG or NOVA and its rate of return for 1993 (and beyond) is 75 basis points lower than TCPL's and 50 basis points lower than for ANG. The end result is several million dollars less in returns for Foothills and, in my opinion, a lack of fairness.

The issue of fairness as it relates to the tollpayers must also be examined. In this proceeding, Foothills applied for a deemed common equity of 35 percent and a rate of return on that equity of 12.5 percent. The Company's financial experts indicated that such a capital structure was necessary for the company to obtain an "A" rating from the Bond Rating agencies, which would in turn allow them to

access the bond market rather than being restricted to bank financing. I do not believe the evidence justifies such an award. The resulting tolls from such a capital structure would far exceed any potential (and somewhat intangible) benefits that would result from bond market financing.

On the other hand, the evidence presented during this hearing has indicated that Foothills' bank lenders are uncomfortable with the company's current common equity ratio. The company's financial advisors have previously advised against going to the bond market, presumably due in part to the low equity component in the capital structure. Foothills clearly requires an increase in its common equity ratio to satisfy its current bank lenders as well as to have access to bond markets. In my opinion, a 30 percent common equity ratio would likely be the minimum to ensure that Foothills had sufficient financing flexibility and access to alternative debt markets. The difference in Foothills' annual cost of service between the 30 percent common equity which I am proposing and the 28 percent adopted by the majority in this proceeding is about $1.8 million. This cost could be somewhat offset if the higher equity ratio I am proposing allowed Foothills to access the bond market and the company chose to do so. If Foothills replaced some of its existing debt with long-term bonds and interest rates subsequently increased, the interest charges in the cost of service would be lower than under the existing financing arrangement.

Both Dr. Waters and the majority opinion implicitly are advocating the "chip away" theory. This approach increases (or decreases) the common equity ratio in small increments in the hope that the resulting decision finds some correct balance between the conflicting demands of tollpayers and the pipeline. Should this capital structure result in a lack of financing flexibility, the company can come back to the Board next year and try again. In my opinion, the Board should not be instructing Foothills how to manage its finances and yet may be doing just that through the capital structure which it has awarded the company. If the financial markets perceive the deemed common equity of 28 percent as being too low, the company will have limited options by which to finance itself. Ultimately, Foothills is in the best position to decide how to finance itself and should be allowed the freedom to do so.

Given the above reasons, the evidence, and a sense of fairness, it is my view that a deemed common equity of 30 percent is justified for Foothills.

I concur with the majority opinion on the rate of return on equity of 11.5 percent. This view, of course, is premised on the 30 percent equity finding. I would, however, arrive at the rate of return on equity slightly differently from the majority in this proceeding. I would first estimate the long-term Canada bond forecast to be used in the equity risk premium test, in this case 7.75 percent. I would then add the equity risk premium to this bond rate. The equity risk premium is dependent on several factors. The first factor is the level of the prevailing bond rate. A lower bond rate suggests a higher equity risk premium, although the exact relationship has not been adequately defined. The second factor is the company's risk relative to the market. Another factor would be an adjustment for unforseen financial circumstances. This is particularly important for Foothills which is not regulated on a testyear basis and for which a Board decision can potentially stand for a long period of time. In my view, the appropriate risk premium for Foothills is a range of 3.5 - 4.5 percent. Putting emphasis on the lower end of my equity risk premium range and adding this to the long-term bond rate results in a rate of return on equity of 11.50 percent.

I would make a further general observation about the toll hearing process based on my experience in this proceeding. I am left with the opinion that the opposing sides submit "expert" evidence that tends to exaggerate their respective (higher or lower) positions on the capital structure and rate of return.

This is reminiscent of traditional labour negotiations wherein an ultimate decision is assumed to be somewhere in the middle of the two extremes. In this analogy, the Board acts as the arbitrator but, unlike labour negotiations, it is not clear that the parties in hearings such as this have exhausted the negotiation process prior to referring the matter to the arbitrator, i.e. the Board. I would hope that in the future, alternative dispute resolution mechanisms could be found for hearings such as this. However this was not pursued during this hearing and is therefore beyond the scope of this decision.

R.L. Andrew
Member

Calgary, Alberta
November 1993

Appendix I

Order AO-12-TG-4-82

AO-12-TG-4-82

IN THE MATTER OF the *National Energy Board Act* ("NEB Act") and the Regulations made thereunder, and the *Northern Pipeline Act*; and

IN THE MATTER OF the tariff and tolls to be charged by Foothills Pipe Lines Ltd. ("Foothills") and its subsidiaries Foothills Pipe Lines (Alta.) Ltd., Foothills Pipe Lines (South B.C.) Ltd. and Foothills Pipe Lines (Sask) Ltd. ("its subsidiaries") in the operation of their prebuilt facilities in Zones 6 to 9, and other related matters, and

BEFORE THE BOARD on 4 November 1993.

WHEREAS the Board having by Order TG-4-82, as amended, and Order TG-6-81, as amended, prescribed the tolls Foothills and its subsidiaries may charge in respect of natural gas transmitted by them in each month through their prebuilt facilities in Zones 6 to 9;

AND WHEREAS the Board issued Order TGI-1-93, dated 25 March 1993, making Foothills tolls interim and approving interruptible tolls on an interim basis.

AND WHEREAS the Board issued Order RH-1-93, dated 30 April 1993, declaring its intention to hold a public hearing with respect to certain matters relating to Foothills' tolls and tariffs as specified in Order RH-1-93;

AND WHEREAS Foothills filed an application dated 28 May 1993, for Orders with respect to certain matters relating to its tolls and tariffs as specified in Order RH-1-93;

AND UPON the Board, following a public hearing held pursuant to Order RH-1-93 at which all interested parties were heard, having made certain determinations respecting the tolls and tariffs to be charged by Foothills;

AND UPON the Board, having considered the evidence and submissions, and having found that the tolls to be charged by Foothills in accordance with this Order are just and reasonable;

IT IS ORDERED THAT:
Order TG-4-82, as amended, is hereby changed, altered and varied.

1. By adding to paragraph 1 thereof the following:

    "(f) the Board's Reasons for Decision dated November 1993, resulting from the public hearing held under Order RH-1-93."

2. Paragraph 4 of Order No. TG-4-82, as amended, is hereby changed, altered and varied effective from 25 March 1993 to read as follows:

> "4. For the purpose of determining the tolls to be charged in respect of the transmission of natural gas through the prebuild facilities in each month, Foothills shall calculate its cost of service for each month in accordance with the procedures set out in the Gas Transportation Tariff - Phase 1, modified as necessary in accordance with this Order, and incorporating:
>
> (a) a return on equity of 11.5 percent,
>
> (b) income taxes calculated on a flow-through basis,
>
> (c) where applicable, the recalculated amounts approved by the Board pursuant to paragraph 3, and
>
> (d) the actual common equity in the capital structure for each operating zone, not exceeding 28 percent on average over each calendar year.

3. Paragraph 8 of Order No. TG-4-82, as amended, is hereby changed altered and varied effective from 25 March 1993 to read as follows:

> "8. Upon filing in a manner satisfactory to the Board, the items indicated in paragraph 3, subsections (g) and (j) to (l) (i) inclusive, Foothills may include in the Prebuild cost of service for Zones 6 through 9, amounts related to the amortization of and return on the mainline preliminary expenditures up to 31 December 1981. Unless otherwise determined by the Board such amounts shall include two percent amortization of the amount approved by the Board until such time as the unamortized balance is equal to the amount that the balance would have been if the amount approved by the Board had been amortized at a rate of three percent from the date of commencement of amortization, plus the prevailing rate of return on common equity as authorized by the Board on the unamortized balance of the same amount. Furthermore, the provision for income taxes collected in the Prebuild cost of service is not to increase as a result of inclusion of these amounts related to mainline preliminary expenditures, regardless of the method of establishing the income tax provision (i.e. the normalized or flow-through method). Amortization of and return on the mainline preliminary expenditures is to cease on 1 November 2000, unless the Board directs otherwise."

National Energy Board

J. S. Richardson
Secretary