NATIONAL ENERGY BOARD

Reasons for Decision

TransCanada PipeLines Limited

Applications for Facilities and Approval
of Toll Methodology and Related Tariff Matters

GH-2-87

July 1988

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Recital and Appearances

NATIONAL ENERGY BOARD

IN THE MATTER OF the *National Energy Board Act,* R.S.C. 1970, c. N-6, as am. (the "Act"), and the Regulations made thereunder; and

IN THE MATTER OF an application dated 9 June 1987, as amended, by TransCanada PipeLines Limited ("TransCanada" or "TCPL"), pursuant to Parts III and IV of the Act, for a certificate in respect of certain proposed facilities, for an Order exempting those facilities from the provisions of certain sections of the Act and for certain toll orders; filed with the National Energy Board (the "Board") under File No. 1555-T1-149; and

IN THE MATTER OF an application dated 18 August 1987 by TransCanada pursuant to Order No. TG-3-87 for approval of certain contractual amendments; and

IN THE MATTER OF Hearing Order GH-2-87, as amended; and

IN THE MATTER OF an application dated 29 March 1988 by TransCanada, pursuant to Part III of the Act, for an order exempting certain proposed facilities from certain sections of the Act; filed with the Board under File No. 1555-T1-153.

HEARD at Ottawa, Ontario on:

17,18,19, 20, 23, 24, 25, 26, 27 and 30 November 1987;1, 2, 3, 4, 7, 8, 9,10,11,14,15,16,17 and 18 December 1987; 5, 6, 7, 8, 11,12,13,18,19, 20, 21 and 22 January 1988; and 3, 4, 5, 23, 24, 25, 26 and 29 February 1988.

BEFORE:

J.R. Jenkins	Presiding Member
A.D. Hunt	Member
R.B. Horner, Q.C.	Member

APPEARANCES:

J.M. Murray T.D. Dalgleish R.B. Cohen	TransCanada PipeLines Limited
C.K Yates D.A. Holgate	Canadian Petroleum Association
A.S. Hollingworth J.A. Snider	Independent Petroleum Association of Canada
P.C.P. Thompson, Q.C.	Industrial Gas Users Association

P. Annis
F. Brunning-Howard

L.E. Smith
J. Lowe

Alberta Northeast Gas Export Project

J.R. Smith, Q.C.	Alberta and Southern Gas Co. Ltd.
T.G. Kane M. Cook	ANR Pipeline Company
L.E. Smith J. Lowe	Boundary Gas, Inc.
A.M. Bigué J.F. Zipp	Champlain Pipeline Project
J.H. Farrell H.A. Christie	The Consumers' Gas Limited
M.M. Peterson	C-I-L Inc.
N.A. Harburn	Dome Petroleum Limited
J. Lutes	Foothills Pipe Lines (Yukon) Ltd.
L.-C. Lalonde	Gaz Métropolitain, inc.
J.D. Brett	Greater Winnipeg Gas Company and ICG Utilities (Manitoba) Ltd.
J.H. Smellie	ICG Utilities (Ontario) Ltd.
D.M. Masuhara	Inland Natural Gas Company Ltd.
F.M. Lowther B.L. Webb	Iroquois Gas Transmission System
J.T. Horte	KannGaz Producers Ltd.
N.J. Schultz	Midwestern Gas Transmission Company
E.B. McDougall	Northern Border Pipeline Company
R.L. Jones	NOVA Corporation of Alberta
M.J. Veniot	Nova Scotia Resources Limited
L.E. Smith J. Lowe K Simon	Ocean State Power

K.L. Meyer	Pan-Alberta Gas Ltd.
D.G. Hart, Q.C. J.P. Peacock, Q.C.	PanCanadian Petroleum Limited
T.M. Hughes	Polysar Limited

K.J. MacDonald N.W. Boutillier	ProGas Limited
W. Baux J.M. Dunn	Shell Canada Limited
N.J. Schultz E.B. Abbott	Tennessee Gas Pipeline Company
C. Buchanan	Texaco Canada Resources
W.G. Burke-Robertson, Q.C.	Transcontinental Gas Pipe Line Corporation
L.A. Leclerc	Trans Quebec & Maritimes Pipeline Inc.
G. Pratte R. Valdis	Union Gas Limited
A.M. Bigué J.F. Zipp	Vermont Gas Systems, Inc.
D.C. Edie P. McCunn-Miller	Alberta Petroleum Marketing Commission
P.D. Morris	Minister of Energy for Ontario
J. Giroux	Procureur général du Québec
H. Soudek J.A. Vockeroth	National Energy Board

Table of Contents

Tables

Figures

List of Appendices

Abbreviations

Act	National Energy Board Act
ACQ	Annual Contract Quantity
AEC	AEC Oil and Gas Company
AFUDC	allowance for funds used during construction
ANE	Alberta Northeast Gas, Limited
ANE Project	The Alberta Northeast Gas Export Project
ANR	ANR Pipeline Company
APMC	Alberta Petroleum Marketing Commission
ATCOR	ATCOR Ltd.
Bcf	billion cubic feet
Board, NEB	National Energy Board
Boundary	Boundary Gas, Inc.
CDA	Central Delivery Area
Champlain	Champlain Pipeline Project
Consumers	The Consumers' Gas Company Ltd.
CPA	Canadian Petroleum Association
CS	compressor station
Cyanamid	Cyanamid Canada Inc. and Cyanamid Canada Pipeline Inc.
EDA	Eastern Delivery Area
EIL	Environmental Issues List
ERA	(United States) Economic Regulatory Administration

FERC	(United States) Federal Energy Regulatory
Foothills	Foothills (Yukon) Ltd.
FS	Firm Service

GJ	gigajoule
GMi	Gaz Métropolitain inc.
Great Lakes	Great Lakes Gas Transmission Company
ICG Ontario	ICG (Ontario) Ltd.
IPL	Interprovincial Pipe Line Limited
IGUA	Industrial Gas Users Association
IGTS	Iroquois Gas Transmission System
IPAC	Independent Petroleum Association of Canada
IS	Interruptible Service
KannGaz	KannGaz Producers Ltd.
km	kilometre(s)
kPa	kilopascal(s)
LDC	local distribution company
m	metre(s)
m3	cubic metre(s)
m3/d	cubic metre(s) per day
MAOP	maximum allowable operating pressure
mcf	thousand cubic feet
mm	millimetre
MMcfd	million cubic feet per day
M W	megawatt
MLV	mainline valve
Midwestern	Midwestern Gas Transmission Company
Natural	Natural Gas Pipeline Company of America

O.D.	outside diameter
O&M	operation and maintenance
OPCC	Ontario Pipeline Coordinating Committee

OSP	Ocean State Power
Ontario	Minister of Energy for Ontario
PanCanadian	PanCanadian Petroleum Limited
PPBoR	plan, profile and book of reference
ProGas	ProGas Limited
PS	Peaking Service
psig	pounds per square inch gauge
STS	Storage Transportation Service
Shell	Shell Canada Limited
TCPL, TransCanada	TransCanada PipeLines Limited
Tennessee	Tennessee Gas Pipeline Company
Texas Eastern	Texas Eastern Transmission Corporation
TQM	Trans Quebec & Maritimes Pipeline Inc.
TWS	Temporary Winter Service
Union	Union Gas Limited
Vermont Gas	Vermont Gas Systems, Inc.
WGML	Western Gas Marketing Limited

Overview

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

The Applications

By application dated 9 June 1987, as amended on 17 September 1987, TransCanada PipeLines Limited ("TransCanada") applied for new facilities to expand the capacity of its pipeline system in order to serve existing markets and to deliver additional export volumes to the northeastern United States. The new exports underpinning the 9 June 1987 application. as amended. are detailed in Table ov-1.

The total cost of the proposed facilities was estimated to be $334 million. Details of these facilities are provided in Table ov-2. (see page xii)

Gas to be delivered at Niagara Falls would be transported on the Tennessee Gas Pipeline Company ("Tennessee") system and require the construction of new facilities on that system. Gas to be delivered at Iroquois would be transported through a proposed new pipeline known as the Iroquois Gas Transmission System ("IGTS"). The IGTS is proposed to extend from the Canada/United States border southeast through the states of New York and Connecticut and then across Long Island Sound to Long Island, New York. In both of these cases, the construction of new facilities in the United States would require FERC approval.

TransCanada also requested that the methods of cost allocation and toll design for export sales and transportation services presently utilized by the Board (the "rolled-in" method1) be continued and applied to the proposed facilities.

As a result of subsequent requests by The Consumers' Gas Company Ltd. ("Consumers") and Gaz Metropolitain, inc. ("GMi") for additional service to commence 1 November 1988, as detailed in Table ov-3, TransCanada applied on 29 March 1988 for the construction of 19.1 km of parallel pipeline on the Montreal Line, and for the temporary relocation of a portable compressor from Station 134 to Station 137 on the Montreal Line and from Station 136 to Station 95 on the Central Section. The capital cost of these facilities was estimated to be $21 million (1988 base - direct and indirect costs included). TransCanada also filed a further amendment to its 9 June 1987 application, the purpose of which was to advance the in-service date of certain facilities.

The facilities proposed in the 9 June 1987 and 29 March 1988 applications would provide, among other things, capacity to enable TransCanada to move the additional Consumers volumes during the 1988-89 contract year. TransCanada indicated at the hearing that a further facilities application would be required in order to provide capacity on a permanent basis for the Consumers volumes commencing 1 November 1989.

Under the "rolled-in" method of cost allocation and toll design, the owning and operating costs of new facilities are included in a pipeline company’s total revenue requirement and are allocated among all users of the system.

The Hearing

A public hearing, lasting 44 days, was held at the Board’s offices in Ottawa during the period 17 November 1987 to 29 February 1988.

Highlights of the Board’s Decision

In view of timing constraints related to the 1988 construction season, the Board had earlier released its decision in respect of facilities to be in service for the 1988-89 contract year and related toll and tariff matters. In view of concerns regarding financing and the timely and cost effective construction of the Ocean State Power ("OSP") Project, the Board had also issued its decision in respect of additional facilities to serve exports by ProGas Limited to OSP at Niagara Falls commencing 1 November 1989. The Board’s reasons for these decisions are included in this report.

Requirements

The Board accepted TransCanada’s forecast of domestic requirements under existing contracts for the purpose of considering the design of the applied-for facilities. However, the Board found TransCanada’s forecast of total domestic natural gas demand, including presently uncontracted demand that was forecasted to exist in contract years commencing November 1988 and November 1989 (designated as "unallocated" demand during the hearing), to be towards the low end of reasonable expectations. In its Reasons for Decision, the Board outlines a comprehensive and rigorous forecasting methodology which it suggests TransCanada adopt. TransCanada may wish to include in a future facilities application an allowance for uncontracted demand based on the findings of the forecasting methodology outlined by the Board.
The Board found the forecasted export requirements to be reasonable for the purpose of assessing facilities requirements for the 1988-89 and 1989-90 contract years.

Regulatory Situation in the United States

The Board expects that the necessary approvals in the United States will be granted in time to enable Tennessee to service the additional forecasted exports at Niagara Falls commencing 1 November 1988 and 1989. While the Board is satisfied that the proposed IGTS project is being actively pursued by Alberta Northeast Gas, Limited ("ANE") and the IGTS sponsors, the Board has concluded that the regulatory process in the United States will not be completed in time to enable the IGTS to achieve its in-service date of 1 November 1989.

Facilities

Noting the current high level of utilization of the TransCanada system and the current difficulties that shippers of new natural gas volumes have in gaining access to the system in view of capacity constraints, the Board found that an expansion of the TransCanada system is required.

In view its finding that the IGTS would not be completed in time to achieve its 1 November 1989 in-service date, the Board decided that it would certificate, subject to Governor in Council approval, or exempt from the necessity of certification, those facilities that it judges will be required to expand capacity to transport all firm volumes now requested other than the ANE exports at Iroquois. Accordingly, the proposed facilities comprising the Iroquois Extension, the proposed compressor station on the North Bay Shortcut and the additional compressor unit at Station 147 on the Montreal Line were denied. The capital cost of the facilities which the Board denied was estimated to be approximately $72 million (1987 base direct costs only).

The Board indicated that had IGTS been in a position to meet its 1 November 1989 in-service date, the Board would have considered the ANE/Iroquois volumes to be in the queue for service at that date ahead of Consumers' requests for additional firm service. The Board would accordingly have certificated the proposed expansion including the Iroquois extension and related facilities on the basis on these volumes.

ANE Contracts

The Board expressed certain concerns regarding the contracts underpinning the proposed exports by ANE at Niagara Falls and Iroquois. The Board did not condition its facilities decision upon the contracting parties addressing these concerns, in view of the Board's denial of the Iroquois-related facilities, and in view of the relatively small magnitude of the proposed ANE exports at Niagara. The Board, however, indicated that TransCanada will be considered to have accepted for its own account, and not for the account of tollpayers, the risk that the ANE contracts may not, in certain circumstances, be enforceable with respect to the collection of unpaid demand charges.

Land Use

The Board accepted the criteria used by TransCanada for its route selection, namely, making use of established utility corridors, Hydro lands and existing easements to the greatest extent possible. The Board also found TransCanada's land acquisition requirements to be reasonable.

The Board granted TransCanada's request to exempt the facilities from the requirements of detailed route proceedings. However, in order to protect the interests of the owners of lands proposed to be acquired, the exemption granted by the Board is conditional upon all necessary option or easement agreements being executed by such landowners prior to commencement of construction.

Toll Methdology

The Board decided that the rolled-in method of cost allocation and toll design will be appropriate in respect of the authorized facilities which are proposed for the transportation of volumes in accordance with TransCanada's General Terms and Conditions.

The Board decided that any incremental costs incurred by TransCanada to guarantee the provision of delivery pressure in excess of 4000 kilopascals (580 pounds per square inch gauge) at any delivery point on the TransCanada system shall be recovered through an incremental two-part delivery pressure toll to be collected from all shippers using that delivery point. The Board directed TransCanada to amend its General Terms and Conditions to provide that the minimum pressure at each delivery point on its system shall be not less than a gauge pressure of 4000 kilopascals (580 pounds per square inch gauge) unless a lesser minimum pressure is agreed to by the parties. The General Terms and Conditions previously specified a minimum delivery pressure of 2800 kilopascals (400 pounds per square inch gauge)

TransCanada/Great Lakes Amending Agreement

The Board approved the amendment dated 1 July 1987 to the T-4 Transportation Contract under which TransCanada transports gas on the Great Lakes Gas Transmission Company system. The amendment, which was reviewed during the hearing, has the effect of continuing to 1 November 2000 an existing arrangement whereby a portion of TransCanada's transportation entitlement on Great Lakes is assigned to the purchasers of gas exported by ProGas Limited at Emerson, Manitoba.

Tariff Matters

At the outset of the hearing, TransCanada's Firm Service ("FS") toll schedule stipulated that TransCanada would not construct additional facilities for the purpose of providing short-term FS. The schedule also allowed TransCanada to reduce the Operating Demand volume of a short-term FS customer to the extent that TransCanada required capacity to provide for long-term FS; this was referred to as the "bumping" clause. TransCanada filed during the hearing a revised FS toll schedule that had the effect of deleting the bumping clause and the stipulation that facilities would not be constructed for short-term FS.

In its decision, the Board found the removal of these provisions to be appropriate. The Board also decided on several tariff matters which required clarification as a result of the filing of TransCanada's revised FS toll schedule. The Board directed TransCanada to:

· include in its FS toll schedule the company's policy to construct facilities, subject to Board approval, for the purpose of providing capacity for any FS with a term of at least one year, provided that there is a reasonable expectation of a long-term requirement for that capacity;

· amend its FS toll schedule to provide for any term of FS of one year or longer;

· amend its FS toll schedule to provide for the continued renewal of all domestic and export FS contracts serving long-term markets, subject to TransCanada receiving written notice from the shipper, not less than six months prior to termination of the contract, or a shorter period as may

be stipulated by TransCanada, that it will renew the contract;

(xvi)

· include in its tariff, provisions setting out the manner in which an applicant for firm transportation capacity on its system will be included in a queue of those awaiting firm service contracts.

Open Access

During the course of the hearing, the Board and interested parties questioned TransCanada on how it perceived its role and obligations in the current period of transition towards deregulated natural gas markets.

The Board directed TransCanada to stipulate in its *tariff all* terms and conditions that govern access to its pipeline system. It further directed that *pro forma* contracts, in respect of all transportation services offered by the company, be filed as part of TransCanada's tariff.

Chapter 1

The Applications

1.1 Sequence of Events

On 9 June 1987, TransCanada PipeLines Limited ("TransCanada" or "TCPL") applied to the National Energy Board (the "Board"), pursuant to Part III of the *National Energy Board Act* the "Act"), for a certificate in respect of certain proposed pipeline facilities. The proposed facilities would expand the capacity of the TransCanada pipeline system in order that additional gas volumes could be transported to markets in eastern Canada and the northeastern United States commencing 1 November 1988 and 1 November 1989. The additional volumes include gas proposed to be exported to the United States at points near Niagara Falls and Iroquois in Ontario under licences issued by the Board to Alberta Northeast Gas, Limited ("ANE"), TransCanada, ProGas Limited ("ProGas"), ATCOR Ltd. ("ATCOR"), and AEC Oil and Gas Company ("AEC"). Under Part III of the Act, the application also sought exemption from the requirement of filing, for Board approval, a plan, profile and book of reference ("PPBoR") with respect to certain of the appliedfor facilities.
In its application, TransCanada also requested, pursuant to Part IV of the Act, orders of the Board to the effect that the "rolled-in"1 method of cost allocation and toll design, presently utilized by the Board in fixing tolls, be applied to the cost allocation and toll design of the applied-for facilities.

On 21 July 1987, the Board issued Order No. GH-2-87, setting down the 9 June 1987 application for hearing commencing 19 October 1987.

On 7 August 1987, the Board issued Order AO-1GH-2-87 which included for consideration in the GH-2-87 proceedings an application dated 23 July 1987 by KannGaz Producers Ltd. ("KannGaz"). KannGaz requested, pursuant to subsection 59(3) of the Act, an order requiring TransCanada to provide facilities for the receipt, transmission, and delivery of certain volumes of natural gas to Tennessee Gas Pipeline Company ("Tennessee") at Niagara Falls, Ontario under Licence GL-77. TransCanada had refused to provide such facilities because KannGaz would not agree to certain contractual assurances sought by TransCanada.
By letter dated 18 August 1987, TransCanada submitted for Board approval an agreement dated 1 July 1987, which further amended the transportation contract dated 12 September 1967 between TransCanada and Great Lakes Gas Transmission Company ("Great Lakes"). The Board approved the 1 July 1987 Agreement on an interim basis pending receipt of written comments from interested parties. As TransCanada’s request for approval of the said agreement was directly related to matters addressed in the 9 June 1987 application, the Board later decided to deal with the request as a further issue in the GH-2-87 proceedings.

By letter dated 17 September 1987, TransCanada filed an amendment to its 9 June 1987 application. The amendment sought certification of additional facilities for:
1988 and 1989 exports by KannGaz2 and Western Gas Marketing Limited ("WGML")3 to Tennessee at Niagara Falls; and · maintenance of a minimum pressure of 2800 kilopascals1 ("kPa") (400 pounds per square inch gauge ("psig")) at Philipsburg, Quebec for deliveries to

Vermont Gas Systems, Inc. ("Vermont Gas").

1 Under the "rolled-in" method of cost allocation and toll design, the owning and operating costs of new facilities are included in a pipeline company's total revenue requirement and are allocated among all users of the system.

2 Although TransCanada was proposing in its facilities application to provide capacity for the KannGaz volumes, it had not entered into a transportation contract in view of disagreements on the appropriate financial assurances to be provided by KannGaz. Thus, the 23 July 1987 application by KannGaz pursuant to subsection 59(3) of the Act remained an issue in the proceedings.

3 WGML was established in December 1985 as a whollyowned subsidiary of TransCanada. The company administers TransCanada's gas purchase contracts with western Canadian producers and TransCanada's sales contracts with other pipelines and distributors in Canada and the United States.

On 30 September 1987, Champlain Pipeline Project ("Champlain") filed with the Board a Notice of Motion requesting an order postponing the hearing of that portion of TransCanada's 9 June 1987 application relating to exports projected to commence in 1989 at Niagara Falls and Iroquois, until such time as the Board and interested parties were informed of all pipeline projects filed with the United States Federal Energy Regulatory Commission ("FERC") under its "open-season" notice. Champlain further requested an order providing that the hearing be reconvened as soon as practicable after 15 January 1988.

Champlain's motion was heard on 19 and 20 October 1987 and was denied. The Board's Reasons for Decision in respect of the motion were issued on 30 October 1987.
On 29 October 1987 KannGaz applied, pursuant to subsection 59(2) of the Act, for an order requiring TransCanada to receive, transport, and deliver gas offered by KannGaz for transportation through the TransCanada system to Niagara Falls. The Board incorporated KannGaz's 29 October 1987 application into the GH-2-87 proceedings.

The public hearing into the applications by TransCanada and KannGaz was conducted in Ottawa for a total of 44 days between 17 November 1987 and 29 February 1988.

On 4 December 1987 TransCanada filed, pursuant to subsection 51(1) of the Act, Revision No. 1 to its Firm Service ("FS") toll schedule. This revision eliminated "bumping"2 and the provision that TransCanada shall not construct additional facilities for the purpose of providing short-term FS. Bumping had been added as an issue in these proceedings in November 1987.
On 29 March 1988, following the public hearing, TransCanada filed an application3 requesting the following relief:

a) the advancement of the "in-service" dates of certain facilities which had been applied for in TransCanada's 9 June 1987 application, as amended, and an order exempting those facilities from, the requirement of obtaining a certificate as a prerequisite to their construction and operation; and

b) in respect of certain incremental facilities not addressed in the 9 June 1987 application, as amended, an exemption order similar to that referred to item a) above.
On 31 March 1988, the Board advised all Parties of Record to the GH-2-87 proceedings that TransCanada's request for the relief referred to item a) above constituted an amendment4 to TransCanada's 9 June 1987 application. The Board invited parties to submit written comments thereon no later than 22 April 1988, and indicated that its decision in this matter would form part of its decision in the GH-2-87 proceedings.

The Board also informed parties that it was prepared to consider, as a separate application5, TransCanada's request for the relief referred to in item b) above. Parties were requested to submit written comments thereon no later than 22 April 1988.

On 18 May 1988, in view of timing constraints related to the 1988 construction season, the Board released its decisions with respect to those facilities included in TransCanada's 9 June 1987 application, as amended, which were scheduled to be in service during the 1988-89 contract year and with respect to certain of the incremental facilities applied for by TransCanada in its 29 March 1988 application. In view of concerns regarding financing and the timely and cost-effective construction of the Ocean State Power ("OSP") project, the Board also issued its decision in respect of additional facilities to serve exports by ProGas to OSP at Niagara Falls under Licence GL-101 commencing l November 1989. In addition, the Board rendered its decision on the appropriate toll methodology applicable to the aforementioned facilities and to the provision of delivery pressure. The Board's decisions and the corresponding orders are attached hereto as Appendix II.

1 All pressures cited in this report are relative or gauge pressures. 2 TransCanada's right to reduce the Operating Demand volume of a short-term FS customer to the extent that TransCanada requires capacity to provide for long-term FS. 9 The application was entitled "Section 49 Application for Facilities to Meet Requests for Additional Service during 1988-89".

4 Hereinafter referred to as the "29 March 1988 amendment to the 9 June 1987 application". 5 Hereinafter referred to as the "29 March 1988 application".

The issue of contract renewal rights was addressed as a tariff matter in the GH-2-87 proceedings. On 21 April 1988, TransCanada issued a notice to all customers concerning renewal rights for the contract year commencing 1 November 1988. In order to assist parties in negotiations for the contract year commencing 1 November 1988, the Board, by letter dated 31 May 1988, issued those parts of its decision related to contract renewal rights.

On 15 June 1988, the Board released its decision with respect to the remainder of the facilities applied for by TransCanada in its 29 March 1988 application.

The aforementioned decisions of May and June, 1988 were each released without reasons. The Board's reasons for these decisions are included in this report.

Under cover of letter dated 16 June 1988, KannGaz, having "successfully negotiated transportation arrangements, including the provision of financial assurances", withdrew its applications of 23

July and 29 October 1987. The KannGaz applications are therefore not considered in these Reasons for Decision.

1.2 Details of Applications

1.2.1 Application of 9 June 1987, as Amended

Certiffcation

In its 9 June 1987 application, as amended on 17 September 1987, TransCanada requested a certificate under Part III of the Act, with respect to the additional facilities required to expand the capacity of its pipeline system in order to serve existing markets and to deliver the additional export volumes referred to in Table 1-1 on page 4 of these Reasons. These export volumes had been authorized for export by various licences issued or varied by the Board, under Part VI of the Act, during the period 1983 to 1987. All of these volumes were proposed to be transported on the TransCanada system to the United States border, connecting with American pipeline systems for delivery to the northeastern United States. Gas delivered at Niagara Falls would be transported on the Tennessee system and require the construction of new facilities on that system. Gas delivered at Iroquois would be transported through a proposed new pipeline known as the Iroquois Gas Transmission System ("IGTS"). The IGTS is proposed to extend from the Canada/United States border southeast through the states of New York and Connecticut and then across Long Island Sound to Long Island, New York. In both of these cases, the construction of new facilities in the United States would require FERC approval.
The facilities applied for by TransCanada were as follows:

Central Section - six 12.5-megawatt ("MW") compressor units at stations 45, 75, 86, 95,107 and 112; four aftercoolers at stations 49, 58, 69 and 80; and the upgrading of four existing compressors at stations 52, 60, 88 and 102;

Dawn Extension - 8.8 kilometres (’km") of parallel pipeline on the section which connects the Great Lakes transmission system to that of Union Gas Ltd. ("Union") near Sarnia, Ontario;

Niagara Line - a total of 52.3 km of parallel pipeline sections and the relocation of an existing 3.2MW compressor unit to station 209 between Hamilton, Ontario and Niagara Falls, Ontario;

Kirkwall Line - a new 30.9-km pipeline and a meter station to provide a second connection between the Union transmission system and TransCanada’s Niagara Line;

North Bay Shortcut - a new 12.5-MW compressor station (station 1217) near Ottawa, Ontario;

Montreal Line - a new 7.8-MW compressor unit at station 147 near Cornwall;

Iroquois Extension - a new 18.8-MW compressor station (station 1401) and meter station and a 4.5km pipeline to connect to the proposed IGTS near Iroquois, Ontario;

St. Mathieu Extension - 4.5 km of parallel pipeline near St. Jean-sur-Richelieu, Quebec.

Maps and further details of the above facilities are provided in Chapter 6 of these Reasons.

Exemption Orders

TransCanada requested orders, pursuant to section 49 of the Act, providing for exemption from the provisions of paragraph 27(b) and section 29 thereof respecting the installation of each of the proposed line pipe facilities. Such orders would exempt said facilities from PPBoR requirements. Further details are provided in Subsection 7.1.3 of these Reasons.

Initially, a majority of the Niagara Line facilities and the parallel pipeline on the St. Mathieu Extension were the only facilities scheduled for construction in 1988. The remainder of the facilities were planned for construction in 1989. On 29 March 1988, TransCanada further amended its 9 June 1987 application to advance the inservice dates of the four compressor upgrades on the Central Section and the parallel pipeline on the Dawn Extension from November 1989 to November 1988 and those of the proposed aftercoolers from November 1989 to August 1989. In so doing, TransCanada sought additional orders, pursuant to section 49 of the Act, providing for the following exemptions:

Applicable facilities	**Section of the Act under which exemption order was sought**
Aftercooler installation at Stations 49, 58, 69, and 80, and 26(2), ss. 27, 28 & 29 installation of 8.8 km of 914-mm loop on Dawn Extension from Mainline Valve ("MLV") 501 to MLV 501 + 8.8 km	par. 26 (1) (a), subs
3.4 M.W upgrade of gas generators and power turbines at Stations 52, 60, 88, and 102	ss. 26, 27, 28 & 29

Toll Orders

TransCanada requested orders, pursuant to Part IV of the Act, to the effect that the methods of cost allocation and toll design for export sales and transportation services presently utilized by the Board (the "rolled-in" method) be continued and applied to the cost allocation and toll design matters resulting from the applied-for facilities.

1.2.2 Application of 29 March 1988

TransCanada applied on 29 March 1988 for the construction of 19.1 km of parallel pipeline on the Montreal Line and for the temporary relocation of a portable compressor from station 134 to station 147 on the Montreal Line and from station 136 to station 95 on the Central Section. TransCanada’s application was not for a certificate under section 44 of the Act, but was rather for orders under section 49 thereof exempting the applied-for facilities from, *inter alia,* certification requirements.

The stated purpose of TransCanada’s 29 March 1988 application (and the 29 March 1988

amendment to its 9 June 1987 application) was to increase its pipeline system capacity in order to enable it, commencing 1 November 1988, to transport the additional domestic volumes referred to in Table 1-2 below.

1.2.3 Application of 18 August 1987

TransCanada has agreed to allow 4.249 106m3/d (150 MMcfd) of its transportation entitlement on the Great Lakes system to be used by Tennessee and Texas Eastern Transmission Corporation ("Texas Eastern") in order to transport volumes which they have purchased from ProGas. TransCanada and Great Lakes have therefore amended their T-4 Transportation Contract of 12 September 1967 to accommodate this arrangement.

On 18 August 1987, TransCanada applied for Board approval of an amendment dated 1 July 1987 to the T-4 Transportation Contract which would have the effect of extending the aforementioned arrangement to 1 November 2000. Further details are provided in Subsection 9.3.2 of these Reasons.

Chapter 2

Supply Matters

TransCanada provided estimates of its system supply capability and forecasted requirements. The evidence indicated that sufficient deliverability exists under contract to meet annual requirements until 1997. TransCanada testified that it plans to augment its system supply in the future if necessary to serve its total markets.

Supply evidence adduced in previous Board licence proceedings was filed by ProGas in support of the OSP and ANE projects, and by AEC and ATCOR in support of the ANE Project. Similarly, KannGaz relied on supply evidence filed in the 1982 Gas Export Omnibus hearing in support of its proposed exports to Tennessee. The Board questioned KannGaz on the adequacy of its current supply in view of the fact that some gas volumes under KannGaz's existing Alberta gas removal permit had been transferred to Metro Gaz Marketing, inc. KannGaz testified that its removal permit allowed it to remove more gas from the Province of Alberta than the volumes authorized by the Board pursuant to Licence GL-77. The volumes transferred to Metro Gaz Marketing, inc., were not expected to exceed the differential between its removal permit and its export license. KannGaz also indicated that, if the transferred volumes did eventually exceed this differential, it would undertake to increase the volume available under its removal permit.

As part of the filings made in support of TransCanada's 29 March 1988 application, evidence was submitted on gas supply arrangements regarding the request by Consumers for incremental firm transportation service of 2.850 106m3/d (100 MMcfd) scheduled to commence 1 November 1988. TransCanada indicated that Consumers intended to use a public tender process to secure supplies at competitive prices. Consumers anticipated concluding gas supply contract(s) by the end of May.

During the hearing, the Canadian Petroleum Association ("CPA") questioned TransCanada on the issue of producer support for the exports proposed by WGML and ProGas. The Alberta *Natural Gas Marketing Act* requires a finding of producer support to be made by the Alberta Petroleum Marketing Commission ("APMC") before gas may be removed from the Province of Alberta. WGML conducted a preliminary poll of its producers in February 1987, which demonstrated strong producer support for the Iroquois project. Formal producer support would be sought by WGML once regulatory approvals are received in a form and substance acceptable to it and when the toll methodology, the netback price and the cost of the applied-for facilities become known. The evidence indicated that, although the APMC has made a finding of producer support for ProGas' proposed ANE and OSP exports, ProGas intends to confirm this support if the Board adopts a toll methodology other than rolled-in.

At the hearing, intervenors did not challenge the existence of producer support.

Views of the Board

The Board is satisfied that adequate reserves and deliverability will exist for the markets to be served by the applied-for facilities, and that producer support is or will be obtained in respect of

the export projects underpinning the 9 June 1987 application, as amended. The Board is also satisfied that Consumers is endeavouring to put into place appropriate gas supply arrangements in respect of its request for additional FS commencing 1 November 1988.

Chapter 3

Requirements

In support of the applied-for facilities, TransCanada provided historical and forecasted winter maximum daily and annual requirements by class of service for the contract years 1985 to 2010. The sales and transportation service requirements for the contract years commencing 1 November 1988 and 1989 are summarized in Table 3-1

3.1 Canadian Market

3.1.1 Markets under Contract

TransCanada provided a forecast of domestic requirements under existing long-term contracts by class of service. The forecast assumed that displacement sales currently being made under short-term contracts would be converted to firm long-term service and such sales were included in the forecasted domestic requirements.

TransCanada's domestic requirements forecast included an item designated as the "Unallocated Canadian Market", which TransCanada defined as a forecast of presently uncontracted Canadian market demand. The unallocated Canadian market is discussed in Subsection 3.1.2 commencing on page 9 of these Reasons.

During the hearing, TransCanada testified that GMi had contracted for an additional volume of 1.5 106m3/day (53.0 MMcfd) of STS effective 1 November 1988 and a further 0.500 106m3/d (17.7 MMcfd) effective 1 November 1989. TransCanada testified that it did not revise its application to reflect the new GMi requirements since these would be addressed in a separate facilities application.

Near the end of the hearing, further requests for new domestic service for the 1988-89 and 1989-90 contract years became known. These included new STS and FS requests from Consumers, GMi, Kingston Public Utilities Commission and Union. TransCanada testified that these new requests represented 36 percent of the forecast of the 1988-89 unallocated domestic demand identified by TransCanada in its 9 June 1987 application and were consistent with that forecast. It indicated that it would file further facilities applications to accommodate these requests for new domestic services upon the execution of transportation contracts.

TransCanada's 29 March 1988 application and the 29 March 1988 amendment to its 9 June 1987 application were filed in response to the requests from Consumers and GMi which were announced during the hearing. These service requests are identified in Table 1-2 (see page 5).

Views of Intervenors

In argument, GMi, ICG Utilities (Ontario) Ltd. ("ICG Ontario") and Union expressed concern that TransCanada's domestic requirements forecast of markets under contract understated total domestic demand in that it ignored the likelihood that some of the unallocated Canadian market

would likely become contracted on a firm basis.

The CPA cautioned that domestic market requirements had changed significantly since the 9 June 1987 application was filed and it suggested that the Board direct TransCanada to conduct an expeditious reassessment of domestic requirements before a decision is made on the facilities to be in service by November 1989.

The Independent Petroleum Association of Canada ("IPAC") expressed concern that the domestic requirements forecast was understated since TransCanada had made no allowance for the firming up of the unallocated Canadian market. It submitted that TransCanada did not contact its shippers about their contractual intentions in the face of a capacity restricted system. According to IPAC, TransCanada should establish regular meetings with its shippers for the exchange of information and shippers should be encouraged to contact TransCanada on a periodic basis about available pipeline capacity.

Consumers viewed TransCanada's domestic requirements forecast, adjusted for new domestic service requests identified near the end of the hearing, to be reasonable when judged on the basis of traditional standards applicable to TransCanada's historical facilities applications. Although Consumers suggested that a comprehensive forecast of domestic requirements would be more reasonable in the light of current facts and circumstances, it accepted TransCanada's forecast, adjusted for recent events, for the purposes of these proceedings. Consumers' proposal for a comprehensive requirements forecast is discussed in Subsection 3.1.2 of these Reasons.
The APMC supported a review of both contracted demand and uncontracted demand reasonably anticipated to become contracted within a one to two year period, in the light of requests for additional firm transportation by Consumers, GMi and Union. It recommended that the 1989-90 requirements forecast and facilities design be reassessed by the Board prior to the construction of the facilities anticipated to meet those additional requirements.

The Minister of Energy for Ontario ("Ontario") argued that the forecast of domestic market requirements was no longer reasonable in view of the new domestic service requests and the uncertainty regarding the extent to which the unallocated Canadian market would likely firm up. It submitted that the Board should direct TransCanada to contact all shippers on its system to inform them of recent developments relating to the lack of excess capacity for additional services, and to inquire whether these shippers are prepared to contract for further FS. In its view, TransCanada should be directed to revise its requirements forecast to take into account the recent domestic service requests from GMi, Union, Consumers, and any other shippers that respond to TransCanada's future contacts.

Views of the Board

The Board recognizes the market and regulatory uncertainties that existed when TransCanada prepared its forecast of contracted domestic requirements for the 1988-89 and 1989-90 contract years. It also notes that intervenors did not dispute the reasonableness of the forecasted domestic requirements under existing contracts. Therefore, the Board accepts TransCanada's forecast of domestic requirements under existing contracts for the purpose of considering the design of the applied-for facilities.

Recent service requests demonstrate that a part of TransCanada's unallocated Canadian market will become contracted for the 1988-89 and 1989-90 contract years. The question of the unallocated Canadian market and its implications on the short- and long-term needs for facilities are discussed in further detail in Subsection 3.1.2

3.1.2 Total Natural Gas Demand Forecast and Unallocated Canadian Market

In addition to its forecast of requirements under contract, TransCanada provided in its 9 June 1987 application a long range forecast of total domestic market requirements. The difference between TransCanada's total requirements forecast and its currently contracted volumes was referred to as the "unallocated Canadian market". The unallocated demand may materialize as new firm requirements or as interruptible volumes.

As unallocated demand is determined residually, any analysis of these volumes depends on an assessment of the two components, namely, currently contracted demand and total natural gas demand. Any conclusions relating to the reasonableness of either of these components will apply to the estimate of unallocated demand. Table 3-2 summarizes TransCanada's projections of total requirements, contracted demand, and unallocated demand. The reasonableness of the forecast of currently contracted demand was addressed in Subsection 3.1.1, commencing on page 7 of these Reasons.

TransCanada's total requirements forecast filed at the hearing was prepared in 1986, at which time actual values were available through 1985 only and was based on price projections which were subsequently updated (Tab "Requirements" page 10). However, TransCanada did not update its demand projection for the purpose of these proceedings, arguing that the two price projections were similar, and that the requirements projection would remain unchanged. Although TransCanada stated that certain categories of demand would be altered if the data were updated, it observed that these changes would possibly offset each other in some cases.

The underlying economic and demographic factors for the total requirements forecast showed the economic activity, population, and household growth rates in Manitoba, Ontario and Quebec to be below the national average. This reflects the pattern in the late 1970s of net migration towards western Canada from the eastern provinces. TransCanada did not anticipate any significant increase in the natural gas share of energy demand in its projection. In the commercial sector, conservation measures were assumed to result in energy savings of 35 percent in new construction for the period 1985-2000. In the residential sector,

TransCanada assumed that, by 1992, high efficiency gas furnaces would account for 100 percent of Ontario furnace sales. In Manitoba, the requirements forecast showed an absolute decline in gas sales to the industrial sector as conservation measures which improved energy efficiency were assumed to outweigh growth.

Intervenors did not comment specifically on the reasonableness of the total domestic market requirements forecast including unallocated demand, but rather focussed on whether any of the unallocated demand should be included in the requirements forecast for purposes of the facilities design, thereby providing for a level of "advance capability" on the system. The issue of advance

capability is addressed in Section 6.5 of these Reasons.

Consumers suggested that TransCanada adopt a "comprehensive forecast" methodology in which deliveries under both existing and predictable new domestic firm services would be considered. Consumers, however, was of the view that a number of policy issues needed to be resolved before the concept of a comprehensive forecast could be implemented. These issues included the expansion and design of TransCanada's system over the mid- and long-term, queuing, the renewal of, and construction of facilities for, short-term firm services, and the Interruptible Service ("IS") toll de sign.

Views of the Board

Many factors influence future demand for natural gas. Forecasts are rarely accurate because there is uncertainty about the behaviour of factors influencing gas demand and a lack of precision in portraying exactly how these factors determine specific levels of natural gas consumption. Therefore, the reasonableness of a forecast for planning purposes depends upon how reasonable are the assumptions about the factors determining gas demand and the ways in which these are expected to affect demand.

The prices of natural gas and competing fuels, economic growth, household formation, changes in the composition of economic activity, and changes in the efficiency of energy utilization are among the main factors influencing regional natural gas demands.

TransCanada's forecast of economic activity showed Manitoba, Ontario and Quebec growing less rapidly than the rest of Canada. Although this was the case during the late 1970s, it has not generally been true since 1983. Thus, this pattern would represent the lower range of probable growth for these provinces, given the underlying national outlook. Similarly, concerning rates of population growth and household formation, which are major determinants of residential energy requirements, TransCanada's forecast assumed continued net migration to western provinces - an assumption consistent with one of slower economic growth in central Canada, but which again would cause a relatively low forecasted rate of household formation for those provinces of concern to TransCanada.

A very wide range of assumptions underlying any forecast may be deemed reasonable. The Board finds that although each of the assumptions used by TransCanada may be deemed reasonable, each would lead to a forecast of lower growth of natural gas demand, relative to other equally reasonable assumptions. The impact of the set of assumptions that TransCanada used was such that total market requirements could be higher than TransCanada's forecast, particularly if the assumptions on economic growth and household formation were to reflect more recent patterns. Thus, the unallocated portion of demand could be higher than shown by TransCanada in its forecast. In the context of a range of reasonable assumptions and outcomes, TransCanada's forecast of total natural gas demand is towards the low end of reasonable expectations.

Although TransCanada did not use the total market requirements forecast as the basis for the facilities expansion application, the forecast provided an important indicator of future demand which the TransCanada system would need to serve. In fact, during the course of the hearing, a

substantial amount of unallocated demand firmed up for the 1988-89 and 1989-90 contract years.

The category "unallocated demand" included not only volumes forecasted to flow under IS, but also growth in FS requirements. The Board agrees generally with TransCanada that it may be difficult to distinguish between these two components of unallocated demand.

The Board recognizes that distributors meet the varied needs of their end-users through a portfolio of services. Insofar as TransCanada prepares its total requirements forecast by sector, sectorspecific information which is available to TransCanada, including data on dual-fuel capabilities, should permit it to estimate the proportion of market requirements which might be met through firm service. This general estimate, if filed at a hearing, would impart additional information which would be useful in determining the short- and long-term needs for facilities on the pipeline system.

The Board sees merit in Consumers' proposal that TransCanada develop a well-conceived, comprehensive forecast as a guide to future capacity requirements. However, for a comprehensive forecast to provide a better understanding of demand - especially unallocated demand and the potential firming-up of unallocated - the forecasting process should include:

· the integration into TransCanada's demand forecasting framework of information from local distribution companies and other shippers about the size and character of future demand in the various market sectors they are serving;

· a comprehensive and rigorous demand forecasting methodology capable of assessing demand growth by category of service under a variety of assumptions about the behaviour of key factors influencing demand growth, using information from TransCanada's shippers to supplement its own procedures;

· a range of forecasts using this methodology in order to assess future facilities requirements;

· a quantified methodology for measuring market risk in a cost-benefit framework, in order to assess optimal system expansion alternatives taking account of this risk; and

· risk assessments of system expansion alternatives using this methodology.

Probable demand and future capacity requirements would be better understood by all parties if TransCanada were to implement the abovementioned features into its forecasting process.

3.2 Export Markets

TransCanada provided a forecast of existing export volumes, for both sales and transportation services, based on expected requirements in existing export markets. Additional export volumes were projected to commence in November 1988 and 1989 for WGML, KannGaz, ANE and ProGas. These additional export volumes are set out in Table 1-1 on page 4 of these Reasons.

ANE Markets

In its 9 June 1987 application, TransCanada forecasted ANE export volumes of 1.175 106m3/d (41.5 MMcfd) commencing 1 November 1988 at Niagara Falls and 9.970 106m3/d (352 MMcfd) commencing 1 November 1989 at Iroquois. During the course of the hearing, TransCanada indicated that it expected a one-year delay in the scheduled in-service date of the ANE exports at Niagara Falls.

Evidence indicated that ANE would act as a conduit between the suppliers (TransCanada/ WGML, ProGas, ATCOR and AEC) and the United States repurchasers (18 LDCs located in the northeastern United States). Precedent gas purchase and precedent gas sales agreements between ANE, its suppliers, and the repurchasers were filed at the hearing. Evidence was adduced showing that the suppliers and repurchasers have agreed to execute gas purchase and gas sales agreements with the same form and content as those filed at the hearing, upon fulfillment of certain conditions contained in the various precedent agreements.

The ANE market evidence was adduced to demonstrate that the northeastern United States market continues to provide reasonable potential for growth and has the ability to absorb the ANE gas. TransCanada argued that its evidence continued to support the findings of the ANE GH-1-87 licence hearing.

ANE had filed during the GH-1-87 licence proceedings two studies of the northeastern United States gas market. These studies were incorporated into the record of the GH-2-87 proceedings. The ANE repurchasers' supply/requirements forecast was subsequently updated to reflect certain revisions to the project participants and forecasted market data. This updated evidence indicated that the gas supply deficiency currently forecasted by the ANE repurchasers was greater than that shown in the initial forecast filed at the GH-1-87 licence hearing. TransCanada testified that the ANE supply/requirements forecast was a compilation of the planning and forecasting efforts of each of the individual ANE repurchasers. It argued that the ANE repurchasers, being LDCs, have an intimate knowledge of their individual markets and submitted that the ANE evidence constituted the best evidence on the question of markets.

ANE testified that the United States repurchasers require the ANE volumes to serve peak demands, new growth in residential, commercial and industrial markets, and growing requirements of the electric power generation market as well as to diversify sources of gas supply.

TransCanada assumed that exports under the ANE Project would occur at an 80 percent load factor. To support this assumption, TransCanada referred to the high load factor of the gas currently being exported to Boundary, into the same general market area that ANE intends to serve. TransCanada also pointed out that, in both 1986 and 1987, purchases under the Boundary export were made at a load factor in excess of 90 per cent under pricing terms and conditions virtually identical to those contained in the ANE contracts, despite competition from low oil prices. TransCanada also described the terms and conditions of the ANE contracts which are designed to encourage sales at a high load factor. These consist of the minimum quantity provisions which trigger the sellers' option to reduce the daily contract quantities, the seasonal and marketsensitive pricing formula, and the provision whereby a repurchaser, if unable to take the gas, can offer it to other repurchasers.

Although intervenors were generally satisfied with the market evidence relating to the ANE volumes, several parties expressed concern about the ability of the northeastern United States market to absorb the forecasted ANE volumes at the forecasted load factors. Consumers, IPAC, and Tennessee questioned whether the ANE markets could be developed without a phased-in approach, considering the magnitude of the forecasted export volumes. Tennessee also questioned whether the ANE repurchasers would be able to balance their annual load by selling into the interruptible market, during off-peak periods.

TransCanada argued that gas supply availability constraints, unsaturated service territory, high reliance on foreign oil, large amounts of expensive supplemental seasonal supplies and ripe market opportunities, suggest that the ANE export volumes would be able to penetrate the northeastern United States market at forecasted load factors. TransCanada also argued that the contract provisions allowing repurchasers to shift volumes among themselves, the market-sensitive pricing formula and the winter/summer commodity charge differential would allow the ANE repurchasers to compete in the interruptible market.

OSP Market

TransCanada forecasted exports of 1.416 106m3/d (50 MMcfd) by ProGas to OSP at Niagara Falls commencing 1 November 1989. The forecast assumed exports to OSP would occur at a 90 percent load factor.

OSP, the end-user, intends to construct a new 235 MW, combined-cycle, natural gas fired electrical power plant at Burrillville, Rhode Island. OSP testified that it had contracted the entire electrical output of the plant to four New England power companies.

TransCanada submitted evidence demonstrating the growing electrical generating capacity needs of the New England market to be served by the planned OSP facilities.

ProGas identified the following factors as contributing to its conclusion that the OSP export volumes would flow at a high load factor:

(i) OSP is committed to pay demand charges to ProGas with respect to the Canadian transportation, and to Tennessee;

(ii) the OSP plant is permitted to earn a premium rate of return if it is available for dispatch over 80 per cent of the time; and

(iii) the ProGas/OSP sales contract pricing formula was designed to ensure that the plant is capable of being dispatched at least 320 days per year.
Intervenors did not dispute the reasonableness of the forecasted OSP market requirements.

Boundary Market

TransCanada forecasted an additional 0.071 106m3/d (2.5 MMcfd) of gas sales by WGML to Boundary at Niagara Falls, commencing 1 November 1988. TransCanada submitted that the high

load factor experience with the Boundary Phase I volumes proved the existence of a strong market and TransCanada forecasted the load factor of the additional sales at 96 Percent.
Intervenors did not dispute the reasonableness of the forecasted Boundary requirements.

Tennessee Markets

TransCanada forecasted the additional export volumes by WGML and KannGaz to Tennessee pursuant to Licences GL-84 and GL-77 shown in Table 3-3

The forecasted additional exports to be made by KannGaz and WGML at Niagara Falls would serve to supplement Tennessee's declining system supply in order to serve Tennessee's currently attached markets.

Intervenors did not dispute the reasonableness of the forecasted Tennessee market requirements.

Views of the Board

The Board is satisfied that markets exist for the forecasted export volumes and finds the forecasted export requirements to be reasonable for the purpose of assessing facilities requirements for the 1988-89 and 1989-90 contract Years.

The Board continues to hold the view that the northeastern United States market offers reasonable potential for growth and has the ability to accept the forecasted export volumes at projected load factors. This recognizes that the ANE repurchasers' supply/requirements forecast represents an aggregate of individual market forecasts prepared by LDCs, each of which is intimately familiar with its market. The existence of executed precedent agreements between ANE, its Canadian suppliers, and repurchasers in the United States satisfies the Board that the markets exist for the forecasted export volumes.

The various contractual provisions allowing ANE and its repurchasers to shift volumes between repurchasers and the seasonal and market-sensitive pricing provisions outlined in the *pro forma* gas purchase and gas sales contracts lead the Board to conclude that the ANE repurchasers would be able to balance their annual load by selling into the interruptible market during off-peak periods. It is also noted that the ANE repurchasers have executed precedent agreements for firm transportation service in the United States to transport the gas to their markets.

Chapter 4

Regulatory Situation in the United States

The existence and timing of regulatory approvals in the United States became a key issue at the hearing as a consequence of:

(i) TransCanada's 9 June 1987 facilities application seeking certification conditional on receipt, in a timely manner, of approvals required from appropriate regulatory bodies in Canada and the United States, all in a manner satisfactory to the Board;

(ii) parties' concern that TransCanada's applied-for facilities might not be used and useful if Canadian facilities construction is commenced in the absence of all relevant United States regulatory authorizations having been issued; and

(iii) parties' concern that the current "cheap expansibility"1 of TransCanada's system be reserved for projects which are unlikely to proceed by the forecasted in-service dates.

The regulatory risk associated with government or regulatory actions in the United States having a detrimental impact on the importation of Canadian gas after Canadian pipeline facilities are constructed is addressed in Chapter 5 of these Reasons.

FERC's "Open Season"

On 24 July 1987 the FERC issued a notice inviting applications to provide new gas service to the northeastern United States. The notice established a 1 December 1987 deadline for the filing of applications. The FERC subsequently extended the deadline to 15 January 1988.

The FERC issued an order on 17 March 1988 prescribing procedures in respect of the various applications proposing new gas service to the northeastern United States. The FERC grouped interrelated applications together, identifying 31 proposed projects to serve the Northeast. After analyzing these projects, the FERC made a preliminary determination that 20 of the projects may be competitive or mutually exclusive and may require consideration in one or more comparative evidentiary hearings. The FERC also determined that certain projects involved proposals to provide gas service to distinct markets in the northeast under circumstances where there are no issues of mutual exclusivity2. Parties were invited by the FERC to comment on the its preliminary determinations by 18 April 1988.

The FERC's preliminary determinations identified the proposed pipeline projects designed to service the forecasted ANE Iroquois and Niagara Falls exports and the forecasted WGML and KannGaz sales to Tennessee3 as competitive projects. Tennessee's OSP pipeline proposal was identified as a discrete project.

1 During the hearing, the expression "cheap expansibility" has been used to indicate that the proposed expansion is based primarily on the addition of compression along TransCanada's

mainline system. It is anticipated that future increases in capacity will require more capital intensive expansion through looping. The existence of spare capacity along some sections of the system also contributes to the current "cheap expansibility".

2 For the purposes of the "open season" proceedings, the FERC indicated that "a discrete project represents a proposal that can be processed independently from the pending competitive projects and that, if authorized, will not adversely impact those pending competitive projects." (Docket No. CP87-451-004, page 5).

3 On 30 June 1988, the FERC issued an Order Issuing Certificate Separating Tennessee's Phase I facilities from Docket No. CP87-132-000, et al. The Order Issuing Certificate authorizes Tennessee to operate, on a permanent basis, those facilities allowing Tennessee to take delivery of the additional WGML and KannGaz volumes scheduled for 1 November 1988. At its 29 June 1988 meeting, the FERC declared Phase II of Tennessee's Niagara Spur project as discrete. Phase II is designed to accommodate the entire contracted WGML and KannGaz volumes scheduled for 1 November 1990.

On 18 March 1988, the FERC issued a news release announcing a tentative schedule for its review of the various proposals. The schedule suggests that the normal six-year period that would traditionally be required to process such major applications will be reduced but the FERC acknowledged that the environmental analyses may still take three years to complete because of the complexity and diversity of the various proposals.

ANE

ANE testified that its import authorization applications before the Economic Regulatory Administration ("ERA") are complete and pending decision.
ANE's proposed exports at Iroquois, commencing 1 November 1989, would be transported to markets in the northeastern United States by the proposed IGTS. IGTS has filed applications with the FERC for certification of its facilities pursuant to the optional expedited certificate procedures and the traditional facilities certification procedures under section 7(c) of the *Natural Gas Act* of the United States. The supplemental 7(c) application was filed by IGTS to protect and preserve its position in the FERC's "open season" process. IGTS continued to hold the view during the hearing that its scheduled 1 November 1989 in-service date was realistic. ANE and IGTS acknowledged that the 1 November 1989 in-service date was dependent upon a final FERC certificate being issued by 15 September 1988, as a result of a settlement being reached by 15

April 1988, without hearings or appeals.

The volumes forecasted to be exported by ANE at Niagara Falls commencing 1 November 1988 would be transported in the United States by the Tennessee pipeline system. Tennessee's evidence showed that it had filed, on 15 January 1988, an application with the FERC to construct the required facilities. TransCanada acknowledged a one-year delay in the scheduled in-service date for these facilities in the light of Tennessee's evidence that it is not possible to receive timely FERC authorizations to construct the required facilities by 1 November 1988. Tennessee also suggested that the ANE Niagara Falls volumes may not flow before 1 November 1991, in view of

Tennessee's "open season" NOREX pipeline expansion proposal and Tennessee's expectation that the northeastern United States market would be unable to absorb both the ANE and NOREX volumes before 1 November 1991.

OSP

Tennessee has applied to the FERC for authorization to transport the OSP volumes, during the period 1 November 1989 to 1 November 1990, through an expansion of its Niagara Spur which is designed to service the total contracted KannGaz and WGML volumes scheduled to flow by 1 November 1990. Tennessee submitted that the Niagara Spur expansion capacity would be recalled 1 November 1990 to meet Tennessee's entire contractual purchase commitments from KannGaz and WGML. Tennessee filed a separate application with the FERC to construct facilities for the OSP volumes to be imported after 1 November 1990.

TransCanada testified that OSP's ERA application for import authorization is pending and that a decision by the ERA was anticipated by May of 19881.

Boundary

TransCanada provided evidence that the Boundary volumes have received all necessary ERA and FERC authorizations.

KannGaz and WGML Sales to Tennessee

Tennessee testified that ERA import authorization had been received for the KannGaz volumes, with the volume increments scheduled for November 1988, 1989 and 1990 subject to an environmental review associated with the facilities which Tennessee has applied for in FERC Docket No. CP87-131-001. Tennessee had also filed an application with the ERA for authority to import the WGML volumes and anticipated imminent ERA authorization, noting that the application was unopposed2.

1 ERA Order granting conditional authorization to import natural gas from Canada was issued 13 June 1988.

2 ERA import authorization was issued 15 July 1988.

Tennessee has requested authority from the FERC to operate existing facilities to accommodate the additional KannGaz and WGML volumes scheduled for 1 November 19881. It has also filed applications with the FERC to construct facilities for the remaining KannGaz and WGML volume increments. Tennessee expects timely FERC approval of these applications.

Views of Intervenors

Most intervenors were of the view that the forecasted ANE exports at Iroquois, Ontario would likely be delayed beyond the scheduled 1 November 1989 commencement date given the degree of regulatory uncertainty surrounding the proposed IGTS.

Some intervenors, while accepting that timely FERC certification of the IGTS facilities through the FERC's "settlement process" was a remote possibility, cautioned that the configuration and the size of pipeline facilities required in the United States to transport gas to the Northeast remained uncertain. The CPA noted that, by nature, the settlement process involves compromise and questioned the reasonableness of IGTS' assumption that it would achieve all its objectives.

Champlain argued that IGTS' scheduled 1 November 1989 in-service date was not achievable since it was based on the FERC issuing the final order authorizing construction by 15 September 1988.

KannGaz indicated that the as-billed2 issue would have to be resolved to its satisfaction before it proceeds with transportation arrangements with TransCanada for the volumes scheduled for export to Tennessee commencing 1 November 1989.

Views of the Board

Although the FERC made a preliminary determination that the proposed Tennessee pipeline projects designed to transport the forecasted ANE, WGML and KannGaz3 volumes may be competitive and may require consideration in the "open season" comparative evidentiary hearings, there was no evidence adduced at the hearing identifying a critical date by which Tennessee's expansion proposals would require FERC approvals in order to meet their scheduled 1 November 1988 and 1989 in-service dates. Since Tennessee's proposals involve the use and expansion of existing pipeline infrastructures, the Board expects that the necessary approvals in the United States will be granted in time to enable Tennessee to service the additional forecasted exports at Niagara Falls commencing 1 November 1988 and 1989.

The Board notes the FERC's preliminary determination that Tennessee's pipeline expansion proposal to serve the OSP volumes at Niagara Falls will be considered as a discrete project. It is therefore reasonable to conclude that the ProGas exports to OSP will achieve their forecasted 1 November 1989 commencement date.

While the Board is satisfied that the proposed IGTS project is being actively pursued by ANE and the IGTS sponsors, the Board concludes that the regulatory process in the United States will not be completed in time to enable the IGTS to achieve its scheduled 1 November 1989 in-service date. In this respect, the Board notes that, by letters dated 14 and 16 March 1988, the Department of Interior of the United States denied the IGTS' proposed crossing of the Appalachian Trail. Particular consideration has been given to the evidence that the 1 November 1989 in-service date was dependent upon IGTS and other parties reaching agreement by 15 April 1988 through the FERC's settlement process, without hearings or appeals, resulting in the FERC issuing its final order authorizing construction of the IGTS by 15 September 1988. Since as of the date of writing no agreed settlement without objection has been announced, it is almost certain the necessary FERC approval cannot be obtained within the time frame contemplated by TransCanada when it first made its facilities application.

1 See note 3 on page 14.

2 A discussion of the as-billed issue and its relevance to the KannGaz sales to Tennessee appears in Section 5.2 of these Reasons

3 See note 3 on page 14.

Chapter 5

Contracts

5.1 ANE

The degree of contractual and regulatory risk associated with the ANE Project, and how that risk should be allocated among parties to the ANE Project, TransCanada and TransCanada's tollpayers was examined by parties at the hearing in the context of Issue IV-2 of the Board's List of Issues. Particular attention was paid to the liability for payment of TransCanada's transportation charges in respect of the ANE export gas volumes. To this end, parties examined the question of the enforceability of the assignment provisions contained in the Gas Purchase and the Gas Sales Agreements and the enforceability of the assignment provisions contained in the separate, but related, financial assurance packages. Parties also examined the scope of the various force majeure clauses found in the Gas Purchase Agreements and Gas Sales Agreements. In this regard, they looked at whether or not the revocation of a government or a regulatory permission, or the denial, in whole or in part, of the passthrough of any of the purchasers' costs by a state commission exercising its retail rate-making authority would be an event of force majeure, relieving the repurchasers of their obligation to pay demand charges under the contracts.

The Assignment Provisions in the Financial Assurance Packages

The evidence was that TransCanada had sought and received financial assurances from two of the four ANE Project shippers. ProGas, a broker with limited assets, was required to execute the full financial assurance package. ATCOR, a producer and a marketer of gas with some assets situated in Alberta, was required to execute the financial assurance package with the exception of the Producer Assignment. AEC, which has assets of a substantial nature in Alberta, was not required to give any financial assurances; it has however, signed a letter, indicating its willingness to sign a similar package of financial assurances should it be required to do so by TransCanada at some future time. WGML was not required to execute a financial assurance package, because WGML was acting as agent on behalf of TransCanada in contracting with system suppliers for gas volumes dedicated to the ANE Project. TransCanada already has the same rights in connection with the WGML transactions that it must obtain from independent entities such as ProGas and ATCOR through the financial assurance agreements.

The financial assurances involve the assignment to TransCanada of certain of the rights of the shippers and of ANE under the Gas Purchase and the Gas Sale Agreements, respectively. It was TransCanada's evidence that by requesting such assignments, it sought to guarantee the payment of demand charges owed it for the provision of long-term transportation services for which new facilities must be built. TransCanada submitted that this series of assignments would provide long-term financial assurances both to TransCanada and to tollpayers on the system.

The purpose of the financial assurance package is to ensure that TransCanada will have direct access, as a matter of contract law, to the creditworthy participants in the ANE Project. If a shipper, who has a direct contractual relationship with TransCanada, is not itself creditworthy,

TransCanada wants to establish a chain of contractual provisions that, by way of the assignment of contractual rights, will place TransCanada in a direct relationship with a creditworthy party. In this way TransCanada would have the contractual status required to enforce the demand charge provisions of the various contracts in the chain directly against the party which has the "deep pockets".

There are four major links in the series of assignments constituting the Financial Assurance Package. The first is the assignment by ANE to the gas supplier (ProGas or ATCOR) of ANE's rights against the United States repurchasers under the Gas Sales Agreements. This assignment is limited to the interest in and rights to receive the amounts which are payable to ANE by the repurchasers in respect of the gas suppliers' charges and occurs in the event that ANE defaults on its obligation to pay these amounts or on other obligations to ProGas or ATCOR under the assignment. The second link in the series of assignments is the assignment by the gas supplier (ProGas or ATCOR) to TransCanada of:

(i) its rights as against ANE under the Gas Purchase Agreements; and

(ii) its rights acquired from ANE, pursuant to the ANE/gas supplier Assignment Agreement.

The assignment of rights by the gas supplier to TransCanada occurs in the event that the gas supplier defaults on its obligation to pay TransCanada's transportation charges or on other obligations to TransCanada under the assignment.

The third link in the assignment chain and an associated element to the gas supplier/ TransCanada assignment are the agreements whereby ANE and each of the repurchasers consent to assignments by ANE and by the gas supplier. One such agreement is styled "Notice and Consent" wherein ANE consents to the gas supplier assigning certain of its rights to TransCanada. In turn, the repurchasers enter into an agreement which is also styled "Notice and Consent" wherein each consents to the assignments from ANE to the gas suppliers in the first instance, and from the gas suppliers to TransCanada in the second instance.

The fourth link in the series of assignments is the Producer Assignment which TransCanada has only required of ProGas. Under the terms of this Agreement, ProGas agrees to assign to TransCanada certain of its rights which ProGas may have to seek and recover damages from any of its producers under its contract with such producer. TransCanada could, pursuant to the terms of this assignment, sue the ProGas producers, standing in ProGas' shoes, to receive outstanding transportation charges, in the event that, as a direct or an indirect result of the default of a producer, ProGas were unable to pay transportation charges under the TransCanada/ProGas Export Transportation Agreement. The assignment provision as between TransCanada and ProGas is operative only in circumstances where the ProGas producer default is a result of that producer deciding to sell his gas into another market. It would appear that a failure to deliver resulting from a decline in deliverability or an event of force majeure would *not* constitute a default which would trigger the assignment provision.

ProGas testified that it does not intend to get its producers' consent to the various provisions of the ProGas/Producer Assignment Agreement. A question arose as to whether that Producer

Assignment is valid and enforceable upon the ProGas producers absent such consent, having regard to the terms of the producer contracts with ProGas. TransCanada's evidence was that it has sought and obtained legal advice that such assignments are valid and legally enforceable in such circumstances.

The financial assurance package also contains a form of Gas Substitution Agreement to be entered into by ProGas, ANE and TransCanada, which is intended to provide additional assurance that a gas supply adequate to meet the requirements of the Gas Purchase Agreement between ANE and ProGas will be maintained. It provides for projections to determine the adequacy of the ProGas gas supplies to fulfill ProGas' obligations under the Gas Purchase Agreement and establishes a mechanism which, in the first instance, is intended to ensure that circumstances do not arise under which ANE would have the right to reduce the volumes under the Gas Purchase Agreement. TransCanada would be given certain rights to designate a substitute gas supplier to make up any supply deficiency in the event that the ProGas is unable to do so.

The validity and enforceability of the ProGas and ATCOR financial assurance packages were the subject of a legal opinion filed by TransCanada at the hearing. This opinion concluded that, subject to certain assumptions, the agreements constituting the financial assurance package would be valid and enforceable under the laws of the states in which each of the U.S. repurchasers has its principal place of business (New York, New Jersey and Connecticut) and in which ANE has its principal place of business in the United States (Massachusetts). There were three specific exceptions made to this opinion, relating to bankruptcy of the repurchasers, applicability of certain equitable defences, and the application of Article 9 of the *Uniform Commercial Code.*

The financial assurance packages were also the subject of a second legal opinion filed at the hearing by TransCanada. This opinion stated that, subject to certain assumptions, the financial assurance agreements in the financial assurance packages proposed to be entered into by TransCanada with ProGas and ATCOR would constitute valid and enforceable agreements under the laws of the Province of Alberta, the jurisdiction designated in the choice of law provision in each of the financial assurance packages.
In addressing the question of financial assurances, the APMC submitted that the proposed financial assurance package is reasonable and responsive to the circumstances of the ANE Project. The APMC noted that there is no present need for an assignment of rights from WGML to TransCanada similar to those made by some of the other shippers. TransCanada, as principal under the WGML/TransCanada contracts already has these rights. The APMC submitted however, that the Board should obtain an undertaking from TransCanada, to the effect that TransCanada would retain the right to enforce the WGML producer agreements in the event that, at some future time, the TransCanada producer contracts become segregated, that is, assigned to WGML.

Assignment Provisions in Gas Sales and Gas Purchase Agreements

The series of assignments of contractual rights in the financial assurance packages go hand-inhand with a similar and related assignment provision in each of the Gas Purchase Agreements as between the gas suppliers and ANE. Under the assignment provision in the Gas Purchase Agreements, ANE assigns to the gas suppliers all of ANE's interest in and rights to receive

monies due from the repurchasers on account of the ANE volumes pursuant to the Gas Sales Agreements. There is a corresponding provision in each of the Gas Sales Agreements between ANE and the repurchasers whereby the repurchasers consent to the assignment by ANE to the gas suppliers.
The actual terms and conditions of the assignment in the Gas Purchase Agreement are contained not in the Gas Purchase Agreement itself but in the ANE/Gas Supplier Assignment Agreement which forms part of the financial assurance package. The expressly stated purpose of that Assignment Agreement is to clarify the terms of the assignment contained in the Gas Purchase Agreement. There are of course, no ANE/Gas Supplier Assignment Agreements with respect to the AEC and WGML sales because no financial assurance package has been sought from these two parties. The question of whether the Assignment Agreements in the financial assurance package are critical to the enforceability of the assignment provisions in the Gas Purchase Agreements was not addressed in evidence or in argument.

The issue of the enforceability of the Gas Sales Agreements by TransCanada as against the repurchasers was raised by counsel for the CPA, the APMC, and Consumers. The first question these intervenors focussed on was whether TransCanada, as the ultimate assignee under the chain of assignments could enforce, against the repurchasers, the rights assigned it by ANE pursuant to the terms of the Gas Sales Agreements. This uncertainty arose because neither the gas suppliers nor TransCanada are in privity of contract with the repurchasers i.e., they are not parties to the Gas Sales Agreements between ANE and the repurchasers, from which agreements the rights assigned by ANE to the gas suppliers, and ultimately, to TransCanada, arise.

The second question raised by the intervenors focussed on the enforceability of the rights ultimately assigned TransCanada against one or more of the repurchasers in the various jurisdictions where the repurchasers' assets were located and where an action might therefore be brought.

As a result of the questions raised by intervenors, TransCanada filed a legal opinion respecting the enforceability by the gas suppliers of their rights, as against the repurchasers, pursuant to the Gas Sales Agreements. On the question of privity, the legal opinion stated that:

"Although the issue is not clearly established under the laws of the states of Connecticut, Massachusetts, New Hampshire, New Jersey, New York and Rhode Island, we believe it is probable that the provisions of Article XIX1 of each Gas Sales Agreement will be enforceable by the *gas supplier (either ProGas Limited, ATCOR Ltd., or TransCanada PipeLines Limited) referenced in said Article XIX of the Gas Sales Agreement under the substantive law of such jurisdictions.*

1 In Article XIX, the repurchaser consents to the assignment to the gas supplier of ANE's rights under the Gas Sales Agreement.

The attorney responsible for preparing the legal opinion, testified that although there is no ironclad guarantee that Article XIX would be enforceable by third parties as against the repurchasers, it is nevertheless his opinion that a court, applying relevant precedent, would more likely than not determine that these provisions are, in fact, enforceable. His opinion in this regard was based on

the so called "third-party beneficiary" rule. Put another way, a third party not privy to a contract, can nevertheless benefit from the terms and conditions of that contract if:

(i) the parties to the contract intended that the contract would benefit that third party;

(ii) if there is an obligation running directly to that third party.

Based on factors such as how the contracts are set up and the fact that there is a fairly obvious intent in the contracts that the gas suppliers are to receive benefits through the contract, he is fairly confident that Article XIX is an enforceable provision .
With respect to the questions raised about the enforceability of the rights assigned to TransCanada in the various jurisdictions where an action might be brought, the filed legal opinion stated that, subject to three exceptions, each of the Gas Sales Agreements would be valid and enforceable according to its terms under the substantive law of New York, the jurisdiction designated in the choice of law provision in each Gas Sales Agreement. The most significant exception concerned the enforceability by TransCanada of its rights under the Gas Sales Agreements in the event of the bankruptcy or insolvency of one of the repurchasers.

The evidence was that a trustee in bankruptcy has the power to decline to be bound by the terms of the Gas Sales Agreement - in effect, it could repudiate the agreement. In other words, United States federal bankruptcy laws would be paramount over contractual obligations. The obligation to continue to pay demand charges under that contract would cease upon the repudiation of the agreement although ANE could file a claim against the bankrupt estate with respect to demand charges incurred and owing prior to the repudiation of the contract.

The filed legal opinion further stated that in the event that a court applying the conflict of laws principles applicable under the law of the states of Connecticut, Massachusetts, New Hampshire, New Jersey, New York or Rhode Island determines that any of the Gas Sales Agreements should be construed and interpreted in accordance with the substantive law of the state in which the United States repurchaser which is a party to such agreement has its principal place of business if different from New York *(i.e.*, Connecticut, Massachusetts, New Hampshire, New Jersey, or Rhode Island), rather than under the substantive law of the State of New York, then the Gas Sales Agreement will be valid and enforceable under the substantive law of such alternative jurisdiction, subject to the above-discussed exceptions.

The CPA and Consumers expressed concern about the enforceability of the various assignment provisions. The CPA noted that, although the written legal opinions were not unqualified and do provide some reassurance, the risk of ultimate default and insolvency of a repurchaser ultimately rests upon the TransCanada tollpayers.

Consumers expressed concern with the legal opinion to the effect that "...we believe it is probable that the provisions of Article XIX of each Gas Sales Agreement will be enforceable by the gas supplier". Consumers noted that there is a legal risk that TransCanada may not have the status to enforce the demand charge obligations by way of a lawsuit against the repurchasers, should that course of action become necessary. Consumers submitted that TransCanada is aware of the risk right now, and its subsequent actions in proceeding with the expansion in the face of this risk

must be judged accordingly.

With respect to the exceptions made to the legal opinion respecting the enforceability of the Gas Sales Agreement by TransCanada as against the repurchasers, Consumers noted that should a repurchaser seek the protection of a Chapter 11 bankruptcy in the event that a state regulator validly disallows the pass-through of that repurchaser's Canadian gas costs for rate-making purposes, then the trustee in bankruptcy would be entitled to repudiate the Gas Sales Agreement. As discussed above, this means that the obligation to continue to pay demand charges would cease.

The APMC submitted that in the event of the bankruptcy of a repurchaser, the obligation of that repurchaser to pay demand charges pursuant to the Gas Sales Agreements could be rendered useless. The APMC noted, however, that there is little additional practical security which could be extracted from U.S. repurchasers in order to protect against such an occurrence; in any event, the Gas Sales Agreements provide that should a repurchaser default on payment obligations for thirty days after notice, ANE may, with the consent of TransCanada, cancel the rights of that U.S. repurchaser and offer its share of natural gas volumes to the remaining repurchasers.

TransCanada, responding to the concerns expressed by the CPA and Consumers, submitted that the Notices and Consents by the repurchasers which are contained in the financial assurance packages, should eliminate concerns respecting the effect of Article XIX of the Gas Sales Agreements upon the ProGas and ATCOR financial assurance agreements. In response to the concerns raised respecting the "probable enforceability" of the Gas Sales Agreement, TransCanada submitted that the legal opinion was expressed in terms of probability because a decision vis-à-vis the enforceability of the agreements was one which would ultimately be made by a Court based upon its determination of relevant factors. TransCanada further submitted that the contractual arrangements had been prudently negotiated and that the prudency of these arrangements should be determined at the time of negotiation and not with the benefit of hindsight. TransCanada further submitted that similar assurances do not exist with respect to existing exports.

The Force Majeure Provisions in the Gas Purchase and Gas Sales Agreement

There was much discussion during the crossexamination of TransCanada's Contract Panel on precisely what events were intended to allow a party in the ANE Project to claim force majeure and thereby escape its contractual obligation to pay demand charges. These discussions focussed on the force majeure provisions in the Gas Purchase Agreements as between ANE and the gas suppliers and the Gas Sales Agreements as between ANE and the repurchasers.

The evidence indicated that it was the intention of parties to the contract that there be only two, possibly three, events that would preclude the payment of demand charges. The first is the failure to tender gas at the export point due to an upstream event of force majeure on the TransCanada system. The evidence of TransCanada and of the ANE Project sponsors was that any other event of force majeure, including an event of force majeure on a pipeline system downstream of the TransCanada system, such as the IGTS or the Tennessee system, would not excuse the obligations of the repurchasers to pay demand charges to ANE. This evidence was adduced in the context of a discussion of the meaning of the phrase "to the extent affected by such events of force majeure", which phrase is contained in paragraph 1 of the force majeure article in each of the Gas Purchase and Gas Sales Agreements. The Panel's testimony was that this phrase has the effect of excusing the obligation of the buyer to purchase gas and the seller to sell the gas during an event of force majeure but does not excuse the buyer from its obligation to pay demand charges. An event of force majeure may prevent the seller from delivering the gas or may prevent the buyer from taking receipt of the gas, but that event of force majeure does not extend to the ability of the buyer to pay demand charges owing in respect of the aborted deliveries; the obligation to pay demand charges exists independent of the volumes of gas actually delivered.

The second event that would excuse the payment of demand charges is regulatory or governmental action, in either Canada or the United States, that would have the effect of proscribing the export or the import of the contract volumes; for example, the revocation of export licences or import authorizations. The evidence of the gas suppliers was that such revocations might not constitute an event of force majeure, but might, pursuant to the terms of the contracts, result in the termination of the contracts themselves. The evidence of ANE was that such a revocation might be an event of force majeure excusing ANE and the repurchasers from paying TransCanada's demand charges. Both parties however agreed that the end result is that demand charges would not be payable. It was TransCanada's evidence that it would, under such circumstances, seek to recover its unpaid demand charges through its cost of service, to the extent that the facilities, which became available due to such an occurrence, were not used for the provision of other services. TransCanada acknowledged that its tollpayers would bear the risk associated with the termination of the contracts in such circumstances.

A third possible force majeure event was canvassed in some detail during the hearing. It concerned whether a denial, in whole or in part, of the pass-through of any of a repurchaser's costs by a state commission exercising its retail ratemaking authority could relieve that repurchaser of its obligation to pay demand charges. This issue was considered in the context of two questions:

1) does the doctrine of pre-emption prevent state regulators from proscribing the *payment* of demand charges for Canadian gas? and
2) do state regulators have the jurisdiction to prohibit the *recovery* of the demand charge, in whole or in part, by an individual repurchaser, by disallowing the flowthrough of demand charges from the repurchaser to its customers?

State regulatory authorities have jurisdiction over the rates charged by the repurchasers to their customers. The evidence of the representatives of certain of the repurchasers was that a repurchaser might assert a claim of force majeure under the Gas Sales Agreement as a basis for excusing its obligation to pay demand charges if a state regulator were to issue an order, after gas was flowing, that denied the repurchaser the right to pass-through to its ratepayers all, or a portion, of the costs which it incurred under its Gas Sales Agreement with ANE. The repurchasers stated that a determination of whether to assert such a claim would be dependent upon the specific circumstances, the degree to which passthrough was denied, and the advice of legal counsel.

ANE's witnesses, on the other hand, testified that the disallowance in whole or in part would not, in their opinion, constitute an event of force majeure which would excuse the repurchaser from its obligations to pay demand charges pursuant to the Gas Sales Agreement. Such a disallowance would not "affect" the repurchaser's obligation to pay demand charges; it merely would make it financially more difficult to pay them.

The evidence of TransCanada, ANE and the repurchasers was that aside from the three events where demand charges may not be payable, no other circumstances could excuse ANE and the repurchasers from the obligation to pay TransCanada's demand charges. ANE and the repurchasers are not excused from this obligation if they lose their markets; there are no "marketouts" in the Gas Purchase or the Gas Sales Agreements.

As a result of some uncertainty respecting the legal basis for the evidence of ANE and the repurchasers on the question of the jurisdiction of state regulators respecting the flow-through of demand charges, a United States attorney was presented by TransCanada as an expert witness respecting certain issues of law. He testified that in his view, once the ERA approves the import contracts of the repurchasers, the supremacy clause of the United States Constitution operates to prevent state regulatory authorities from barring the purchase of the imported gas supply by a distributor and from paying the price specified in the "approved" contracts. He relied in this regard on the principles set out in *Narragansett Elec. Co. v. Burke1* and *Nantahala Power and Light Co. v. Thornburg2,* which are authority for the proposition that state regulators are required to accept rates approved by the FERC, although they are not required to pass these rates through on a dollarfor-dollar basis. In his view, the doctrine of federal pre-emption applies to ERA-approved import authorizations as it does to FERC-approved rates despite the fact that there are no cases which specifically make this holding and despite the fact that the substantive law standards for import authorizations and rate orders are different. He expressed the view that approval by the ERA of the import contracts and their pricing provisions would pre-empt interference by state regulatory authorities with these contracts by way of, for example, an order proscribing the payment by the repurchaser of the demand charge component of the gas price or otherwise proscribing performance of the contract by a repurchaser. He testified that such an order, by a state regulator, would not be valid. Consequently, the demand charges payable

pursuant to the Gas Sales Agreements must be paid in all instances required in the contracts, even if the applicability of the state leastcost purchasing policy results in the distributor taking reduced quantities of Canadian gas (see discussion of prudency-of-purchase below).

1 119 R.I. 559, 381 A. 2d 1358 (1977). 2 476 U.S. 953,106 S.Ct. 2349(1986).

Another question canvassed in the context of the regulatory jurisdiction of state commissions, was whether state regulators have the power to disallow gas costs for retail rate-making purposes on a prudence-of-purchase basis. TransCanada's witness testified that state regulators have this power despite an initial finding of prudency in respect of a gas purchase contract. State regulators can therefore, in the exercise of their rate-making jurisdiction, disallow, reallocate or reclassify costs incurred by an LDC.

The prudence-of-purchase doctrine was developed in the *Pike County Case1*, the *Mississippi Power Case2* and the recently decided *Kentucky West Virginia Case 3*. The prudence-of-purchase doctrine holds that a state regulator may disallow a pass-through of gas costs based on a finding that a LDC had acted imprudently in purchasing a particular gas supply in the light of the cost of alternate supplies. The doctrine of pre-emption would not appear to preclude a state regulator from inquiring into whether the LDC prudently chose to pay a FERC-approved wholesale rate for one source, as opposed to the lower rate of another source. In other words, although a state regulator must accept a FERC-approved price or rate, in respect of a distributor's gas, as representing actual or reasonably incurred operating expenses, that regulator does have the power to assess the prudence of the distributor's purchase in light of the cost of its alternative sources of supply.

TransCanada argued that the contracts to be entered into for the transportation and sale of the natural gas associated with the ANE Project firmly establish the responsibility and the obligation of the gas suppliers, ANE and the United States repurchasers to pay TransCanada's transportation charges. It was TransCanada's submission that the chain of contracts, including the agreements comprising the financial assurance package, effectively allocates the cost of the applied-for facilities. TransCanada submitted that ANE and the gas suppliers generally agreed that these contracts provide that after gas deliveries have commenced, ANE and the United States repurchasers will be relieved from the obligation to pay the demand charges specified in these contracts under only two circumstances. Addressing the question of regulatory risk, TransCanada argued that the United States is moving towards minimizing the risk of punitive regulatory actions, curtailments and revocations and that the evidence should "lay to rest any lingering concerns that the state regulators pose a real risk to the project".

TransCanada argued that the ANE contractual arrangements minimize, to the extent possible, the risk of non-recovery of costs from those who have contracted to bear such costs and that such arrangements demonstrate prudency on the part of TransCanada. TransCanada submitted that assuming a pipeline has not acted in an imprudent fashion, it should be entitled to recover in tolls the costs of providing the pipeline facilities and service.

The CPA noted that if the opinion of TCPL's witness with respect to the application of federal pre-emption to ERA-approved contracts is incorrect and a state order directing that a repurchaser not pay the demand charges to ANE is in fact a valid order, then such an order would constitute

an event of force majeure that would relieve the repurchasers from the obligation to pay demand charges. CPA further submitted that although the *Kentucky West* case may be consistent with the opinion of TransCanada's witness in that denial of the pass-through of demand charges on a prudence-of-purchase basis does not mean that demand charges payable under the contract may be avoided, that case does confirm that there is a regulatory risk at the state public utility level. The CPA noted that the risk may be limited to a denial of the recovery of incurred costs and the consequent potential insolvency of the LDC, but it may not.

1 *Pike County Light and Power Co. v. Pennsylvania Pub. Util. Comm'n,* 77 Pa. Commw. 268, 465 A. 2d 735 (1983).

2 State ex rel. Pittman u. Mississippi Pub. Seru. Comm'n, 506 So. *2d 978* (Miss. *1987), rev'd* sub nom. *Mississippi Power and Light Co. v. Mississippi ex rel. Moore,* 108 S. Ct. 2428 (1988) (Brennan, Marshall and Blackmun, JJ., dissenting).

3 Kentucky W. Va. Gas Co. v. Pennsylvania Pub. Util. Comm'n, 837 F. 2d 600 (3rd Cir. 1988). The *Kentucky West Virginia Case* is apparently the first case in which a Federal Appeals Court has applied the prudence-ofpurchase doctrine to a gas case.

It was the submission of the CPA that although the interpretation of the force majeure clauses in the Gas Purchase and Gas Sales Agreements had become much clearer during the course of crossexamination, the clauses themselves were not particularly clear in the contracts. The CPA submitted that it should be absolutely clear in the contracts, as it had been asserted in the evidence, that events of force majeure that occurred other than on the TransCanada system that affected deliveries do not relieve the repurchasers from the obligation to pay demand charges. The CPA recommended that any certificate issued to TransCanada in respect of the facilities required to serve the ANE Project should be conditioned to the effect that the force majeure clause be amended to conform with the evidence of the ANE Project sponsors. In this regard, the CPA recommended that such certificate should be conditioned upon an amendment to the Gas Sales Agreements to the effect that demand charges are payable in any event including the revocation of United States regulatory authorizations and notwithstanding a denial in whole or in part of the pass-through of any of the costs by a state commission exercising its retail rate-making authority.

Consumers alluded to the risk created by the uncertainty with respect to the question of whether the doctrine of federal pre-emption applied to ERA approvals in the same manner that it applies to FERC approvals. Addressing the question of regulatory and contractual risk, Consumers submitted that TransCanada's system users should not bear the fixed cost risk in every situation. When there are clear indications at the outset, as there are here, that the contracts may not be iron-clad in regard to the collection of unpaid demand charges, then, by proceeding with a system expansion, TransCanada must be taken to have accepted the fixed cost risk for its own account and not for the account of its tollpayers.

ANE submitted that a condition in a certificate, such as that recommended by the CPA, had not been imposed in respect of any other export facilities certificate; nor, had such condition ever been applied in a domestic situation. ANE submitted that a certificate condition regarding the relief of the payment of demand charges is not appropriate; such matters, ANE argued, are more properly dealt with under Part IV of the Act. ANE further submitted that such a certificate condition, if imposed, might jeopardize the viability of the ANE project.

Ontario recommended that any approval of TransCanada's application be made conditional on the amendment of the contracts to ensure that revocation of United States regulatory authorizations and failure of a state regulatory authority to pass through demand charges do not constitute force majeure. Alternatively, Ontario submitted that TransCanada's shareholders should be required to bear the risk of a successful claim of force majeure.

Views of the Board

The Board is generally satisfied with the contractual arrangements which underpin the ANE Project. It notes in particular, the assignments contained in the financial assurance packages and in the Gas Purchase Agreements and the Gas Sales Agreements, which assignments, seek to ensure the recovery of TransCanada's transportation charges. The Board however, does share some of the specific concerns raised by intervenors in respect of the Gas Purchase Agreements and Gas Sales Agreements.

The Board agrees with those intervenors who argued that TransCanada's tollpayers should not be put at risk in the event that the facilities expansions required to serve the ANE markets become, at some point in time, no longer used and useful. It is the Board's view that contractual and United States regulatory risk (at least at the state level), which could affect the viability of the ANE project, should not be borne by TransCanada's tollpayers.

Contractual Risk

The Board notes the concern expressed by the CPA and Consumers in respect of the enforceability by TransCanada, as the ultimate assignee under the chain of assignments, of its rights pursuant to the Gas Sales Agreements. This concern arises because TransCanada is not privy to these agreements. The legal opinion in respect of this matter was expressed in terms of "probable enforceability" and was based on a "fairly confident" belief, that a Court, applying the so-called "third-party beneficiary" rule, would find that notwithstanding its lack of privity to the Gas Sales Agreement, TransCanada could enforce its rights under the agreements. Although TransCanada submitted that the Notices and Consents by the repurchasers eliminated concerns respecting the enforceability of the Gas Sales Agreements, the legal opinion respecting such enforceability was based solely on the "third-party beneficiary" rule; no reliance was placed on the Notices and Consents to be executed by the repurchasers.

If, in the end result, the assignment provisions in the Gas Purchase Agreements are not enforceable by TransCanada as the ultimate assignee under the chain of assignments, then the risk in respect of unrecovered transportation charges will fall on TransCanada's tollpayers or shareholders, as the case may be. This will not materialize unless and until a repurchaser defaults in respect of its obligation to pay its share of such charges and the repurchaser's share of the ANE gas volumes is not accepted by the remaining repurchasers and as a result, the gas supplier defaults in respect of its obligation to pay TransCanada's transportation charges. Be this as it may, the Board is concerned that there remains a question about the enforceability by TransCanada of its rights under the Gas Sales Agreements especially in view of the fact that the sole purpose of the chain of assignments is to provide long term financial assurances to TransCanada and its tollpayers.

Had the Board decided to recommend that a certificate be issued in respect of the 1989 facilities on the basis, *inter alia*, of the proposed ANE exports at Iroquois, the Board would have been prepared to consider imposing a certificate condition that required TransCanada to satisfy the Board that its rights, arising from the Gas Sales Agreements, were enforceable insofar as the problem related to privity of contract calls into question such enforceability.

There is a second concern in respect of the chain of assignments. The fact that the clarifying terms and conditions of the assignment in the Gas Purchase Agreements are not contained in those Agreements but in the ANE/Gas Supplier Assignment Agreement, is, in the Board's view, unusual. The Board wonders why, in view of the fact that there are no ANE/Gas Supplier Assignment Agreements in respect of the AEC and WGML's sales, *all* the terms and conditions of the assignment by ANE to the gas supplier are not contained in the Gas Purchase Agreements. There is a concern that the absence of clarifying terms and conditions in respect of the assignment may adversely affect the efficacy and enforceability thereto.

The question of the enforceability by TCPL of its rights under the Gas Sales Agreements in the various jurisdictions where the repurchasers' offices were located and where an action might therefore be brought was raised by intervenors. The Board is satisfied, subject to the two concerns it has noted, that such agreements are enforceable in such jurisdictions. In so saying, regard is had to the legal opinion filed in respect of this matter and to the testimony thereto. The legal opinion was subject to three exceptions. The exception concerning the enforceability by TransCanada, of its rights under the Gas Sales Agreements in the event of the bankruptcy or insolvency of one of the repurchasers was addressed by Consumers and the APMC in their final arguments. The Board notes that it is not possible in law to render the Gas Sales Agreements immune from the application of relevant United States federal bankruptcy laws.

Regulatory Risk

The interpretation and scope of the various force majeure provisions in the Gas Purchase and Gas Sales Agreements were the subject of much discussion in the hearing. It is the Board's understanding that the intention of TransCanada, ANE and certain of the repurchasers is that only two events will relieve the repurchasers of their obligation to pay their share of transportation charges:

(i) the failure to tender gas at the export point due to an upstream event of force majeure on the TransCanada system; and

(ii) regulatory or governmental actions, in either Canada or the United States, that would have the effect of proscribing the export or import1.

The testimony of TransCanada's expert witness was that state regulators can, in the exercise of their rate-making jurisdiction, disallow costs incurred by a LDC, despite an initial finding of prudency in respect of a gas purchase contract. Several of the repurchasers testified that such a disallowance may constitute an event of force majeure which would relieve them from their obligation to pay demand charges to ANE. ANE testified that such disallowance in whole or in part, by a state regulator, of the flow-through of demand charges from the repurchaser to its customers, would not constitute such an event of force majeure.

Force majeure clauses, by their very nature, are open to varying interpretations, and, of course, the ultimate determination in the case of a dispute will be made by a Court of Law. However, the fact that there is a difference in how ANE and the repurchasers interpret the force majeure provisions, as these provisions relate to the payment of demand charges, indicates that the wording of the

these provisions in the Gas Purchase and Gas Sales Agreements is not as clear as it could be. The Board agrees with the submissions of certain intervenors that the wording of the force majeure provisions in the Gas Purchase and the Gas Sales Agreements does not clearly and unambiguously convey the intention of the parties as that intention was expressed during the hearing.

Had the Board decided to recommend that a certificate be issued in respect of the 1989 facilities on the basis, *inter alia,* of the proposed ANE exports at Iroquois, the Board would have been prepared to accept the recommendations of those intervenors who argued that more of the United States regulatory risk associated with the project should be borne by the repurchasers and that this shifting of risk could be accomplished by means of certificate conditions. In this regard, the Board would have been prepared to consider imposing a condition requiring that the force majeure clauses be amended so that it is clear that only two events of force majeure would relieve the repurchasers and ANE from the obligation to pay TransCanada's transportation charges:

(i) the failure to tender gas at the export point due to an upstream event of force majeure on the TransCanada system; and

(ii) Unites States or Canadian federal regulatory or governmental actions that would have the effect of proscribing the export or import.

A corollary of such a requirements would be that Canadian demand charges should be payable notwithstanding the denial, in whole or in part, of the pass-through of any of the purchase-gas costs by a state commission exercising its retail ratemaking authority.

Decision

As indicated in Subsection 6.2.3, commencing on page 42 of these Reasons, the Board has decided to recommend that a certificate be issued in respect of the facilities required to transport the ANE gas volumes proposed to be exported at Niagara Falls. In view of the fact that these exports represent approximately a quarter of the additional requirements underpinning the 1989 expansion, the Board is not convinced that the certificate conditions described above are necessary in the circumstances. In reaching this conclusion, the Board has regard to the fact that the facilities required in respect of the ANE volumes proposed to be exported at Niagara Falls, cannot, on the basis of the record before the Board at this time, be discretely identified.

Notwithstanding its decision not to attach conditions in respect of the allocation of regulatory and contractual risk to the certificate for facilities which will be required to transport the ANE volumes proposed for export at Niagara Falls, the Board is concerned that the contracts underpinning the ANE Project may not, in certain circumstances, be enforceable with respect to the collection of unpaid demand charges. By proceeding with the system expansion TransCanada will be considered to have accepted the fixed-cost risk for its own account and not for the account of the tollpayers. TransCanada is aware of the risk inherent in the project; accordingly, any facilities that become no longer used and useful as a result of this risk materializing will be subject to review in a future TransCanada toll proceeding.

1 Whether such an event is one of force majeure or results in the termination of the contract is not important here; the end result is the same in either case: i.e., the repurchaser is relieved from its obligation to pay transportation charges.

5.2 KannGaz Sale to Tennessee and the -billed Issue *The As-billed Issue* Natural Gas Pipeline Company of America ("Natural") purchases Canadian gas from ProGas and from Great Lakes. Pursuant to contracts between Natural and the gas exporters, Natural pays a two-part demand/commodity charge, and had therefore sought to pass through to its customers such charges on the same basis as these charges were billed by the exporters. This became known as the "as-billed" principle.

FERC Opinion No. 256, issued 8 December 1986, addressed the question of the proper ratemaking treatment of the cost of Canadian natural gas and required Natural to pass along the costs of Canadian gas to United States customers in the same manner as United States pipelines are required to flow-through the costs of United States gas to their customers. Although it allowed the use of a two-part demand/commodity rate by Natural, Opinion No. 256 modified the manner in which certain Canadian fixed costs could be recovered. FERC Opinion No. 256-A, issued 27 May 1987, reaffirmed the principles of Opinion No. 256.

There was considerable evidence adduced at the hearing about the implications of FERC Opinions 256 and 256A with respect to the forecasted KannGaz exports to Tennessee pursuant to Licence GL-77. Intervenors probed the various contractual provisions in the KannGaz/ Tennessee Gas Purchase Contract and in particular examined the as-billed "out" provisions relating to FERC Opinions No. 256 and 256A.

KannGaz/Tennessee Gas Purchase Contract Asbilled "out" Clauses

The following are the various as-billed "out" clauses contained in the KannGaz/Tennessee Gas Purchase Contract:

"7.4 (a) The parties recognize the current market and supply situation encountered by Buyer. In the event that either party determines the aforementioned situation has changed and that the pricing and other provisions do not appropriately reflect the market and supply conditions then existing, either party may give the other party notice setting forth such party's concerns regarding the impact of such circumstances upon such provisions whereupon the parties shall meet to negotiate the terms and conditions that require changing; provided, however, that the terms and provisions of this Contract shall continue unless modified as a result of such negotiations.

"(b) If at any time during the term of this Contract an application of Seller or Buyer for regulatory or governmental approvals deemed necessary by either party to allow the continued sale and purchase of gas under the provisions of this Contract is denied, or if authorizations are issued which, in the opinion of either Buyer or Seller, do not allow for the provisions of the Contract to be implemented in conformance with the intent and understandings of Buyer and Seller, then either Buyer or Seller may, by written notice to the other, require a renegotiation of those terms and/or conditions of this Contract which are not in conformance with the regulatory or governmental approvals. The parties agree that they will promptly meet to resolve such

nonconformance issues expeditiously. Effective upon receipt of a request for renegotiation under this section the provisions of this Contract shall be suspended and shall be of no force and effect to either Buyer or Seller until such renegotiation has been completed."

"(c) Authorization by U.S. regulatory bodies of an appropriate rate structure for recovery of costs of gas purchased hereunder is recognized as the intent of both Buyer and Seller in this Contract. "

"12.4 Seller's obligation to sell and Buyer's obligation to purchase gas hereunder shall be excused during the effectiveness of any governmental action which results in the interruption of deliveries or which prevents, totally or partially, the exportation of gas from Canada under the contract or the importation of gas into the United States under this contract or the as-billed flow-through to Buyer's customers on a demand-commodity basis of charges incurred hereunder by Buyer; provided that where any such action results only in a partial reduction in the volumes of gas to be sold and purchased hereunder, then the obligations of the parties hereunder shall be excused only to the extent of such partial reduction as aforesaid."

Tennessee testified that section 7.4(a) of the KannGaz/Tennessee Gas Purchase Contract provides that in the event of changes in the gas supply or gas market situation, either party to the contract may reopen negotiation of those terms which impede the ability of that party to compete in the changed marketplace. Section 7.4(c) provides for renegotiation of the contract in the event that the application of the "as-billed" principle to the KannGaz/Tennessee sale affects Tennessee's gas costs from the standpoint of how it recovers these costs from its customers and this in turn affects its ability to compete in the marketplace. Failing successful renegotiation, Tennessee testified that it would have the contractual right, pursuant to section 7.4(c), to terminate the contract. Its right to terminate, should Tennessee choose to exercise it, is one that is not dependent upon whether TransCanada has either started or completed construction of the facilities required to deliver the KannGaz volumes. Tennessee testified that, notwithstanding its right to terminate, it intended to purchase gas at the second increment, commencing 1 November 1988. However, any further step-ups would need to be examined in light of developments vis-a-vis the "as-billed" issue.

KannGaz agreed that Tennessee had the right to terminate the contract in certain circumstances. KannGaz testified that it did not intend to proceed with transportation arrangements with TransCanada to accommodate the second increment in the daily contract quantity scheduled for 1 November 1989 until the as-billed issue, as that issue affected its contract with Tennessee, was resolved to its satisfaction.

KannGaz testified that section 7.4(b) of the Gas Purchase Contract provides that the buyer's and seller's obligations under the contract are suspended, pending renegotiation, if any regulatory or governmental approval is denied. The contract would, absent a successful renegotiation of terms, be in a state of suspension in perpetuity if, in the opinion of either KannGaz or Tennessee, any governmental or regulatory approval is unacceptable.

Section 12.4 of the KannGaz/Tennessee contract refers, *inter alia*, to events which prevent, totally or partially, the as-billed flow-through to Tennessee's customers on a demand-commodity basis of charges incurred by Tennessee. KannGaz testified that section 12.4 would excuse KannGaz's

obligation to sell gas and Tennessee's obligation to purchase gas during the effectiveness of any governmental or regulatory action which prevents the as-billed flow-through to Tennessee's customers, on a demand/ commodity basis, of those charges incurred by Tennessee.

As-billed Waiver

Subsequent to Tennessee's testimony at the hearing, KannGaz filed a letter of agreement, dated 8 January 1988 (Exhibit C-10), addressed to KannGaz from Tennessee. It was KannGaz's testimony that this letter of agreement gave an assurance that Tennessee would continue to pay the demand charges regardless of the outcome of the as-billed issue. KannGaz testified that the intent of the letter of agreement was that Tennessee would waive its rights, pursuant to sections 7.4 and 12.4 of the Gas Purchase Contract, throughout the term of the contract, in respect of the 0.847 106m3/d (29.9 MMcfd) of gas scheduled to be exported by 1 November 1988.

Views of Parties

TransCanada expressed concern that the letter of agreement of 8 January 1988 refers only to FERC Opinions 256 and 256A, which opinions were issued in respect of an application by Natural; these opinions are not in the nature of generic orders. KannGaz agreed that the letter of agreement did not specifically address a situation where an opinion similar to Opinion 256, were issued by the FERC to Tennessee, and where such opinion was later affirmed by the Courts. TransCanada submitted that the 8 January 1988 letter did not therefore constitute a sufficient waiver of Tennessee's rights to assert the as-billed "outs" in the KannGaz/Tennessee contract with respect to the 0.847 106m3/d (29.9 MMcfd) scheduled for export by 1 November 1988. It noted that KannGaz conceded, under cross-examination, that Tennessee would retain the right to assert an as-billed "out" under certain circumstances.

TransCanada requested that any order or certificate issued by the Board with respect to the construction of facilities to transport the KannGaz volumes for both 1 November 1988 and 1989 be conditional on KannGaz filing an agreement specifically waiving application of the as-billed "out" provisions of the KannGaz/Tennessee contract. TransCanada submitted that the condition should specify that the Board would determine, following comment by TransCanada, whether the waiver is satisfactory.

The CPA opposed the facilities proposed for 1 November 1989 for the KannGaz volumes since Tennessee retained the right to suspend the provisions of the contract pursuant to Section 7.4(b) and to be excused from its contractual obligations under certain circumstances pursuant to section 12.4. The CPA also opposed the 1989 facilities for the KannGaz volumes on the basis that the evidence showed Tennessee's contractual termination rights were not dependent upon whether TransCanada had either started or completed construction of the capacity necessary to deliver the KannGaz volumes.

Consumers and Ontario expressed concern that Tennessee had not waived its as-billed rights with respect to the second contractual volume stepup scheduled for 1 November 1989.

Tennessee argued that it had, by its letter to KannGaz of 8 January 1988, waived its rights

pursuant to Sections 7.4(b) and 12.4 of the Gas Purchase Contract, in respect of the volume increment scheduled to begin flowing 1 November 1988. Tennessee advised that it would not object to a certificate condition which required it to file evidence that it considered the as-billed issue to have been resolved to its satisfaction before TransCanada may commence construction of facilities for the incremental service required 1 November 1989. In the alternative, Tennessee indicated that it would not object to a condition requiring the filing of evidence that it had waived its rights as against KannGaz regarding termination or suspension of the KannGaz contract, in respect of the 1989 volume increment.

KannGaz argued that Tennessee had confirmed its commitment to take the next increment of gas scheduled to flow on 1 November 1988. In this regard it referred to the 8 January 1988 letter of agreement and Tennessee's testimony. KannGaz proposed that Section 59(2) and (3) orders be conditioned such that KannGaz obtain reasonable assurances in respect of the recovery of the fixed transportation costs to be incurred on the TransCanada system for the carriage of the 1 November 1989 volumes prior to the commencement of construction of facilities required as of 1 November 1989.

Views of the Board and Decision

In the Board's view, the 8 January 1988 letter of agreement does not adequately deal with the various as-billed provisions set out in the KannGaz/ Tennessee Gas Purchase Contract dated 1 November 1987. It would appear that both Tennessee and KannGaz intended that the waiver of contractual rights in respect of certain asbilled provisions in their Gas Purchase Contract apply throughout the full term of the contract. The Board is concerned however, that the 8 January 1988 letter does not clearly reflect this intent. For this reason, the Board has conditioned the section 49 order, which exempts from the necessity of certification the Niagara Line facilities required for the 1988-89 contract year, on the filing of evidence that, in respect of the 0.847 106m3/d (29.9 MMcfd) of gas scheduled for export by 1 November 1988, this waiver does in fact apply throughout the full term of the Gas Purchase Contract. The Board will also recommend to the Governor in Council that the certificate in respect of the Niagara Line facilities required for the 1989-90 contract year contain a condition which precludes the commencement of construction of such facilities until evidence is filed demonstrating that, in respect of the 2.258 106m3/d (79.7 MMcfd) of gas scheduled to flow by 1 November 1989, the various as-billed contractual provisions in the Gas Purchase Contract, have been waived throughout the full term of that contract.

Chapter 6

Facilities

6.1 Need for Facilities

9 June 1987 Application, as Amended on 17 September 1987

TransCanada submitted evidence that additional facilities would be required on its pipeline system in order to:

(i) meet projected sales and transportation requirements in existing domestic and export markets:

(ii) deliver additional licensed export volumes to the United States for the contract years 1988-89 and 1989-90, as set out in Table 1-1 (see page 4); and

(iii) guarantee a minimum delivery pressure of 2800 kPa (400 psig) for existing exports to Vermont Gas at Philipsburg, Quebec.

A description and the estimated capital cost of the facilities included in TransCanada's application at the commencement of the hearing are provided in Table 6-1 (see page 32). A map indicating the location of these facilities appears as Figure 6.1 (see page 33).

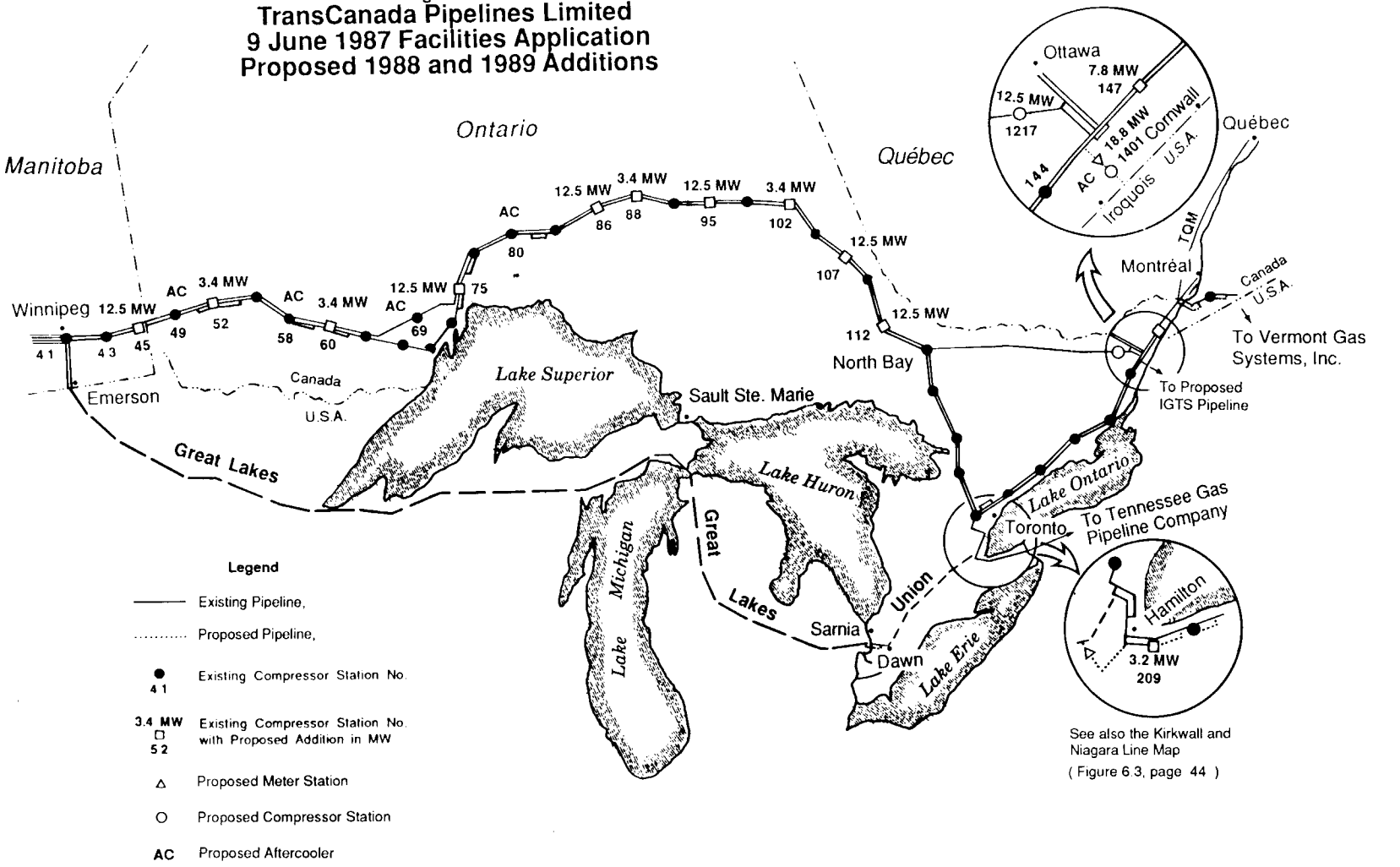
TransCanada designs its pipeline system so that the annual capacity on the Central Section combined with the annual contracted transportation service on the Great Lakes system equals the firm annual requirements east of station 41 near Winnipeg (see Figure 6.1). TransCanada determined that the most cost effective method of expanding for the 1988-89 and 1989-90 contract years would involve utilizing all of the existing excess capability on the Great Lakes system and constructing facilities on the Central Section and Great Lakes system to increase the capability of each of these sections in equal amounts. TransCanada's analysis indicated that the Central Section should be expanded by 3.80 106m3/d (134 MMcfd) by installing six compressors and four aftercoolers and by upgrading four existing compressor units.

TransCanada proposed in its 9 June 1987 application to increase its contracted annual transportation service on the Great Lakes system as detailed in Table 6-2 (see page 34). The increase in 1989-90 would be a combination of firm daily transportation service (designated by Great Lakes as "T-4" service) and a newly proposed seasonal/annual service which would feature a firm annual volume with a daily volume on a best efforts basis. The increase in service on Great Lakes in 1988-89 could be accommodated by the existing Great Lakes system, but the increase for 1989-90 would require additional facilities.

In order to utilize the proposed increases in Great Lakes transportation service for the 1989-90 contract year, TransCanada proposed to add loop to the Dawn Extension near Sarnia, Ontario, where gas transported on the Great Lakes system reenters Canada.
TransCanada's requirements would also necessitate the following additional facilities downstream of the combined Central Section/Great Lakes system:

Figure 6.1

TransCanada Pipelines Limited
9 June 1987 Facilities Application
Proposed 1988 and 1989 Additions



See also the Kirkwall and Niagara Line Map
(Figure 6.3, page 44)

· the Iroquois Extension and associated compression and metering facilities to connect to the proposed IGTS in New York State;

· additional loop and compression facilities on the Niagara Line to accommodate incremental exports and pressure obligations at Niagara Falls, Ontario;

· the Kirkwall Line to provide a new connection between the Union transmission system and the Niagara Line, for reasons of increased throughput and safety; and

· additional loop on the St. Mathieu Extension near Saint-Jean-sur-Richelieu, Quebec to provide delivery pressure at Philipsburg and to transport increased domestic deliveries.

Details of these facilities appear in Section 6.2, of these Reasons.

Towards the end of the hearing, TransCanada indicated that it had received new requests for service from Consumers and GMi to commence 1 November 1988 and that the forecasted in-service date for the new ANE export at Niagara would be delayed one year from 1 November 1988 to 1 November 1989. In addition, Union advised TransCanada that it was prepared to enter into an agreement for 0.622 106m3/d (22 MMcfd) of additional FS to commence 1 November 1989.

In order to meet its total requirements for the contract years 1988-89 and 1989-90, including the incremental Consumers and GMi requests and Union's proposed agreement, TransCanada indicated that facilities estimated to cost between $244 million to $375 million would be required over and above the facilities included in the 9 June 1987 application, as amended on 17 September 1987. These additions would result in an estimated increase in "rolled-in" tolls of 2 to 3 cents per gigajoule ("GJ").

29 March 1988 Amendment to 9 June 1987 Application

TransCanada's 29 March 1988 amendment was filed as a result of the company receiving the additional service requests from Consumers and GMi which were announced during the hearing.

These requests are set out in Table 1-2 of these Reasons (see page 5). These requests would require additional capacity on the Central Section/ Great Lakes system and on the Montreal Line.

TransCanada indicated that in view of its revised 1988-89 requirements, it would increase its request for transportation service on Great Lakes for 1988-89 by a further 1.77 106m3/d (62.5 MMcfd) for a total service level in that year of 23.71 106m3/d (837 MMcfd). This increase would be requested in the form of seasonal/annual service.

The new level of transportation services on Great Lakes would require TransCanada to construct the proposed loop on the Dawn Extension in 1988 rather than in 1989.

TransCanada expressed concern that the requested seasonal/annual service might not receive

FERC approval in time for the commencement of the 1988-89 contract year. In order to ensure that the maximum percentage of its revised 1988-89 requirements would be satisfied, TransCanada proposed advancing the in-service date of the four compressor upgrades on the Central Section into the 1988 construction season and that of the proposed aftercoolers to 1 August 1989, from 1 November 1989.

29 March 1989 Application

TransCanada's 29 March 1988 application was filed for the same reason as its 29 March amendment to its 9 June 1987 application, namely, the receipt of the additional service requests set out in Table 1-2 on page 5 of these Reasons. TransCanada applied for the construction of additional facilities as set out in Table 6-3 (below). A map indicating the location of these facilities appears as Figure 6.2 (see page 36).

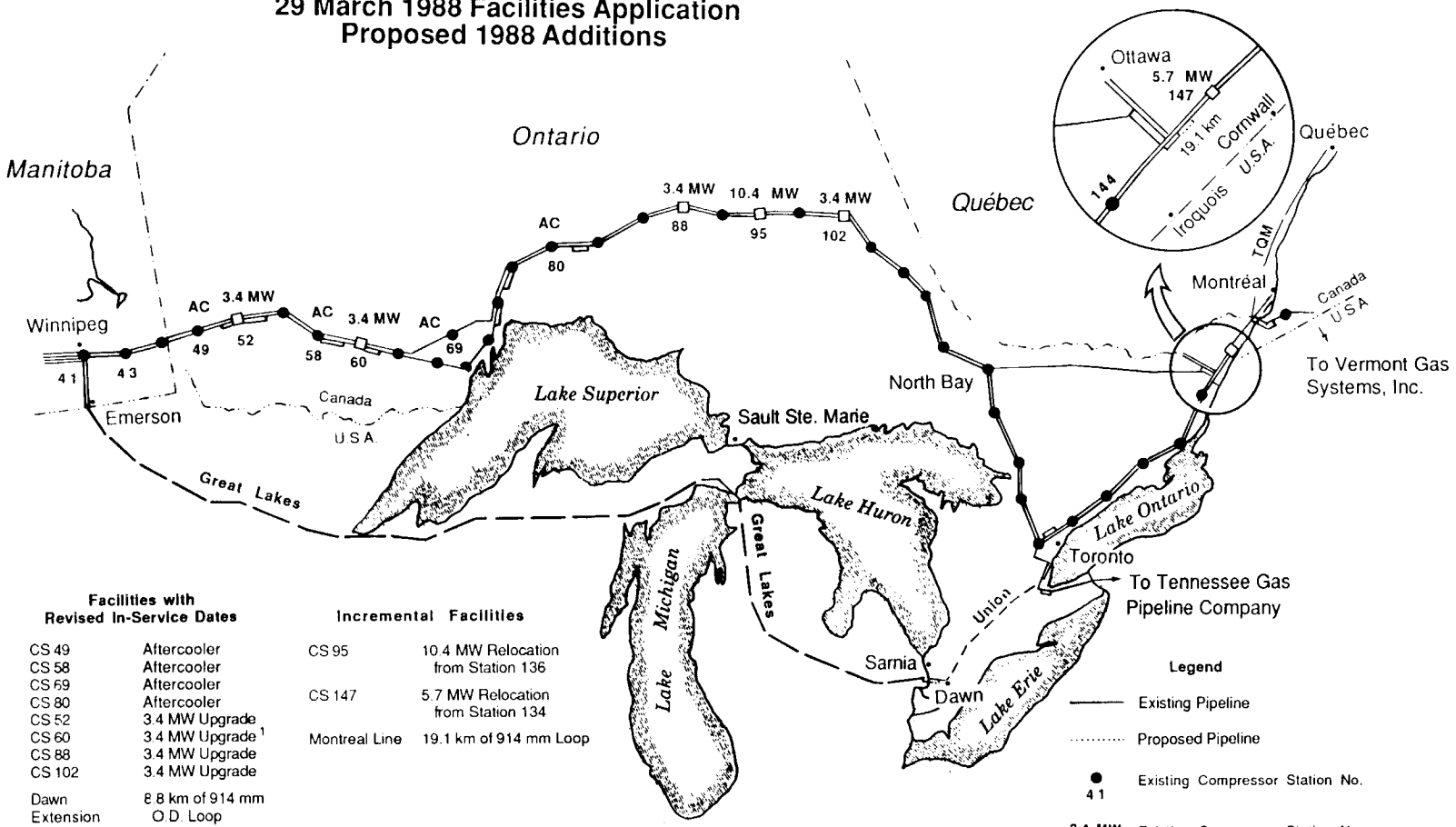
TransCanada proposed to temporarily relocate a portable compressor from station 136 to station 95 to increase the capability of the Central Section. It also proposed to temporarily relocate a portable compressor from station 134 to station 147 and to construct 19.1 km of looping on the Montreal Line in order to provide capacity to serve additional FS volumes to Consumers' EDA as well as incremental STS and Gas Exchange requests by Consumers and GMi.

Several parties expressed concern that some of the forecasted requirements, in particular the ANE exports at Iroquois, may not come on stream in a timely manner. In such a situation, it was TransCanada's submission that in the event that the Central Section facilities are constructed as requested and transportation services on Great Lakes are not increased beyond the requested 1988-89 level, there would be some level of advance capability on the system for a brief period of time, until new firm domestic or export volumes materialize.

The CPA expressed concern as to whether any facilities were required on the Central Section, and also submitted that the installation of the proposed aftercoolers should not be approved. (For a detailed discussion of compression requirements on the Central Section, the need for aftercoolers, and the Board's views thereon, see Subsections 6.6.1 and 6.6.2 of these Reasons). The CPA noted that the actual 1989-90 domestic and export throughput requirements would be different from those set forth in the 9 June 1987 application, citing, *inter alia*, the uncertainty surrounding the commencement dates of the additional exports by ANE at Iroquois and Niagara Falls. Given such uncertainty in throughput requirements, it was the CPA's view that the Board cannot satisfy itself that the facilities applied for will be required by the present and future public convenience and necessity. According to the CPA, the Board should defer its decision on the 1989-90 facilities until TransCanada has provided an optimal facilities design to match a more realistic requirements forecast. In the alternative, in the event that a certificate were to be issued in respect of TransCanada's application, the CPA took the position that the Board should not certificate that part of TransCanada's application which relates to the need for capacity to transport the KannGaz volumes (see Section 5.2 of these Reasons for a discussion of this matter and the Board's views thereon). It also proposed a sunset clause specifying that any certificate would expire if certain conditions were not met within one year of its issuance.
IPAC agreed to the issuance of a certificate for the applied-for 1988 facilities. However, it characterized the 1989 facilities as under-sized and recommended that the Board not certificate

Figure 6.2

TransCanada PipeLines Limited
29 March 1988 Facilities Application
Proposed 1988 Additions



Facilities with Revised In-Service Dates

CS 49	Aftercooler
CS 58	Aftercooler
CS 69	Aftercooler
CS 80	Aftercooler
CS 52	3.4 MW Upgrade
CS 60	3.4 MW Upgrade [1]
CS 88	3.4 MW Upgrade
CS 102	3.4 MW Upgrade
Dawn Extension	8.8 km of 914 mm O.D. Loop

Incremental Facilities

CS 95	10.4 MW Relocation from Station 136
CS 147	5.7 MW Relocation from Station 134
Montreal Line	19.1 km of 914 mm Loop

Legend

- Existing Pipeline
- Proposed Pipeline
- 41 — Existing Compressor Station No.
- 3.4 MW / 52 — Existing Compressor Station No. with Proposed Addition in MW
- AC — Proposed Aftercooler

1 Location of this upgrade changed to CS 43 as per TransCanada's application dated 28 june 1988

them in view of:

(i) uncertainties in the required facilities;

(ii) the distinct prospect of regulatory delays in the United States;

(iii) uncertainty with respect to the requirement for and availability of capacity on the Great Lakes system; and (iv) the need for TransCanada to come forward, in any event, with further facilities applications to determine the most efficient and effective facilities configurations in the light of actual requirements.

ANE submitted that the Board should approve the facilities and include flexible conditions in the certificate to take into account, for example, design or scheduling changes in order to accommodate interjurisdictional process problems.

ANR Pipeline Company ("ANR") submitted that TransCanada should be requested to affirm that the facilities which it proposes in its 29 March 1988 application are those that it would propose to provide the requested service to Consumers and GMi if such proposal were evaluated on a stand-alone basis, without regard to the proposals to service the northeastern United States market.

Boundary urged the Board to certificate those facilities that are necessary to provide capacity for the balance of the WGML exports to Boundary at Niagara Falls.

Champlain took the position that the 1988 facilities should be approved. It argued that it would be premature and inappropriate for the Board to issue a certificate of public convenience and necessity with respect to facilities required for the 1989 ANE exports at Iroquois. In the alternative, Champlain submitted that certificate conditions should require that:

(i) all regulatory approvals be obtained prior to construction; and
(ii) TransCanada demonstrate that the exact configurations of the certificated facilities continue to be the most appropriate ones to build, or justify alternative ones prior to leave to construct being granted by the Board Champlain argued that if the IGTS related facilities were approved, the Board should grant only a certificate in principle at this time. This could be done through the issuance of a contingent certificate which would come into effect when conditions regarding regulatory approvals and leave to construct are met. Champlain also submitted that it was generally in support of TransCanada’s 29 March 1988 application in respect of additional service requests by GMi and Consumers.

Foothills Pipe Lines (Yukon) Ltd. ("Foothills") did not oppose the 9 June 1987 application, but submitted that the certificate should be conditioned to provide for review in the event there is a delay in the in-service date now projected by TransCanada. According to Foothills, such a delay may affect the cost assumptions and may enhance the potential for the filing of a competitive alternative application.

GMi submitted that the 1988 facilities should be certificated, but that the 1989 facilities be

granted a contingent certificate which would come into effect upon TransCanada submitting a new optimized design, which meets the Board's approval, taking into account the incremental Consumers and GMi requests and a level of advance capability as determined by the Board.

PanCanadian Petroleum Limited ("PanCanadian") supported TransCanada's 29 March 1988 application, even though it may result in a small amount of over-construction. PanCanadian submitted that this would be a tolerable economic burden and might result in marketing opportunities that would otherwise not be available.
The APMC submitted that the applied-for facilities should be approved on the condition that TransCanada demonstrate, prior to their installation, that they are optimal. However, the APMC questioned the need for the proposed aftercoolers. It did not object to TransCanada's 29 March 1988 application.

Ontario supported certification of the 1988 facilities and facilities for the OSP export in 1989 subject to the condition that all regulatory approvals have been obtained prior to the commencement of construction. It proposed that TransCanada be required to refile an application with respect to the remainder of the facilities needed to meet the total requirements in 1989-90. It also submitted that the 29 March 1988 application should be approved as soon as possible so that the requested in-service dates could be met.

Reservation of Capacity

TransCanada described the procedure it uses to allocate capacity to shippers seeking additional or new services on its pipeline system. During the hearing, this procedure was referred to as "queuing". The generic issue of queuing is addressed in Subsection 9.2.7 of these Reasons.

In response to the additional service requests outlined in Table 1-1 (see page 4), TransCanada applied for authorization to construct additional facilities to serve its total requirements for the 1988-89 and 1989-90 contract years. Consumers later requested incremental firm service to commence 1 November 1988. TransCanada proposed to provide capacity to serve the additional Consumers volumes during the 1988-89 contract year by, *inter alia,* advancing the in-service date of certain facilities contained in the 9 June 1987 application, as amended on 17 September 1987. In keeping with its queuing procedure, TransCanada proposed to file a further facilities application in order to provide capacity on a permanent basis for the Consumers volumes commencing 1 November 1989. If these further facilities were not in service by 1 November 1989, Consumers' new volumes would no longer be transported by TransCanada unless capacity became available as a result of some of the incremental volumes scheduled to commence 1 November 1989 not coming on stream in a timely manner.

Champlain argued that reserving capacity for exports at Iroquois would enable ANE to benefit from the "cheap expansibility" which currently exists on the TransCanada system. According to Champlain, in the event that IGTS does not meet its 1 November 1989 in-service date, cheap expansibility should no longer be reserved for those volumes.

Ontario expressed the view that TransCanada's queuing procedure would have an impact on the economic viability of the current and future projects. It submitted that the Board should not

prematurely certificate facilities on the basis of uncertain requirements as this would result in unnecessary changes of places in the queue as a result of in-service dates not being met. As the capacity now proposed to be made available to the ANE volumes could be used by other shippers if ANE does not meet its in-service date, certification of facilities on the basis of ANE requirements would make it difficult to assess the economic viability of the current and subsequent applications.

TransCanada’s "Shelf Proposal" and Need for Further Expansions

TransCanada acknowledged that the timing of the commencement of some of the export proposals was subject to regulatory approvals in the United States and that the forecasted in-service dates of the related facilities were subject to change. It suggested a condition be included in the certificate such that the Board would approve those particular facilities that are required to match specific approvals as they come along. This approach was referred to as the "shelf’ proposal.

According to the CPA, TransCanada’s "shelf proposal" did not fall within the intent of section 44 of the Act since it would be equivalent to certificating facilities without knowing the time that they will be needed.

Consumers characterized the "shelf proposal" as an innovative and workable solution to the problem presented by an industry in the process of rapid evolution. It submitted that certificate conditions could be devised to provide the proper safeguards against sub-optimal expansion.

With respect to changes in design which may be later required as a result of different and/or further service requests, TransCanada submitted that the applied-for facilities should be certificated and conditioned in such a way that TransCanada would be required to come back to the Board and demonstrate that the particular facilities which it seeks to modify are the optimal facilities for the volumes in question.

TransCanada argued that requiring it to refile an updated application which would take into account the new service requests would serve only to delay, not to obviate, the applied-for facilities. TransCanada’s views in this respect were supported by ANE, ProGas, IGTS, Consumers, ICG Ontario and Union

Views of the Board

The Board notes the current high level of utilization of the TransCanada system and the current difficulties that shippers of new natural gas volumes have in gaining access to the system in view of capacity constraints. This lack of capacity may result in long-term firm transportation requirements for contract years 1988-89 and 1989-90 not being served in a timely fashion. Therefore, an expansion of the TransCanada pipeline system is required.

In light of the new service requests by Consumers and GMi, the capacity provided by the facilities proposed in TransCanada’s 9 June 1987 and 29 March 1988 applications and the increased transportation services requested on Great Lakes would not be sufficient to satisfy all of the requirements forecasted by TransCanada for the 1989-90 contract year. There also exists much

uncertainty regarding the timely availability of increases in transportation services requested by TransCanada on Great Lakes. Therefore, an expansion of the TransCanada system and/or further increases in transportation services on Great Lakes beyond those envisaged in the 9 June 1987 and the 29 March 1988 applications would be necessary. The exact configuration of that further expansion is not known at this time, both because TransCanada has not finalized its optimal design for contract year 1989-90 and because the exact firm service requirements for that year are still subject to discussion within the natural gas industry.

As discussed in Chapter 4 of these Reasons, the Board has concluded that the regulatory process in the United States will not be completed in time to enable the IGTS to achieve its scheduled 1 November 1989 in-service date. In view of this finding, the Board does not accept TransCanada's proposal that pipeline capacity be made available for Consumers' new firm service requirements for one year only, and that the capacity provided by the applied-for facilities be used to deliver the ANE exports at Iroquois commencing on 1 November 1989. The additional service requests by Consumers, together with expected additional exports by WGML, KannGaz, ProGas and ANE at Niagara, are sufficiently firm and mature to justify prompt and definitive resolution. At the same time, the in-service date of the IGTS continues to be the subject of much uncertainty. The Board is of the view that it would be contrary to the public interest to dedicate, at this time, firm pipeline capacity to ANE exports at Iroquois, while leaving unresolved the question of the capacity necessary to carry additional Consumers volumes on the TransCanada system beyond the 1988-89 contract year. Accordingly, the Board will certificate subject to Governor in Council approval, or exempt from the necessity of certification, only those facilities that it judges will be required to expand capacity to transport all firm volumes now requested other than the ANE exports at Iroquois. It is recognized that if any one of the firm service requests contributing to the increased capacity requirements fails to materialize, depending on the timely availability of increased service levels on the Great Lakes system, there may be some excess capacity on the system. An exact matching of capacity to demand is extremely difficult to achieve and the potential for excess, probably of short duration, can be accepted in light of the overall public interest. However, the excess, if it should exist, would not be sufficient to service the contemplated ANE/Iroquois volumes

It is not possible to make a finding at this time that the facilities required to expand capacity to transport the ANE/Iroquois volumes are and will be required by the present and future public convenience and necessity since the Board does not know what those facilities would be. However, had IGTS been in a position to meet its 1 November 1989 in-service date, the Board would have considered the ANE/Iroquois volumes to be in the queue for service at that date ahead of Consumers' request for additional FS. The Board would accordingly have certificated the proposed expansion, including the Iroquois Extension and related facilities, on the basis of these volumes. Thus, as and when the sponsors of the ANE/IGTS project can foresee with a greatly improved degree of confidence that the FERC process is nearing completion and that IGTS, on reasonable and probable grounds, expects eventually to receive a FERC certificate, TransCanada may at that time apply to the Board for a certificate to install those facilities that will be required in Canada to provide the required additional capacity.

6.2 Specific Facilities

6.2.1. Central Section

TransCanada determined that the most economical manner of providing the required increase in the capability of the Central Section would be to install six new compressors and four aftercoolers and to upgrade four existing compressor units. These facilities, referred to throughout the hearing as the "6-4-4" facilities, would increase the annual capability of the Central Section by approximately 3.80 106m3/d (134 MMcfd). TransCanada testified that the "6/4/4" facilities would be part of any optimal expansion scenario requiring at least 3.80 106m3/d (134 MMcfd) of incremental capacity on the Central Section.

No additional facilities would be required on Great Lakes in 1988-89 to provide the increase in transportation service of 1.06 106m3/d (37.5 MMcfd) (see Table 6-2 on page 34 of these Reasons for details of increases in Great Lakes transportation services). However, in order to provide the additional transportation service of 7.10 106m3/d (250 MMcfd) initially requested by TransCanada in 1989-90, Great Lakes would require 78 km of 914-mm O.D. loop, 20 impellers, six aftercoolers and one 12.5-MW compressor unit, at a total cost of $72.4 million (U.S.).

The request by Consumers for 2.85 106m3/d (100 MMcfd) of incremental firm service to commence 1 November 1988 would require additional capacity on the Central Section/Great Lakes system for the 1988-89 contract year beyond that envisaged in the original 9 June 1987 application. TransCanada indicated that it could satisfy this new requirement temporarily by increasing its transportation capability on Great Lakes for 1 November 1988 and by advancing the in-service dates of some of the facilities originally scheduled for service commencing 1 November 1989.

The delay in the commencement of the ANE Niagara volumes to 1 November 1989 would allow TransCanada to use the 1.06 106m3/day (37.5 MMcfd) of firm service requested on Great Lakes to serve part of the Consumers firm service request during the 1988-89 contract year. Following Consumers' request, TransCanada also requested Great Lakes to provide the equivalent of 1.77 106m3/d (62.5 MMcfd) of new seasonal/annual service to commence 1 November 1988. These services could be provided by Great Lakes without the addition of any new facilities. TransCanada, however, expressed concern that FERC approval for these services, particularly the yet-to-beoffered seasonal/annual service, might not be granted in time to meet the requirements of the 1988-89 contract year.

In view of uncertainties regarding the timely FERC approval of increased transportation services on Great Lakes, TransCanada proposed, in the 29 March 1988 amendment to its application of 9 June 1987, to advance the in-service date of the four compressor upgrades on the Central Section into the 1988 construction season and that of the proposed aftercoolers to 1 August 1989 from 1 November 1989. These facilities and the relocation1 of a portable compressor from station 136 to station 95 would increase the capability of the Central Section by the equivalent of 1.01 106m3/d (36 MMcfd) for the 1988-89 contract year. TransCanada submitted that the combination of these additions and the incremental 1.06 106m3/d (37.5 MMcfd) of firm service on Great Lakes would enable TransCanada to meet the majority of the incremental requirements for the 1988-89 contract

year.

TransCanada indicated at the hearing that, in view of Consumers' additional FS requests, it had not yet determined its transportation requirements on Great Lakes for the 1989-90 contract year.

In its 29 March 1988 amendment to its 9 June 1987 application, TransCanada also sought exemptions pursuant to section 49 of the Act, from the provisions of paragraph 26 (1)(a), subsection 26(2) and sections 27 through 29 thereof, in respect of the aforementioned aftercoolers and compressor upgrades. In its application of 29 March 1988, TransCanada sought identical exemptions in respect of the aforementioned compressor relocation. Such exemptions would relieve TransCanada from the necessity of obtaining a certificate from those facilities, and from various related requirements, such as the filing of maps and PPBoRs.

With respect to the above-mentioned compressor upgrades, TransCanada also sought exemption under section 49 of the Act from the provisions of paragraph 26(1)(b) thereof. Such exemption would relieve TransCanada from the necessity of obtaining leave of the Board to open the upgraded compressors.

The Board's decisions with respect to the requested exemptions from paragraphs 27(b) and 27(c) and sections 28 and 29 of the Act are contained in Subsection 7.1.3 of this Report.

Views of the Board

The Board is satisfied that the *"6/4/4"* facilities are part of any optimal expansion scenario requiring at least 3.80 106m3/d (134 MMcfd) of incremental capacity on the Central Section and that such an increase in capacity is necessary in order for TransCanada to serve its 1988-89 and 1989-90 requirements. Uncertainties regarding the timely availability of increased service levels on the Great Lakes system indicate that it is prudent to proceed now with the proposed expansion of the Central Section, recognizing that such an expansion would not even suffice to serve TransCanada's 1988-89 and 1989-90 requirements in the absence of timely FERC approvals. The installation of the Central Section facilities would also provide supplementary benefits in the form of fuel savings and increased system reliability. As the Central Section serves a large number of customers and a significant proportion of TransCanada's total requirements, the Board is not convinced that approval of these facilities should be conditioned upon receipt of specific regulatory approvals in the United States related to the export projects underpinning TransCanada's facilities applications.

Decision

(i) 9 June 1987 Application

In view of timing constraints related to the 1988 construction schedule, the Board, on 18 May 1988, issued an exemption order pursuant to sections 16.2 and 49 of the Act rather than a certificate under section 44 thereof for those facilities proposed in the 9 June 1987 application, as amended, to be in service on the Central Section by 1 November 1988. The Board has exempted the proposed aftercoolers at compressor stations 49, 58, 69, and 80 and

the proposed upgrades of existing compressor units at stations 52, 60, 88, and 102 from section 26, paragraphs 27(a) and 27(a.1) and section 38 of the Act1. A copy of Board Order No. XG-6-88, granting this relief, appears in Appendix II.2

1 The relocation was applied for in TransCanada's application of 29 March 1988.

The Board is prepared to certificate the six proposed compressor units to be in service by November 1989, subject to approval by the Governor in Council. The certificate in respect of these facilities will be subject to the terms and conditions which are set out in Appendix IV.

(ii) 29 March 1988 Application

Pursuant to section 49 of the Act, the Board, on 18 May 1988, exempted from paragraph 26(1)(a), subsection 26(2) and paragraphs 27(a) and 27(a.1) thereof, the proposed relocation of a 10.4 MW portable compressor from station 136 to station 951. A copy of Board Order No. XG-10-88, granting this relief, appears in Appendix II.

6.2.2. Dawn Extension Facilities

In its 9 June 1987 application, TransCanada indicated that the proposed 8.8 km of loop on the Dawn Extension was necessary to enable TransCanada to utilize increased transportation services on Great Lakes commencing in November 1989. In view of the incremental service request by Consumers, TransCanada, in its 29 March 1988 amendment to its 9 June 1987 application, requested authorization to construct the proposed Dawn Extension loop in 1988 in order to use the new seasonal/annual service requested for 1 November 1988. Although only 7.0 km of loop would be necessary in 1988, the construction of the entire 8.8-km loop was proposed for that year in order for TransCanada to have suitable access to the loop terminus. While the timing of the FERC approvals for the requested services on Great Lakes was uncertain, TransCanada submitted that it would nonetheless be prudent to install the loop in the 1988 construction season in order to en sure that the Dawn Extension would not restrict deliveries to Eastern Canada once the FERC had approved the upstream services. According to TransCanada, it was virtually certain that FERC would not have made a decision with respect to these services prior to the date when TransCanada must order pipe in order to install the loop in 1988.

Views of the Board

The Board finds that TransCanada's proposed increase in its level of contracted transportation services on Great Lakes for 1988-89 is a cost effective way of increasing the capability of the combined Central Section/Great Lakes system. An increase in the capacity of the Dawn Extension is essential for TransCanada to take advantage of additional transportation services on Great Lakes, once FERC approval for the increased service level has been obtained. It is possible that such approval will not be granted until after the 1988 construction season. Therefore, making the Board approval of the Dawn Extension loop conditional upon receipt of FERC approvals before construction may begin could result in the necessary capacity not being available in time for

TransCanada to serve its requirements for the 1988-89 contract year.

Decision

In view of timing constraints related to the 1988 construction schedule, the Board, on 18 May 1988, issued an exemption order pursuant to sections 16.2 and 49 of the Act rather than a certificate under section 44 thereof for the proposed loop of the Dawn Extension. The Board has exempted the proposed 8.8-km Dawn Extension loop from paragraph 26(1)(a), subsection 26(2) and paragraphs 27(a) and 27(a.1) of the Act1. A copy of Board Order No. XG-788, granting this relief, appears in Appendix II.

6.2.3. Niagara Line Facilities

In its 9 June 1987 application, TransCanada sought approval for additional facilities on the Niagara Line which would be required in order to deliver additional exports at Niagara Falls, Ontario commencing in November 1988 and 1989 and to satisfy TransCanada's obligation to provide a minimum delivery pressure of 4826 kPa (700 psig) at Niagara Falls. These facilities include 48.6 km and 3.5 km of 914-mm O.D. loop for construction in 1988 and 1989 respectively, the relocation in 1988 of a 3.2-MW compressor from station 139 to station 209, and modifications in 1989 to the Niagara check meter station. The location of the proposed facilities is shown on Figure 6.3. (see page 44).

1 The Board's decision on the requested exemptions from paragraphs 27(b) and 27(c) and sections 28 and 29 of the Act are contained in Subsection 7.1.3 of this Report.

2 By application dated 29 June 1988, TransCanada requested that Board Order No. XG-6-88 be amended to provide for a 3.4-MW compressor unit upgrade at station 43 rather than at station 60. On 18 July 1988, the Board approved TransCanada's request.

During the hearing, TransCanada indicated that the scheduled commencement date of the 1.176 106m3/d (41.5 MMcfd) of exports by ANE at Niagara would be delayed one year to 1 November 1989. TransCanada testified that this delay would reduce the amount of loop required on the Niagara Line in 1988 from 48.6 km to 35.8 km. It proposed that the remaining 12.8 km of loop be built in 1989 together with the 3.5 km of looping initially scheduled for 1989 construction.

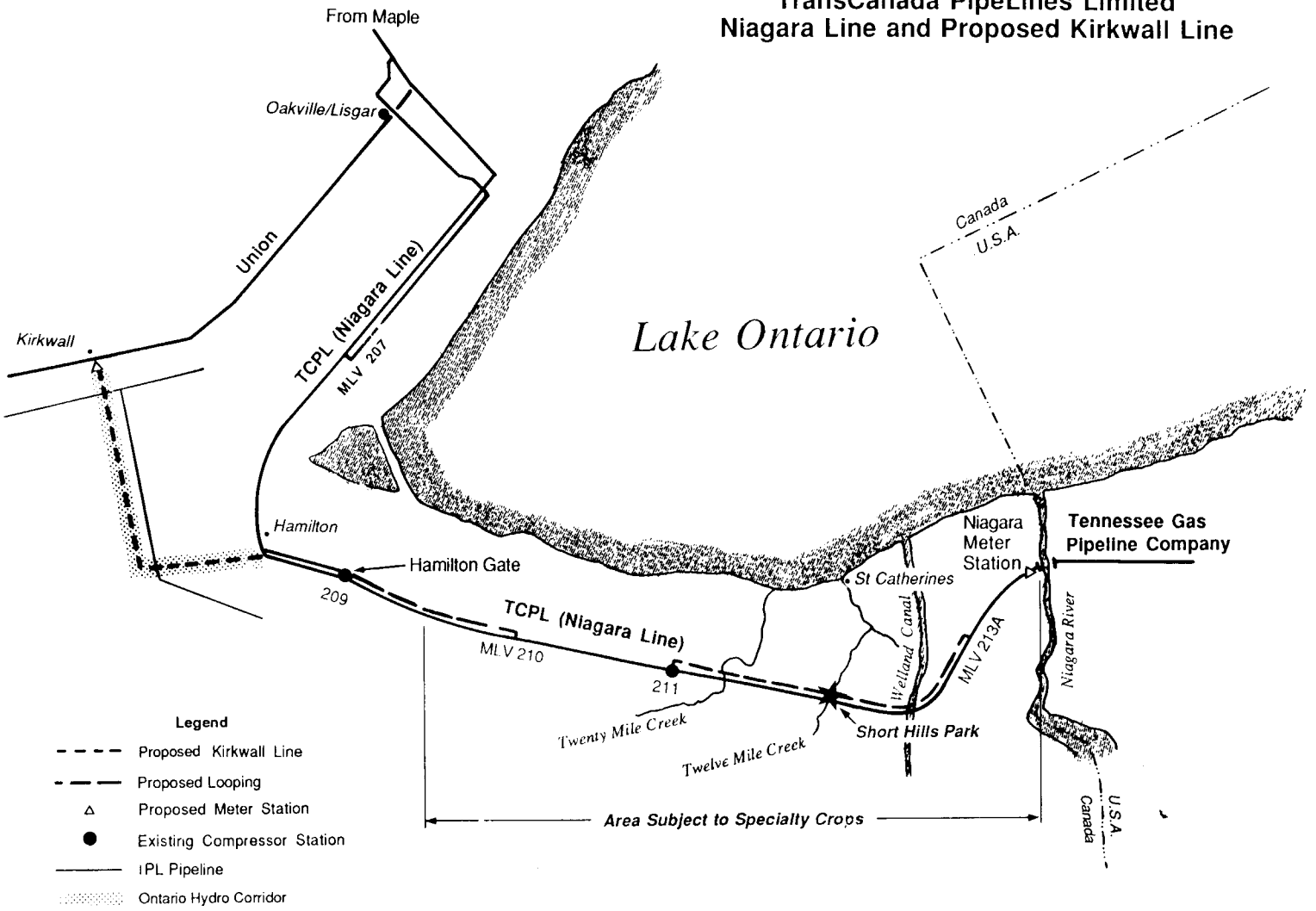
Views of the Board

In view of the market evidence submitted by TransCanada, the Board is satisfied that an increase in capacity on the Niagara Line is necessary for contract years 1988-89 and 1989-90. The incremental exports by WGML and KannGaz to Tennessee, ProGas to OSP, and ANE to various repurchasers in the United States are sufficiently firm and mature to warrant approval of additional facilities on the Niagara Line. However, capacity for the ANE exports at Niagara Falls will not be required commencing 1 November 1988, but rather 1 November 1989.

The proposed Niagara Line facilities would be located downstream of the majority of TransCanada's existing markets and therefore, would be usable by a relatively small number of

Figure 6.3

TransCanada PipeLines Limited
Niagara Line and Proposed Kirkwall Line



shippers. The proposed Niagara Falls exports and the necessary expansions of downstream pipelines are both subject to approval by regulatory authorities in the United States. The proposed exports are also subject to the execution of contracts for their transportation on the TransCanada system. Therefore, the Board considers it prudent to condition its approval of the Niagara Line facilities upon TransCanada demonstrating prior to the commencement of construction that all necessary FERC and ERA approvals have been granted in final, nonappealable form and that contracts for the transportation of the proposed exports on the TransCanada system have been executed.

Decision

In view of timing constraints related to the 1988 construction schedule, the Board, on 18 May 1988, issued an exemption order pursuant to sections 16.2 and 49 of the Act rather than a certificate under section 44 thereof for the proposed Niagara Line facilities that are scheduled for construction in 1988. The Board has exempted the proposed relocation of a 3.2-MW compressor unit to station 209 and 35.8 km of the proposed loop of the Niagara Line from paragraph 26(1)(a), subsection 26(2) and paragraphs 27(a) and 27(a.1) of the Act1. A copy of Board Order No. XG-8-88, granting this relief, appears in Appendix II.2 With respect to 1989 Niagara Line construction, the Board will recommend to the Governor in Council that the Board issue a certificate in respect of:

(i) the 12.8 km of Niagara Line loop originally scheduled for construction in 1988 but postponed to 1989 as a result of the delay in the commencement date of the ANE/ Niagara exports; (ii) the 3.5 km of looping scheduled to be constructed in 1989; and (iii) the requested modifications to the Niagara check meter station.
The certificate in respect of the Niagara Line facilities would be subject to the terms and conditions which are set out in Appendix V. Both Order No. XG-8-88 and the recommended certificate include, *inter alia*, provisions regarding the outstanding contractual matters and regulatory approvals discussed above.

1 The Board’s decision on the requested exemptions from paragraphs 27(b) and 27(c) and sections 28 and 29 of the Act are contained in Subsection 7.1.3. of this Report.

2 On 18 July 1988, the Board amended Board Order No. XG8-88 by adding thereto, immediately preceding the word "TransCanada" in Condition 10 thereof, the following words: "Unless the Board otherwise directs,".

6.2.4. Iroquois Extension and Related Facilities

TransCanada proposed, in its 9 June 1987 application, to construct in 1989 a 4.5-km Iroquois Extension from the Montreal Line to a point in the St. Lawrence River at the Canada/United States border where it would connect with the proposed IGTS. Immediately downstream of the junction with the Montreal Line, TransCanada proposed to construct a new meter station and a new compressor station, designated as station 1401, including two 9.4-MW compressors and an aftercooler. Station 1401 would increase the pressure of the gas entering the Iroquois extension

from the Montreal Line pressure (which ranges from 4200 kPa (610 psig) to 5500 kPa (800 psig)) to the maximum allowable operating pressure ("MAOP") of the Iroquois Extension and the IGTS (9930 kPa (1440 psig)).

TransCanada also proposed to construct in 1989 a new compressor station at MLV 1217 on the North Bay Shortcut and a new compressor at station 147. The units at compressor station 1217 would be required solely to transport the ANE exports at Iroquois. The proposed 7.8-MW compressor unit at compressor station 147 would be necessary for TransCanada to meet its contractual obligations downstream of that station because the Iroquois deliveries would have the effect of lowering the line pressure at the junction of the North Bay Shortcut and the Montreal Line.

TransCanada indicated that, because of the incremental GMi and Consumers requirements, the design of the proposed compressor units at stations 147 and 1217 would be altered. The optimal unit at station 147 would likely be larger than the applied-for 7.8-MW unit. Also, it is probable that two 9.4-MW compressor units would be selected for station 1217 on the North Bay Shortcut rather than the 12.5-MW unit as proposed in the 9 June 1987 application, as amended. At the time of the filing of the 29 March 1988 application, TransCanada had not yet finalized its plans with respect to the exact size of compression units at these two stations.

Views of the Board

As discussed in Chapter 4 of these Reasons, the Board has concluded that the regulatory process in the United States will not be completed in time to enable the IGTS to achieve its scheduled 1 November 1989 in-service date. In view of this finding, the Board cannot find that the Iroquois Extension and related facilities are and will be required by the present and future public convenience and necessity. However, as indicated in Section 6.1 of these Reasons, had the IGTS been in a position to meet the 1 November 1989 in-service date, the Board would have considered the ANE/ Iroquois volumes to be in the queue for service at that date, ahead of Consumers' request for additional FS, and would accordingly have recommended that a certificate be issued in respect of the IGTS-related facilities.

During the hearing, the Board and several intervenors raised the question of whether it would be in the public interest to provide facilities in Canada for delivery of natural gas at Iroquois, Ontario, at a pressure higher than the minimum pressure specified in TransCanada's tariff. This issue is discussed in Section 6.4 of these Reasons.

Decision

The Board is not prepared to issue a certificate in respect of the following facilities:

(i) 4.5 km of 610-mm O.D. Iroquois Extension pipeline; (ii) compressor station 1401; (iii) Iroquois meter station; (iv) compressor station 1217 on the North Bay Shortcut; and (v) additional compressor unit at station 147.

6.2.5. Montreal Line Facilities

In response to the incremental service requests by Consumers and GMi, TransCanada proposed in its 29 March 1988 application to construct 19.1 km of loop downstream of MLV 146 on the Montreal Line and to relocate a 5.7-MW portable compressor unit from station 134 to station 147. It requested that these proposed facilities be exempted pursuant to section 49 of the Act, from the provisions of paragraph 26(1)(a), subsection 26(2) and sections 27 through 29 thereof.

Views of the Board

On the basis of the market evidence submitted by TransCanada in support of its 29 March 1988 application, the Board is satisfied that additional capacity is required on the Montreal Line. In the Board's view, the proposed 19.1-km loop together with the 5.7-MW compressor relocation from station 134 to station 147 will be required to provide the necessary capacity.

Decision

On 18 May 1988, the Board exempted from paragraph 26(1)(a), subsection 26(2) and paragraphs 27(a) and 27(a.1) of the Act, the proposed relocation of a 5.7-MW portable compressor to station 147, pursuant to section 49 thereof1. A copy of Board Order No. XG-10-88, granting this relief appears in Appendix II.
The Board issued on 15 June 1988 its decision to exempt the proposed 19.1 km loop of the Montreal Line from paragraph 26(1)(a), subsection 26(2) and section 27 of the Act, pursuant to section 49 thereof. A copy of Board Order No. XG-13-88 granting this relief appears in Appendix III.

6.2.6. St. Mathieu Extension Facilities

In its 9 June 1987 application, TransCanada applied for the construction of a 4.5-km loop on the St. Mathieu Extension in order to meet increased projected requirements at St. Mathieu and Sabrevois as well as to guarantee a minimum delivery pressure of 2800 kPa (400 psig) to Vermont Gas in the event of loss of a critical unit. In the past, TransCanada had been contractually required to provide a minimum delivery pressure of 1723 kPa (250 psig) in the event of loss of the unit at station 802. However, TransCanada's contract with Vermont Gas was recently renegotiated to allow for a guaranteed minimum delivery pressure of 2800 kPa (400 psig) under loss-ofunit conditions, which is the standard level of service stipulated in TransCanada's tariff.
Vermont Gas submitted that the loop on the St. Mathieu Extension should be approved in order to provide to Vermont Gas the same quality of service as to others.

Views of the Board

The 4.5 km of looping on the St. Mathieu Extension would be required to serve TransCanada's projected requirements and to provide a quality of service to Vermont Gas equal to that offered to other customers. Therefore, the Board finds that the construction of the St. Mathieu loop would be in the public interest.

Decision

In view of timing constraints related to the 1988 construction schedule, the Board, on 18 May 1988, issued an exemption order pursuant to sections 16.2 and 49 of the Act rather than a certificate under section 44 thereof for the proposed 4.5-km loop on the St. Mathieu Extension. The Board has exempted these facilities from paragraph 26(1)(a), subsection 26(2) and paragraphs 27(a) and 27(a.1) of the Act1. A copy of Board Order No. XG-9-88, granting this relief appears in Appendlx II.

6.2.7 Kirkwall Line and Kirkwall Meter Station

In its 9 June 1987 application, TransCanada applied to construct in 1989 a new pipeline consisting of 30.9 km of 914-mm O.D. line connecting Union's transmission system near Kirkwall to a proposed TransCanada receipt meter station on the Niagara Line near Hamilton, Ontario, 6.7 km upstream of station 209. These facilities, together with the Niagara Line facilities discussed in Subsection 6.2.3, commencing on page 42 of these Reasons, would provide the capacity necessary to accommodate the forecasted increases in export volumes at Niagara Falls.

1 The Board's decision on the requested exemptions from paragraphs 27(b) and 27(c) and sections 28 and 29 of the Act are contained in Subsection 7.1.3 of this Report.

During the hearing, TransCanada submitted that the Kirkwall Line was necessary for reasons of safety, notwithstanding the forecasted exports. An engineering assessment indicated that an existing section of the Niagara line from MLV 207 to MLV 209 would require pipe replacements, estimated to cost approximately $10 million, if the existing MAOP of 5980 kPa (867 psig) is to be maintained. This particular section was constructed in 1954 and has inadequate fracture appearance shear area to prevent brittle fracture propagation. TransCanada would propose to reduce the MAOP of this section to 4480 kPa (650 psig) and use the new Kirkwall Line to compensate for the resulting shortfall in capacity on the downstream Niagara Line. The Kirkwall Line would be constructed in an existing utility corridor, avoiding the need for difficult construction in the heavily congested area between MLV 207 and MLV 209.

TransCanada also adduced evidence that major eastern Canadian distributors believed that a Kirkwall Line is required to relieve a transmission bottleneck on the Union system at Trafalgar. TransCanada indicated that it had received additional requests for incremental exports at Niagara Falls beyond those reflected in its 9 June 1987 application.

In its evidence, Union referred to its application to the Ontario Energy Board dated 28 September 1987 wherein it proposed construction of, *inter alia*, a 37.7-km section of 610-mm O.D. pipeline from its Kirkwall junction to a point near TransCanada's Station 209. Union's Kirkwall Line would provide 13.2 106m3/d (466 MMcfd) of additional capacity which would be available to serve Consumers' Niagara region and TransCanada's Niagara Line requirements, and would provide security of supply for the Hamilton area. Union's Kirkwall line was approved by the Ontario Energy Board on 23 February 1988.

Union stated that its 610-mm O.D. Kirkwall Line would obviate the need for TransCanada's Kirkwall Line for the two-year period from 1988 to 1990. For this reason, Union argued that the Board should not issue a certificate with respect to TransCanada's Kirkwall Line.

It was TransCanada's submission that there would be no capacity on the Union Kirkwall Line

available to it, since Union had justified its line on the basis of security of supply to its Hamilton market, and additional deliveries to Consumers' Niagara region. Thus, TransCanada maintained that its 914-mm O.D. Kirkwall Line would be required for 1989-90.

Ontario and CPA submitted that only one Kirkwall Line should be constructed, and that TransCanada and Union should negotiate to resolve their differences.

Views of the Board

The Board concludes that the existing TransCanada Niagara Line pipe between MLV 207 and MLV 209 has inadequate shear area characteristics to prevent brittle fracture propagation and has insufficient capacity to satisfy increased downstream market requirements. The installation of extensive pipe replacements and looping in this area would not be cost-effective due to the level of residential development and general congestion. It is noted that although a 610-mm line as proposed by Union would suffice to serve short-term requirements, the potential for future increases in the required capacity of the Niagara Line for domestic and export purposes justifies the installation of a larger 914-mm diameter line instead.

Decision

The Board will recommend to the Governor in Council that a certificate be issued in respect of the 30.9 km TCPL Kirkwall Line and the Kirkwall meter station, subject to the terms and conditions which are set out in Appendix VI.

6.3 Provision of Facilities for Shortterm Service

6.3.1 Firm Service

In its 9 June 1987 application, TransCanada assumed that short-term firm transportation contracts would be converted to firm long-term service. It indicated in its application that, if any of the short-term shippers elected not to convert, the estimated requirements would be adjusted.

TransCanada's assumptions in respect of shortterm transportation contracts were in keeping with the provisions in the FS toll schedule which was implemented following the Board's decision in the RH-3-86 proceedings. The following availability of service provision appeared under Subsection 1.2 of that schedule:
"It is understood that TransCanada shall not construct additional facilities for the purpose of providing short-term firm service hereunder".

In Subsection 2.2 of the same toll schedule, TransCanada stipulated that:

"In respect of short-term firm service hereunder, notwithstanding subsection 2.1 hereof, TransCanada may, at any time, by written notice to Customer and with the prior approval of the National Energy Board, reduce Customer's Operating Demand Volume to the extent that TransCanada requires capacity to provide for long term firm service.

The latter above-quoted section has been referred to as the "bumping" provision of TransCanada's tariff.
In the RH-3-86 proceedings, the Board ruled that it did not advocate the use of the "bumping" provision as a general means of controlling the construction of facilities on the TransCanada system and that it would consider the use of such provision only in special circumstances. In view of TransCanada's apparent intent not to build facilities for short-term service unless shippers elect to convert to firm long-term service, the Board included in its List of Issues for the GH-2-87 proceedings the question of whether it is in the public interest to provide new facilities for short-term service. The Board also included in its List of Issues under "Part IV Matters" the appropriateness of Subsection 1.2 of the FS toll schedule, and the question of whether "bumping" for short-term service should be permitted and if so, under what terms and conditions.

During the course of the hearing, TransCanada revised its position with respect to the provision of facilities for short-term contracts and filed a new tariff which removed the bumping provision and the caveat that TransCanada shall not construct additional facilities for the purpose of providing short-term service. Parties focussed their discussions on the appropriate tariff provisions with respect to access to the TransCanada system for FS shippers under short-term contracts. Parties' views and the Board's decision in respect of the provision of facilities for short-term FS and the associated tariff provisions appear in Subsection 9.1.1 and Section 9.2 of these Reasons.

6.3.2 Peaking Service and Temporary Winter Service

In argument, GMi indicated that TransCanada's requirements forecast did not adequately reflect the Canadian market because TransCanada had not considered volumes for supplemental service

such as peaking service ("PS") and temporary winter service ("TWS"). In its 9 June 1987 application, TransCanada had indicated that for the purposes of facilities design, supplemental services such as PS were not included. Accordingly, such services were only shown in the market requirements forecast when there was sufficient excess capacity to provide them.

Views of the Board

The Board is of the view that supplemental services such as PS and TWS serve to make increased use of the pipeline system when there exists temporary excess capacity. However, the Board believes that the load balancing which can be achieved by these services is normally the responsibility of local distribution companies and other shippers on the TransCanada system.

Decision

The Board accepts TransCanada's position that supplemental services such as PS and TWS should not be considered for purposes of facilities design.

6.4 Provision of Facilities for Delivery Pressure

As part of its 9 June 1987 application, as amended, TransCanada applied for a new Iroquois Extension and additional Niagara Line facilities. The design of these facilities was such that TransCanada would be able to meet contractual obligations to deliver gas at Iroquois and Niagara Falls at a minimum pressure in excess of the minimum delivery pressure of 2800 kPa (400 psig) specified in TransCanada's General Terms and Conditions. In view of the distinct service which TransCanada proposed to provide, the Board included in the List of Issues for the GH-2-87 proceedings the question of whether it would be in the public interest to provide facilities for the delivery of natural gas at the export points at a higher pressure than that specified in the General Terms and Conditions of TransCanada's tariff.

TransCanada testified that its contractual obligation to provide a minimum delivery pressure of 9928 kPa (1440 psig) at Iroquois required the construction of station 1401 on the Iroquois Extension and the requirement of heavy wall pipe extending from the discharge side of station 1401 to the international boundary. The capital cost of these facilities was estimated by TransCanada to be $36 million.

According to TransCanada, the higher delivery pressure at Iroquois would be necessary in order to allow the proposed IGTS to carry the contracted volumes to Long Island without any compression in the United States. TransCanada testified that locating the requisite compressor station in Canada resulted in the lowest owning and operating costs of the combined TransCanada/IGTS system, and therefore was the most economical alternative. The cost savings were attributed to lower fuel costs and lower rates of return in Canada, and to the existence of TransCanada's operating infrastructure which would incorporate the new compressor station at minimal cost.

TransCanada's contractual obligation to guarantee to Tennessee at Niagara Falls a minimum delivery pressure of 4826 kPa (700 psig) commencing 1 November 1988, would require the installation of 6.8 km of loop on the Niagara Line. The capital cost of these facilities was

estimated to be $7.7 million. According to TransCanada, the incremental pressure was required due to limitations on the downstream Tennessee pipeline system.

TransCanada argued that the provision of higher delivery pressure at Niagara, although only on a best-efforts basis, had allowed it to make deliveries to Tennessee that would not have been otherwise possible. According to TransCanada, producers have received and will continue to receive the benefits of the provision of higher delivery pressure at Niagara.

ANE submitted that locating station 1401 in Canada would provide the lowest-cost compression of its volumes at Iroquois.

Champlain took the position that facilities for the provision of excess delivery pressure should be constructed in Canada. It testified that it intended to request TransCanada to provide the compression necessary to accommodate Champlain's proposed project, arguing that fuel and power costs would be lower in Canada.

Consumers, GMi and ICG Ontario supported, and Ontario did not oppose, the construction of compression facilities in Canada to provide delivery pressure at export points.

The CPA opposed the construction of station 1401 in Canada, arguing that if TransCanada owned and operated the station as part of its utility operation, Canadian producers would ultimately pay for it. However, if the Board decided to allow the construction at the station in Canada, the CPA submitted that the full owning and operating costs of the station should be subject to a pressure charge.

IPAC argued that there was little justification for the construction of station 1401 in Canada. According to IPAC, any benefit to IGTS resulting from the use of TransCanada's staff to operate the compressor would be negated if IGTS later installed a compressor on its system. IPAC was of the view that the decision to locate station 1401 in Canada was influenced by the modified fixed/variable toll methodology used in the United States, whereby the return on equity is placed in the commodity charge and is therefore at risk if the throughputs are lower than anticipated.

Union submitted that TransCanada had not discharged the requisite burden of proof for the location of compressor station 1401 in Canada. It stated that it might be in the public interest to provide facilities for delivery at a higher pressure if doing so did not require a change of the optimal design of the system. If additional facilities are required, customers that do not need the higher pressure should not be financially Penalized.

Views of the Board

The provision of pressure is an integral and fundamental component of the transportation and delivery of natural gas. For that reason, TransCanada's General Terms and Conditions stipulate that the delivery of natural gas transported by TransCanada must be made at a specified minimum pressure. The delivery of gas at a pressure lower than that minimum would result in a transportation service of a different quality and value. Similarly, by guaranteeing a delivery pressure higher than that specified in its General Terms and Conditions, TransCanada is providing

a separate and distinct service which is an integral part of the portfolio of transportation services which it offers to its shippers.

The Board is satisfied that, in view of Tennessee's current pipeline system configuration, the facilities which are proposed on the Niagara Line for the provision of a higher delivery pressure are necessary in order to enable Canadian exporters to cause their natural gas volumes to be delivered to market in the 1988-89 and 1989-90 contract years. As detailed in Section 8.3 of these Reasons, the Board will require TransCanada to file, for consideration in the RH-1-88 proceedings, a toll in respect of delivery pressure at Niagara Falls and other delivery points where this distinct service is provided.

In view of the Board's decision regarding the Iroquois Extension and the related facilities, a decision in respect of the provision of delivery Pressure at Iroauois is not required at this time.

6.5 Advance Capability

In its List of Issues for GH-2-87, the Board raised the question of whether it is in the public interest to provide new facilities for presently uncontracted Canadian market demand which is forecasted to exist in contract years commencing November 1988 and November 1989. Such facilities would provide that which became referred to in the hearing as "advance capability."

In its "1981 Facilities Application", TransCanada proposed facilities resulting in excess capability on the Western and Central Sections at a time when recently licensed exports were perceived to be likely to reduce the level of advance capability to zero. In its "1982 Facilities Application", it also proposed excess capability on the Western and Central Sections since the proposed advance capability was projected to be fully utilized by the operating year 1983-84. Federal government programs designed to increase Canadian natural gas consumption, anticipated new export volumes, favorable producer netbacks, and relatively high inflation in the pipeline construction industry provided reasons for constructing advance capability.

TransCanada submitted that it did not include advanced capability in its current facilities application because of a less optimistic outlook of the current natural gas environment. In TransCanada's view, producers, which it viewed as the ultimate tollpayers, would not support the installation of excess capacity. According to TransCanada, the lack of producer support was due to a number of factors including less optimistic perceptions about future natural gas demand and prices, relatively low producer netbacks and relatively low inflation in the pipeline construction industry. TransCanada submitted that there are no longer any real cost savings associated with pre-building facilities for future demand and that producers are concerned about the risk of additional cost if the excess capacity were not to be utilized.

Although TransCanada did not include advance capability in its 9 June 1987 application, as amended, it indicated during the hearing that it saw merit in designing some degree of advance capability in future applications. It conceded that a reasonable amount of advance capability would allow the market to operate more effectively, subject to the caveat that an excessive amount could create an incentive for firm shippers to request IS. TransCanada noted, however, that such an incentive may no longer exist under the current tolling for IS.

TransCanada indicated that the spare capacity inherent in the 95 percent annual capability factor used in its system design should not be relied upon to provide advance capability. This factor represents what TransCanada views as an adequate cushion to provide for planned and unexpected facilities outages.

Most of the intervenors that expressed views on the issue, supported the principle of providing facilities for some level of advance capability. IPAC, Consumers, Union, APMC, Ontario and The Industrial Gas Users Association ("IGUA") all supported the construction of advance capability to accommodate both anticipated and unanticipated contracted demands.

Intervenors recognized that TransCanada did not build for interruptible volumes explicitly but GMi argued that such volumes were required for market development. The lack of capacity for interruptible volumes and the fact that new FS shippers may have to wait as long as two years for new facilities construction led intervenors and TransCanada alike to conclude that some market potential could be lost to other fuels perhaps permanently.

Consumers voiced concern about the rapid tightening of the only transmission system serving major domestic markets. It argued that TransCanada's system users deserve a reasonable period to adjust their service procurement practices in such circumstances. Otherwise, there could be serious disruptions in the domestic marketplace, at a time when gas supply is plentiful. Consumers also suggested a need for what it termed adequate standby capability to accommodate the contingencies of forecast error, weather, and swings in the economy resulting in unforeseen increases in throughput requirements.

IPAC observed that constraints on the delivery of natural gas and the tightening of the TransCanada system could have a considerable effect on the gas market, in particular on the prices charged, and the amount of competition therein. It argued that some advance capability should be factored into TransCanada's facilities to serve expected demand. IPAC suggested in its evidence that TransCanada be required to provide facilities for approximately 50 percent of TransCanada's unallocated Canadian demand, which IPAC expected to convert to FS. This suggestion was put forward with the caveat that it was not possible to determine precisely how much spare capacity should be included in the design until the cost of incremental capacity was known.

The CPA argued that facilities should not be constructed for either uncontracted demand or advance capability since TransCanada has a 95 percent capacity factor built into its system design. It submitted that LDCs should assume responsibility for demand growth within their franchise areas and contract accordingly. It also argued that limiting facilities construction for only firm contracted requirements would encourage LDCs to more accurately forecast requirements within their franchise areas.

ICG Ontario expressed concern about the risk of under-utilization of facilities constructed to provide advance capability. It urged the Board to exercise caution in dealing with the construction of facilities for the uncontracted Canadian market.

IGUA stated that there should be some "reasonable" amount of spare capacity, as a 24-month lead

time required for the construction of pipeline facilities would not accommodate rapid market shifts. It stated that a marketer or shipper of gas should have access to readily available capacity to take advantage of the market as it develops. However, IGUA also observed that advance capability would not be required for the purpose of supplying natural gas to a new plant, as the 24-month lead time would correspond to the time required to put the plant in place.

The APMC recommended that a reasonable amount of advance capability be incorporated into TransCanada's system design to protect against the possible shutting-in of gas production due to pipeline capacity constraints. It argued that the cost of providing a reasonable amount of excess capacity to allow for uncontracted demand which can be expected to become contracted in the next two to three years would be balanced by the cost of shutting-in gas production.

No parties were forthcoming with suggestions or recommendations on the actual amount of advance capacity that should be constructed. Several intervenors argued that the question of the appropriate level of advance capability should be addressed at TransCanada's next facilities hearing where parties would have access to adequate evidence on the unit costs of providing various levels of advance capacity.

Views of the Board

The Board recognizes that lack of adequate pipeline capacity could inhibit competition by restricting access to markets. With the unbundling of gas marketing and transportation, the number of shippers on TransCanada's system has increased and local distribution companies are no longer the only parties contracting for natural gas supply and for transportation service.

The 31 October 1985 Natural Gas Agreement addressed the necessary conditions for an efficient and competitive deregulated natural gas market.

These included

"...conditions for a new marketresponsive pricing system consistent with the regulated character of the transmission and distribution sectors of the gas industry. . . [and] *... a return to market forces characterized by choices for buyers and sellers...".*
The Agreement further stated that:

"...prices will be affected by conditions in the market place; both supply and demand will influence the price. Competition will be fostered which should increase the industry's ability to react quickly to changing conditions".

Most of these conditions were addressed and discussed by intervenors in the context of the potential impact of the lack of spare capacity inherent in TransCanada's facilities expansion proposal.

In order to meet the objectives of the Natural Gas Agreement, the industry must be able to react quickly and to adjust to changing conditions. The lack of advance capability could affect the access to transportation for new shippers or for increases in existing contracts. At the very least,

this lack of flexibility would introduce a delay in accommodating such requirements; however, at worst it could inhibit the development of more competitive business arrangements if the prospect of delay and queuing were to discourage new participants from entering the marketplace. Pipeline facilities have traditionally been designed to meet primarily firm requirements. However, provided that the system is not in a continual state of excess demand for service, there will usually be some space for interruptible volumes, as not all services of a firm nature will normally operate at the forecasted load factors. Furthermore, a cost-effective facilities expansion program may itself provide some excess capacity or advance capability at certain times, as the most efficient design for the next increment of capacity may not always permit an exact matching of capacity and requirements from the moment the expanded facilities are commissioned.

In determining a basis for facilities expansion in today's market environment, the Board is aware of the risks involved. There are both "market" and "policy" risks. To over-build the system burdens producers, consumers or pipeline shareholders with the cost of under-utilized assets in an intensely competitive energy market (market risk). To under-build may put at risk the achievement of public policy objectives stated in the 1985 Natural Gas Agreement (policy risk). For these reasons, the choice of the planning basis must be careful and deliberate, bearing in mind the balance of risks and objectives at hand.

The Board is of the view that TransCanada has chosen a planning basis for this facilities expansion which minimizes market risk, insofar as the requirements are based only on contracted demand, rather than a more comprehensive view of demand growth or on contracted demand plus an estimate of "unallocated" demand which may firm up within the current planning horizon. The Board recognizes, however, that to increase facilities beyond the requested amount at this particular juncture of pipeline development would entail a substantial increment of system expansion cost, and no parties at the hearing suggested an adequate basis for assessing how much additional market risk it would be economically worthwhile to incur.

Recognizing the short-term nature of the present expansion program, the Board believes that TransCanada will soon have to contemplate further adaptation of its system to an expanding and changing market environment. The Board has outlined in Subsection 3.1.2, commencing on page 9 of these Reasons, a comprehensive and rigorous forecasting methodology to permit a full evaluation of probable and possible developments of natural gas demand, which the Board would suggest TransCanada adopt. TransCanada may wish to include in a future facilities application an allowance for uncontracted demand based on the findings of the forecasting methodology outlined by the Board.

Decision

The Board will not direct TransCanada to make specific allowance for advance capability in its current facilities expansion.

6.6 Technical Matters

6.6.1 Compression Requirements

A major part of TransCanada's proposed expansion consists of the upgrade of four compressors in 1988, and the addition of six 12.5-MW turbinedriven centrifugal compressors, to be installed in 1989 on the Central Section at a total estimated direct cost of $98 million.

The CPA submitted that TransCanada's case did not demonstrate the need for all of the requested facilities. The CPA's position was based on the following evidence:

(i) TransCanada has in past peak days transported volumes in excess of the 59.8 106m3/d (2111 MMcfd) forecasted for 198889;

(ii) less than 70 percent of the available power was used to move the 1987 peak day volume; (iii) 37 of 79 compressor units were idle during the 1987 peak day; and

(iv) the effective power available in the winter is greater than the power used for design purposes.

The CPA submitted that in view of the considerable excess power apparently available, the Board should assess carefully whether any facilities additions are required to meet the revised 1988-89 requirements on the Central Section.

TransCanada argued that the flow capability of its pipeline system is a function of the distribution of off-line deliveries. It observed that, although total flow entering Central Section has on occasion exceeded 60 106m3/d (2118 MMcfd), increased off-line deliveries were higher during those periods. This has resulted in a temporarily higher input capacity on the system. TransCanada also explained that a flow limitation at station 95 tends to restrict the section throughput capacity, as well as limiting the full utilization of upstream compressor stations.

TransCanada stated that it is overly simplistic to compare total power required with total power available on a system-wide basis. According to TransCanada, it would be impractical to design a perfectly balanced system where all power is utilized under all conditions, since compressor units are only available in certain quantum blocks of power. The actual-versus-available power comparison must be carried out under winter and summer conditions on a station-bystation basis. TransCanada also argued that any excess power would be used to minimize the effect of outages on other compressor units.

Views of the Board

Several factors have been considered by the Board in arriving at its decision on the proposed compression additions for the Central Section. Statistics on actual throughputs have shown that there is little spare capacity on the Central Section, and that any significant additional volumes of gas could not be moved to eastern Canada on a sustainable basis without the addition of facilities.

Evidence indicates that there is a bottleneck on the eastern portion of the Central Section which

restricts the efficient utilization of upstream compressor stations. The age and reliability of existing units at the locations where the compressor additions are proposed have also been taken into account. The Board is of the view that the addition of six new compressors, as well as the upgrade of four existing units, represents a sound design which is consistent with an effective long-term expansion plan for TransCanada's Central Section.

6.6.2 Need for Aftercoolers on the Central Section

In its 9 June 1987 application, as amended, TransCanada proposed the installation on the Central Section of four aerial aftercoolers to be located at compressor stations 49, 58, 69 and 80, at a total estimated direct cost of $21 million. The cooling of the high-temperature discharge gas at these stations would result in a smaller pipeline pressure drop and a corresponding increase in overall throughput capacity.

TransCanada's analysis of several alternatives, composed of different combinations of compressors, looping and aftercoolers, showed that its proposed design would provide significant savings in capital costs and annual owning and operating costs. TransCanada stated that the four proposed aftercoolers, when combined with three of the four proposed compressor upgrades, would achieve the same capacity increase as 84.9 km of looping.
Although aftercoolers should also reduce the rate of pitting and stress corrosion cracking downstream of these compressor stations, the uncertainty about the causes of stress corrosion cracking has led TransCanada to consider its mitigation to be only a possible side benefit of the aftercooler installations.

The CPA questioned TransCanada's design on the basis that the addition of aftercoolers had not been found to be appropriate for its 1980-81 facilities expansions. It pointed out that the pipe-to-soil heat transfer coefficients, or U-factors, used in TransCanada's flow calculations were lower than those used in previous facilities applications, thereby overstating the case for the installation of aftercoolers. TransCanada explained that differences in engineering and economic assumptions from those used in 1980 accounted for the different conclusion regarding the feasibility of aftercoolers. The heat transfer coefficients were revised as a result of the flowing temperature equation having been updated by the addition of a Joule-Thomson coefficient, which accounts for the reduction in the gas temperature due to its expansion.

The CPA and IPAC were concerned that the effectiveness of aftercoolers may be reduced if loop is added in the future near the stations where they are installed. TransCanada submitted that the additions of loop near the aftercooler locations would not render the coolers redundant because such looping would presumably be installed to increase throughput. The resulting increase in compression ratios and the corresponding increase in gas temperatures would continue to justify operation of the aftercoolers.

Views of the Board

The Board concurs with TransCanada's explanation for the modifications to the flowing temperature equation and corresponding changes to the heat transfer coefficients. The evidence demonstrates that, for the same increase in pipeline capacity, substantial looping would be

required which would result in higher owning and operating costs. Furthermore, the operation of the aftercoolers would continue to be justified should throughput increase and additional looping be required. The Board therefore has agreed to TransCanada's proposal to install the four aftercoolers on the Central Section. (See Subsection 6.2.1, commencing on page 40 of these Reasons, for details of the Board's decision in this matter.)

6.6.3 Technical Certificate Conditions

During the hearing, TransCanada was asked whether certain technical conditions which had been attached to previous certificates would be appropriate for the facilities currently being applied for. These conditions included the following:

(i) submission of final construction schedules and drawings;

(ii) submission of plans and procedures for cost control;

(iii) submission of cost reports including Canadian content realized:

(iv) submission of final construction techniques for water crossings;

(v) notification of blasting;

(vi) welding and non-destructive testing procedures; and

(vii) documentation on the qualification of welding procedures.

TransCanada expressed no concerns with respect to items (i)-(iii) provided that the method and frequency of reporting would be similar to that used for other major projects. It agreed to the filing of drawings in respect of item (iv) but stated that it needed to retain flexibility to revise construction techniques on a site specific basis if conditions at the time of construction so warrant. With respect to item (v), TransCanada stated that it would notify landowners and other affected parties 48 hours prior to any blasting. It felt that it would be impractical to notify the Board on a continuous basis during the blasting period. It submitted, with respect to items (vi) and (vii), that qualification of the procedures would be completed prior to commencement of pipeline welding and that all applicable procedures and documentation would be available for Board review during construction.

Views of the Board

To enable the Board to monitor and inspect construction of the facilities and to monitor project costs, the Board is of the view that conditions requiring the submission of construction schedules and drawings, plans and procedures for cost control, and final cost reports should be included with orders and certificates issued in respect of the applied-for facilities. The cost reports would provide detailed cost breakdowns of incurredversus-estimated costs as well as the percentage of actual- versus-estimated Canadian content.

The Board concurs with TransCanada that flexibility should be provided in respect of final construction techniques for less sensitive stream crossings. Accordingly, conditions requiring TransCanada to file detailed drawings, specifications and construction schedules will be limited to the Welland Canal, Power Canal and Twelve Mile Creek.

The Board finds TransCanada's proposal for notification of landowners and other affected parties 48 hours prior to blasting to be sufficient. The Board agrees with TransCanada that it would be impractical to notify the Board prior to each blasting operation.
TransCanada should demonstrate to the Board that welding and non-destructive testing procedures have been qualified prior to the commencement of production welding. The Board accepts TransCanada's submission that it is not practical or cost effective to undertake any welding procedure qualification tests until the contractor is ready to commence production welding. Accordingly, the Board will not require that the welding and non-destructive testing procedures themselves be submitted, but rather than an affidavit, signed by a professional engineer, be filed confirming that these procedures have been qualified in a manner acceptable to TransCanada.

Decision

The exemption orders which the Board has issued and the certificates which it is prepared to issue, upon Governor in Council approval, are subject to the above-stipulated conditions, as applicable.

6.7 Certificate Conditions Regarding Rate Base Additions

Included in the List of Issues for the GH-2-87 proceedings was the question of who should bear the risk of facilities expansions required to serve new markets in the event that the project does not proceed as envisaged, throughputs are reduced and certain facilities are no longer used and useful, and in what manner the risk should be borne.
Several intervenors expressed concern that existing tollpayers be required to pay for Canadian facilities which would not be used and useful if the necessary financing, contracts and companion facilities in the United States are not in place in a timely manner. To this end interested parties suggested many certificate conditions designed to place the burden of these risks on TransCanada.

The CPA suggested a certificate condition that no money be spent on facilities and no commitments to purchase materials be made until all applicable regulatory approvals in the United States are in place. It also suggested a condition that no construction commence until all contracts are executed and in full force. Many other intervenors expressed similar views.

Views of the Board

The concerns which resulted in the certificate conditions suggested by the CPA and others centred primarily on the facilities required to serve the proposed exports at Iroquois. The Board's orders and its recommendations to the Governor in Council pertain solely to facilities required to provide capacity for the domestic market and exports at Niagara Falls. The Board perceives a low level of risk that the appropriate downstream facilities will not be in place and that outstanding contractual

matters will not be resolved. Furthermore, the exemption order which the Board has issued and the certificate which it is prepared to issue upon Governor in Council approval, in respect of the Niagara Line facilities, contain a condition that no construction shall commence until regulatory approvals in the United States are in place and outstanding contractual matters are resolved. For these reasons, specific conditions dealing with future rate base additions are not required. TransCanada is expected to act in a prudent manner at all times in constructing facilities. To the extent that any facilities constructed should prove not to be used and useful, the Board will assess the appropriate sharing of costs based on an assessment of the facts at that time

6.8 Economic Impact of Proposed Facilities

TransCanada provided an economic impact study outlining income and employment impacts that could be associated with the proposed 1988 and 1989 facilities construction program. The study was described as providing information on economic benefits to supplement that provided in the benefit-cost studies, which had been filed in earlier licence proceedings and relied upon by TransCanada for the purpose of its 9 June 1987 application. The economic impact study was based on a multiplier technique instead of the efficiency criterion underlying benefit-cost analyses.

Views of the Board

The Board notes that, with the economic impact analysis provided by TransCanada, the larger the expenditure the greater the economic impact regardless of the amount of additional capacity provided. The Board believes that in order to determine if a proposed expansion is in the overall public interest, it is essential to ensure that scarce resources are put to their most productive or efficient use. Thus the appropriate economic decision tool is benefit-cost analysis. The Board recognizes that in certain contexts economic impact analysis may provide useful insight - for example, in comparing two competing projects with similar benefit-cost results. Those conditions, however, were not present in this hearing and accordingly, the Board did not rely on the results of the economic impact study in arriving at its decision.

Chapter 7

Land Use and Environmental Matters

7.1 Land Use

7.1.1 Route Selection

With the exception of the Iroquois Extension and the Kirkwall Line, TransCanada proposed to locate its new facilities on its existing easements or new easements adjacent thereto. The Iroquois Extension and the Kirkwall Line constitute new pipeline routes.

St. Mathieu Extension

The new looping on the St. Mathieu Extension would be located adjacent to TransCanada's existing servitude and would require an additional, permanent 12.19-m servitude. In the selection of a route for the new looping, TransCanada considered the fact that owners of land along its existing servitude are already familiar with TransCanada's procedures.

Dawn Extension

The routing of the new looping on the Dawn Extension would not require any additional, permanent easements as it would be within an existing TransCanada easement. The selection of that location was based on the multiple-line rights of that easement.

Niagara Line

Factors considered by TransCanada in the route selection for the Niagara Line looping included the following: the multiple-line nature of TransCanada's Niagara Line easements, the consideration of the multiple-use corridor concept; the ease of land acquisition due to landowner familiarity with TransCanada and its procedures; the avoidance of major physical, natural and cultural constraints; and, the compliance with technical limitations.

The aforementioned factors led TransCanada to propose locating the required pipeline facilities adjacent to its existing line. That location would place approximately 40 km of line within easements where multiple-line rights were held and would place 11 km of line within Ontario Hydro property. TransCanada indicated that those locations would avoid: interfering with the Niagara Escarpment and its associated features; affecting the headwaters of Twelve Mile Creek; disrupting more sensitive agricultural areas than those through which the existing easement passed; and, disrupting more sensitive areas of the Short Hills Park.

At the hearing, the Board questioned the proposed routing of the Niagara facilities. In addition, certain landowners who would be affected by the construction of the facilities submitted letters of comment to the Board raising a number of issues including: project notification procedures, exporting Canadian natural resources, pipeline operating pressures, property devaluation, construction disruption, compensation, work space requirements and clearing, environmental and

scenic disruption, and the status of existing easement documents.

TransCanada responded to those questions by filing written documentation of its negotiations, indicating that, through its landowner contacts, no unusual construction-related or environmental concerns were raised. In certain cases, TransCanada undertook to restrict its temporary working space requirements; explained in detail its clearing and restoration practices; and, for the affected grape growers, undertook to establish compensation practices commensurate with the grape-growers' consultant's recommendations. In addition, TransCanada undertook to submit rehabilitation plans to the Niagara Escarpment Commission, the Ministry of Natural Resources and the Ontario Pipeline Coordinating Committee ("OPCC");

Iroquois Extension

The proposed Iroquois Extension, a relatively short line of 4.5 km, would connect TransCanada's main pipeline system with IGTS, a proposed transmission system in the United States. In selecting the proposed location, TransCanada considered engineering and construction options and environmental and easement constraints. The following seven specific criteria were applied to the selection process: avoiding steep slopes; locating a stable landfall and river bank; avoiding incompatible land-use; avoiding designated anchorage and recreation areas; avoiding areas of known ice jamming and ice scouring; locating vacant land on both sides of the St. Lawrence River; and, complying with technical requirements.
TransCanada submitted that the route it proposed met the criteria as described. It indicated that, for the landfall portion of the project, only three private owners would be directly affected. Permanent residences in the area are located to the east of the proposed route and do not lie closer than 50 m from the pipeline route. In response to the Board's concern on the impact of the proposed route on future development and official plan and zoning regulations, TransCanada responded that the area is zoned and designated "Residential Hamlet" and that future development, in the form of single lot development, would be a function of market demand. TransCanada was not aware of any proposed recreational development applications and it indicated that it would maintain continued liaison with planning authorities.

Associated with the Iroquois Extension, TransCanada also proposed to construct compressor station 1401. It was indicated that the compressor station location would be separated from existing residences by 750 m; would be located in a 4-hectare remnant of a woodlot subject to seasonal flooding; and that an option to purchase the property had been secured.

Kirkwall Line

The Kirkwall Line is not associated with existing TransCanada easements. The proposed facilities are comprised of 30.9 km of pipeline and metering facilities at the Union tie-in. The Kirkwall Line was proposed as an alternative to looping TransCanada's existing pipeline from MLV 207 to MLV 208 + 2.8 km. Encroaching urban development, easement limitations, construction difficulties, and associated environmental limitations precluded that alternative.

Evidence, in support of TransCanada's proposed Kirkwall Line location, indicated that it was selected using four principal factors. The concept of multiple-use easements to limit the impacts

of linear developments was the first factor. That was followed by avoidance of physical, natural and cultural constraints; compliance with technical limitations; and, minimization of the development costs for the facilities. Utilizing those factors in conjunction with more detailed criteria, TransCanada selected two possible alternative routes: an Ontario Hydro corridor route, and an Interprovincial Pipe Line Limited ("IPL")/ Ontario Hydro corridor route. The alternatives, separated by approximately 600 m, with the Ontario Hydro alternative to the west, traverse similar lands for the first 19 km along their north to south orientation. For the remaining 12 km, the routes are identical in their west to east orientation.

The IPL/Ontario Hydro route was eliminated from consideration for four reasons. Firstly, it traversed more systematic, tile-drained fields and specialized agricultural land. Secondly, a higher density of cultural, historical and recreational features were encountered along the route. Thirdly, the route would have affected more houses and farm buildings in addition to diagonally crossing many properties. Finally, TransCanada indicated that, from a construction perspective, the route was more difficult to follow for a large diameter pipeline and that blasting requirements along 7 km of its length could be complicated by the presence of IPL's oil line.

The selected Ontario Hydro alternative, while an improvement to the IPL/Ontario Hydro route, also had certain limitations. TransCanada indicated that the route would cross two environmentally sensitive areas shown in the Official Plan of Hamilton-Wentworth. Those limitations were offset by the existence of the cleared Ontario Hydro easement. This proposed route also traversed one known archaeological site and passed adjacent to one other: the Saeger and Muskrat Pond Sites. TransCanada, to offset the potential impacts of construction, engaged consultants to undertake archaeologic field studies and provided those documents to the Board and to the OPCC. The last significant limitation was that the north-south portion of the route affected stormwater detention ponds proposed to be constructed by the Town of Ancaster. That issue was resolved between TransCanada, Ontario Hydro, and the Town of Ancaster.

Montreal Line

The proposed Montreal Line looping, as applied for in TransCanada's application dated 29 March 1988, would be located adjacent to TransCanada's existing easement and would require an additional, permanent 20-m easement. TransCanada indicated that looping adjacent and parallel to the existing easement would represent the minimum length of loop required. TransCanada further indicated that installing the pipe in an adjacent easement allows the use of the existing easement for temporary topsoil and spoil storage, thus, minimizing the amount of new easement that would be disturbed by construction.

Views of the Board

The principal route selection criterion of TransCanada, namely, the advantage associated with the multiple-use of existing utility corridors, is well recognized by the Board. The rights of affected landowners, however, must not be ignored. In the instance of the Kirkwall Line, the Board is influenced by the protection afforded lessees of Ontario Hydro lands and by TransCanada's treatment of the requirements of the Conservation Authority and the Town of Ancaster. If new

facilities are to be located within the multiple-line easements of the Niagara Line and Dawn Extension, the rights of affected landowners remain a serious consideration. In those areas, the Board appreciates TransCanada's method of securing necessary authorizations, limiting temporary work space requirements as well as its efforts to compromise with the Niagara grape growers. For the St. Mathieu Extension, the Board sees the merit of TransCanada's position that a new servitude adjacent to an existing servitude minimizes construction impacts. Similarly, the Board accepts the use of a new easement adjacent to the existing easement on the Montreal Line.

The Board, therefore, accepts the criteria used by TransCanada for its route selection, namely, making use of established utility corridors, Hydro lands and existing easements to the greatest extent possible.

7.1.2 Land Acquisition

TransCanada indicated that its land requirements for the proposed facilities included feesimple lands, new easements remote from existing easements, easement additions adjacent to existing easements, and temporary working space. Details of the land requirements for the facilities proposed are shown in Table 7-1 on page of these Reasons.

Section 75 of the Act requires a company to serve a notice of proposed acquisition on all owners of lands that may be required for a section or part of its pipeline. With respect to the applied-for facilities, TransCanada undertook to advise the Board of the number of landowners upon whom it must serve a section 75 notice and to document whether those landowners have signed easements agreements or options to purchase. Table 7-2 summarizes that information as of 15 July 1988.

Temporary work space is normally secured at the same time as permanent easement, but is sometimes not secured until after the commencement of construction. For the proposed facilities TransCanada would require temporary work space ranging in width from 7.0 m to 27.0 m to be located parallel and adjacent to its permanent easements. Many of TransCanada's easements along the Dawn Extension were negotiated in 1954 and 1955 and along the Niagara Line in 1965, and had automatic provisions for temporary work space included therein. TransCanada indicated that, despite those provisions, it negotiates temporary work space with each landowner. As of 1984, TransCanada's policy has been not to include the automatic temporary work space provisions in any new easement acquisition.

During the hearing, discussion focussed on whether the securement of temporary work space represented an acquisition of land, since if it were an acquisition of land, a notice of proposed acquisition would be required by section 75 of the Act. TransCanada's view was that securing temporary work space is a short-term, commercial transaction between itself and the landowner. As a result, TransCanada saw no obligation to serve a notice of proposed acquisition as a prerequisite to obtaining temporary work space.

Views of the Board

The Board considers TransCanada's land acquisition requirements to be reasonable. The Board notes that not all required lands have been optioned but acknowledges the major extent to which

TransCanada has completed negotiations with landowners and is confident that all negotiations will continue in a satisfactory manner.

The question of whether or not a particular temporary work space agreement creates an interest in land is a question of law which must be decided on a case-by-case basis. In each determination of that issue the intention of the contracting parties is paramount.

The Board is of the view that all temporary work space required adjacent to TransCanada's 195455 and 1965 easements has been already legally acquired by virtue of the automatic temporary work space provisions contained in the applicable easement agreements. It is, therefore, the Board's opinion that, with respect to this particular temporary work space, no section 75 notices of proposed acquisition - are required. As such, the Board offers no opinion as to whether or not TransCanada's use of such temporary work space constitutes an acquisition of land.

With respect to temporary work space required adjacent to easements which TransCanada acquired subsequent to 1983, the Board accepts TransCanada's evidence that it intends its acquisition of such temporary work space to be a shortterm commercial transaction which does not create an interest in land. However, the Board is of the view that TransCanada's intentions are not clearly reflected in the *pro forma* Work Permit that was filed in conjunction with its 29 March 1988 application. The Board therefore suggests that TransCanada incorporate into its *pro forma* Work Permit a clause stating that the parties thereto agree that the document does not create an interest in land.

7.1.3 Exemptions from Paragraphs 27(b) and 27(c) and Sections 28 and 29 of the Act

In its 9 June 1987 application, TransCanada requested a certificate with respect to its proposed 1988 and 1989 facilities. In addition it requested, *inter alia*, that the line pipe sections of those facilities be exempted, pursuant to section 49 of the Act, from the provisions of paragraph 27(b) and section 29 thereof. Such exemptions would relieve TransCanada from the necessity of filing PPBoRs and, as a consequence, from the procedures involved in obtaining Board approval thereof.

In the 29 March 1988 amendment to its 9 June 1987 application, TransCanada requested that construction of certain of its proposed 1989 facilities be advanced to earlier dates and exempted, pursuant to section 49 of the Act, from the provisions of paragraph 26(1)(a), subsection 26(2) and sections 27 through 29 thereof. In its 29 March 1988 application, TransCanada requested that its newly proposed Montreal Line and Central Section facilities receive identical exemptions. Such exemptions would relieve TransCanada from the necessity of obtaining a certificate in respect of those facilities and, as a consequence, from the various requirements associated with a certificate, including, *inter alia*, the filing of maps and PPBoRs.

In addition to the aforementioned exemptions, TransCanada, in its 29 March 1988 amendment, sought, in respect of its proposed gas generator and turbine upgrades at Stations 52, 60, 88 and 102, exemption under section 49 of the Act from the provisions of paragraph 26(1)(b) thereof. Such exemption would relieve TransCanada from the necessity of obtaining leave of the Board to open those facilities.

The Board's decisions with respect to the requested exemptions from section 26 and paragraphs 27(a) and 27(a.1) of the Act are included in Section 6.2 of these Reasons.

In seeking its exemption from paragraph 27(b) and section 29 of the Act, TransCanada presented the following arguments in support thereof:

(i) pursuant to section 49 of the Act, exemptions may be granted for new pipelines which do not exceed 40 km in length - any one of the facilities proposed by TransCanada does not exceed 40 km in length;

(ii) the requested section 49 exemption applies only to pipelines which create new easements that are remote from established utility corridors - TransCanada proposes to construct only one 4.5 km stretch of 'new' remote facilities, the remaining facilities would be within TransCanada's existing easement, Ontario Hydro lands or immediately adjacent and parallel to existing easements;

(iii) construction of loopline, an accepted industry practice to increase capacity, requires that loopline be placed in close proximity to existing pipeline for tie-in purposes - the majority of TransCanada's facilities are loopline:

(iv) additional regulatory procedures to determine the feasibility of following such easements would be redundant;

(v) TransCanada's facilities follow existing easements and no concerns have been expressed by federal, provincial and municipal authorities or organizations regarding the route location; and

(vi) rather than making use of established pipeline easements or other utility corridors, a requirement to obtain new easements, which could result from PPBoR procedures, would run contrary to the interests of landowners to be affected by a new route and the agencies responsible for the efficient use of lands.

With the exception of the Dawn Extension, new permanent easements or additions to permanent easements would be required. In all cases temporary working space is required. Both the proposed looping on the Dawn Extension and the Niagara Line would be located within existing easements where TransCanada holds multipleline rights and rights to obtain necessary, temporary working space.

Information provided by TransCanada indicated that, where new easement would be required, notices of proposed acquisition had been served but not all land rights had been acquired. A summary of acquisition status is provided in Table 7-2. For adjacent owners, who would have an opportunity to present their concerns regarding the method and timing of construction if a section 29.2 hearing were convened, TransCanada indicated that they had not done a title search on adjacent lands to advise those landowners of the project, nor had they given notice other than by the publication of the Notice of Public Hearing.

As indicated previously, a relatively large portion of TransCanada's facilities would be located within Ontario Hydro fee simple lands. The line to occupy the majority of that land would be the

Kirkwall Line which is approximately 30.9 km in length. TransCanada filed a copy of a Construction Agreement with Ontario Hydro for that location.

As owner of the property, Ontario Hydro would be responsible for the protection of its facilities from TransCanada's construction proposal and for the effects of that construction on lands leased by private individuals. The conditions of the Construction Agreement imposed by Ontario Hydro on TransCanada with respect to the protection of those tenants' interests are of note, specifically Conditions 2(b) and (f) and Condition 4(c) of the agreement which read as follows:

"2. Prior to commencement of construction the Corporation shall:

(b) Develop and implement an Ontario Hydro approved programme of notification to and adjacent property owners of its intention to construct a pipeline on Ontario Hydro land. (f) Make necessary arrangements with all Ontario Hydro tenants and adjacent property owners respecting access routes, temporary work areas, fencing, movement and care of livestock, vehicles and equipment."

"4. After construction the Corporation shall:

(c) Compensate Ontario Hydro tenants for any damages, such as crop loss or injury to livestock, caused by the Corporation, its servants or agents as a result of the construction, operation and maintenance of the works."

Views of the Board and Decision

A. Facilities for which the Board is prepared to issue a certificate

As stated in Chapter 6 of these Reasons for Decision, the Board is prepared to issue a certificate in respect of, *inter alia*, the following facilities:

1. Kirkwall Line -a new 30.9-km, 914-mm O.D. pipeline; and

2. Niagara Line -16.3 km of 914-mm O.D. pipeline loop.

In deciding whether or not to exempt those facilities from the provisions of paragraph 27(b) and section 29 of the Act, the Board has been mindful of the rights of neighbouring landowners. After careful consideration, the Board is of the opinion that due to the nature of the facilities' locations, those landowners would not be adversely affected by the proposed construction.

However, in order to protect the interests of the owners of lands proposed to be acquired by TransCanada, the Board is only prepared to exempt the above-listed facilities from the provisions of paragraph 27(b) and section 29 of the Act on condition that all necessary option or easement agreements be executed by such landowners prior to commencement of construction.

Although TransCanada did not request that these facilities be exempted from the provisions of paragraph 27(c) of the Act, which requires the depositing of Board-approved PPBoRs in the offices of the pertinent registrars of deeds, the Board is of the view that such an exemption should accompany exemptions from paragraph 27(b) and section 29. Therefore, the Board is prepared, pursuant to section 16.2 of the Act, to exempt the above-listed facilities from the provisions of paragraph 27(c) of the Act on condition that all necessary option or easement agreements be executed by all applicable landowners prior to construction.

The Board wishes to note that it does not accept the argument of TransCanada that exemptions from paragraph 27(b) and section 29 of the Act are not required with respect to pipelines which create new easements within established utility corridors. The Board has been vested with discretionary powers under section 49 of the Act to exempt a company from, *inter alia*, the provisions of sections 27 and 29. The Act provides no automatic exemptions from said sections. The Board therefore concludes that only by way of a section 49 application may a company potentially avoid the impact of those sections

B. Facilities which the Board has Exempted from Paragraph 26(1)(a)
As is stated in Subsection 6.2 of these Reasons, the Board has exempted the following facilities from the provisions of paragraph 26(1)(a) of the Act:

1. **Central Section-** Four Aftercoolers at compressor stations 49, 58, 69, and 80;

2. **Central Section -** Four existing 10.4-MW compressor units upgraded to 13.8 MW at stations 52, 601, 88, and 102;

3. **Central Section -** Temporary relocation of a portable 10.4-MW compressor unit from station 136 to station 95;

4. **Niagara Line -** 35.8 km of 914-mm O.D. pipeline loop;

5. **Niagara Line** - Relocation of a 3.2-MW compressor unit to station 109;

6. **Montreal Line -** Temporary relocation of a portable 5.7-MW compressor unit from station 134 to station 147;

7. **Montreal Line** - 19.1 km of 914-mm O.D. pipeline loop;

8. **St.Mathieu Extension** - 4.5 km of 508-mm O.D. pipeline loop; and

9. **Dawn Extension -** 8.8 km of 914-mm O.D. pipeline loop.
As a result TransCanada need not acquire a certificate for these facilities.

The Board exempts these facilities from the provisions of paragraphs 27(b) and 27(c) of the Act subject to the conditions which are itemized in the applicable Board orders found in Appendices II and III of these Reasons. The Board wishes to emphasize that, in respect of the above facilities numbered 4, 7, and 8, the exemption from paragraphs 27(b) and 27(c) of the Act is contingent on all necessary option and easement agreements being executed by all applicable landowners. Unless such agreements are executed, TransCanada must file applicable PPBoRs for Board approval prior to commencement of construction and follow the approval procedures set out in sections 29.1 to 29.6 of the Act.

With respect to the above facilities numbered 1, 2, 3, 4, 5, 8, and 9, TransCanada has already complied with the provisions of section 28 of the Act in connection with its 9 June 1987 application. With respect to the above facilities numbered 6 and 7, TransCanada did not apply for a certificate and is therefore not required to comply with the provisions of section 28. The Board therefore considers that TransCanada's request for exemption from the provisions of section 28 of the Act is unnecessary. Accordingly, the request is denied.

As the Board will not be issuing a certificate in respect of the above-listed facilities, section 29 of the Act does not apply to them. The Board therefore denies TransCanada's request for an exemption from the provisions of section 29 in respect of those facilities.

7.2 Environmental Matters

TransCanada submitted an environmental assessment and adopted its recommendations to prevent or mitigate any adverse environmental impacts resulting from the construction and operation of the applied-for facilities. TransCanada undertook to follow the policy statements and specific environmental mitigative measures and procedures stated in its Environmental Protection Practices Handbook, 1986, and its revised Pipeline Construction Specifications, 1988.

The facilities include a variety of projects across Ontario and Quebec for which TransCanada has

identified a wide range of environmental concerns related to land use, soils, agriculture and aquatic and heritage resources.

An Environmental Issues List ("EIL") was presented for each project, which included the recommended methods to prevent or reduce major environmental impacts.

Soil Compaction

Soil compaction is a potential problem on clayrich soils during wet weather conditions. Almost all of the proposed looping sections have some soils susceptible to compaction and rutting. TransCanada proposed to avoid wet conditions by scheduling construction during the normally dry summer months. If wet conditions are a concern, TransCanada would restrict the movement of heavily loaded wheeled vehicles to minimize the loss of soil structure.

1 By application dated 28 June 1988, TransCanada requested that Board Order No. XG-6-88 be amended to provide for a 3.4-MW compressor unit upgrade at station 43 rather than at station 60. On 18 July 1988, the Board approved TransCanada's request.

Where compaction is found to be of concern, subsoiling and primary cultivation may be recommended. TransCanada acknowledged that an agricultural subsoiler, when used under the correct soil moisture conditions, can relieve compaction by breaking up the soil at a much greater depth than other implements. TransCanada may recommend additional tillage if subsequent construction and clean-up activities result in further compaction .

On the looped sections where stoniness is a concern, the subsoil would be cultivated and stones larger than 0.1 m in dimension removed to a depth of 0.3 m prior to replacing the topsoil. In general, subsoiling and deep tillage would not be recommended for use in stony soils unless severe compaction were determined at a specific site.

In rural residential areas, where concern over the width of the right-of-way has been expressed by landowners, an effort would be made to restrict the work area to 50 percent of the area usually needed for construction. TransCanada would not strip the topsoil, but rather would work on the spoil pile over the hot line. It would restrict the passing of equipment and limit access to equipment and construction personnel only as required.

Vineyard Disturbance

There would be significant impacts on vineyards along the Niagara Line due to the three to four year lead time required for the vines to reach maturity. The significance of the disturbance would be increased by the number of years of lost potential productivity of a standing crop. Impacts may result from the removal of grape posts and the cutting of wires, which are required to maintain tension for the vines. Further impacts would include the reduction of access for irrigation, spraying, harvesting and other farm activities.

TransCanada stated that it had had extensive discussions with the grape growers. The growers have employed an outside consultant on their behalf to examine the possible impacts that pipeline

construction would have on their farm operations. TransCanada agreed that the consultant's report presented a reasonable case and would form a basis for further discussion and negotiation. TransCanada would also implement the related recommended mitigative measures outlined in its EIL.

Water Crossings

TransCanada indicated that it had determined the environmental sensitivity of each watercourse to be crossed by the proposed pipeline. The objective for protection of the streams would be to conduct the crossing during the period identified as the construction "window", normally during the dry summer months when the watercourse is least sensitive.

After pipe installation, TransCanada would stabilize the stream banks and valley slopes to minimize sedimentation and erosion. The environmental assessment contained a summary of the actions to be used for minimizing sediment loading in streams.

The highest quality stream that would be crossed is Twelve Mile Creek, located on the Niagara Line. To reduce the potential for negative impacts on aquatic resources during the crossing, an expedited wet crossing procedure would be implemented. Sand and silt created by ditch excavation and carried by the stream would be intercepted by a sediment control device installed just prior to excavation. To stabilize the steep valley slopes, TransCanada would cross-berm them and immediately mulch, fertilize and seed the area to achieve a stable Plant cover.

The crossing of the St. Lawrence River, as part of the proposed Iroquois Extension, would result in impacts such as the temporary disruption of habitat by trench excavation and noise created by instream blasting activities. TransCanada made a number of specific commitments to reduce the negative environmental impacts resulting on the river bank and in the St. Lawrence River. Consideration has been taken also to minimize conflicts with other uses such as commercial navigation. TransCanada has indicated in its assessment that through careful planning and sound construction practices, the overall impacts to the aquatic environment can be minimized.

Heritage Resources

The concerns for archaeological and historical resources along most of the proposed pipeline are minimal since in general, existing rights-ofway are followed. Most of the routes have already been disturbed, and any artifacts or structures were removed during previous pipeline or hydro tower construction.

TransCanada, however, filed additional archaeological reports for the Iroquois Extension and Kirkwall Line. Further site investigations involving test excavations have been recommended along those two sections of proposed new right-ofway. If additional sites are located, qualified consultants will be available to determine the optimal mitigative techniques.

Environmental Inspection and Monitoring

TransCanada clarified that, particularly in agricultural areas, environmental inspectors are to be

employed who have soils expertise. Those inspectors are to be on site continuously and will be associated with any activity that can create a potential environmental impact. The environmental inspector would have the right to shut down a specific construction activity if it were causing any damage that may likely be long term. TransCanada indicated that, for all construction spreads, it will retain an environmental inspector to advise on the implementation of recommendations submitted in the assessment and construction specifications. The inspector will help ensure compliance with contract documents, as well as with commitments made during the hearing, or in discussions with landowners or provincial or federal governments.

The inspector will also perform monitoring of soil restoration, water crossings and right-ofway clean-up. TransCanada indicated that where changes to right-of-way soils result in crop reductions as compared to off-right-of-way yields, rehabilitation programs to reduce the differences should be carried out. Parameters such as soil pH, fertility, density and organic matter would be monitored in certain locations to quantify differences and help determine an optimum restoration program.

The EIL would be used by TransCanada to track the status of the identified environmental issues throughout the project and to document the effectiveness of the environmental mitigation measures. The environmental inspector would be responsible for documenting the issues listed in the assessment as well as any additional environmental concerns arising during construction.

Concerns of the OPCC

Ontario, acting on behalf of the OPCC, was the sole intervenor to address environmental matters. The OPCC has been involved in an ongoing process of consultation and negotiation with TransCanada concerning the identification and resolution of many concerns involving provincial responsibilities.

Resulting from the discussions, have been a number of undertakings which TransCanada has entered into to satisfy Ontario. Those include a number of commitments such as providing construction designs for water crossings, and consulting with provincial personnel regarding rehabilitation and blasting plans. TransCanada agreed to comply with all but one request (25 of 26 items) made by Ontario during the hearing. That item entailed a pre-construction fish sampling program that Ontario would like TransCanada to carry out on the St. Lawrence River. Ontario felt that useful information could be gathered to improve construction techniques and mitigative measures.

Ontario also submitted that all of the undertakings made to the OPCC at the hearing should be identified and incorporated as individual conditions in any certificate. Ontario did not believe that a general condition relating to environmental policies, practices and procedures would be sufficient.

Views of the Board and Decision

The Board has considered the environmental information contained in the application and the evidence presented in the hearing. It is the view of the Board that the project would cause only local temporary environmental impacts.

The environmental information was clearly set out in TransCanada's EIL. The proper development and maintenance of the EIL should provide a focus for inspection during construction and help TransCanada to implement an effective environmental monitoring program.

Regarding the extensive commitments that TransCanada made to Ontario while under cross-examination, on matters such as providing additional information or notice of construction dates, the Board is of the opinion that those items should be included in a general certificate condition rather than as separate conditions. The evidence revealed that TransCanada and the OPCC have mutually agreed upon almost all of the measures to be undertaken, and, thus, the Board finds a listing of separate terms and conditions to be unnecessary.

In view of the Board's ruling on the Iroquois Extension, a decision is not required with respect to Ontario's request that TransCanada be ordered to conduct pre-construction baseline sampling of fish populations at the proposed St. Lawrence River crossing.

The Board requires TransCanada to implement the policies and recommendations contained in the application and the environmental reports, including the EIL. TransCanada is also required to implement the undertakings made to the Board and the OPCC during the hearing. Those measures and recommendations should, if properly applied throughout construction, result in a high standard of environmental protection and right-of-way rehabilitation.

To determine that the environmental objectives have been achieved, the Board requires TransCanada to file a post-construction environmental report within six months of the date that leave to open is granted. The report must discuss all the issues that have been identified up to that point in time, along with a statement of their status. The report must also discuss the measures to be implemented for the resolution of any outstanding issues.

The Board requires TransCanada to file a similar report by 31 December following each of the first two full growing seasons after construction.

Chapter 8

Toll Methodology

8.1 Background

In setting down TransCanada's facilities application for hearing, the Board decided to address at the same time any related toll methodology issues. The decision of the Board in this regard is in keeping with the views expressed earlier by the Board in respect of an application by IPL for new tolls effective 1 January 1987.
In view of its decision to examine toll methodology issues, the Board specified a number of issues which would be addressed at the hearing; these issues included:

(i) the appropriate toll methodology in respect of facilities proposed to serve new export markets and the anticipated domestic market growth;

(ii) the question of whether tolls to be charged for the use of the applied-for facilities, calculated on an incremental basis as opposed to the rolled-in method, would be just and reasonable having regard to section 52 and 52.1 of the Act; and

(iii) the question of whether a toll, rather than a surcharge which would be credited to TransCanada's cost of service, should be set to recover the cost of any facilities on the TransCanada system required to supply natural gas at a delivery pressure higher than that specified in the General Terms and Conditions of TransCanada's tariffs.

The Board requested TransCanada to file its proposed toll design methodology applicable to domestic and export incremental markets, including its justification of such proposals and to submit evidence on the applicable tolls under both incremental and rolled-in methodologies.

In response to the evidence submitted by TransCanada in this regard, the Board further requested TransCanada to examine an alternate toll methodology which would take into account the allocation of the costs of the existing facilities to both existing and incremental volumes and the allocation of the cost of the additional facilities to the incremental volumes only. TransCanada was requested to provide exemplar tolls using this so-called "alternate incremental" methodology.

8.2 Toll Methodologies Considered

The Issue

Under the existing rolled-in methodology, the cost of the new facilities would be added to the existing rate base and the tolls for all traffic, including the new volumes, would be based on the new cost of service for the whole pipeline system including expansion. To the extent that the toll revenues generated by the new volumes are greater (or less) than the costs of owning and operating the new facilities, the new tolls, on a rolled-in basis, will be lower (or higher) than the existing tolls.

Contrasted with the rolled-in method is the incremental method; two approaches to this method were examined. In the first incremental approach, the tolls for the new volumes would be charged with only the costs of the new facilities needed to expand capacity to move them through the system. Under this approach, existing tolls remain unchanged and in effect, no charge is made for the use of existing facilities, although new volumes do make use of them to the extent that spare capacity is available.

Under a second incremental approach, new volumes would be allocated their proportional share of the existing system costs plus all the costs of the new facilities. Using this approach, referred to as the "alternate incremental" toll method, the toll for the existing system would decline due to higher overall throughput but the new volumes would be charged with a higher aggregate toll.

Views of Parties

IGUA proposed that TransCanada's rate base should theoretically be split into two separate rate bases with one for domestic service and one for export service. To achieve this, IGUA suggested that TransCanada's previous capital expansions could be reviewed and allocated to a domestic or export rate base. Each rate base would then operate with its own rolled-in toll. While offering many practical suggestions as to how this might operate, IGUA agreed that its proposal was not fully developed and was presented as a concept for consideration.

It was argued that the IGUA proposal to establish separate rate bases to serve domestic and export markets is discriminatory because there is nothing inherently different between domestic and export markets. While IGUA acknowledged that there is no inherent difference in the nature of the customers in each market, it argued that there are differences in the risks of serving those markets.

TransCanada argued that incremental tolls would be discriminatory and would result in different customers paying different tolls for the same service at the same load factor and at the same delivery point. On the other hand, it argued that under rolled-in tolls, differences in unit costs of transportation only occur as a result of selecting a different quality of service. Shell Canada Limited ("Shell") argued that tolls may discriminate, provided that such discrimination is not unjust. In Shell's view, with respect to TransCanada's proposed facilities expansion, any discrimination in an incremental toll methodology would not be unjust because the new volumes are not moving under substantially similar circumstances. In this regard it pointed to deregulation as a major circumstance that has changed.

The concept of TransCanada as an integrated system was relied upon by proponents of the rolled-in methodology. TransCanada expressed the view that each user of the integrated system benefits from the existence of other users. Rolledin cost allocation and toll design treats costs and financial benefits in a manner consistent with the operational sharing of facilities and gas flow. TransCanada argued that, in its currently proposed expansion, all new facilities form part of the integrated system and, with the exception of the proposed Iroquois Extension, benefit all users of the pipeline. Shell questioned whether TransCanada's existing customers will benefit from the new facilities in a meaningful way, given that they do not need them and recognizing that there will be no spare capacity on the system after the expansion.

While this facilities expansion has been forecasted to have a negligible impact on existing tolls under the rolled-in methodology proposed by TransCanada, the Board heard testimony that future expansions under the same methodology would result in toll increases for all users. Some parties argued that this would amount to unfair cross-subsidization of the new volumes by the old.

Proponents of incremental tolls, particularly under the alternate approach, recognized that the new volumes would be subject to higher tolls than the existing volumes. They argued that this would be fair because the new volumes should pay for the new facilities required and suggested that the existing facilities somehow belong to, or are dedicated to, the existing shippers. TransCanada argued that cross-subsidization would exist under incremental tolls because the existing shippers would benefit from the increased system security resulting from the new facilities.

As to the existing shippers' rights to existing facilities it was argued that, given the differences between the current netback pricing system and the previous add-on system, it is difficult to say who has really paid for existing facilities. TransCanada expressed the view that facilities are not dedicated to specific customers and that the previous payment of tolls did not confer upon prior tollpayers any rights or privileges beyond the provision of service at that time.

In supporting a continuation of the rolled-in methodology, TransCanada pointed to the Board's past practice, noting the Board's reliance upon the integrated nature of its pipeline system in its 1973 and 1974 rate cases wherein the Board ruled against a TransCanada proposal to split the pipeline into a western and an eastern segment for cost allocation purposes. TransCanada also noted that previous major system expansions in 197273 and in 1981-82 were tolled on a rolled-in basis, even though those expansions resulted in higher tolls for all system users.

The witness for ANR who urged the Board to consider the alternate incremental methodology, testified that the rolled-in method is the preferred methodology of the FERC. He did, however, present examples in which the FERC has found the use of incremental tolls to be appropriate.

Consumers noted that the FERC's use of incremental tolls has been primarily restricted to situations when facilities have been installed to provide a custom service to a specific customer or group of customers and in situations when tolls are temporary and subject to review during a company's next rates proceeding.

Compatibility with deregulation and the promotion of industry growth were considered by many to be important factors in the selection of a toll methodology. TransCanada argued that one of the major objectives of deregulation was to enhance the access of supplies to markets, and that incremental tolls would not provide equality of access to the pipeline system. TransCanada further argued that the higher costs under an incremental or alternate incremental toll would discourage market growth and the attendant exploration and economic development. Those arguing for incremental tolls argued that the rolled-in methodology would mask market signals and would not accurately reflect the incremental cost of providing service to new customers .

It was argued that tolls are more stable and predictable under the rolled-in methodology thus allowing market participants, under deregulation, to plan with greater certainty. Concerns were expressed that, under incremental tolls, periods of cheap or expensive expansion could affect

decisions on future projects.

There seemed to be general agreement that the rolled-in method is the simplest method to administer and understand. However, it was recognized by those who proposed alternative methodologies that simplicity, although desirable, should not be a major factor in selecting a toll methodology.

ANR suggested that incremental tolls could be developed in an administratively workable manner by grouping this and all subsequent expansions together in a "new vintage" rate base. It argued that this approach would eliminate the problem of having different tolls for each incremental customer and toll fluctuations relating to periods of inexpensive or expensive expansion.

Views of the Board

(i) Practical Considerations

Fairness and Equity

In considering this application, the Board believes that it is important to first consider the legitimacy of the claims of the existing shippers over those of the so-called new shippers. Some parties argued that those who had paid for the existing facilities, in the sense of having been a customer in the past, should be entitled to continue using them without being affected by the addition of new facilities to serve new customers. Because new facilities tend to be more costly than older plant, this entitlement would in reality provide existing shippers with an acquired right to enjoy the use of older facilities at their lower embedded cost. Otherwise, they claim they would be required to cross-subsidize new customers. This theme underpinned a good deal of the arguments presented to the Board in these proceedings. Thus, various approaches were proposed to protect the existing shippers, including the separation of different rate bases for different vintages of shippers based on nothing more than seniority.

While the Board could well understand the motives of some existing shippers in protecting their own interests, acceptance by the Board of the notion of acquired rights would inevitably mean that past tolls were not just and reasonable in the sense of payment for services rendered. Such a notion would require that past tolls somehow also included payment for an option for the future use of the pipeline on preferential terms. Clearly this is not the case. In the Board’s view, the payment of tolls in the past conferred no benefit on tollpayers beyond the provision of services at that time. The Board does not equate those who paid for a service with those who paid for the facilities. Accordingly, the Board rejects the notion that shippers who have used the pipeline in the past are somehow entitled to continue using the existing facilities without being affected by new circumstances

Having thus placed both existing and new shippers on the same footing, the Board considers the next issue to be the relationship between the proposed new facilities and the existing pipeline system.

The Integral Nature of the System

From the outset the Board has viewed and treated all facilities in the TransCanada system, including those of Great Lakes and Trans Quebec and Maritimes Pipeline Inc. ("TQM"), as integrated. As well, spur lines and laterals to Ottawa, Niagara, etc. have been treated as integral parts of the whole system and for this reason the capital cost of these facilities were rolled into one rate base. In the present case, the Board believes that the service provided by the new facilities contributes to the capacity and integrity of the integrated system as a whole, and the Board finds no reason to deviate from this historical treatment. This finding, however, does not prevent other facilities, such as those designed to deliver extra pressure, from being treated either on a rolled-in or an incremental basis.

Complexity / Simplicity

Although given less weight than the previous two considerations, the Board recognizes that the rolled-in approach avoids the toll design complexity inherent in an incremental approach. The Board finds it impractical to require TransCanada to divide the existing system into component parts, as suggested by IGUA, or multiple incremental rate bases, as proposed by others.

Other

The Board finds that many of the other toll methodology criteria suggested by parties, such as compatibility with deregulation, promotion of growth in the natural gas industry, and stability of tolls over time, while laudable, are not primary considerations in arriving at just and reasonable tolls. Notwithstanding this view, the Board notes that the rolled-in approach is not in conflict with these objectives.

(ii) Legal Considerations

The Board's authority flows entirely from the National Energy Board Act. The Board does not possess any inherent jurisdiction and thus, authority for any and all actions taken by it, must be found in the wording of the Act. The Board's mandate in respect of traffic, tolls and tariff matters is found in Part IV of the Act. The Board must abide by certain fundamental standards of tollmaking that are specified in, inter alia, sections 52 and 55 of the Act: all tolls must be just and reasonable (section 52) and no toll shall result in unjust discrimination (sections 52 and 55).

The "Just and Reasonable" Standard

The "just and reasonable" standard of tollmaking is commonly found in legislation governing the regulation of public utilities. Precisely what this standard embodies has been the subject of considerable debate. That the Board has a wide discretion in choosing the method to be used by it and the factors to be considered by it in assessing the justness and reasonableness of tolls has been confirmed by at least three cases dealing with Board decisions.1

In determining just and reasonable tolls, one of the approaches the Board has taken is to allocate costs to various services on the basis of cost causation; tolls are then designed to recover the costs of these services from the customers using them. In the Board's view, although each of the methodologies proposed at the hearing differs in the allocation of the new costs of facilities, each

takes into account cost causation and is therefore consistent with one of the Board's approaches to setting just and reasonable tolls.

In considering cost causation as an approach to making tolls just and reasonable, the Board notes that in an integrated system as complex as TransCanada's, it is not always practical to determine the precise costs caused by the provision of a specific service. Accordingly, modifications to a strict cost-causation approach to tollmaking are necessary. One such example is the use of toll zones to deal with a multitude of delivery points within a geographical region. If tolled on a strict cost-causation basis, for example point-to-point, a multiplicity of price differences within each region would result. Furthermore, there are situations where the cost-causation approach *per se* may not be appropriate. These situations include tolls for one service that reflect its relative value of service in comparison with that of another, rather than its underlying cost. This, in fact, is the basis for the differences among TransCanada's IS-1, IS-2 and FS tolls. Another is a market-oriented approach where competition exists and tolls based on cost causation are not competitive. Such tolls, if implemented, could lead to what is commonly referred to as a "deathspiral" for the company and therefore would not be reasonable.

1 See:

British Columbia Hydro and Power Authority u. Westcoast Transmission Company Limited, [1981] 2 F.C. 146, 36 N.R. 33 (C.A.).
Trans Mountain Pipeline Company Ltd. v. National Energy Board, [1979] 2 F.C. 118, 29 N.R. 44 (C A.).
Consumers' Association of Canada v. The HydroElectric Power Commission of Ontario (No. 1), [1974] 1 F.C. 453, 2 N.R. 467 (C.A.).

Unjust Discrimination

Although the Board has a wide discretion in choosing a toll methodology which results in just and reasonable tolls, this discretion is fettered by the requirement (in sections 52 and 55) that tolls shall not be unjustly discriminatory. Section 55 prohibits a company from making any unjust discrimination in tolls against any person or locality. This prohibition is reinforced by section 52 which provides that:

"All tolls shall be just and reasonable, and shall always, under substantially similar circumstances and conditions with respect to all traffic of the same description carried over the same route, be charged equally to all persons at the same rate."

The use of the words "shall always" in legislation indicates a strong desire on the part of the legislators that there be few, if any, differences in rates charged for the same service. Unless there were a genuine concern, there could have been little point in doing more than require that "all tolls shall be just and reasonable".

Differences in tolls between customers for the same class of service even within one toll zone are, *prima facie,* discriminatory. The prohibitions in sections 52 and 55 are however, prohibitions of unjust discrimination and the question is when is discrimination against any person or locality

justified? Section 52 provides some guidance in this regard. Section 52 provides that tolls shall be charged equally to all persons at the same rate in respect of traffic of the same description carried over the same route, under substantially similar circumstances and conditions. By implication, tolls may be charged differently where these tolls are:

(i) in respect of traffic of differing descriptions;

(ii) in respect of traffic carried over different routes; or

(iii) in respect of traffic transported under differing circumstances and conditions.

The word "traffic" is not defined in the Act; in the Board's view however, "traffic" refers to the commodity which is being transported. In equating the word ''traffic'' with the word "commodity", the Board has regard to the fact that "traffic" is defined to be "passengers or goods" in a section of the *Railway Act*, similar to section 52 of the *National Energy Board Act.* In the case of a pipeline like TransCanada, the commodity is, of course, natural gas and all throughput is therefore "traffic of the same description". This is in contrast to a pipeline like IPL which transports traffic of different descriptions (e.g., light, medium or heavy oil or natural gas liquids). In that case, by applying the cost-causation principle, different tolls may be charged to reflect the cost of providing service to each of the various streams.

The Board agrees with Consumers that the phrase "over the same route" refers to a specific domestic toll zone or a specific export point in the context of TransCanada's system. While it could be argued that gas moving to the Eastern Zone through Great Lakes does not take the same route as gas through the Central Section and on to Toronto or via the North Bay Shortcut to Montreal, the co-mingled nature of the gas streams makes it impossible to determine the exact route taken by particular volumes. Notwithstanding this technical problem, the Board finds that because TransCanada is in an integrated system, all gas reaching the Eastern Zone should be regarded as having moved over the same route.

The meaning of the phrase "under substantially similar circumstances and conditions" is more difficult to ascertain. Taken in the context of the whole of section 52, the phrase "circumstances and conditions" may be regarded as referring to circumstances and conditions of transportation of the gas such as the nature and character of the service provided (i.e., FS or IS) and not to the business motives either of the shipper or the carrier nor to circumstances and conditions created by contract (such as the terms of gas sales or purchase contracts), or by government policy (for example, pre- and post- 31 October 1985).

To the extent that the new facilities form part of the integrated system, the Board agrees with those parties to the hearing who submitted that section 52 precludes the adoption of an incremental toll methodology. Each of the alternate and the incremental methodologies would afford different, segregated treatment to new facilities and cost of service components required to deliver all, or a portion of, the incremental volumes. This would result in different tolls being paid for the same service to the same zone, and even to the same delivery point, and would, in the Board's view, violate section 52 of the Act. To adopt, for example, the alternative incremental approach would inescapably result in FS tolls charged at different rates to different shippers in

respect of traffic of the same description moving over the same route under substantially similar circumstances and conditions; such a situation is specifically prohibited by section 52.

A finding, in the circumstances of this case, that the integrated nature of TransCanada precludes the adoption of other than a rolled-in methodology does not, in the Board's view, necessarily mean that *all* new facility additions must be treated in a similar fashion. When identifiable facilities which do not increase the throughput capacity on the integrated system are installed to provide a custom service to a specific user or group of users, then such discrete facilities might not form part of the integrated system. In such cases, these facilities can, in the Board's view, be the subject of a separate toll, calculated on the basis of either a rolled-in or incremental methodology; this would not constitute a contravention of section 52 of the Act.

Decision

Except where set out in Section 8.3 of these Reasons, all costs of all those facilities either approved under section 44 or exempted under section 49 of the Act, in this proceeding, will be rolled-in to the TransCanada rate base.

8.3 Delivery Pressure Toll

In its 9 June 1987 application, as amended, TransCanada proposed to install facilities to provide at Niagara Falls and Iroquois a minimum delivery pressure in excess of that specified in its General Terms and Conditions.

According to TransCanada, the provision of a guaranteed pressure higher than that stipulated in the General Terms and Conditions is a service which is distinct and different from the other transmission services rendered on its system. Accordingly, TransCanada proposed the imposition of an incremental delivery pressure charge at Iroquois.

TransCanada took the position that the incremental delivery pressure at Niagara Falls should be "grandfathered", even though the contractual obligation to provide incremental pressure on a firm basis would not commence until 1 November 1988. It argued that since the Board had approved, pursuant to section 35(2) of the *National Energy Board Part VI Regulations*, an amendment to the Boundary contract which specified the incremental pressure obligation at Niagara Falls, it would be consistent for the Board to grandfather such obligation.

Noting the different toll treatments of the costs of providing additional pressure at Iroquois, Niagara Falls and other delivery points, the Board decided to review delivery pressure tolls as a generic issue. Accordingly, the List of Issues was amended to include the following:

"IV-4 The question of whether a toll, rather than a surcharge which should be credited to TransCanada's cost of service, should he set to recover the costs of any existing or proposed facilities on the TransCanada System which are required to supply natural gas, at existing or proposed delivery points, at a minimum delivery pressure higher than that specified in the General Terms and Conditions. Also, the appropriate methodology to determine the toll or surcharge.

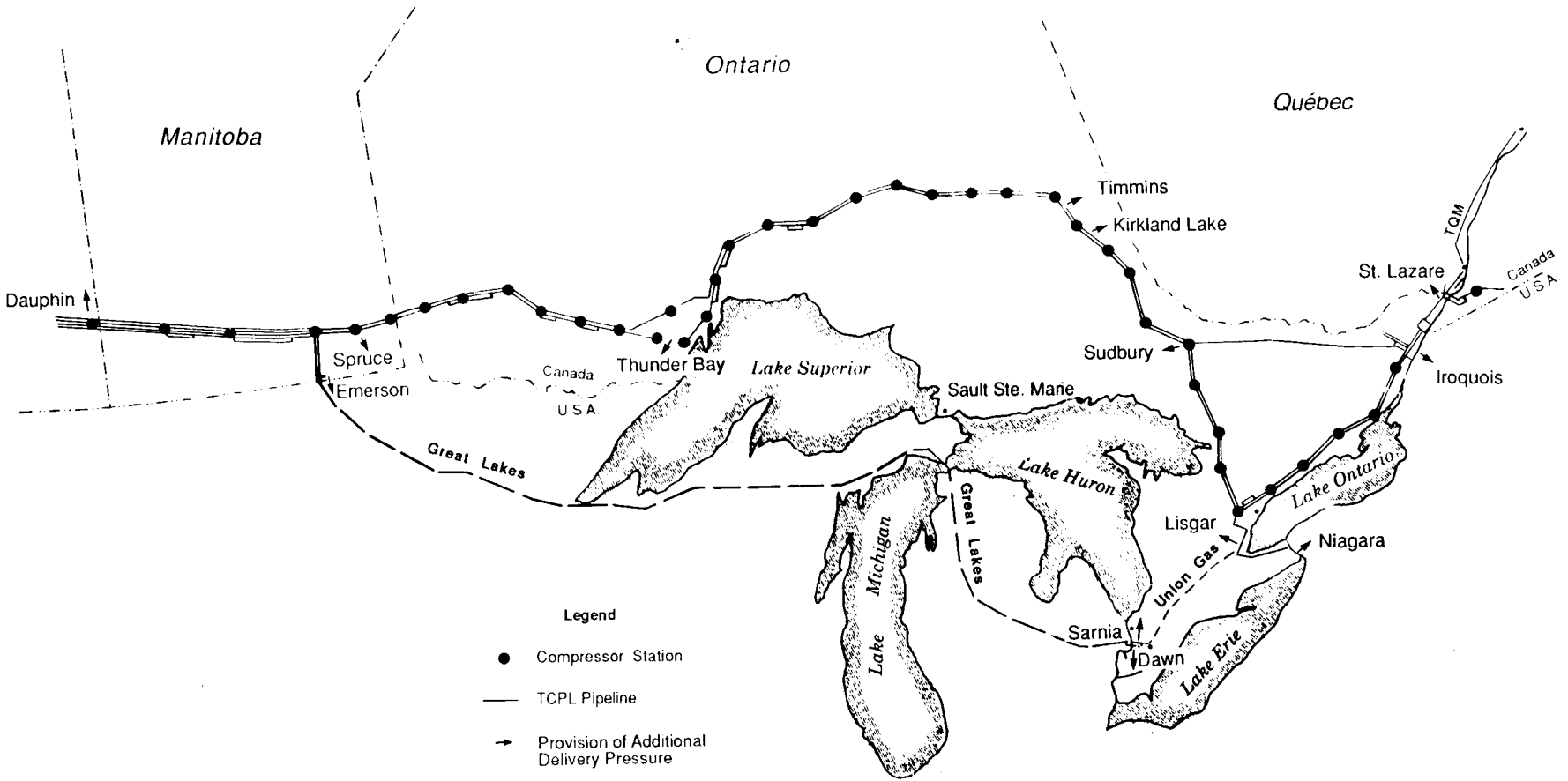
TransCanada's General Terms and Conditions specify that the minimum pressure shall be not less than a gauge pressure of 2800 kPa (400 psig). TransCanada testified that it is contractually obligated to provide pressure in excess of 2800 kPa at eleven locations, namely, Emerson, Sudbury, Dawn, Sarnia, St. Lazare, Dauphin, Spruce, Thunder Bay, Timmins, Kirkland Lake and Lisgar. TransCanada incurs incremental costs at the following five locations: Emerson, Sudbury, Dawn, Sarnia and St. Lazare (see Figure 8.1).

Emerson

At Emerson, Manitoba, TransCanada has a contractual obligation to provide gas to Midwestern and Great Lakes at 5171 kPa (750 psig). Since TransCanada first began to provide a delivery

Figure 8.1

Locations Where TransCanada is Contractually Required to Provide Pressure in Excess of 2800 kPa



pressure higher than 2800 kPa (400 psig) at Emerson, facilities have been added to meet increased volume requirements while maintaining or increasing the delivery pressure. Therefore, TransCanada was not able to separate the facilities added to increase the delivery pressure from those added to provide increased deliveries.

Emerson is the only location where TransCanada recovers a revenue from the sale of delivery pressure. The delivery pressure charge currently in place is a result of an estimate of required facilities based on market requirements during the 1975-76 to 1979-80 contract years, as forecasted by TransCanada in 1974. Therefore, the charge at Emerson does not reflect the current cost of providing the delivery pressure service.

Sudbury

The Sudbury sales meter station is located at North Bay adjacent to compressor station 116. TransCanada has an obligation to deliver gas to ICG Ontario at that station at not less than 6200 kPa (900 psig). As the prevailing pressure at the suction side of the station is less than 6200 kPa, TransCanada makes the deliveries from the discharge side. TransCanada did not quantify precisely the incremental cost of compressing the Sudbury volumes at station 116 but estimated that it was in the range of $40,000 per year.

Sarnia and Dawn

TransCanada has an obligation to deliver gas at 4500 kPa (650 psig) at Sarnia and Dawn. Since TransCanada's Dawn Extension consists of only line pipe, this pressure originates from compression facilities installed on the Great Lakes system. In theory, TransCanada could have initially installed a smaller size line had its contractual obligation been to guarantee only 2800 kPa (400 psig). However, increased requirements subsequent to construction would have necessitated compression or loop. Therefore, TransCanada could not identify the theoretical facilities modifications necessary to maintain the higher delivery pressure at Sarnia and Dawn.

St. Lazare

TransCanada is contractually obligated to provide a minimum delivery pressure of 2800 kPa (400 psig) at the ultimate delivery points on the TQM system. As there are no compression facilities on the TQM system, TransCanada must provide a pressure at St. Lazare which is sufficiently high to meet these obligations. Although a minimum pressure at St. Lazare is not specified in the contract, evidence indicated that a pressure in the range of 4200 kPa (610 psig) is satisfactory. TransCanada could not identify the specific facilities and associated costs required to provide the necessary pressure to TQM.

TQM's transportation costs are incorporated into TransCanada's revenue requirement. Therefore, any charges for additional pressure to meet TQM's delivery pressure requirements would, in effect, be a transportation cost to TransCanada and rolled into TransCanada's cost of service

Niagara Falls

TransCanada has been providing pressure at Niagara in excess of 2800 kPa (400 psig) since 1980 on a best efforts basis. Pursuant to the Boundary Phase II gas purchase agreement which was executed on 14 September 1987, TransCanada will have a firm obligation to deliver gas at Niagara Falls at 4826 kPa (700 psig) once facilities are in place to transport the last 0.071 106m3/d (2.5 MMcfd) increment of the Boundary exports pursuant to Licence GL-83. This is scheduled to occur by 1 November 1988. TransCanada indicated that the requirement for a higher delivery pressure at Niagara Falls is due to capability restrictions downstream on the Tennessee pipeline system. It estimated that 6.8 km of the applied-for 914-mm O.D. Niagara Line loop was required to provide the higher delivery pressure.

Iroquois

TransCanada proposed to construct facilities at Iroquois to guarantee a delivery pressure of 9928 kPa (1440 psig). The additional facilities necessary to provide this pressure were identified as compressor station 1401 and 4.5 km of heavy wall pipe on the Iroquois Extension.

Base Pressure for the Calculation of Delivery Pressure Tolls

TransCanada testified that the appropriate costs to be recovered through a delivery pressure toll are the costs that are incurred in raising the pipeline pressure from the minimum level required by the safe, effective and efficient operation of the pipeline to the requested level. It indicated that operating its compressor stations to discharge gas at the MAOP resulted in optimum efficiency. In view of the range of compression ratios (the ratio of discharge pressure over suction pressure at a compressor station) that prevail across the pipeline system, suction pressures do not fall below 4480 kPa (650 psig) during normal operation but may drop as low as 4000 kPa (580 psig) in the event of the loss of an upstream compressor unit.

Toll Methodology

TransCanada testified that a surcharge for the provision of incremental pressure is a toll as defined in section 2 of the Act. In its view, the words "toll" and "surcharge" could be used interchangeably.

TransCanada proposed that a two-part toll, composed of a demand and a commodity component, be set at Iroquois to recover the incremental costs associated with the provision of additional pressure. All the fixed costs would be recovered through a demand charge which would be based upon contracted volumes. All variable costs would be recovered through a commodity charge.

The demand charge would recover the fixed operating and maintenance expenses, return, depreciation, and taxes associated with the incremental facilities.

The commodity charge would recover the cost of incremental fuel consumed to increase the pressure to the requested level. TransCanada proposed to cost the fuel at the average price of natural gas at the Alberta border without including the toll for moving that fuel to the point of consumption. It submitted that costing the fuel at the Alberta border would be consistent with the

way in which fuel is costed for the purpose of determining transportation tolls.

TransCanada proposed to modify the existing one-part pressure charge in place at Emerson. Currently the charge is applied to volumes actually received. However, in providing the pressure, TransCanada incurs certain fixed costs which are unrelated to the volumes taken by Great Lakes and Midwestern. These fixed costs are recovered from all TransCanada tollpayers in the event that Midwestern and Great Lakes reduce their takes. Also, a one-part charge requires TransCanada's shareholders to bear the risk of under recovery if Great Lakes and Midwestern take less gas than forecasted at the time that tolls are established. For these reasons, TransCanada submitted that the existing Emerson pressure charge should be made a two-part toll.

TransCanada proposed that the revenue from the pressure charges at Emerson and Iroquois be credited to its cost of service under "Other Operating Income" prior to cost allocation and toll design. This is consistent with the current treatment of the revenue from the Emerson charge. TransCanada argued that only those who request the incremental delivery pressure service should pay the incremental toll.

Views of Interuenors

The CPA did not take a position on the generic issue of delivery pressure tolls. However, it submitted that, if the Board certificates compressor station 1401 on the Iroquois Extension, the owning and operating costs of the station should be the subject of a pressure charge.

IPAC took the position that the recipient of incremental pressure should not be necessarily obliged to pay a charge. According to IPAC, whether a purchaser at a given receipt point on the TransCanada system should be obliged to pay a pressure charge depends to a very considerable degree on whether that party requested the higher pressure.

ANE argued that the costs of providing incremental pressure should be rolled-in in order to prevent inconsistent and discriminatory treatment. It submitted that if a delivery pressure charge is levied at Iroquois then, by virtue of Part IV of the Act, every party receiving incremental delivery pressure at other delivery points should be charged on the same basis and not only at locations where the costs are readily identifiable. According to ANE, the level of pressure requested may affect the quantum of the charge but should not affect whether the charge itself is imposed. ANE stated that the project participants would have to negotiate the manner in which a delivery pressure toll levied at Iroquois would be borne.

Boundary supported rolling-in the cost of providing delivery pressure in excess of that specified in the General Terms and Conditions. It submitted that, should the Board choose to set a toll or charge for the provision of higher than normal delivery pressures, all parties receiving this service should pay for it on the same basis.

Champlain did not object in principle to the imposition of a separate pressure charge for the provision of delivery pressure at a higher than normal operating pressure. It argued that a pressure of 4482 kPa (650 psig) should be considered as the floor for pressure charges between transmission companies since evidence indicated this was the minimum pressure at the suction

side of TransCanada's compressors under normal operations. Champlain also suggested that the tolls for the service should be included in TransCanada's tariff and that the conditions under which excess delivery pressure is offered should be in the General Terms and Conditions rather than in individual contracts.

Vermont Gas supported Champlain's submissions.

ProGas submitted that the Board's decision on delivery pressure charges must be consistent at all delivery points in order to prevent discrimination. It suggested that the best manner to ensure against discrimination is to remove all pressure charges on the TransCanada system.

Consumers argued that the provision of pressure higher than that required by the tariff and higher than the pressure that would otherwise prevail at or near the delivery point is a custom service that does not provide any system-wide benefits. Accordingly, the users of such custom service should pay the resultant owning and operating costs. According to Consumers, a pressure charge should be levied at Niagara Falls, Emerson and Iroquois and should be designed on a demand/commodity basis so that the fixed costs would be recovered regardless of the degree of use of the service.

GMi stated that a delivery pressure charge should be established to cover the difference in costs between the delivery of gas at the level requested and the level necessary for normal operation. It suggested that, for deliveries to a transmission system, a minimum pressure of 4480 kPa (650 psig) represented a suitable operational level.

KannGaz submitted that there should be no extra charge if the minimum delivery pressure supplied to a downstream system is not greater than the minimum normal operating pressure on the upstream system. It supported the imposition of a pressure charge at Iroquois since the design operating pressure of the IGTS pipeline is higher than that of the TransCanada pipeline.

OSP opposed the establishment of an incremental pressure charge at export points since it may raise questions of discrimination in the United States. It noted that Great Lakes provides TransCanada with gas at a minimum of 5000 kPa (725 psig) at St. Clair without levying a pressure charge. It argued that the imposition of a new delivery pressure charge, unless it were included as part of the TransCanada demand charge and therefore had no effect on the border price, would result in considerable delays and uncertainty since it would necessitate renegotiation and approval of all of the contracts associated with the OSP project.

Tennessee supported TransCanada's position that no delivery pressure charge should be levied for the minimum pressure of 4826 kPa (700 psig) to be provided at Niagara Falls commencing 1 November 1988. In Tennessee's view, delivery pressures at this level are normal at the interface of two high pressure transmission systems and reflect sound engineering economics.

Midwestern stated that it was prepared to abide by the agreement currently in place at Emerson, which provides for a one-part commodity pressure charge. However, should there be changes to the pressure charge in light of the Board having raised the question, it was Midwestern's submission that there should be no separate charge for pressure at Emerson. According to

Midwestern, the delivery pressure at Emerson is normal in light of the integrated nature of the TransCanada/Great Lakes system. Furthermore, the evolution of facilities to deliver gas at Emerson is such that the allocation of costs to the provision of pressure would be arbitrary. Ontario submitted that a pressure charge for the provision of excess delivery pressure is appropriate. The charge should be designed to recover the estimated annual owning and operating costs of providing delivery pressure above the prevailing operating pressure of the line on the Canadian side of the export point.

Views of the Board

As indicated in Section 6.4, commencing on page 48 of these Reasons, the provision of additional delivery pressure is a separate and distinct transportation service. Only a limited number of shippers require additional pressure at the various delivery points and the service is in many respects unique at each such point. The facilities which are, or are deemed to be, necessary to provide the service can be separately identified and stated apart from the integrated rate base. In this case, the application of section 52 of the Act is not determinative. The situation would allow either a rolled-in or incremental approach to be contemplated. However, in accordance with the principles of cost causation and "user-pay", the shippers using and benefiting from this service should be required to bear the incremental costs in order to ensure that undue cross-subsidization by other tollpayers does not occur. Therefore, to ensure that only those using and benefiting from the service pay, a separate and incremental tolling approach is necessary.

(i) Base Pressure

The current General Terms and Conditions of TransCanada's tariff specify a minimum delivery pressure of 2800 kPa (400 psig). This minimum does not take into account the operational requirement of maintaining TransCanada's pipeline pressure above 4480 kPa (650 psig) under normal operations and above 4000 kPa (580 psig) under loss-of-unit conditions. The Board is of the view that all shippers using the TransCanada system are entitled to a minimum delivery pressure not less than that which TransCanada must ensure for the safe, effective and efficient operation of the integrated system as a whole. However, in certain cases such as when the shipper receives gas in a low pressure system, a delivery pressure of that magnitude is not required. In these cases TransCanada and the customers may agree to a lower guaranteed minimum pressure

Decision

TransCanada is directed to amend section IX of its General Terms and Conditions to provide that the minimum pressure at each delivery point shall be not less than a gauge pressure of 4000 kPa (580 psig) unless a lesser minimum pressure is agreed to by the parties.

(ii) Deliuery Pressure Toll Methodology

TransCanada proposes to treat the costs of providing incremental pressure in three different ways. At several points, where TransCanada is required to provide incremental pressure, it proposes to "grandfather" the obligation and not require the shippers using or benefiting from the service to

pay the incremental costs. At Emerson, the current one-part charge that is in effect and proposed to be continued, albeit under a two-part formula, is contractually based and does not reflect the costs of providing the service. At Iroquois, and presumably any other new delivery point, TransCanada proposes to establish a twopart toll. The Board finds that, were TransCanada to implement the three different toll treatments that it proposes for the cost of providing incremental delivery pressure, the resulting tolls would be unjustly discriminatory and therefore contrary to section 55 of the Act.

Certain of the costs of providing incremental delivery pressure do not vary with throughput. In order to ensure that these fixed costs are properly recovered from the shippers which use and benefit from this service, the incremental delivery pressure toll should be a two-part toll. The demand component should recover the fixed owning and operating costs of the facilities that are, or are deemed to be, necessary to raise the pressure from:

(a) the higher of:

(1) 4000 kPa (580 psig); or

(2) the prevailing line pressure that would be required at all times (including the loss-of-unit conditions) in the absence of the incremental pressure obligation;

(b) the requested guaranteed minimum pressure.

TransCanada's pipeline system is designed to transport its shippers' volumes together with the fuel consumed along the system which is necessary to transport these volumes. TransCanada incurs fuel-related costs as follows:

(i) the fixed cost of the facilities required to move the fuel volumes; and

(ii) the variable costs associated with the fuel itself and its transportation.

Under current toll-making methodology for FS, the system's total fuel-related costs are allocated on a volume-distance basis. Therefore, a shipper pays, as part of the toll, the allocated portion of the fuel-related costs incurred in moving gas to the ultimate point of delivery.

Similarly, the provision of delivery pressure would require that the pipeline system carry from the Alberta border an incremental amount of gas that would be consumed at the last compressor station(s) upstream of the shipper's delivery point. By adding the FS toll to the fuel costs at the Alberta border, the incremental costs of both the facilities and the fuel required to move that incremental fuel volume would be allocated to the shippers using the delivery pressure service. In the Board's view, this would be consistent with the methodology currently in place for the FS toll and with principles of "user pay" and cost causation. Therefore, the commodity component of the delivery pressure toll should recover:

(i) the costs of the compressor fuel used to elevate the pressure of the delivered gas to the requested level; and

(ii) the FS transportation toll at 100% load factor to move that fuel from the Alberta border to the zone in which it is consumed.

Consistent with the toll design methodology used for other services, shippers on TransCanada requesting a delivery pressure service should have the option of providing their own fuel. Such shippers would pay, as part of the commodity charge for the delivery pressure service, the appropriate FS toll for shipper-provided fuel.

The Board does not accept TransCanada's proposal that only the specific parties that initially requested incremental pressure should pay an incremental pressure toll at a given delivery point whereas other parties receiving gas at the same delivery point would not be required to pay any incremental charges. In the Board's view, the pressure at any delivery point where the gas is co-mingled both upstream and downstream cannot be seen as being required by only one particular shipper. The costs of providing incremental pressure are related to the total volume delivered at the delivery point. Charging only the parties that request the service could result in two parties receiving the same service at the same point paying different tolls. This situation would be contrary to section 52 of the Act. Accordingly, the Board finds that all shippers using or benefiting from incremental delivery pressure at a specific delivery point should be charged the appropriate toll.

Decision

The Board directs TransCanada to develop tolls, in accordance with the methodology set out above, to recover the incremental costs incurred at each delivery point on the TransCanada system where it is obligated by contract to provide incremental pres- sure. TransCanada shall record the revenues from these tolls in account 579, Miscellaneous Operating Revenue, in accordance with the Board's *Gas Pipeline Uniform Accounting Regulations.* **The Board will review the proposed tolls at the RH-188 proceedings.**

8.4 Burden of Proof

In their submissions on the appropriate tolling methodology with respect to the applied-for facilities, several parties addressed the concept of burden of proof. The Board therefore considers it appropriate to deal with the matter in this chapter.

Consumers stated that in the context of administrative proceedings, the burden of proof is typically cast upon the applicant. When the applicant has made a *prima facie* case, its burden has been discharged and the burden shifts to those parties opposed to the applicant's position. However, in the specific situation wherein an intervenor proposes a change in the status quo of something that the applicant does not propose to alter, the initial burden of proof lies with such intervenor. Consumers therefore concluded that a proponent of change to the existing rolled-in toll methodology bears the burden of proof.

Consumers position was opposed by no-one and was supported by the APMC and TransCanada. TransCanada qualified its support by stating that there are certain situations wherein no party bears the burden of proof. An example of such a situation, cited by TransCanada, is Issue III-3 of

these proceedings which reads as follows:

"Is it in the public interest to provide new facilities for presently uncontracted Canadian market demand which is forecasted to exist in contract years commencing November 1988 and Nouember 1989?"

In TransCanada's opinion such an issue is akin to an enquiry by the Board and, as such, no burden of proof is thereby created.

TransCanada also addressed the burden of proof created by section 56 of the Act which reads as follows:

"Where it is shown that a company makes any discrimination in tolls, service or facilities against any person or locality, the burden of proving that the discrimination is not unjust lies upon the company."

Stating that section 56 applies to a pipeline company charging or proposing to charge a discriminatory toll, TransCanada submitted that an intervenor proposing a discriminatory toll, can be subject to no less a burden than that created by section 56. TransCanada's views were supported by the APMC.

ANR disagreed that the section 56 burden applies to intervenors. It stated that TransCanada's position is premised on an invalid reading of section

Viewsof the Board

"Burden of proof' is a fundamental concept in proceedings before a Court. If a party is unable to satisfy the burden cast upon it, the Court has no option but to deny the relief sought by that party, thereby ruling in favour of that party's adversary.

Unlike a Court, the Board, in arriving at its decisions does not focus on the specific interests of two adversarial parties but must focus its attention on the wider public interest. It is therefore inappropriate to designate a burden of proof with respect to each of the issues before the Board in a public hearing. Were the Board to decide each issue on the basis of the strict rules pertaining to burden of proof, it would, in a situation wherein an applicant and an intervenor take opposite positions on a particular issue and provide equally unpersuasive evidence, be nonetheless obligated to adopt the position of the intervenor.

Although the Board does not consider it appropriate to establish a burden of proof with respect to each issue in a public hearing, it nonetheless considers that an applicant has the burden of establishing on the balance of probability that the relief sought in its application should be granted. For example, with respect to its original 9 June 1987 application, TransCanada had the burden of establishing that:

(1) its applied-for facilities are in the present and future public convenience and necessity;

(2) it is in the public interest to exempt those facilities from paragraph 27(b) and section 29 of the Act; and

(3) its suggested toll methodology will yield just and reasonable tolls.

Whether or not the relief sought by an applicant involves a change in the status quo, the Board is of the view that with respect to such relief the initial burden of proof always lies with the applicant. If an applicant is unable to satisfy such burden, the particular relief sought will be denied. If, on the other hand, the applicant establishes a prima facie case, the burden shifts to those parties opposed to the applicant's position. Therefore an intervenor which merely opposes the position of an applicant without proposing an alternate position of its own, has no burden of proof unless the applicant establishes a prima facie case. However, should an intervenor not merely oppose the position of an applicant, but propose its own alternative position, such intervenor has, with respect to its alternative position, a burden of proof identical to that of the applicant. Were this not the case, intervenors would have an unfair advantage over an applicant. This conclusion is based upon principles of fairness and not upon the provisions of section 56 of the Act. In the Board's view section 56 does not apply to toll methodology proceedings but rather to a situation wherein a party complains of unjust discrimination in a company's existing tolls.1

1 The toll criteria enunciated in section 52 of the Act implicitly prohibit unjust discrimination in a company's proposed tolls.

Chapter 9

Tariff Matters

TransCanada's FS toll schedule, which was implemented following the Board's RH-3-86 decision, contained the following availability of service provision under subsection 1.2 thereof:

"It is understood that TransCanada shall not construct additional facilities for the purpose of providing short-term firm service hereunder".

In subsection 2.2 of the same toll schedule, TransCanada stipulated that:

"In respect of short-term firm service hereunder, not withstanding sub-section 2.1 hereof, TransCanada may, at any time, by written notice to Customer and with the prior approval of the National Energy Board, reduce Customer's Operating Demand Volume to the extent that TransCanada requires capacity to provide for long term firm service.

This subsection was referred to as the "bumping" provision of the TransCanada tariff.

In assessing the applied-for facilities, the Board was concerned with the possible impact of certain provisions of TransCanada's tariff on the continued availability of short-term service to direct shippers. Accordingly, the following three issues were included in the List of Issues to be considered during the hearing:

'III-2 Is it in the public interest to provide new facilities for short-term service ?

"IV-5 The appropriateness of the "Availability" provisions of TransCanada's Short-Term Transportation (STT) and Short-Term Contract Demand (SCD) toll schedules to the effect that TransCanada shall not construct additional facilities for the purpose of providing short-term service.

"IV-6 Should "bumping" of short-term service be permitted on the TransCanada system and if so, under what terms and conditions?"

Recognizing that the role of transmission companies is being altered by deregulation, TransCanada stated early in the hearing that it proposed to remove from its FS tariff the availability caveat and the "bumping" provisions referred to in issues IV-5 and IV-6 above. To this end, TransCanada filed with the Board, on 4 December 1987, Revision No. 1 to its firm FS toll schedule, the effect of which was to delete the availability caveat and the "bumping" provisions.

The Board confirmed during the hearing that, pursuant to section 51 of the Act, the revised FS toll schedule would remain in effect until such time as TransCanada files a further revision, either of its own volition or as a result of the Board's disallowing the toll schedule and directing that a new schedule be filed. The Board also stated its expectation that intervenors would address the appropriateness and the efficacy of including in the FS toll schedule the general principles which will govern the provision of service for short-term shippers on the TransCanada system.

During the course of the hearing, TransCanada and various parties addressed many tariff matters which required clarification as a result of the filing of TransCanada's revised FS toll schedule. Sections 9.1 and 9.2 of this Chapter contain the following Board decisions on these matters:

9.1 Provision of Service under Short term Contracts

9.1.1 Bumping and Availability of Shortterm Firm Service

TransCanada argued that its filing of Revision No. 1 to its FS toll schedule removing the availability and "bumping" provisions from the tariff, in effect, resolved Issues IV-5 and IV-6 of the List of Issues.

The CPA indicated that it was not convinced that "bumping" should be eliminated. Both the CPA and IPAC suggested that "bumping" and other related issues be addressed in more detail at the RH-1-88 toll proceedings, although IPAC submitted that Revision No. 1 to the FS toll schedule could in the meantime remain in effect.

Most other intervenors supported the removal of the availability and "bumping" provisions from the FS toll schedule. Consumers, the APMC, and Ontario supported their removal on the condition that other related tariff matters be addressed at the next TransCanada toll proceedings. ICG Ontario also supported their removal, indicating that it was not opposed to a re-examination of the topic in RH-1-88. IGUA supported the removal and argued that the issue required no further review.

Views of the Board and Decision

The Board concurs with TransCanada's policy as detailed in subsection 9.2.1 of these Reasons that, subject to Board approval and the availability provisions of the FS toll schedule, facilities should be constructed for the purpose of providing capacity to any FS with a term of at least one year, provided that there is a reasonable expectation of a longterm requirement for that capacity. Accordingly, the removal by TransCanada of the above-quoted provisions is appropriate.

9.1.2 Availability of Short-term Annual Contract Quantity ("ACQ") Service

Following the submission of TransCanada's case, Union suggested in supplementary evidence that, since TransCanada is now offering one-year FS contracts, it would also be appropriate for it to offer one-year ACQ contracts. Although TransCanada indicated in argument that it would consider doing so, it took the position that this was not an issue properly before the Board in these proceedings. In argument, Union acknowledged that it might be appropriate to discuss the matter in the next toll proceedings.

Views of the Board

In view of the changes in TransCanada's tariff regarding the availability and terms of FS, the Board believes it would be appropriate to consider whether short-term ACQ service should be available to shippers. Therefore, the Board is of the view that the availability of short-term ACQ service should be reviewed during Phase II of the RH-1-88 proceedings.

9.2 Codification of Conditions of Access to the TransCanada System under FS

9.2.1 Short-term Contracts Serving Long-term Markets

During the course of the hearing TransCanada expressed its willingness to construct new facilities for short-term FS, but argued that it would first have to be assured that such contracts were serving a long-term market. It was unable to specify any particular time frame for "longterm", but indicated that it must be long enough for the depreciation of any new facilities and the recovery of their costs. TransCanada also stated that although its facilities are currently depreciated over 40 years, it has in the past considered a 15-year period as "long-term".

Upon receipt of a request for service by a specific customer, TransCanada would assure itself that there exists a long-term requirement for the associated pipeline capacity and in doing so would consult distributors. Factors to be considered by TransCanada would include the potential gas market growth in the franchise area within which the specific customer would be receiving the service, or growth in a downstream franchise area so that the upstream capacity would be used.

TransCanada distinguished between existing contracts for displacement short-term service and new contracts, stating that displacement contracts may be deemed to serve long-term markets since affected distributors have sought and obtained Operating Demand relief with respect to such contracts. It also indicated that a distinction might be made between a new demand for a shortterm contract *(e.g.,* by a new industrial plant) and a request to increase the level of service

relative to an existing contract *(e.g.,* to serve an expansion of an existing plant).

TransCanada argued that, for tariff codification purposes, it would be difficult at present to establish, other than on a judgemental basis, a series of criteria to determine whether or not a market is long-term. It expressed the view that a set of criteria might be developed after discussions are held with the producing and consuming sectors of the natural gas industry. While TransCanada held to its proposal that facilities be constructed for short-term service only if a long-term market exists, it argued that it was not a matter for codification, but must be addressed on a case-by-case basis, as the criteria may differ between domestic and export gas. According to TransCanada, although an export market may be long-term, several pipeline companies could serve that market and there would be no guarantee that the gas would continue to be transported on TransCanada's facilities. TransCanada agreed with intervenors that argued that long-term markets could only exist under competitive pricing situations.

Intervenors discussed a variety of factors which would determine whether or not gas demand would be long-term. GMi argued that a long-term market exists for natural gas as long as growth is anticipated in that market, and that for there to be growth, gas must be priced competitively. Although some criteria could be codified, GMi argued that judgement would more often than not be required to determine the existence of a longterm market.

IGUA, Consumers, and ICG Ontario submitted that the existence of a long-term market should be addressed on a case-by-case basis. IPAC, the CPA, and the APMC were of the view that this issue should be referred to the next TransCanada toll proceedings for full review, along with other issues relating to "bumping" and "queuing". IPAC also observed that as long as natural gas were priced competitively, there would be a customer for the gas, though not always the same customer.

Union was the only intervenor to argue that a definition of "long-term market" should be included in the tariff. It proposed the following definition:

"A long-term market is a market which has historically used natural gas service or a new market, either of which can reasonably be expected to use gas in the future, assuming gas prices remain competitive with alternative fuels".

Union indicated that, in the case of an LDC requirement, where there was growth in the area to be served, such a definition could be readily adopted. For a direct shipper, however, the Board may require in addition an overall market assessment. Union suggested that TransCanada include its proposed definition in the tariff or, alternatively, that the issue be made part of the RH-1-88 proceedings.

Views of the Board

The Board concurs with TransCanada's policy that, subject to Board approval and the availability provisions of the FS toll schedule, facilities should be constructed for the purpose of providing capacity for any FS with a term of at least one year, provided that there is a reasonable expectation of a long-term requirement for that capacity.

Evidence indicates that the question of whether or not a market is long-term depends to a large degree on the specific facts. Accordingly, the Board concludes that it is not practically possible to codify in the tariff a definition of long-term market or a standard set of criteria against which a given service request can be tested.

TransCanada submitted that displacement shortterm service contracts would be deemed to serve long-term markets, by virtue of the Operating Demand relief obtained by distributors for those contracts. The Board finds no reason to distinguish *a priori* between displacement and incremental short-term contracts, or to impose a burden of proof on new shippers which would not be required of displacement shippers.

Decision

The Board directs TransCanada to include in its FS toll schedule by 1 November 1988 its policy, as stated at the hearing, that it is prepared, subject to Board approval and the availability provisions of its toll schedule as filed with the Board from time to time, to construct facilities for the purpose of providing capacity for any FS with a term of at least one year, provided that there is a reasonable expectation of a long-term requirement for that capacity.

9.2.2 Term of Service

Under TransCanada's FS toll schedule, a customer is eligible to receive FS provided, *inter alia*, that such customer has entered into, with TransCanada, either a long-term FS contract having a minimum term of 15 years, or a short-term FS contract having a term of from one to three years. During the hearing, however, TransCanada indicated that under its new policies, shippers would be entitled to contract for any term of FS of one year or longer.

Union testified that it did not see a need to restrict the term of FS contracts to one to three years, or to fifteen years or more. It recommended that TransCanada's clarification as stated at the hearing be included in the tariff in order to eliminate any confusion or misunderstanding.

Views of the Board and Decision

The Board finds that the current distinction in the tariff between short-term and long-term FS no longer reflects TransCanada's policies as stated at the hearing. Accordingly, the Board directs TransCanada to amend its FS toll schedule by 1 November 1988 to provide for any term of FS of one year or longer.

9.2.3 Contract Renewal Rights1

TransCanada testified that short-term contracts serving long-term markets should have a continual right of renewal provided that the end-user of the gas remains the same. It expressed the view that such renewal rights are a contract matter and should not be included in the tariff. Many parties argued that renewal rights should be codified, as shippers should know their rights and would benefit from clear rules.

TransCanada argued that a blanket statement as to the right to renew short-term FS contracts would ignore such questions as renewing for a shorter or a longer term or at different volumetric levels or with additional, fewer or different delivery points, and that such factors could bear on facilities construction and configuration both in the shorter and longer term.

Views of the Board

In the Board's view, the question of the provision of facilities for short-term service is fundamentally related to contract renewal rights; in the absence of such rights, short-term shippers serving long-term markets would be subject to the "queuing" procedure at the termination date of their contracts. Depending on pipeline capacity available at that time, this could result in disruptions in service to markets which are fundamentally long-term. In order for long-term markets to be served by pipeline capacity available on a long-term basis, it is essential that shippers be afforded a right of contract renewal, subject to filing a prior notice which is discussed in Subsection 9.2.4 of these Reasons.

Decision

TransCanada is directed to amend its FS Toll Schedule by 1 November 1988 to provide for the continued renewal of all domestic and export FS contracts serving long-term markets. To the extent that TransCanada views any of its current customers holding FS contracts to not be serving long-term markets, TransCanada is to notify such customers by 30 September 1988. Any existing customers holding FS contracts not so notified will be considered to be serving long-term markets and will be entitled to the contract renewal rights provided for above.

1 In order to assist parties in contract negotiations for the contract year commencing 1 November 1988, the Board issued, by letter dated 31 May 1988, its decisions related to contract renewal rights. By letter dated 9 June 1988, Cyanamid Canada Inc. and Cyanamid Canada Pipeline Inc. ("Cyanamid") applied pursuant to section 17 of the Act for a review of that part of the Board's 31 May 1988 decision which dealt with the renewal notice period. By letter dated 27 June 1988, the Board denied Cyanamid's application.

9.2.4 Renewal Notice Period1

TransCanada took the position that the contract renewal rights which are discussed in Subsection 9.2.3 should be conditional upon the shipper:

(i) providing a renewal notice to TransCanada a certain (as yet to be determined) number of months prior to the end of the contract; and

(ii) specifying at the time the notice is given the level of service at which the contract will be renewed.

The notice would allow TransCanada to know ahead of time whether capacity will become

available for other services, and to respond in a timely fashion to requests for additional service.

In supplemental evidence filed immediately before the appearance of its witnesses, Union indicated that it supported a six month-notice period prior to the termination date of a contract. It took the position that the notice period for renewal should be published in the tariff.

Views of the Board

As indicated in Subsection 9.2.3 of these Reasons, it is essential that shippers serving long-term markets be afforded a right of contract renewal. This right, however, must be balanced against TransCanada's responsibility to respond in an informed manner to requests for additional service on its pipeline system. Accordingly, contract renewal rights should be subject to notice being given to TransCanada prior to the expiration of the contract.

In respect of what constitutes a reasonable notice period, the Board notes that TransCanada's proposal for a "number of months" and Union's proposal for a six-month notice period remained unchallenged at the hearing. In the absence of better evidence, the Board is of the view that a six-month notice would be reasonable, particularly in the light of TransCanada's evidence that, in certain circumstances, a period of approximately two years is required between the time that the need for a system expansion is identified and the time that the necessary facilities are in place.

Decision

The Board directs that the contract renewal rights indicated in Subsection 9.2.3 be subject to TransCanada receiving written notice from the shipper, not less than six months prior to termination of the contract or a shorter period as may be stipulated by TransCanada, that It will renew the contract. The Board further directs that this condition be stipulated In the tariff by 1 November 1988.

9.2.5 Reversion of Capacity

TransCanada testified that assignment of a short-term contract would be permitted provided that the end-user remained the same. If the enduser were to go off natural gas, the capacity reserved for that user would be available to all system users. Distribution companies argued that they should have the right of first refusal to such capacity. Union proposed as an alternative that the tariff be amended by restricting the renewal provisions of short-term contracts such that capacity could only be assigned or transferred so as to allow the direct purchaser to continue to be served. 1 In order to assist parties in contract negotiations for the contract year commencing 1 November 1988, the Board issued, by letter dated 31 May 1988, its decisions related to contract renewal rights. By letter dated 9 June 1988, Cyanamid Canada Inc. and Cyanamid Canada Pipeline Inc. ("Cyanamid") applied pursuant to section 17 of the Act for a review of that part of the Board's 31 May 1988 decision which dealt with the renewal notice period. By letter dated 27 June 1988, the Board denied Cyanamid's application.

Viewsof the Board

The topic of reversion of capacity was extensively canvassed during the RH-3-86 proceedings. In Section 11.1 of the RH-3-86 Reasons for Decision, the Board stated:

"The Board implemented the OD methodology as a mechanism to deal specifically with the double demand charge problem. The Board does not believe that automatic reversion of pipeline capacity to distributors would be appropriate as it confers to distributors additional rights not previously available to them under TransCanada's CD contract. Also, automatic reversion, if implemented, would obligate TransCanada's producers to keep gas in inventory without being compensated for lost marketing opportunities."

The limited evidence that was submitted at the hearing was not sufficient to persuade the Board to amend its RH-3-86 decision in this matter.

Decision

The Board does not amend its RH-3-86 decision regarding automatic reversion of pipeline capacity to distributors.

9.2.6 Credit Requirements

During the hearing some questions were raised as to what criteria TransCanada utilizes in determining whether or not a customer is creditworthy. Parties also discussed whether or not these criteria should be published in the tariff in order to inform a potential new shipper of the credit tests that would be applied.

TransCanada argued that credit decisions are qualitative and quantitative in nature and, as such, the process does not lend itself to codification. In exhibits filed during the hearing, TransCanada indicated that in following practices similar to those of other trade credit-granting organizations, it looks to a review of financial statements with particular attention to earnings level and record,

liquidity, cash flow and capital position, relative to the level of service requested. The Board recognizes that the granting of credit requires the exercise of informed judgement. Any attempt to codify credit criteria could result in arbitrary credit decisions that may not be in the best interests of tollpayers.

Decision

The Board has decided that the criteria TransCanada uses to assess the credit worthiness of a shipper prior to that shipper gaining access to the pipeline system need not be published in TransCanada's tariff.

9.2.7 Queuing

The matter of queuing arose in connection with the "bumping" issue following TransCanada's statement of intent to remove from its tariff the "bumping" provisions and the proviso against constructing facilities to serve short-term contracts. TransCanada stressed that it would consider constructing facilities to serve short-term contracts only if, in its sole judgement, the market to be served is long-term. TransCanada testified that, as a matter of policy, it would automatically renew short-term transportation contracts serving long-term markets (see Subsections 9.2.3 and 9.2.4. These changes have a significant effect on how system capacity is to be allocated because short-term service can no longer be "bumped" to free up capacity for long-term service and the construction of facilities for additional firm service volumes may require lengthy lead times.

During the course of cross-examination it became clear that a procedure is required whereby new shippers (or existing shippers seeking additional capacity) would be aware of how they stand vis-à-vis other shippers in line for the needed capacity. It was recognized that some form of priority would have to be established in order that all shippers, including WGML, are treated on an equal basis. Since there may be several shippers awaiting the next available increment of capacity, they may be thought of as being in a queue.

TransCanada proposed to accord priority on a "first come first served" basis. With respect to the difficulty of determining at what point TransCanada may reasonably conclude that a request for capacity is of a nature that warrants serious consideration, TransCanada testified that a party would be placed in the queue upon receipt of a letter of intent and that TransCanada would immediately try to enter into a precedent agreement. TransCanada indicated in testimony that while in the queue, a shipper would have priority over other shippers which join the queue later; if a shipper in the queue cannot meet its requested date for commencement of service, it would lose its place in the queue and any capacity reserved for that shipper would be available to the next party in the queue.

Views of the Board

Care must be taken not to restrict the question of queuing to situations where capacity expansion by means of the addition of new facilities is required. Although firm capacity on TransCanada is essentially fully committed today, there may come a time in the future where some long-term contracts are not renewed, or where shorter term contracts which are not serving long-term

markets are near the end of their terms. In these circumstances, just as in the case of capacity expansion, shippers seeking new contracts should know the process to be followed and have confidence that no competitor has "an inside track". An existing shipper holding a short-term contract without automatic renewal rights and wishing to extend its contract, should be subject to the same queuing procedures as a new applicant for a contract. Once its position in the queue has been established, it should not lose its position to a shipper which applies at a later date to serve a long-term market. If a later application requires capacity expansion, TransCanada must determine whether to wait for the existing short-term contract to expire and not renew, or whether to seek to justify capacity expansion, even though some of its capacity is contracted on short-term contracts serving short-term markets and may well become available at a later date.

The queuing issue therefore raises the question of when an applicant can be said to have established its position in the queue. Clearly, if it were prepared to enter into a standard FS transportation contract (or its equivalent in the case of WGML), the day of receipt of such a clear and firm commitment would be the date of entering the queue. In contrast, an oral inquiry by telephone respecting capacity availability would not be sufficient.

In the Board’s view, an applicant should be awarded the next place in the queue upon signing a letter of intent committing itself to enter into a firm transportation contract with TransCanada for a specified volume with delivery and destination points indicated, upon the happening, by a date certain, of any events it may wish to specify. (It must also indicate that it can meet all the requirements for access set out in the TransCanada tariff.) The date of receipt by TransCanada of such a letter would be the date of entering into the queue. All parties should be treated equally and preference may not be given to known customers such as LDCs or WGML.

If any of the conditions precedent specified by the applicant are judged by TransCanada to be unreasonable and the matter cannot be resolved, the Board may be called upon to adjudicate. That applicant’s position in the queue would then be either confirmed or lost depending on the findings of the Board. This procedure would also apply in respect of any dispute arising from TransCanada’s judgement as to whether or not the applicant can meet the terms of access set out in the tariff.

It should be clear that any applicant, provided it is prepared to meet the access requirements set out in the tariff and makes a commitment to take capacity, even if conditional, is entitled to a place in the queue. That place may be lost if the applicant cannot meet any of the tariff requirements, or if one or more of its conditions precedent proves to be unreasonable or unattainable. It is recognized that TransCanada and the applicant may wish to refine some aspects of the request by negotiation and enter into a precedent agreement. It may be that during this process, shortcomings will be identified. Even if no problems are encountered and the queue priority is firmly established, it may still be lost if the applicant cannot enter into the actual firm transportation contract by the date specified in its request. It would then, should it so desire, be placed at the end of the queue. TransCanada may not displace any others already in the queue except with their consent.

Decision

TransCanada shall include In its tariff by 1 November 1988, provisions which set out the manner in which an applicant for firm transportation capacity on its system, where such is not Immediately available, will be included in a queue of those awaiting firm transportation contracts. The provision should reflect as closely as possible the approach described above and the intent that no applicant, whether an LDC, a broker, a producer or WGML, should have or be perceived to have any advantage respecting entry to the queue. A list of those in the queue and their respective position shall be made available for examination upon request.

9.3 Transportation by Great Lakes

9.3.1 Additional Service Requests

In Subsection 7.1.7 of the RH-3-86 Reasons for Decision, the Board stated:

"... in the future TransCanada should seek approval from the Board prior to requesting a change in its long-term contractual obligations with other pipeline companies when the costs of transportation services provided under the contracts are included in TransCanada's revenue requirement.

As detailed in Section 6.1, TransCanada proposed in its 9 June 1987 application that it would seek to increase its contracted annual transportation service on the Great Lakes system in order to satisfy its requirements for the contract years commencing 1 November 1988 and 1 November 1989. It proposed that these increments would be in the form of an increase in the level of its Great Lakes firm transportation agreement ("T-4 agreement"), and a new seasonal/annual service. During the hearing, TransCanada acknowledged that it had already requested these increments without seeking leave of the Board pursuant to the Board's decision in Subsection 7.1.7 of RH-3-86.

Upon questioning from the Board, TransCanada indicated that it had interpreted that decision as meaning that it could negotiate the terms and conditions of the amendment and then file it with the Board for approval. TransCanada testified that rather than seeking the Board's approval before requesting a change in its long-term contractual obligations with other pipeline companies, it would be more practical to request the service, negotiate terms with the other pipeline as definitively as possible without creating a legally binding contract, and then seek the Board's approval. TransCanada indicated as an example of this procedure its request for the approval of the TransCanada/Great Lakes Amending Agreement ("T-4 Amending Agreement") (see Subsection 9.3.2 of these Reasons) in which regulatory approval is expressly stated as a condition precedent. During the hearing, TransCanada sought confirmation from the Board that its interpretation of subsection 7.1.7 was correct.

In argument, TransCanada requested the Board's approval in principle, under Section 7.1.7 of the RH-3-86 Decision, of its requests for additional service on Great Lakes although contracts for these services have not yet been negotiated.

Viewsof the Board

The Board finds that the requirements of Subsection 7.1.7 of the RH-3-86 Reasons for Decision may yield impractical results. TransCanada's proposed approach by which the terms of the service are agreed upon between parties and detailed as definitively as possible without being legally binding on TransCanada is sensible and appropriate. Accordingly, the Board finds that the decision should be amended.

Decision

The Board amends the relevant portion of its previous decision in Subsectlon 7.1.7 of the RH-3-86 Reasons for Decision to read as follows:

"... in the future TransCanada should seek approval from the Board prior to committing itself to a change in its long-term contractual obligations with other pipeline companies when the costs of transportation services provided under the contracts are included in TransCanada's revenue requirement."

Accordingly, approval in principle of TransCanada's requests for additional transportation services on Great Lakes is not necessary.

9.3.2 TransCanada/Great Lakes Amending Agreement

The ProGas exports at Emerson were proposed in 1978 to export shut-in Alberta gas over the short term. ProGas intended to later sell this gas to TransCanada to satisfy domestic requirements as domestic markets increased. In order to effect this proposal, ProGas entered into both a sales and transportation agreement with TransCanada. The contract quantity of the sales agreement was zero for the first five years and then, at TransCanada's option, increased in steps to the full volume.

The remaining ProGas volumes, that is, those not sold to TransCanada, were transported on the TransCanada system to Emerson and then sold to United States repurchasers, which transported the volumes to market via the Great Lakes system and the ANR pipeline. In order to provide capacity to transport these volumes on the Great Lakes system, TransCanada agreed to amend its T-4 agreement with Great Lakes to include a "backoff" provision which released capacity under contract to TransCanada to the United States repurchasers. The TransCanada/ProGas sales agreement requires TransCanada to indicate each year whether it wishes to purchase gas from ProGas. Should TransCanada decide not to purchase gas from ProGas, TransCanada is required to continue to release capacity on Great Lakes. The repurchasers then may acquire all necessary regulatory approvals in the United States to continue the exports for an additional year. In 1986, since TransCanada did not foresee a need for the ProGas volumes, it was agreed among the parties to the contracts that in order to remove the uncertainty involved in obtaining the necessary annual regulatory approvals, it would be advantageous to secure long-term regulatory approvals in the United States and Canada to permit the exports to continue at their present level to 1 November 2000. Accordingly, Great Lakes and TransCanada have entered into an Amending Agreement dated 1 July 1987 ("T-4 Amending Agreement") which has the effect of extending the existing back-off provisions at their current level of 4.25 106m3/d (150 MMcfd) to 1 November

2000. In view of the possible implication that the continued release of contracted capacity on Great Lakes may have on TransCanada's future revenue requirement and the optimal configuration of the combined Central Section/Great Lakes system, the Board decided to add to the List of Issues for GH-2-87 the question of whether it is in the public interest to approve the T-4 Amending Agreement.

ProGas testified that all necessary approvals to continue the exports to the year 2000 have been obtained with the exception of a gas export licence and FERC approval of the T-4 Amending Agreement and the necessary transportation services to allow the repurchasers to move the gas from Emerson to their markets. ProGas testified that it intended to apply in the near future for an extension of its export licence, which currently expires in 1994, to the year 2000.

The FERC has approved the T-4 Amending Agreement and the transportation services necessary for the repurchasers to deliver the gas to market through the Great Lakes and ANR pipelines for one year until 1 November 1988. According to ProGas, the extension for only one year is due to continued efforts by the FERC to encourage pipeline systems in the United States to become open-access carriers under Orders 436 and 500. ProGas testified that the FERC decision also resulted in a significant increase in transportation rates on the ANR system for the repurchasers' volumes. ProGas noted that, notwithstanding the rate increase and unsuccessful appeals of the FERC decision, the repurchasers have continued to take gas at a high load factor.

TransCanada testified that if the T-4 Amending Agreement is not approved, the ProGas exports would likely be frustrated and ProGas would be relieved of the obligation to continue to pay Canadian demand charges for the transportation of volumes to Emerson. TransCanada estimated that this would result in an annual loss of $18 million in demand charges which would have to be recovered from the remaining TransCanada tollpayers. TransCanada and ProGas testified that in the event of cancellation of the back-off provision, the repurchasers in the United States could arrange their own transportation on the Great Lakes system, but that this would interrupt the sale until Great Lakes constructed additional facilities. ProGas submitted that it was doubtful that Great Lakes would agree to the construction of facilities to accommodate the United States repurchasers since the export licence terminates in 1994 and the regulatory approvals in the United States will terminate in the year 2000.

TransCanada testified that the proposed expansion of the combined TransCanada/Great Lakes system (which included increasing the level of TransCanada's firm transportation service on the Great Lakes system in concert with contracting for a seasonal/annual service) was determined to yield the lowest present value of the owning and operating costs of the incremental facilities. According to TransCanada, if it assumed the 4.25 106m3/d (150 MMcfd) of firm service previously released to repurchasers in the United States, this could result in the construction of less than optimum facilities when considering the combined TransCanada and Great Lakes systems and therefore result in an increase in TransCanada's revenue requirements.

In written argument, Texas Eastern indicated strong support for the continuation of the "backoff" arrangements and stated its intention to continue to take the ProGas volumes at a high load factor.

The CPA submitted that if the continuation of the ProGas exports is precluded by the regulatory action of the FERC, there will be an additional 4.25 106m3/d (150 MMcfd) of capacity available on the Western Section of TransCanada and on Great Lakes. The availability of that capacity could have a significant effect upon the requirement for new facilities. The CPA stated that it wanted the ProGas exports to continue but did not want new facilities to be constructed on the assumption that the sale would continue, when there is significant risk that regulatory action in the United States would subsequently preclude the sale from occurring. The CPA argued that the T-4 Amending Agreement should be approved but that the continuation of the approval beyond 1 November 1988 should be conditioned upon the ProGas customers having long-term transportation agreements in the United States approved and in place by that time.

IPAC submitted that it was generally in favour of the ProGas "back-off' arrangement. It suggested that the Board approve the arrangement at least until 1 November 1989 and possibly for a further year during which time ProGas should seek to renew its export licence and obtain the necessary approvals in the United States. When all necessary arrangements are in place the T-4 Amending Agreement should be re-examined by the Board.

ICG Ontario submitted that it would be in the public interest for the Board to approve the T-4 Amending Agreement.

The APMC recommended approval of the T-4 Amending Agreement since the amendments are integral to long-term contractual arrangements between ProGas and its customers and since the increase in volumes resulting from the amendment would benefit Alberta and its producers through enhanced netbacks. It submitted that the ProGas arrangement may provide greater certainty that natural gas sales will continue at current levels, thereby promoting a healthier Canadian natural gas industry.

Viewsof the Board

Evidence indicated that terminating the back-off provision and having the released capacity on Great Lakes revert to TransCanada could result in a sub-optimal combination of transportation services on the Great Lakes system and an increase in TransCanada's revenue requirement over the short term. Furthermore, termination of the "back-off' arrangements could frustrate the continuation of the ProGas exports into a strong and valuable market. On the basis of these considerations, the Board is of the view that the T-4 Amending Agreement should be approved. However, in the event that regulatory approvals to continue the ProGas exports are not obtained, the Board would expect TransCanada to adjust its transportation requests on Great Lakes accordingly.

Decision

The Board approves the T-4 Amending Agreement pursuant to Subsection 9.3.1 of these Reasons.

Appendix I

Amended List of Issues (Exhibit A-70 to the GH-2-87 Proceedings)

This list is intended to assist all parties in defining the key issues to be addressed at the hearing. This will not preclude the Board from dealing with other matters which are normally raised by virtue of the Board's mandate pursuant to Part III of the *NEB Act,* or with generic Part IV matters which are raised as a result of the Board's review of the specific issues listed below. It is not the Board's intention at this hearing to set specific tolls.
At the hearing the Board will consider, *inter alia,* the following matters:

Part III Matters

III-1 The reasonableness of forecasted domestic and export market requirements.(1)

III-2 Is it in the public interest to provide new facilities for short term service?(2) III-3 Is it in the public interest to provide new facilities for presently uncontracted Canadian market demand which is forecasted to exist in contract years commencing November 1988 and November 1989?

III-4 Is it in the public interest to provide facilities for the delivery of natural gas at the export points at a higher pressure than that specified in the General Terms and Conditions of TransCanada's tariff?(3)

III-5 Is it in the public interest to exempt the facilities listed in Paragraph 9, Tab "Application" of the TransCanada application dated June 1987, from the provisions of Paragraph 27(b) and Section 29 of the *NEB Act?*

Part IV Matters

IV-1 The appropriate toll methodology in respect of facilities proposed to serve (a) new export markets and (b) the anticipated domestic market growth.(4) IV-2 The question of who should bear the risk of facilities expansions required to service new markets in the event that the project does not proceed as envisaged, throughputs are reduced, and certain facilities are no longer used and useful, and in what manner this risk should be borne.(5)

IV-3 The question of whether tolls to be charged for the use of the applied-for facilities, calculated on an incremental basis as opposed to the current rolled-in method, would be just and reasonable having regard to Sections 52 and 52.1 of the *NEB Act.* Parties may see this question as primarily one of legal interpretation and therefore may wish to address the issue only in final argument.(6)

IV-4 The question of whether a toll, rather than a surcharge which would be credited to TransCanada's cost of service, should be set to recover the cost of any existing or proposed facilities on the TransCanada System which are required to supply natural gas, at existing or proposed delivery points, at a minimum delivery pressure higher than that specified in the General Terms and Conditions. Also, the appropriate methodology to determine the toll or surcharge.(7)

IV-5 The appropriateness of the "Availability" provisions of TCPL's Short-Term Transportation (STT) and Short-Term Contract Demand (SCD) toll schedules to the effect that TransCanada shall not construct additional facilities for the purpose of providing short-term service. IV-6 Should "bumping" of short-term service be permitted on the TCPL system and if so, under what terms and conditions?

IV-7 Is it in the public interest to approve the TransCanada/Great Lakes Amending Agreement(3) having regard to its impact on TransCanada's future revenue requirements and on the optimal configuration of the combined Central Section/Great Lakes system?

General

G-1 The question of what terms or conditions, if any, should be included in any certificate, order or decision that the Board may decide to issue in respect of the application.(9)
Notes:

(1) Previously Issue No. 1 in Appendix III to Order GH-2-87.

(2) Previously Issue No. 2.

(3) Previously Issue No. 3.

(4) Previously Issue No. 4.

(5) Previously Issue No. 5.

(6) Previously Issue No. 6.

(7) Previously Issue No. 7. The wording was expanded in the amended list of issues dated 14 October 1987 in order to make it clearer that the Board will examine domestic and export delivery points other than Iroquois and Niagara where a minimum delivery pressure in excess of 2800 kPa is or will be guaranteed.

(8) Amending Agreement Dated 1 July 1987 to the TransCanada PipeLines Limited/Great Lakes Gas Transmission Company Transportation Contract Dated 12 September 1967, as amended.

(9) Previously Issue No. 8.

Appendix II

NEB Decision Issued 18 May 1988 Regarding 1988 Facilities, Ocean State Power, and Related Toll Methodology

IN THE MATTER OF the *National Energy Board Act*, R.S.C. 1970, c. N-6, as am. (the "Act"), and the Regulations made thereunder; and

IN THE MATTER OF an application dated 9 June 1987, as amended, by TransCanada PipeLines Limited ("TransCanada" or "TCPL") pursuant to Parts III and IV of the Act, for a certificate in respect of certain proposed facilities, for an order exempting those facilities from the provisions of certain sections of the Act and for certain toll orders; filed with the National Energy Board under File No. 1555-T1-149; and

IN THE MATTER OF National Energy Board Directions on Procedure GH-2-87, as amended; and

IN THE MATTER OF an application dated 29 March 1988, by TransCanada, pursuant to Part III of the Act for an order exempting certain proposed facilities from certain sections of the Act; filed with the National Energy Board (the "Board") under File No. 1555-T1-153.

Decision

Having considered the evidence adduced at the public hearing held pursuant to Hearing Order No. GH-2-87, the arguments and submissions made by all parties, and the submissions by TransCanada and parties of record to GH-2-87 in respect of TransCanada's application dated 29 March 1988, the Board has authorized for construction and operation certain of the pipeline facilities requested by TransCanada for the 1988-89 and 1989-90 contract years.

I. TCPL's Application Dated 9 June 1987

The Board has decided, pursuant to its powers under section 16.2 of the Act, to grant exemptions pursuant to section 49 of the Act rather than approval under section 44 thereof for the following facilities.

I. 1 Central Section and Dawn Extension

The Board has exempted the proposed aftercoolers at compressor stations 49, 58, 69 and 80 and the proposed upgrades of existing compressor units at stations 52, 60, 88 and 102 from sections 26, 27, and 38 of the Act, pursuant to sections 16.2 and 49 thereof. A copy of Board Order No. XG-6-88, granting this relief, is attached hereto.

The Board has exempted the proposed 8.8 kilometre ("km") loop of TransCanada's Dawn Extension from paragraph 26(1)(a), subsection 26(2) and section 27 of the Act, pursuant to sections 16.2 and 49 thereof. A copy of Board Order No. XG-7-88, granting this relief, is attached hereto.

I.2 Niagara Line

The Board has exempted 35.8 km of the proposed loop of the Niagara Line and the proposed relocation of a 3.2 megawatt ("MW") compressor unit to station 209 from paragraph 26(1)(a), subsection 26(2) and section 27 of the Act, pursuant to sections 16.2 and 49 thereof. A copy of Board Order No.XG8-88, granting this relief, is attached hereto.

I.3 St. Mathieu Extension

The Board has exempted the proposed 4.5 km loop of the St. Mathieu Extension from paragraph 26(1)(a), subsection 26(2) and section 27 of the Act, pursuant to sections 16.2 and 49 thereof. A copy of Board Order No. XG-9-88, granting this relief, is attached hereto.

II. TCPL's Application Dated 29 March 1988 for Incremental Facilities

The Board has exempted the proposed relocation of a 10.4 MW portable compressor to station 95 and the proposed relocation of a 5.7 MW compressor to station 147 from paragraph 26(1)(a), subsection 26(2) and section 27 of the Act, pursuant to section 49 thereof. A copy of Board Order No. XG-10-88, granting this relief, is attached hereto.

The Board will not further consider the portion of TransCanada's application pertaining to the construction of 19.1 km of loop of the Montreal Line until TransCanada has filed evidence that it has, pursuant to subsection 75(1) of the Act, completed service of notice on each owner of lands that may be required for the purposes of said loop.

III Ocean State Power

The Board will recommend to the Governor in Council that the necessary approvals be granted in respect of the additional facilities required to expand the capacity of the TransCanada system so that it may transport, as a minimum, exports by ProGas Limited to Ocean State Power at Niagara Falls under licence GL-101 commencing on 1 November 1989. Details of the necessary approvals will be provided in the Board's Reasons for Decision.

IV. Toll Methodology

The Board has decided that the rolled-in method of cost allocation and toll design will be appropriate in respect of the above-authorized facilities which are proposed for the transportation of volumes in accordance with TransCanada's

General Terms and Conditions.

The Board has decided that any incremental costs incurred by TransCanada to guarantee the provision of delivery pressure in excess of 4000 kilopascals (580 pounds per square inch gauge) at any delivery point on the TransCanada system shall be recovered through an incremental two-part delivery pressure toll to be collected from all shippers using that delivery point. The demand component of the toll shall recover the deemed owning and operating costs of the facilities which

are required to provide this incremental service. The commodity component shall recover the costs of the compressor fuel used to elevate the pressure of the delivered gas above 4000 kilopascals and the FS transportation toll at 100% load factor to move this fuel from the Alberta border to the zone in which it is consumed. TransCanada is required to derive delivery pressure tolls effective 1 January 1989 using the above methodology for each applicable delivery point for examination at the upcoming TransCanada toll proceedings (RH-1-88)
Ottawa, Ontario
May 1988

ORDER NO. XG-6-88

IN THE MATTER OF the *National Energy Board Act* (hereinafter referred to as "the Act") and the Regulations made thereunder; and

IN THE MATTER OF an application, dated 9 June 1987, as amended, by TransCanada PipeLines Limited (hereinafter referred to as "TransCanada") pursuant to Parts III and IV of the Act, seeking, *inter alia*, a certificate in respect of certain pipeline facilities; filed with the National Energy Board (hereinafter referred to as "the Board") under File No. 1555-T1-149.

BEFORE the Board on 9 May 1988.

WHEREAS TransCanada has represented that its proposed pipeline facilities are required to transport additional volumes of natural gas for domestic and export requirements;

AND WHEREAS a public hearing was held pursuant to Hearing Order GH-2-87, in the City of Ottawa, in the Province of Ontario, at which the Board heard TransCanada and all interested parties;

AND WHEREAS TransCanada has filed an application dated 29 March 1988, under File No. 1555-T1-153, pursuant to Part III of the Act for an order exempting certain pipeline facilities from the provisions of certain sections of the Act:

AND WHEREAS interested parties have made their comments known to the Board in respect of the application dated 29 March 1988;

AND WHEREAS the Board has found that the pipeline facilities described in Schedule "A" attached to and forming part of this order, are and will be required by the present and future public convenience and necessity;

IT IS ORDERED THAT pursuant to sections 16.2 and 49 of the Act, the facilities described in Schedule "A" attached hereto are exempt from the provisions of sections 26, 27 and 38 of the Act upon the following conditions:

1. TransCanada shall, at least 10 days prior to the commencement of construction of the additional facilities, file with the Board a detailed construction schedule or schedules identifying major construction activities and shall notify the Board of any modifications to the schedule or schedules

as they occur.

2. TransCanada shall, at least 10 days prior to the commencement of construction, file with the Board a description of the plans and procedures for cost control of the project.

3. TransCanada shall, within six months of putting the facilities into service, file with the Board a report providing

(a) a breakdown of the costs incurred in the construction of the additional facilities in the format used in Schedules 12 to 15, inclusive, of Tab 10 under Tab "Facilities" of Exhibit B-11 to these proceedings, setting forth actual versus estimated costs, including reasons for significant differences from estimates; and

(b) the percentage of Canadian content realized in comparison with that estimated in Schedule 21 of Tab 10 under Tab "Facilities" of Exhibit B-11 to these proceedings, including reasons for significant differences.

4. TransCanada shall cause the construction and installation of the additional facilities, herein referred to, to be commenced on or before 31 December 1989.

NATIONAL ENERGY BOARD

J.S. Klenavic
Secretary

SCHEDULE "A"

Descriptionts	TransCanada's (1988 Dollars)
Aftercoolers	
Aftercooler installation at Station 49	$ 8,720,000
Aftercooler installation at Station 58	4,580,000
Aftercooler installation at Station 69	4,580,000
Aftercooler installation at Station 80	4,000,000

Sub-total $21,880,000

Upgrade of Existing
Turbine/Compressor Units

3.4 MW Compressor Unit Upgrade at Station 52 3.4 MW Compressor Unit Upgrade at Station 60 3.4 MW Compressor Unit Upgrade at Station 88 3.4 MW Compressor Unit Upgrade at Station 102 Sub-total $ 9,820.000 **Total** **$31,700,000**

ORDER NO. XG-7-88

IN THE MATTER OF the *National Energy Board Act* (hereinafter referred to as "the Act") and the Regulations made thereunder; and

IN THE MATTER OF an application, dated 9 June 1987, as amended, by TransCanada PipeLines Limited (hereinafter referred to as "TransCanada") pursuant to Parts III and IV of the Act, seeking, *inter alia*, a certificate in respect of certain pipeline facilities and an order exempting those pipeline facilities from the provisions of certain sections of the Act; filed with the National Energy Board (hereinafter referred to as "the Board") under File No. 1555-T1-149.

BEFORE the Board on 9 May 1988.

WHEREAS TransCanada has represented that its proposed pipeline facilities are required to transport additional volumes of natural gas for domestic and export requirements;

AND WHEREAS a public hearing was held pursuant to Hearing Order GH-2-87, in the City of Ottawa, in the Province of Ontario, at which the Board heard TransCanada and all interested parties:

AND WHEREAS TransCanada has filed an application dated 29 March 1988, under File No. 1555-T1-153, pursuant to Part III of the Act, for an order exempting certain pipeline facilities from the provisions of certain sections of the Act;

AND WHEREAS interested parties have made their comments known to the Board in respect of the application dated 29 March 1988;

AND WHEREAS the Board has found that the pipeline facilities described in Schedule "A" attached to and forming part of this order, are and will be required by the present and future public convenience and necessity;

IT IS ORDERED THAT pursuant to sections 16.2 and 49 of the Act, the facilities described in Schedule "A" attached hereto are exempt from the provisions of paragraph 26(1)(a), subsection 26(2) and section 27 of the Act upon the following conditions:

1. TransCanada shall, at least 10 days prior to the commencement of construction of the additional

facilities, file with the Board a detailed construction schedule or schedules identifying major construction activities and shall notify the Board of any modifications to the schedule or schedules as they occur.

2. TransCanada shall, at least 10 days prior to the commencement of pipeline construction, file with the Board pipeline construction alignment drawings.

3. TransCanada shall, at least 10 days prior to the commencement of construction, file with the Board a description of the plans and procedures for cost control of the project.

4. TransCanada shall, prior to commencement of pipeline welding, file with the Board an affidavit, signed by a professional engineer, confirming that the welding procedures and the non-destructive testing procedures to be used during the project have been qualified in accordance with Response (i)(c) of Exhibit B172 to the GH-2-87 proceedings.

5. TransCanada shall, within six months of putting the facilities into service, file with the Board a report providing

(a) a breakdown of the costs incurred in the construction of the additional facilities in the format used in Schedule 9 of Tab 10 under Tab "Facilities" of Exhibit B- 11 to these proceedings setting forth actual versus estimated costs, including reasons for significant differences from estimates; and

(b) the percentage of Canadian content realized in comparison with that estimated in Schedule 21, of Tab 10 under Tab "Facilities" of Exhibit B-11 to these proceedings, including reasons for significant differences.

6. TransCanada shall implement all the policies, practices, recommendations and procedures for the protection of the environment included in its application, its environmental reports, its Pipeline Construction Specifications, its Environmental Protection Practices Handbook, 1986, its undertakings made to the Minister of Energy for Ontario and otherwise adduced in evidence before the Board in these proceedings.

7. (1) TransCanada shall file with the Board a post-construction environmental report within six months of the date that the last leave to open is granted for the approved facilities.

(2) The post-construction environmental report referred to in subsection (1) shall set out the environmental issues that have arisen up to the date on which the report is filed and shall (a) indicate the issues resolved and those unresolved; and (b) describe the measures the company proposes to take in respect of the unresolved issues.

(3) TransCanada shall file with the Board, on or before the 31 December that follows each of the first two complete growing seasons after the post-construction environmental report referred to in subsection (1) is filed, (a) a list of the environmental issues indicated as unresolved in the report and those that have arisen since the report was filed, if any; and

(b) a description of the measures the company proposes to take in respect of any unresolved environmental issue.

8. TransCanada shall cause the construction and installation of the additional pipeline, herein referred to, to be commenced on or before 31 December 1988.
NATIONAL ENERGY BOARD

J.S. Klenavic Secretary

SCHEDULE "A"

Pipeline

8.8 km of 914 mm loop of the MLV 501 + 8.8 km	$8,193,000	Dawn Extension from MLV 501 to

ORDER NO. XG-8-88

National Energy Board Act (hereinafter referred to as "the Act") and the Regulations made thereunder; and

IN THE MATTER OF an application, dated 9 June 1987, as amended, by TransCanada PipeLines Limited (hereinafter referred to as "TransCanada") pursuant to Parts III and IV of the Act, seeking, *inter alia*, a certificate in respect of certain pipeline facilities and an order exempting those pipeline facilities from the provisions of certain sections of the Act; filed with the National Energy Board (hereinafter referred to as "the Board") under File No. 1555-T1-149.

BEFORE the Board on 9 May 1988. WHEREAS TransCanada has represented that its proposed pipeline facilities are required to transport additional volumes of natural gas for domestic and export requirements; AND WHEREAS a public hearing has been held pursuant to Hearing Order GH-2-87, in the City of Ottawa, in the Province of Ontario, at which the Board heard TransCanada and all interested parties; AND WHEREAS TransCanada testified at said public hearing that a lesser amount of pipeline facilities would be required in 1988 than that applied for in its application; AND WHEREAS the Board has found that a lesser amount of pipeline facilities than that applied for in said application is in the public interest; AND WHEREAS the

Board has found that the fa cilities described in Schedule "A" attached to and forming part of this order, are and will be in the present and future public convenience and necessity;

IT IS ORDERED THAT pursuant to sections 16.2 and 49 of the Act, the facilities described in Schedule A attached hereto are exempt from the provisions of paragraph 26(1)(a), subsection 26(2) and section 27 of the Act upon the following conditions, as applicable:

1. TransCanada shall, at least 10 days prior to the commencement of construction of the additional facilities, file with the Board a detailed construction schedule or schedules identifying major construction activities and shall notify the Board of any modifications to the schedule or schedules as they occur.

2. TransCanada shall, at least 10 days prior to the commencement of pipeline construction, file with the Board pipeline construction alignment drawings.

3. TransCanada shall, at least 10 days prior to the commencement of construction, file with the Board a description of the plans and procedures for cost control of the project.

4. TransCanada shall, prior to commencement of pipeline welding, file with the Board an affidavit, signed by a professional engineer, confirming that the welding procedures and the non-destructive testing procedures to be used during the project have been qualified in accordance with Response (i)(c) of Exhibit B172 to the GH-2-87 proceedings.

5. TransCanada shall, at least 10 days prior to commencement of site preparation for the crossing of Twelve Mile Creek, file with the

(a) the construction schedule for the crossing; and

(b) detailed drawings and specifications for the crossing.

6. TransCanada shall, within six months of putting the facilities into service, file with the Board a report providing

(a) a breakdown of the costs incurred in the construction of the additional facilities in the format used in Schedules 4 and 6 of Tab 10 under Tab "Facilities" of Exhibit B-11 to these proceedings, setting forth actual versus estimated costs, including reasons for significant differences from estimates; and

(b) the percentage of Canadian content realized in comparison with that estimated in Schedule 21, of Tab 10 under Tab "Facilities" of Exhibit B-11 to these proceedings, including reasons for significant differences.

7. (1) The exemption from paragraphs (b) and (c) of section 27 of the Act shall not take effect until such time as

(a) all necessary option or easement agreements have been executed by all owners of lands proposed to be acquired in connection with the facilities described in Schedule "A" attached hereto; and

(b) TransCanada notifies the Board that the agreements referred to in pararaph (a) have been executed.

(2) Unless the conditions prescribed in paragraphs (a) and (b) of subsection (1) have been satisfied, TransCanada shall, prior to the commencement of construction of the facilities referred to in paragraph (a) of subsection (1), file for the approval of the Board, a plan, profile and book of reference of said facilities.

(3) If a plan, profile and book of reference are filed pursuant to subsection (2), the procedure to be followed in respect of Board approval of such plan, profile and book of reference will be that which is set out in subsections 29.1 to 29.6, inclusive, of the Act.

8. TransCanada shall implement all the policies, practices, recommendations and procedures for the protection of the environment included in its application, its environmental reports, its Pipeline Construction Specifications, its Environmental Protection Practices Handbook, 1986, its undertakings made to the Minister of Energy for Ontario and otherwise adduced in evidence before the Board in these proceedings.

(1) TransCanada shall file with the Board a post-construction environmental report within six months of the date that the last leave to open is granted for the approved facilities.

(2) The post-construction environmental report referred to in subsection (1) shall set out the environmental issues that have arisen up to the date on which the report is filed and shall (a) indicate the issues resolved and those unresolved; and (b) describe the measures the company proposes to take in respect of the unresolved issues.

(3) TransCanada shall file with the Board, on or before the 31 December that follows each of the first two complete growing seasons after the construction environmental report referred to in subsection (1) is filed, (a) a list of the environmental issues indicated as unresolved in the report and those that have arisen since the report was filed, if any; and (b) a description of the measures the company proposes to take in respect of any unresolved environmental issue.

10. TransCanada shall, prior to the commencement of construction of the facilities, demonstrate to the Board’s satisfaction that

(a) all necessary United States Economic Regulatory Administration and Federal Energy Regulatory Commission approvals have been granted in final nonappealable form in respect of the anticipated export volumes and any necessary downstream facilities:

(b) transportation contracts with respect to the transportation of the anticipated export volumes on the TransCanada system have been executed; and

(c) in respect of the 847 thousand cubic metres per day (29.9 MMcfd) scheduled to flow by 1 November 1988, KannGaz Producers Ltd. and Tennessee Gas Pipeline Company have, throughout the full term of their Gas Purchase contract, dated 1 November 1987, waived the various asbilled contractual provisions which provide for the suspension or termination of said contract.

11. TransCanada shall cause the construction and installation of the additional facilities, herein referred to, to be commenced on or
NATIONAL ENERGY BOARD

J.S. Klenavic Secretary

SCHEDULE "A"

TransCanada's
Description Estimated Direct Costs
(1987 Dollars)

Pipeline

16.7 km of 914 mm loop of the Niagara Line From MLV 209 to MLV 209 + 16.7 km 19.1 km of 914 mm loop of the Niagara Line from MLV 211 to MLV 211 A + 6.7 km
Sub-total $35,200,000

Compression

Relocation of a 3.2 MW
Compressor unit from
Station 139 to Station 209 1,960,000

Total $37,160,000

ORDER NO. XG-9-88

IN THE MATTER OF the *National Energy Board Act* (hereinafter referred to as "the Act") and the Regulations made thereunder; and

IN THE MATTER OF an application, dated 9 June 1987, as amended, by TransCanada PipeLines Limited (hereinafter referred to as "TransCanada") pursuant to Parts III and IV of the Act, seeking, *inter alia,* a certificate in respect of certain pipeline facilities and an order exempting those pipeline facilities from the provisions of certain sections of the Act; filed with the National Energy Board (hereinafter referred to as "the Board") under File No. 1555-T1-149.

BEFORE the Board on 9 May 1988.

WHEREAS TransCanada has represented that its proposed pipeline facilities are required to transport additional volumes of natural gas for domestic and export requirements;

AND WHEREAS a public hearing has been held pursuant to Hearing Order GH-2-87, in the City of Ottawa, in the Province of Ontario, at which the Board heard TransCanada and all interested parties;

AND WHEREAS the Board has found that the pipeline facilities described in Schedule "A" attached to and forming part of this order, are and will be required by the present and future public convenience and necessity;

IT IS ORDERED THAT pursuant to sections 16.2 and 49 of the Act the facilities described in Schedule "A" attached hereto are exempt from the provisions of paragraph 26(1)(a), subsection 26(2) and section 27 of the Act upon the following conditions:

1. TransCanada shall, at least 10 days prior to the commencement of construction of the additional facilities, file with the Board a detailed construction schedule or schedules identifying major construction activities and shall notify the Board of any modifications to the schedule or schedules as they occur.

2. TransCanada shall, at least 10 days prior to the commencement of pipeline construction, file with the Board pipeline construction alignment drawings.

3. TransCanada shall, at least 10 days prior to the commencement of construction, file with the Board a description of the plans and procedures for cost control of the project.

4. TransCanada shall, prior to commencement of pipeline welding, file with the Board an affidavit, signed by a professional engineer, confirming that the welding procedures and the non-destructive testing procedures to be used during the project have been qualified in accordance with Response (i)(c) of Exhibit B172 to the GH-2-87 proceedings.

5. TransCanada shall, within six months of putting the facilities into service, file with the Board a report providing a breakdown of the costs incurred in the construction of the additional facilities in the format used in Schedule 5 of Tab 10 under Tab "Facilities" of Exhibit B-11 to these proceedings, setting forth actual versus estimated costs, including reasons for significant differences from estimates.

6. (1) The exemption from paragraphs (b) and (c) of section 27 of the Act shall not take effect until such time as

(a) all necessary option or easement agreements have been executed by all owners of lands proposed to be acquired in connection with the facilities described in Schedule "A" attached hereto; and

(b) TransCanada notifies the Board that the agreements referred to in paragraph (a) have been executed.

(2) Unless the conditions prescribed in paragraphs (a) and (b) of subsection (1) have been satisfied, TransCanada shall, prior to the commencement of construction of the facilities referred to in paragraph (a) of subsection (1), file for the approval of the Board, a plan, profile and book of reference of said facilities.

(3) If a plan, profile and book of reference are filed pursuant to subsection (2), the procedure to be followed in respect of Board approval of such plan, profile and book of reference will be that which is set out in subsections 29.1 to 29.6, inclusive, of the Act.

7. TransCanada shall implement all the policies, practices, recommendations and procedures for the protection of the environment included in its application, its environmental reports, the Pipeline Construction Specifications, its Environmental Protection Practices Handbook, 1986, its undertakings made to the Minister of Energy for Ontario and otherwise adduced in evidence before the Board in these proceedings.

8. (1) TransCanada shall file with the Board a post-construction environmental report within six months of the date that the last leave to open is granted for the approved facilities.

(2) The post-construction environmental report referred to in subsection (1) shall set out the environmental issues that have arisen up to the date on which the report is filed and shall

(a) indicate the issues resolved and those unresolved; and (b) describe the measures the company proposes to take in respect of the unresolved issues.

(3) TransCanada shall file with the Board, on or before the 31 December that follows each of the first two complete growing seasons after the post-construction environmental report referred to in subsection (1) is filed, (a) a list of the environmental issues indicated as unresolved in the report and those that have arisen since the report was filed, if any; and (b) a description of the measures the company proposes to take in respect of any unresolved environmental issue.

9. TransCanada shall cause the construction and installation of the additional pipeline, herein referred to, to be commenced on or before 31 December 1988.

NATIONAL ENERGY BOARD

J.S. Klenavic Secretary

SCHEDULE "A"

TransCanada's Description	**Estimated Direct Costs (1987 Dollars)**
Pipeline	
4.5 km of 508 mm loop of the St. Mathieu Extension from MLV 802 + 6.9 km to MLV 802 + 11.4 km	$2,528,000

ORDER NO. XG-10-88

IN THE MATTER OF the *National Energy Board Act* (hereinafter referred to as "the Act") and the Regulations made thereunder; and

IN THE MATTER OF an application, dated 29 March 1988 by TransCanada PipeLines Limited (hereinafter referred to as "TransCanada") pursuant to Part III of the Act for an order exempting certain pipeline facilities from the provisions of certain sections of the Act; filed with the National Energy Board (hereinafter referred to as "the Board") under File No. 1555-T1-153.

BEFORE the Board on 9 May 1988.

WHEREAS TransCanada has represented that its proposed facilities are required to transport additional volumes of natural gas for domestic requirements:

AND WHEREAS interested parties have made their comments known in respect of TransCanada's application;

AND WHEREAS the Board has found that the facilities described in Schedule "A" attached to and forming part of this order, are in the public interest;

IT IS ORDERED THAT pursuant to section 49 of the Act, the facilities described in Schedule "A" attached hereto are exempt from the provisions of paragraph 26(1)(a), subsection 26(2) and section 27 of the Act upon the following conditions:

1. TransCanada shall, at least 10 days prior to the commencement of construction of the additional facilities, file with the Board a detailed construction schedule or schedules identifying major construction activities and shall notify the Board of any modifications to the schedule or schedules as they occur.

2. TransCanada shall cause the construction and installation of the additional facilities, herein referred to, to be commenced on or before 31 December 1988.

NATIONAL ENERGY BOARD

J.S. Klenavic
Secretary

SCHEDULE "A"

TransCanada's
Description Estimated Direct Costs
(1988 Dollars)

Relocation of a 10.4 MW portable compressor unit from Station 136 to Station 95 $1,140,000

Relocation of a 5.7 MW portable compressor unit from Station 134 to Station 147 $1,510,000

Total $2,650,000

Appendix III

NEB Decision Issued 16 June 1988 Regarding Montreal Line Loop

IN THE MATTER OF the *National Energy Board Act*, R.S.C. 1970, c. N-6, as am. (the "Act") and the Regulations made thereunder; and

IN THE MATTER OF an application dated 29 March 1988, by TransCanada PipeLines Limited ("TransCanada"), pursuant to Part III of the Act for an order exempting certain proposed facilities from certain sections of the Act; filed with the National Energy Board (the "Board") under File No. 1555-T1-153.

Decision

Having considered TransCanada's application dated 29 March 1988 and submissions by TransCanada and parties of record to GH-2-87 in respect of said application, the Board has exempted the proposed 19.1 km loop of the Montreal Line from paragraph 16(1)(a), subsection 26(2) and section 27 of the Act, pursuant to section 49 thereof. A copy of Board Order No. XG-13-88, granting this relief, is attached hereto.

Ottawa, Ontario
June 1988

ORDER NO. XG-13-88

IN THE MATTER OF the *National Energy Board Act* (hereinafter referred to as "the Act") and the Regulations made thereunder; and

IN THE MATTER OF an application, dated 29 March 1988 by TransCanada PipeLines Limited (hereinafter referred to as "TransCanada") pursuant to Part III of the Act for an order exempting certain pipeline facilities from the provisions of certain sections of the Act; filed with the National Energy Board (hereinafter referred to as "the Board") under File No. 1555-T1-153.

BEFORE the Board on 15 June 1988.

WHEREAS TransCanada has represented that its proposed facilities are required to transport additional volumes of natural gas for domestic requirements;

AND WHEREAS interested parties have made their comments known in respect of TransCanada's application;

AND WHEREAS the Board has found that the facilities described in Schedule "A" attached to and forming part of this order, are in the public interest;

IT IS ORDERED THAT pursuant to section 49 of the Act the facilities described in Schedule "A" attached hereto are exempt from the provisions of paragraph 26(1)(a), subsection 26(2) and section 27 of the Act upon the following conditions:

1. TransCanada shall, at least ten days prior to the commencement of construction of the additional facilities, file with the Board a detailed construction schedule or schedules identifying major construction activities and shall notify the Board of any modifications to the schedule or schedules as they

2. TransCanada shall, at least ten days prior to the commencement of pipeline construction, file with the Board pipeline construction alignment drawings.

3. TransCanada shall, at least ten days prior to the commencement of construction, file with the Board a description of the plans and procedures for cost control of the project.

4. TransCanada shall, prior to commencement of pipeline welding, file with the Board an affidavit, signed by a professional engineer, confirming that the welding procedures and the non-destructive testing procedures to be used during the project have been qualified in accordance with Response (i)(c) of Exhibit B172 to the GH-2-87 proceedings.

5. TransCanada shall, within six months of putting the facilities into service, file with the Board a report providing

(a) a detailed breakdown of the costs incurred in the construction of the additional facilities in the format used in Appendix 9 of Tab 9, page 9 of 12 under Tab "Facilities" of the application dated 29 March 1988 setting forth actual versus estimated costs, including reasons for significant differences from estimates; and

(b) the percentage of Canadian content realized in comparison with that estimated in Appendix 9 of Tab 9, page 11 of 12, under Tab "Facilities" of the application dated 29 March 1988, including reasons for significant differences.

6. (1) The exemption from paragraphs (b) and (c) of section 27 of the Act shall not take effect until such time as

(a) all necessary option or easement agreements have been executed by all owners of lands proposed to be acquired in connection with the facilities described in Schedule "A" attached hereto; and (b) TransCanada notifies the Board that the agreements referred to in paragraph (a) have been executed.

(2) Unless the conditions prescribed in paragraphs (a) and (b) of subsection (1) have been satisfied, TransCanada shall, prior to the commencement of construction of the facilities referred to in paragraph (a) of subsection (1), file for the approval of the Board, a plan, profile and book of reference of said facilities.

(3) If a plan, profile and book of reference are filed pursuant to subsection (2), the procedure to

be followed in respect of Board approval of such plan, profile and book of reference will be that which is set out in sections 29.1 to 29.6, inclusive, of the Act.

7. TransCanada shall implement all the policies, practices, recommendations and procedures for the protection of the environment included in its application, its environmental reports, its Pipeline Cons
truction Specifications and its Environmental Protection Practices Handbook, 1986.

8. (1) TransCanada shall file with the Board a post-construction environmental report within six months of the date that the last leave to open is granted for the approved facilities.

(2) The post-construction environmental report referred to in subsection (1) shall set out the environmental issues that have arisen up to the date on which the report is filed and shall

(a) indicate the issues resolved and those unresolved; and (b) describe the measures the company proposes to take in respect of the unre solved issues.

(3) TransCanada shall file with the Board, on or before the 31 December that follows each of the first two complete growing seasons after the post-construction environmental report referred to in subsection (1) is filed,

(a) a list of the environmental issues indicated as unresolved in the report and those that have arisen since the report was filed, if any; and (b) a description of the measures the company proposes to take in respect of any unresolved environmental issue.

9. TransCanada shall file with the Board, at least ten days prior to the commencement of construction, the results of the heritage resources survey referred to on page 18 of the "Environmental and Socio-Economic Impact Assessment of the Proposed Montreal Line Loop 1988", including any corresponding mitigative measures.

10. TransCanada shall, at least ten days prior to commencement of construction, file with the Board a report on the results of a field investigation of the landfill site in the vicinity of MLV 146 + 15.3 km. The report shall

(a) indicate issues related to construction in the vicinity of the site; and (b) describe the measures the Company proposes to take to resolve those issues.

11. TransCanada shall cause the construction and installation of the additional pipeline, herein referred to, to be commenced on or before 31 December 1988.

NATIONAL ENERGY BOARD

J.S. Klenavic
Secretary

SCHEDULE "A"

Description	TransCanada's Estimated Direct Costs (1988 Dollars)
Pipeline	
19.1 km of 914 mm loop of the Montreal Line from MLV 146 to MLV 146 + 19.1 km	15,654,000

Appendix IV

Cerlificate Conditions in Respect of Six 12.5-MW Compressors on the Central Section

1. The pipeline facilities in respect of which this certificate is issued ("the additional facilities") shall be the property of and shall be operated by TransCanada.

2. (1) TransCanada shall cause the additional facilities to be designed, manufactured, located, constructed and installed in accordance with those specifications, drawings, and other information or data set forth in its application, or as otherwise adduced in evidence before the Board or approved pursuant to these, except as varied in accordance with subsection (2) hereof.

(2) TransCanada shall cause no variation to be made to the specifications, drawings or other information or data referred to in subsection (1) without the prior approval

3. TransCanada shall implement or cause to be implemented all of the policies, practices, recommendations and procedures for the protection of the environment included in its application, its environmental reports filed as part of its application, its Pipeline Construction Specifications, its Environmental Protection Practices Handbook, 1986, or as otherwise adduced in evidence before the Board in the GH-2-87 proceedings.

4. TransCanada shall, at least 10 days prior to the commencement of construction of the additional facilities, file with the Board a detailed construction schedule or schedules identifying major construction activities and shall notify the Board of any modifications to the schedule or schedules as they occur.

5. TransCanada shall, at least 10 days prior to the commencement of construction of the additional facilities, file with the Board a description of the plans and procedures for cost control of the project.

6. TransCanada shall, within six months of putting the additional facilities into service, file with the Board a report providing

(a) a breakdown of the costs incurred in the construction of the additional facilities in the format used in Schedules 10 and 11 of Tab 10 under Tab "Facilities" of Exhibit B-11 to the GH-2-87 proceedings, setting forth actual-versusestimated costs, including reasons for significant differences from estimates;

(b) the percentage of Canadian content real ized in comparison with that estimated in Schedule 23, of Tab 10 under Tab "Facilities" of Exhibit B- 11 to the GH-2-87 proceedings, including reasons for significant differences.

7. TransCanada shall cause the construction and installation of the additional facilities, herein

referred to, to be commenced on or before 31 December 1989, unless otherwise approved by the Board.

Appendix V

Certifcate Conditions in Respect of 1989 Niagara Line Facilities

1. The pipeline facilities in respect of which this certificate is issued ("the additional facilities") shall be the property of and shall be operated by TransCanada.

2. (1) TransCanada shall cause the the additional facilities to be designed, manufactured, located, constructed and installed in accordance with those specifications, drawings, and other information or data set forth in its application, or as otherwise adduced in evidence before the Board or approved pursuant to these, except as varied in accordance with subsection (2) hereof.

(2) TransCanada shall cause no variation to be made to the specifications, drawings or other information or data referred to in subsection (1) without the prior approval of the Board.

3. TransCanada shall implement or cause to be implemented all of the policies, practices, recommendations and procedures for the protection of the environment included in its application, its environmental reports filed as part of its application, its Pipeline Construction Specifications, its Environmental Protection Practices Handbook, 1986, its undertakings made to the Minister of Energy for Ontario, or as otherwise adduced in evidence before the Board in the GH-2-87 proceedings.

4. TransCanada shall, at least 10 days prior to the commencement of construction of the additional facilities, file with the Board a detailed construction schedule or schedules identifying major construction activities and shall notify the Board of any modifications to the schedule or schedules as they occur.

5. TransCanada shall, at least 10 days prior to the commencement of pipeline construction, file with the Board pipeline construction alignment drawings.

6. TransCanada shall, at least 10 days prior to the commencement of construction of the measurement facilities, file with the Board

(a) station plot plans; and

(b) equipment layout in the meter building.

7. TransCanada shall, at least 10 days prior to the commencement of construction of the additional facilities, file with the Board a description of the plans and procedures for cost control of the project.

8. TransCanada shall, prior to commencement of pipeline welding, file with the Board an affidavit, signed by a professional engineer, confirming that the welding procedures and the non-destructive testing procedures to be used during the project have been qualified in accordance with Response (i)(c) of Exhibit B-172 to the GH-2-87 proceedings.

9. TransCanada shall, at least 10 days prior to commencement of site preparation for the crossing of the Welland and Power Canals, file with the Board

(a) the construction schedule for the crossing; and

(b) detailed drawings and specifications for the crossing.

10. TransCanada shall, within six months of putting the additional facilities into service, file with the Board a report providing

(a) a breakdown of the costs incurred in the construction of the additional facilities in the format used in Schedules 4 and 8 of Tab 10 under Tab "Facilities" of Exhibit B-11 to GH-2-87 proceedings, setting forth actual-versus-estimated costs, including reasons for significant differences from estimates; and

(b) the percentage of Canadian content realized in comparison with that estimated in Schedules 21 and 22, of Tab 10 under Tab "Facilities" of Exhibit B- 11 to the GH-2-87 proceedings, including reasons for significant differences.

11. (1) TransCanada shall file with the Board a post-construction environmental report within six months of the date that the last leave to open is granted for the additional facilities.

(2) The post-construction environmental report referred to in subsection (1) shall set out the environmental issues that have arisen up to the date on which the report is filed and shall

(a) indicate the issues resolved and those unresolved; and

(b) describe the measures the company proposes to take in respect of the unresolved issues.

(3) TransCanada shall file with the Board, on or before the 31 December that follows each of the first two complete growing seasons after the post-construction environmental report referred to in subsection (1) is filed,

(a) a list of the environmental issues indicated as unresolved in the report and those that have arisen since the report was filed, if any; and

(b) a description of the measures the company proposes to take in respect of any unresolved environmental issue.

12. Unless the Board otherwise directs, TransCanada shall, prior to the commencement of construction of the additional facilities, demonstrate to the Board’s satisfaction that

(a) all necessary United States Economic Regulatory Administration and Federal Energy Regulatory Commission approvals have been granted in final nonappealable form in respect of the anticipated export volumes and any necessary downstream facilities;

(b) transportation contracts with respect to the transportation of the anticipated export volumes on the TransCanada system have been executed;

(c) Alberta Northeast Gas, Limited has fully executed gas purchase and gas sales contracts with its suppliers and U.S. repurchasers, and that ProGas Limited has fully executed a gas purchase contract with Ocean State Power; and

(d) in respect of the 2258 thousand cubic metres per day (79.7 MMcfd) scheduled to flow by 1 November 1989, KannGaz Producers Ltd. and Tennessee Gas Pipeline Company have, throughout the full term of their Gas Purchase contract dated 1 November 1987, waived the various as-billed contractual provisions which provide for the suspension or termination of said contract.

13. TransCanada shall cause the construction and installation of the additional facilities, herein referred to, to be commenced on or before 31 December 1989, unless otherwise approved by the Board.

Appendix VI

Certificate Conditions in Respect of Kirkwall Line and Kirwall Meter Station

1. The pipeline facilities in respect of which this Certificate is issued ("the additional facilities") shall be the property of and shall be operated by TransCanada.

2. (1) TransCanada shall cause the additional facilities to be designed, manufactured, located, constructed and installed in accordance with those specifications, drawings, and other information or data set forth in its application, or as otherwise adduced in evidence before the Board or approved pursuant to these, except as varied in accordance with subsection (2) hereof.

(2) TransCanada shall cause no variation to be made to the specifications, drawings or other information or data referred to in subsection (1) without the prior approval of the Board.

3. TransCanada shall implement or cause to be implemented all of the policies, practices, recommendations and procedures for the protection of the environment included in its application, its environmental reports filed as part of its application, its Pipeline Construction Specifications, its Environmental Protection Practices Handbook, 1986, its undertakings made to the Minister of Energy for Ontario, or as otherwise adduced in evidence before the Board in the GH-2-87 proceedings.

4. TransCanada shall, at least 10 days prior to the commencement of construction of the additional facilities, file with the Board a detailed construction schedule or schedules identifying major construction activities and shall notify the Board of any modifications to the schedule or schedules as they occur.

5. TransCanada shall, at least 10 days prior to the commencement of pipeline construction, file with the Board pipeline construction alignment drawings.

TransCanada shall, at least 10 days prior to the commencement of construction of the measurement facilities, file with the Board

(a) station plot plans; and

(b) equipment layout in the meter building.

7. TransCanada shall, at least 10 days prior to the commencement of construction of the additional facilities, file with the Board a description of the plans and procedures for cost control of the project.

8. TransCanada shall, prior to commencement of pipeline welding, file with the Board an affidavit, signed by a professional engineer, confirming that the welding procedures and the non-destructive testing procedures to be used during the project have been qualified in accordance with Response (i)(c) of Exhibit B-172 to the GH-2-87 proceedings.

9. TransCanada shall, within six months of putting the additional facilities into service, file with the Board a report providing

(a) a breakdown of the costs incurred in the construction of the additional facilities in the format used in Schedules 8A and 20A of Tab 10 under Tab "Facilities" of Exhibit B-11 to GH-2-87 proceedings setting forth actual-versus-estimated costs, including reasons for significant differences from estimates: and

(b) the percentage of Canadian content realized in comparison with that estimated in Schedules 21 and 22, of Tab 10 under Tab "Facilities" of Exhibit B-11 to the GH-2-87 proceedings, including reasons for significant differences.

10. (1) TransCanada shall file with the Board a post-construction environmental report within six months of the date that the last leave to open is granted for the additional facilities

(2) The post-construction environmental report referred to in subsection (1) shall set out the environmental issues that have arisen up to the date on which the report is filed and shall

(a) indicate the issues resolved and those unresolved; and

(b) describe the measures the company proposes to take in respect of the unresolved issues.

(3) TransCanada shall file with the Board, on or before the 31 December that follows each of the first two complete growing sea
sons after the post-construction environmental report referred to in subsection (1) is filed,

(a) a list of the environmental issues indicated as unresolved in the report and those that have arisen since the report was filed, if any; and

(b) a description of the measures the company proposes to take in respect of any unresolved environmental issue.

11. TransCanada shall cause the construction and installation of the additional facilities, herein referred to, to be commenced on or before 31 December 1989, unless otherwise approved by the Board.

Appendix VII

Order No. TG-4-88

ORDER NO. TG-4-88

IN THE MATTER OF the *National Energy Board Act* (hereinafter referred to as "the Act") and the Regulations made thereunder; and

IN THE MATTER OF an application dated 9 June 1987, as amended, by TransCanada PipeLines Limited (hereinafter referred to as "TransCanada") pursuant to Parts III and IV of the Act, seeking, *inter alia*, certain toll orders; filed with the National Energy Board (hereinafter referred to as "the Board") under File No. 1555-T1-149.

B E F O R E the Board on 18 July 1988.

WHEREAS a public hearing has been held pursuant to Hearing Order GH-2-87, in the City of Ottawa, in the Province of Ontario, at which the Board heard TransCanada and all interested parties;

AND WHEREAS the Board's decisions on TransCanada's application are set out in its Reasons for Decision dated July 1988;

IT IS ORDERED THAT:

1. TransCanada shall for tollmaking and tariff purposes, implement the Board's decisions outlined in the Reasons for Decision dated July 1988;

2. TransCanada shall forthwith file with the Board and serve on all parties to the hearing of the application new tariffs including general terms and conditions conforming with the decisions outlined in the Reasons for Decision dated July 1988.

3. Those provisions of TransCanada's tariffs and tolls or any portion thereof that are contrary to any provision of the Act, to the Reasons for Decision dated July 1988, or to any order of the Board including this order, are hereby disallowed.

NATIONAL ENERGY BOARD

J.S. Klenavic Secretary