CANADA

National Energy Board

Reasons for Decision

TransCanada PipeLines Limited

GH-2-97

November 1997

Facilities

National Energy Board

Reasons for Decision

In the Matter of

TransCanada PipeLines Limited

Application dated 13 May 1997, as amended,
for 1998 Facilities

GH-2-97

November 1997

Cat. No. NE22-1/1997-13E
ISBN 0-662-26172-0

This report is published separately in both official languages.

Copies are available on request from:
The Publications Office
National Energy Board
311 Sixth Avenue S.W.
Calgary, Alberta T2P 3H2
E-Mail: orders@neb.gc.ca
Fax: (403) 292-5503
Phone: (403) 299-3562

For pick-up at the NEB office:
Library
Ground Floor

Printed in Canada

Nº de cat. NE22-1/1997-13F
ISBN 0-662-82390-7

Ce rapport est publié séparément dans les deux langues officielles.

Exemplaires disponibles sur demande auprès du:
Bureau des publications
Office national de l'énergie
311, sixième avenue s.-o.
Calgary (Alberta) T2P 3H2
C. électr. : orders@neb.gc.ca
Télécopieur : (403) 292-5503
Téléphone : (403) 299-3562

En personne, au bureau de l'Office:
Bibliothèque
Rez-de-chaussée

Imprimé au Canada

Table of Contents

List of Tables

List of Figures

List of Appendices

Abbreviations

$10^3m^3/d$	thousand cubic metres per day
10^6m^3	million cubic metres
10^9m^3	billion cubic metres
$10^{12}m^3$	trillion cubic metres
Act	*National Energy Board Act*
ADOE	Alberta Department of Energy
AEC	AEC Oil & Gas Partnership
Androscoggin	Androscoggin Energy LLC
Apache	Apache Canada Ltd.
Bay State	Bay State Gas Company
Bcf	billion cubic feet
Beau Canada	Beau Canada Exploration Ltd.
Board	National Energy Board
CAPP	Canadian Association of Petroleum Producers
CBM	coalbed methane
CDA	Central Delivery Area
CEAA	*Canadian Environmental Assessment Act*
Centra Manitoba	Centra Gas Manitoba Inc.
certificate	certificate of public convenience and necessity
CNR	Canadian Natural Resources
CoEnergy	CoEnergy Trading Company
Coastal	Coastal Gas Marketing Company
Consumers	The Consumers' Gas Company Ltd.
ECTR	Enron Capital & Trade Resources Corp.
EDA	Eastern Delivery Area
Empire	Empire State Pipeline Company
Engage US	Engage Energy US, L.P.
Enron	Enron Capital & Trade Resources Canada Corp.
FERC	Federal Energy Regulatory Commission
FST	Firm Service Tendered
FT	Firm Transportation
Geomatics	Geomatics International Inc.
Gulf	Gulf Canada Resources Limited
Gaz Métro	Gaz Métropolitain & Company, Limited Partnership
GJ	gigajoule
GPUAR	*Gas Pipeline Uniform Accounting Regulations*
Great Lakes	Great Lakes Gas Transmission Company Limited Partnership
Husky	Husky Oil Operations Ltd.
International Paper	International Paper Company
J.R. Simplot	J. R. Simplot Company
km	kilometre(s)
LDC	Local Distribution Company
Mcf	thousand cubic feet
MDA	Manitoba Delivery Area
MLV	main line valve
mm	millimetre
MMcfd	million cubic feet per day
M&NE	Maritimes & Northeast Pipeline Company, L.L.C.

MOEE	Ontario Ministry of Environment and Energy
MW	megawatts
National Fuel	National Fuel Gas Supply Corporation
NEB	National Energy Board
Northern Utilities	Northern Utilities, Inc.
NOVA	NOVA Gas Transmission Ltd.
NO_x	oxides of nitrogen
OPCC	Ontario Pipeline Coordination Committee
PA	Precedent Agreement
Petro-Canada	Petro-Canada Oil and Gas
PGQ	le Procureur général du Québec (Government of Quebec)
Pinnacle	Pinnacle Resources Ltd.
PJs	petajoules
PNGTS	Portland Natural Gas Transmission System
PPBR	plans, profiles and books of reference
ProGas	ProGas Limited
ProGas U.S.A.	ProGas U.S.A., Inc.
RDO	RDO Foods Co.
REI	Renaissance Energy (U.S.) Inc.
Renaissance	Renaissance Energy Ltd.
Rigel	Rigel Oil & Gas Ltd.
Rio Alto	Rio Alto Exploration Ltd.
Rock-Tenn	Rock-Tenn Company
Simplot	Simplot Canada Limited
Sproule	Sproule Associates Limited
STS	Storage Transportation Service
Suncor	Suncor Inc.
Talisman	Talisman Energy Inc.
TBO	Transportation by Others
Tennessee	Tennessee Gas Pipeline Company
Tcf	Trillion cubic feet
TCGS	TransCanada Gas Services (a division of TransCanada Energy Ltd.)
TGSI	TransCanada Gas Services Inc.
TQM	Trans Québec and Maritimes Pipeline Inc.
TransCanada	TransCanada PipeLines Limited
TransGas	TransGas Limited
Union	Union Gas Limited/Centra Gas Ontario Inc.
US Gypsum	United States Gypsum Company
Vermont Gas	Vermont Gas Systems, Inc.
Viking	Viking Gas Transmission Company
Wascana	Wascana Energy Inc.
Wausau Papers	Wausau Papers of New Hampshire, Inc.
WCSB	Western Canada Sedimentary Basin
WGSI	Westcoast Gas Services Inc.
WGSI (America)	Westcoast Gas Services (America) Inc.
WGSI (USA)	Westcoast Gas Services (U.S.A.), Inc.

Glossary of Terms

(Explanations for certain terms used in these Reasons which appear infrequently in Board reports or which may be applicable to TransCanada only are provided for the reader's convenience.)

GH-1-97	Hearing Order in respect of Trans Québec & Maritimes Pipeline Inc.'s ("TQM") PNGTS Extension Application.
GHW-1-97	Hearing Order GHW-1-97 in respect of various applications for natural gas export licences.
GHW-2-97	Hearing Order GHW-2-97 in respect of various applications for natural gas export licences.
Guidelines (the)	Board's *Guidelines for Filing Requirements*.
Incentive Settlement	Incentive Cost Recovery and Revenue Sharing Settlement reached by parties with respect to the components of TransCanada's Revenue Requirement, (except for those cost of capital related matters determined in RH-2-94), effective for the years 1996-1999.
M12	Firm Service offered by Union Gas Limited.
NEXUS Phase 1	TransCanada's 1997-98 Facilities Application as initially filed on 13 May 1997 and subsequently revised to become the 1998 Facilities Application (i.e. GH-2-97).
Part III	The part of the *National Energy Board Act* which deals with the construction and operation of pipelines.
Part IV	The part of the *National Energy Board Act* which deals with Traffic, Tolls and Tariffs.
RH-1-97	Hearing Order in respect of TransCanada's application for tolls effective 1 January 1997.
RH-3-97	Hearing Order to establish a proceeding to consider TransCanada's contract renewal rights provisions and expansion policy requirements.

Recital and Appearances

IN THE MATTER OF the *National Energy Board Act* and the Regulations made thereunder; and

IN THE MATTER OF an application by TransCanada PipeLines Limited dated 13 May 1997 and subsequently revised for certain orders respecting a certificate of public convenience and necessity authorizing construction of additional facilities on its mainline; and

IN THE MATTER OF the National Energy Board Hearing Order GH-2-97.

HEARD at Calgary, Alberta on 22, 23, 24, 25, 26 September and 1 October 1997.

BEFORE:

K.W. Vollman	Presiding Member
R. Priddle	Member
R. Revel	Member

APPEARANCES:

P.R. Jeffrey B. Andriachuk	TransCanada PipeLines Limited
N.J. Schultz	Canadian Association of Petroleum Producers
A.S. Hollingworth D. Wood	Androscoggin Energy LLC; Bay State Gas Company; The Mead Corporation; Northern Utilities Inc.; and Portland Natural Gas Transmission System
D.A. Holgate	CoEnergy Trading Company
F. Cass	Consumers’ Gas Company Ltd. (The)
C.B. Woods	Duke Energy Marketing Limited Partnership
L.G. Keough	Enron Capital & Trade Resources Canada
P. Cochrane	Foothills Pipe Lines Ltd.
L.-A. Leclerc	Trans Québec & Maritimes Pipeline Inc.
R.R. Moore	Imperial Oil Resources Limited
N.J. Gretener	J.R. Simplot Company; Simplot Canada Limited
L.E. Smith	Maritimes & Northeast Pipeline Management Ltd.
S. Boucher-Chen	Pan-Alberta Gas Ltd.

S.L. McDonough	PanCanadian Petroleum Limited
M. Voinorosky	ProGas Limited
P.M. Cradock	Renaissance Energy Ltd.
F.G. Hébert	Gaz Métropolitain & Company, Limited Partnership
F. Basham	Talisman Energy Inc.
G.W. Henderson	TransCanada Gas Services, a Division of TransCanada Energy Limited
G. Cameron	Union Gas Limited and Centra Gas Ontario Inc.
R. Syrnyak	Wascana Energy Inc.
C.J.C. Page	Alberta Department of Energy
H.R. Huber	Province of Nova Scotia
L.A. Boychuk P. Enderwick	Board Counsel

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 detailed text and tables.)

The Application

In its 1998 Facilities Application, initially filed on 13 May 1997 as NEXUS Phase 1, and subsequently revised, TransCanada PipeLines Limited ("TransCanada") applied for a certificate of public convenience and necessity ("certificate") pursuant to Part III of the *National Energy Board Act* (the "Act") for authorization to construct facilities on its natural gas pipeline system in Saskatchewan, Manitoba, Ontario and Quebec (the "1998 Facilities"). Approval was sought to construct a total of 308.4 km of pipeline, 11 new compressor units, aftercoolers at seven stations, manifolds, metering facilities at five stations and compression-related facilities comprising standby plant and aero assemblies. The estimated total cost of the facilities is $824.9 million ($1997). The resulting Eastern Zone toll, without fuel, at 100 percent load factor, would be 90.7 cents per gigajoule ("GJ"), the same as the toll for the Base Case. Construction is planned for 1998 with all facilities expected to be in service by 1 November 1998 with the exception of aftercoolers at four stations which are expected to be in service by 15 December 1998.

Other Regulatory Authorizations

TransCanada requested the National Energy Board (the "Board" or "NEB") to conduct an assessment of the environmental effects of the 1998 Facilities under the *Canadian Environmental Assessment Act* ("CEAA") and Regulations. TransCanada applied to the Board for approval to obtain additional transportation service or capacity on the Trans Québec and Maritimes Pipeline Inc. ("TQM") system between Lachenaie and East Hereford, Quebec. Pursuant to section 58 of the Act, TransCanada also requested exemption from the provisions of sections 31(c), 31(d), 33 and 47 of the Act for the applied-for looping facilities.

Highlights of the Board's Decision

In respect of TransCanada's application pursuant to sections 52 and 58 of the Act, the Board is satisfied that the applied-for facilities are required by the present and future public convenience and necessity and is prepared to issue a certificate, subject to the approval of the Governor in Council. The Board determined that TransCanada's proposed expansion was economically feasible, given the likelihood that the facilities would be used at a reasonable level over their economic life and that the demand charges would be paid. The Board's certificate will include conditions to ensure that only those facilities needed to meet the aggregate firm service requirements will be built and that construction will occur in an acceptable technical and environmental manner.

In respect of TransCanada's requested approval of the Board to contract for TBO on TQM's proposed PNGTS Extension, the Board is satisfied that, as conditioned, TransCanada's design considerations are reasonable for the purposes of an approval under Part III of the Act. The Board, therefore, approves TransCanada's request within the context of the proposed design of TransCanada's applied-for facilities. This approval is conditional upon all approvals of the Board relating to TQM's proposed PNGTS Extension being obtained and does not extend to any Part IV matters or to any matters which are properly considered by the Board in the GH-1-97 proceeding or in any other proceeding.

Chapter 1

Introduction

1.1 NEXUS Phase 1 and the "Four Question Proceeding"

On 13 May 1997, TransCanada PipeLines Limited ("TransCanada") filed an application pursuant to sections 52 and 58 of the *National Energy Board Act* ("the Act") which was referred to as "NEXUS Phase 1". The application was part of a multi-year plan which included the proposed construction and separate operation of Line 100-7 at a higher pressure than the rest of TransCanada's system. On 20 June 1997, the National Energy Board ("Board" or "NEB") issued a Notice of Proceeding in which interested persons were invited to respond to four questions regarding the scope of TransCanada's project, the tolling methodology, whether issues regarding competition with other pipelines should be considered, and how the Board should proceed with TransCanada's application (the "Four Question Proceeding"). On 27 June 1997, the Board, pursuant to section 15 of the *Canadian Environmental Assessment Act* ("CEAA"), sent TransCanada an Information Request regarding the scope of the project.

By letter dated 27 June 1997, TransCanada indicated that, upon revisiting the magnitude of capital costs associated with its application, it had decided to expand its system conventionally and that it intended to file a revised application. On 8 July 1997, the Board suspended, until further notice, the Four Question Proceeding. Also on 8 July, TransCanada responded to the Board's Information Request regarding CEAA scoping in the context of its forthcoming revised application. In its response, TransCanada submitted that its revised application would be for stand-alone facilities to meet its aggregate requirements and that the facilities identified within the application would provide the complete project scope as defined by the CEAA.

1.2 1998 Facilities Application

In its revised 1998 Facilities Application, filed on 14 July 1997 and subsequently amended, TransCanada applied for a certificate of public convenience and necessity ("certificate") pursuant to Part III of the Act for authorization to construct facilities on its natural gas pipeline system in Saskatchewan, Manitoba, Ontario and Quebec in order to meet projected aggregate requirements. Pursuant to section 58 of the Act, TransCanada requested exemption from the provisions of subsections 31(c), 31(d) and sections 33 and 47 of the Act for the applied-for looping facilities. TransCanada also requested that the Board conduct an assessment of the environmental effects of the applied-for facilities under the CEAA.

TransCanada indicated that the proposed expansion would enable it to:

- meet projected requirements under existing contracts;
- convert 4 255 10^6m^3 (150.2 Bcf) of FST annual contract quantity to 11 658 $10^3m^3/d$ (411.6 MMcfd) of FT service;
- provide a total of 9 959 $10^3m^3/d$ (351.6 MMcfd) of new Firm Transportation from Empress, Alberta, beginning 1 November 1998 of which 1 656 $10^3m^3/d$ (58.5 MMcfd) or

16.6 percent would be for domestic customers and the remaining 8 303 $10^3m^3/d$ (293.1 MMcfd) or 83.4 percent would be for export customers; and

- provide a total of 1 841 $10^3m^3/d$ (65.0 MMcfd) of new short haul Firm Transportation from St. Clair to East Hereford beginning 1 November 1998.

Approval was sought to construct a total of 308.4 km of pipeline, 11 new compressor units totalling 249.4 MW of power, aftercoolers at seven stations, manifolds, metering facilities at five stations, and compression related facilities comprising standby plant and aero assemblies. The estimated total cost of the facilities is $824.9 million ($1997). Construction is planned for 1998 with all facilities expected to be in service by 1 November 1998 with the exception of the aftercoolers at four stations which are expected to be in service by 15 December 1998. TransCanada estimated that, after the addition of the facilities necessary to provide the capacity to meet the projected aggregate requirements for the 1998-99 operating year, the Eastern Zone toll, without fuel, at 100% load factor, would be 90.7 cents per gigajoule ("GJ"), the same as the toll for the Base Case.

1.3 Contracting for Service/Capacity on TQM's System

On 1 August 1997, TransCanada requested that the Board convene a separate public hearing in respect of the Trans Québec and Maritimes Pipeline Inc. ("TQM") application for the PNGTS Extension, concurrent with the GH-2-97 proceeding, to hear portions of TQM's application. The Board denied this request on 8 August 1997 on the basis of logistical and administrative considerations. On 12 August 1997, TransCanada filed an amendment to its application which included a specific request for approval of additional transportation capacity or service (Transportation by Others or "TBO") on TQM's proposed PNGTS Extension, pursuant to Article 5.1 of TransCanada's *Incentive Cost Recovery and Revenue Sharing Settlement* ("Incentive Settlement").

On 21 August 1997, after receiving letters from Maritimes & Northeast Pipeline Company, L.L.C. ("M&NE") and Union Gas Limited and Centra Gas Ontario Inc. ("Union") dated 19 August 1997, the Board invited comments on TransCanada's 12 August 1997 amendment. After receiving comments regarding TransCanada's request for approval of TBO, the Board, in a letter dated 2 September 1997, advised parties to the GH-2-97 proceeding that the issue of TBO on the TQM system is appropriately considered in the context of Issue 2, the appropriateness of the design of the proposed facilities, included in Appendix III of the GH-2-97 Directions on Procedure. The Board further advised parties that issues concerning toll methodology are not relevant to the GH-2-97 proceeding and may be dealt with in a subsequent proceeding as a matter pursuant to Part IV of the Act. Also, to address possible concerns related to the allocation of costs, the Board revised the Preliminary List of Issues to include as an issue the appropriateness of establishing a deferral account for any costs related to TransCanada's proposed contracting for TBO on TQM's PNGTS Extension.

By copy of the Board's letter to Union dated 17 September 1997, parties to the GH-2-97 proceeding were further advised that the Board would only consider matters required to enable it to discharge its responsibility under Part III of the Act. The Board indicated that it would not consider at this time matters which are properly raised under Part IV of the Act and noted that toll design and tariff issues related to TQM's PNGTS Extension had been identified in the GH-1-97 Directions on Procedure.

Chapter 2

Land Use, Environmental and Socio-Economic Matters

2.1 Route Selection and Land Requirements

2.1.1 Route Selection

In its 1998 Facilities Application TransCanada requested approval for a total of 308.4 km of pipeline in the provinces of Saskatchewan, Manitoba and Ontario, comprising 12 loop sections and one new section of pipeline. The new pipeline section, referred to as the Winchester Shortcut, will involve the installation of 27.9 km of pipeline in a new easement between MLV 1219 + 16.1 km and MLV 1401. The location, length and land requirements (permanent easements and temporary work space) for each pipeline section are found in Table 2-1. TransCanada provided schematics showing the land requirements for each pipeline section.

Where new facilities could not be located on existing rights-of-way due to right-of-way constraints, TransCanada proposed that they be located adjacent to the existing rights-of-way provided that environmental, engineering, construction and safety concerns were addressed. All of the proposed looping is adjacent to existing TransCanada rights-of-way with the exception of the deviations on the MLV 20 to MLV 21, MLV 21 to MLV 22, Assiniboine River (MLV 25 + 30 km to MLV 27 + 1.6 km) and Vermilion Bay (MLV 52 + 6.1 km to MLV 52 + 25.1 km) Loop sections. As mentioned above, the Winchester Shortcut will also require a new right-of-way.

2.1.2 Land Requirements

Station Facilities (Fee Simple)

TransCanada submitted that all of the compressor additions would be constructed on lands owned in fee simple by TransCanada.

Easements

TransCanada requires easements ranging in width from 15 to 30 metres along the proposed loop sections.

Temporary Work Space

TransCanada requires temporary work space ranging in width from 5 to 20 metres for machinery movement, the storage of topsoil and subsoil, and to ensure that no environmental or landowner interests are compromised during construction. This is in accordance with TransCanada's Pipeline Construction Specifications (1993).

TransCanada provided the rationale for its specific land requirements and for each loop location. The location, length and land requirements for each loop section are found in Table 2-1.

Table 2-1
TransCanada's Proposed 1998 Facilities - Land Requirements

Location	Lengt h (km)	Permanent Easement		Temporary Work Space	
		Width (metres)	Length (km)	Width (metres)	Length (km)
Saskatchewan - 7th Loop					
MLV 13 to MLV 13 + 23 .6 km	23.6	20.0	23.6	20.0	23.6
MLV 20 to MLV 20 + 23.1 km	23.1	20.0/30.0	23.1	10.0/20.0	23.1
MLV 21 to MLV 21 + 26.4 km	26.4	20.0/30.0	26.4	10.0/20.0	26.4
MLV 25 to MLV 25 + 2.9 km (Saskatchewan/Manitoba border)	2.9	20.0	2.9	20.0	2.9
Manitoba - 7th Loop					
MLV 25 + 2.9 km to MLV 25 + 32.4 km	29.5	20.0/30.0	29.5	10.0/20.0	**29.5**
MLV 27 to MLV 27 + 24.9 km	24.9	20.0/30.0	24.9	10.0/20.0	**24.9**
MLV 28 to MLV 28 + 26.4 km	26.4	20.0	26.4	20.0	**26.4**
Ontario - 4th Loop					
MLV 52 to MLV 53A	32.9	15.0/30.0	32.9	10.0	23.9
MLV 55 to MLV 55 + 15.2 km	15.2	15.0/30.0	15.2	10.0	13.7
MLV 67 to MLV 67 + 22.8 km	22.8	15.0/20.0	22.8	10.0/20.0	22.8
Ontario - 2nd Loop (North Bay Shortcut)					
MLV 1209 to MLV 1209 + 18.8 km	18.8	30.0	18.8	20.0	18.8
MLV 1210 to MLV 1210 + 22.5	22.5	30.0	22.5	20.0	22.5
Ontario - Winchester Shortcut					
MLV 1219 + 16.1 km to MLV 1219 + 44.0 km (MLV 1401)	27.9	30.0	27.9	10.0	27.9
Ontario - 2nd Loop (Dawn Extension)					
MLV 501 to MLV 501 + 11.5 km	11.5	20.0/45.7	11.5	5.0/20.0	11.5
TOTAL	**308.4**		**308.4**		**297.9**

2.1.3 New Routing and Deviations

MLV 1219 + 16.1 km to MLV 1401, Winchester Shortcut

The Winchester Shortcut will involve the installation of 27.9 km of 1067 mm pipeline in a new 30 metre wide easement between MLV 1219 + 16.1 km and MLV 1401. This pipeline section crosses the townships of Mountain, Winchester, Matilda and Williamsburg in the United Counties of Stormont, Dundas and Glengarry in Eastern Ontario. The Winchester Shortcut will cross mainly agricultural land, with extensive surface and subsurface drainage, and one extensive wetland area. Dairy production is common in the area along with some beef production. Remnants of natural plant communities remain, mainly in large wetland areas. Fifteen to twenty-three permanent water crossings will be required depending on the final route alignment of the shortcut.

MLV 20 to MLV 21 Loop (Saskatchewan)

The close proximity of a church to the proposed pipeline was noted by Geomatics International Inc. ("Geomatics") as a potential concern requiring further analysis. TransCanada examined the site and proposed a short route deviation to avoid impact to the church and its associated outbuildings. The total length of the deviation was approximately 450 metres. The deviation would depart the mainline immediately downstream of MLV 20 and travel in a southeasterly direction for 130 metres, crossing a primary grid road just south of the church driveway. The deviation would then turn eastward, passing through the southern tip of a small woodlot, for about 120 metres before turning northeast and joining the mainline at MLV 20 + 0.4 km.

MLV 21 to MLV 22 Loop (Saskatchewan)

The close proximity of a historic church (St. Andrew’s Anglican) to the proposed pipeline was noted by Geomatics as a potential concern requiring further analysis. TransCanada examined the site and proposed a route deviation of approximately 650 metres to avoid any impact on the church and its associated outbuildings. The deviation would depart the mainline at about MLV 21 + 4.7 km and travel in a southeasterly direction for about 150 metres. The deviation would then turn eastward for about 330 metres before turning northeastwards and rejoining the mainline at about MLV 21 + 5.3 km.

MLV 25 + 30 km to MLV 27 + 1.6 km Assiniboine River Deviation (Manitoba)

TransCanada proposed to construct a loop between MLV 25, just west of the Saskatchewan-Manitoba border and MLV 30 located about 25 km north of the City of Brandon, Manitoba. To avoid a potential dual crossing of the Assiniboine River, TransCanada proposed a realignment of the proposed looping to the south of the existing crossing across a relatively straight reach of the river. The realignment crosses the Assiniboine River and two seasonal watercourses, and would be approximately 3.9 km long.

MLV 52 + 16.1 km to MLV 52 + 25.1 km Vermilion Bay Deviation (Ontario)

TransCanada proposed a 9.0 km route deviation, leaving and rejoining the existing mainline at MLV 52 + 16.1 km and MLV 52 + 25.1 km, respectively. The 32.9 km loop is located about 67 km northeast of the Town of Kenora and 27 km northwest of the Town of Dryden. The existing mainline passes within 200 metres north of the community of Vermilion Bay from MLV 52 + 18.2 km to

MLV 52 + 21.6 km. Several residences, businesses and motels are located in close proximity to the right-of-way in this area. The additional easement requirements for the proposed looping of MLV 52 and MLV 53A, if located parallel and adjacent to the existing easement, would have resulted in additional encroachment of the community and would have required the displacement of several structures. The required width of the proposed permanent easement is 30 metres for the new right-of-way.

Views of the Board

The Board agrees with TransCanada's rationale for installing the proposed new looping facilities either within existing easements or adjacent to existing easements with associated temporary work space. The general routes proposed by TransCanada for those loop sections are acceptable to the Board including the deviations on the MLV 20 to MLV 21, MLV 21 to MLV 22, Assiniboine River and Vermilion Bay Loop sections. The Board also agrees with the general routing of the Winchester Shortcut.

The potential impacts on affected landowners, including the amount of land required for pipeline construction whether acquired as easements or temporary work space, are matters which are carefully considered by the Board. The Board finds that TransCanada's anticipated requirements for easements and temporary work space are reasonable and justified in this application.

2.1.4 Requirements of the Act in Respect of the Routing of New Pipeline Facilities

If the Board is satisfied with the proposed general route of a particular section of pipeline, and issues a certificate in respect of it, the pipeline company must submit to the Board, prior to commencement of construction, plans, profiles and books of reference ("PPBR") which, among other things, lay out the detailed route of the pipeline segment.

In this regard, TransCanada requested that the applied-for looping facilities be exempted, pursuant to section 58 of the Act, from the provisions of paragraphs 31(c), 31(d) and 33 thereof. Such exemptions would relieve TransCanada from the necessity of filing a PPBR for Board approval in respect of the looped sections of pipeline.

Views of the Board

In deciding whether or not to exempt TransCanada from the provisions of paragraphs 31(c), 31(d) and 33 of the Act as requested, the Board is mindful of the rights of adjacent landowners who might be affected by the proposed construction. The Board is of the opinion that, due to the proposed location of the facilities on existing easements or on new easements adjacent thereto or required for the applied-for deviations, it is unlikely that those landowners would be adversely affected in the long term by the proposed construction.

The Board is concerned that landowners, whose property TransCanada proposes to acquire, have their rights protected under the Act. However, the Board is also aware of the potential problems for TransCanada if it is unable to obtain all the necessary land rights. Therefore, the Board is prepared to issue an order pursuant to section 58 of the Act, subject to the condition that the exemption shall not take effect for any specific loop referred to in the order until TransCanada has satisfied the Board that all required land rights have been acquired along that loop section. In the event that all required land rights have not been acquired along a specific loop, any portion or portions of the loop may be constructed if, prior to construction, TransCanada demonstrates to the satisfaction of the Board that the landowner rights as prescribed by the Act will not be prejudiced by the construction .

The Board is of the view that the wording of the condition proposed by TransCanada and included at the end of Appendix II of these reasons, protects the rights of landowners, including the right to a detailed route hearing, while allowing TransCanada flexibility in proceeding with the right-of-entry process.

The Board is satisfied that TransCanada's request for exemption from paragraphs 31(c), 31(d) and 33 of the Act is reasonable, for the loop sections of existing pipeline, and is therefore prepared to grant the requested exemption upon issuance of a certificate by the Governor in Council. This exemption, however, will not apply to the Winchester Shortcut, a new 27.9 km section of 1067 mm mainline pipe, which requires the acquisition of new land rights along a new right-of-way.

Decision

The Board will grant TransCanada an exemption from the provisions of paragraphs 31(c), 31(d) and 33 of the Act, subject to the exemption order condition included in Appendix II of these Reasons, for the applied-for looping facilities. This exemption will not apply to the new section of mainline pipe referred to as the Winchester Shortcut.

2.2 Public Concerns

Mr. F. Susin and Neighbours

Mr. F. Susin, on his own behalf and on behalf of his neighbours who reside near Douglastown Compressor Station 1703, raised a number of concerns relating to the increase in pressure at which the pipeline would be operated, the potential for increased emissions due to increased operating pressure, and the potential for increased noise resulting from compressor facility expansions. In its letter to TransCanada and Mr. Susin dated 15 September 1997, the Board advised that it would limit its consideration to matters which relate directly to the applied-for facilities, including matters concerning safety. Some of the concerns were found to be outside the scope of this hearing, as they were related to facilities additions, including those at Station 1703, that were examined and approved in previous Board proceedings.

During the course of this proceeding TransCanada undertook to follow up on Mr. Susin's concerns, through direct communication with Mr. Susin outside of the GH-2-97 proceeding, and proposed to hold an open house at Station 1703 in an attempt to resolve the outstanding concerns. TransCanada agreed to copy the Board with all communications arising from these discussions.

TransCanada acknowledged that while the pipeline would be operated at a higher pressure as a result of the applied-for facilities, the pressure would remain within the approved maximum allowable pressure. TransCanada stated that Station 1703 and related downstream facilities have been tested to at least 1.4 times their maximum operating pressure and that these requirements meet or exceed the applicable codes, ensuring the safety of both nearby residents and TransCanada staff who work at these stations. TransCanada stated that its aim was to avoid all leaks through regular maintenance checks in accordance with its procedures and operating practices filed with the Board.

Views of the Board

The Board, in this proceeding, considered only those issues which were related directly to the applied-for facilities. The Board notes TransCanada's willingness to continue direct communication with Mr. Susin regarding the concerns which were found to be outside of the context of the GH-2-97 proceeding. The Board further notes TransCanada's willingness to keep the Board apprised of the results of further discussions with Mr. Susin and neighbours, and expects to be copied with all communications in this regard. If the concerns raised are not resolved through discussion, the Board is prepared to consider these matters in a separate complaints process outside the context of this proceeding, as indicated in the Board's letter of 15 September 1997.

2.3 Environmental Matters

2.3.1 Environmental Screening Report

The Board completed an environmental evaluation and an Environmental Screening Report pursuant to the CEAA and the Board's own regulatory process. The Board circulated the Screening Report to those federal agencies that had provided specialist advice on the proposed facilities, to those parties requesting a copy, and to the applicant.

The Board has considered the Environmental Screening Report and comments received on the report in accordance with Hearing Order GH-2-97 and is of the view that, taking into account the implementation of the proposed mitigative measures and those set out in the attached conditions, TransCanada's 1998 Facilities proposal is not likely to cause significant adverse environmental effects. This represents a decision pursuant to paragraph 20(1)(a) of the CEAA, which was taken prior to making any decision under Part III of the Act in respect of the applied-for facilities.

The comments received, and the Board's views, have been added to the Environmental Screening Report as Appendices I and II of the Screening Report respectively. Copies of the Board's Environmental Screening Report are available upon request from the Board's Regulatory Support Office.

2.3.2 Ontario Ministry of Environment and Energy

The Ontario Ministry of Environment and Energy ("MOEE") on behalf of the Ontario Pipeline Coordination Committee ("OPCC") submitted a series of proposed undertakings for environmental protection related to those facilities to be constructed in Ontario. TransCanada agreed to the undertakings as part of the GH-2-97 proceeding. The list of undertakings are included as an appendix to the Environmental Screening Report.

Views of the Board

While the Board encourages and supports agreements between regulatory agencies and pipeline companies, the Board notes that an undertaking made between parties is an agreement not involving the Board. Where the public interest is served, however, the Board may reference the subject matter of such undertakings in the Environmental Screening Report. In this proceeding, as noted above, TransCanada has agreed to be bound by its undertakings to the OPCC.

2.3.3 Environment Canada

Environment Canada reviewed the Environmental Screening Report and submitted comments with regard to the environmental protection and mitigation procedures proposed by TransCanada. The comments and the responses are included as part of Appendix I to the Environmental Screening Report.

Environment Canada's concerns have been addressed with the exception of issues relating to the protection of the Clay Creek Area of Natural and Scientific Interest ("ANSI") and the use of certain grasses and legumes in seed mixes proposed for revegetation.

With respect to the Clay Creek ANSI, TransCanada developed three options to minimize the impact of construction of the Dawn extension upon that area. Those options were:

- using the north side of the right of way to reduce the number of swales that are traversed, minimizing the number of mature trees that are cut and reducing the overall impact of construction on the biological diversity of the Clay Creek Woodland;
- deviating beyond the main block of woodland north of the right of way; and
- if neither option is feasible, not clearing any temporary work area within the Clay Creek Woodland.

Environment Canada assessed those options and recommended locating the additional right-of-way between the existing right of way and the Coyle Drain. TransCanada's response was to state that it was discussing the available options for the Clay Creek ANSI with OMNR, the Lambton Stewardship Network, Environment Canada and the respective landowners.

With respect to revegetation procedures, TransCanada had proposed using a seed mixture containing reed canary grass to revegetate the area on the fringe of the Winchester Bog, which was to be affected by the construction of the Winchester Shortcut. Environment Canada expressed concern about the use of reed canary grass in this area, as it was considered to be one of the principal invasive species of wetlands. In addition to reed canary grass, Environment Canada expressed a concern about seed treatments that could be poisonous to wildlife, in particular, if legumes were planted on erosion prone areas. In response, TransCanada assured Environment Canada that its seed mixes are designed by qualified ecologists to protect the environment and wildlife.

Views of the Board

The Board notes that TransCanada intends to discuss the available options for the protection of the Clay Creek ANSI with OMNR, the Lambton Stewardship Network, Environment Canada and the respective landowners. With respect to the seed mixes to be used for revegetation, the Board is of the view that it would be appropriate in the circumstances for TransCanada to continue its discussions with Environment Canada to resolve any outstanding concerns.

The results of TransCanada's discussions with regard to the issues noted above should be included with the summary of discussions with special interest groups and regulatory agencies referred to in Certificate Condition 10, included in Appendix II of these Reasons.

Chapter 3

Overall Gas Supply/Demand

3.1 Overall Gas Supply

TransCanada relied upon the study prepared by Sproule Associates Limited ("Sproule") entitled *The Future Natural Gas Supply Capability of the Western Canada Sedimentary Basin 1996-2018*, dated May 1997, as evidence of overall gas supply.

The supply capability is based on factors such as demand, price, cost, gas available from existing pools and gas expected to be available from reserves additions, all of which are used to determine productive capacity and returns on investments to the upstream sector.

Sproule prepared sensitivity analyses around alternative projections of future reserves additions, which Sproule considers, at this time, to be the most critical issue in assessing future productive capacity from Western Canada. For the "Base Case", Sproule adopted a reserves addition equation that extends from the 25-year historical rate of 28 10^3m^3 per metre (298 Mcf per foot) of gas-intent drilling with a gradual decline to zero at the ultimate resource estimate of 9.3 $10^{12}m^3$ (329 Tcf). "Sensitivity 1" assumed that the 25-year historical trend in reserves additions would be sustained at 28 10^3m^3 per metre (298 Mcf per foot) of gas-intent drilling while "Sensitivity 2" utilized a reserves addition equation that retained the same exponential structure as that used in previous reports, the latter being a more conservative approach.

The "Base Case" analysis for conventional resources in the Western Canada Sedimentary Basin ("WCSB") identified a supply/demand cross-over in 2015 with a deficit in production relative to demand of 3.4 10^9m^3 (0.1 Tcf) in the year 2018. The supply/demand cross-over for the "Sensitivity 1" analysis was reported to be beyond 2018 while a cross-over in 2007 was reported for the "Sensitivity 2" analysis. Peak annual production in the "Base Case" was projected at 212 10^9m^3 (7.5 Tcf) while peak annual production in the "Sensitivity 1" and "Sensitivity 2" analyses was projected at 218 10^9m^3 (7.7 Tcf) and 198 10^9m^3 (7.0 Tcf) respectively.

The Sproule report also included an analysis of the coalbed methane ("CBM") potential of the Alberta Plains. The unconstrained CBM resource potential of the Alberta Plains was estimated at 18.9 $10^{12}m^3$ (668.6 Tcf) of gas-in-place while the technically constrained resource potential was estimated at 6.1 $10^{12}m^3$ (214.3 Tcf). At a constant price of $1.90/GJ ($2.00/Mcf), Sproule estimated that the CBM reserve potential for the Alberta Plains would be some 225 10^9m^3 (8 Tcf). In Sproule’s opinion, the CBM reserve potential in the Alberta Foothills and British Columbia is at least equal to that of the Alberta Plains.

No intervenor expressed concern over Sproule’s estimates of supply capability.

Views of the Board

While the forecasting of supply capability is an inherently uncertain task, as evidenced by the range of results obtained in Sproule's sensitivity analyses, the Board is broadly satisfied that TransCanada has demonstrated that there will be sufficient overall gas supply to ensure adequate utilization of TransCanada's system, including the proposed facilities. The Board notes that Sproule provided a thorough analysis of the CBM potential of the Alberta Plains and its potential as a future supply source to supplement conventional WCSB gas.

3.2 Long-term Domestic Markets

TransCanada projected that gas demand in Eastern Canada (Manitoba, Ontario and Quebec) will grow at an average annual rate of 2.2 percent over the forecast period, increasing from 1 335 petajoules ("PJs") in 1995 to 1 834 PJs in 2010. TransCanada estimated that gas demand in Ontario and Quebec will exceed contracted pipeline requirements by some 7.8 $10^9 m^3$ (275 Bcf) in 2005. TransCanada's evidence indicated that the gap continues to grow between demand and currently-contracted capacity on the TransCanada system into the Ontario and Quebec markets. The projected requirements in those markets will require additional facilities beyond those applied for and/or additional U.S. gas imports.

Views of the Board

The Board is of the view that TransCanada's forecast of gas demand for Eastern Canada is reasonable. The Board notes that no party either challenged TransCanada's forecast, or questioned TransCanada's ability to compete with other gas pipelines in serving those markets.

3.3 Long-term Export Markets

To demonstrate the long-term nature of gas demand in the U.S. Midwest and U.S. Northeast export markets, TransCanada relied on the forecasts prepared by DRI/McGraw Hill, the Gas Research Institute and the U.S. Department of Energy/Energy Information Administration. TransCanada noted that these forecasts indicate that annual growth rates for gas demand over the forecast period 1995 to 2010 will range between 0.61 and 1.79 percent in the U.S. Midwest, and between 0.98 and 1.64 percent in the U.S. Northeast. TransCanada concluded that these forecasts demonstrate the existence of long-term U.S. markets and, hence, the need for its transportation services.

Views of the Board

The Board is satisfied with TransCanada's evidence regarding long-term gas demand in the U.S. Midwest and U.S. Northeast markets. The Board notes that no party challenged TransCanada's evidence regarding the ability of Canadian-sourced gas to compete with other gas supply sources in those markets. The Board believes that there is reasonable expectation that Canadian gas transported by the TransCanada system will meet some of the projected increase in demand in those U.S. markets.

Chapter 4

Specific Transportation Services

4.1 TransCanada's Requirements Forecast

TransCanada indicated that the capacity to be provided by the applied-for facilities will primarily enable TransCanada to satisfy the projected requirements under existing transportation service contracts and new firm, domestic and export service requirements. It will also permit TransCanada to convert 4 255 10^6m^3 (150.2 Bcf) of FST to FT service, effective 1 November 1998. These additional requirements total 18 160 10^3m^3/d (641.1 MMcfd). (Refer to Table 4-2.)

TransCanada indicated that the additional capacity, when combined with existing capacity, the capacity resulting from the installation of previously authorized but not yet constructed facilities and services to be provided on the Great Lakes Gas Transmission Limited Partnership ("Great Lakes"), Union and TQM systems, will enable TransCanada to satisfy its projected aggregate requirements.

TransCanada provided forecasted contractual winter maximum daily and annual deliveries for the contract years commencing 1 November 1997, and 1998. (Refer to Table 4-1.) TransCanada submitted that its forecast of winter maximum daily deliveries is based upon its existing transportation service contracts and upon executed precedent agreements with prospective shippers. TransCanada's forecast of annual deliveries is based upon survey questionnaire results and upon discussions with existing and prospective shippers. TransCanada's export forecast assumes that existing export licences and contracts will be extended beyond their current expiry dates.

Table 4-1
TransCanada's Forecast of Winter Maximum Daily and Annual Deliveries(1)(2)

(a) Winter Maximum Daily Deliveries

Contract Year	Domestic		Export		Total	
	(10^6m^3)	(MMcf)	(10^6m^3)	(MMcf)	(10^6m^3)	(MMcf)
1997-98	107.2	3 784	101.2	3 572	208.4	7 356
1998-99	114.6	4 045	111.6	3 940	226.2	7 985

(b) Annual Deliveries

Contract Year	Domestic		Export		Total	
	(10^9m^3)	(Bcf)	(10^9m^3)	(Bcf)	(10^9m^3)	(Bcf)
l997-98	35.6	1 257	35.7	1 260	71.3	2 517
l998-99	36.3	1 281	39.4	1 391	75.7	2 672

(1) Source: TransCanada's 1998 Facilities Application, Tab "Requirements", Subtab 1, Tables 3A and 3B, revised 10 September 1997.

(2) Comprised of FT, FST, and STS, but excluding all company fuel requirements, losses and other uses

Compared to the requirements forecast, filed by TransCanada in the GH-3-96 proceeding in the 19 July 1996 revision to its 1997-98 Facilities Application, TransCanada's 1997-98 base case[1] winter maximum daily deliveries increased by 1 197 $10^3m^3/d$ (42.3 MMcfd). This increase reflects, in part, requested contract revisions or restructuring, and the addition of new projects including Gaz Métropolitain & Company, Limited Partnership's ("Gaz Métro") 425 $10^3m^3/d$ (15.0 MMcfd) one-year short-haul contract, commencing 1 November 1997, and Renaissance Energy Ltd.'s ("Renaissance") 95 $10^3m^3/d$ (3.4 MMcfd) delivery point shift from Niagara Falls to East Hereford.

TransCanada indicated that its base case requirements forecast is reasonable, that the forecast will be updated as more current information becomes available, and that it will make any adjustments when its Facilities Release Application is filed with the Board prior to the commencement of construction.

4.2 New Domestic Services

The applied-for facilities are supported by three domestic projects which have requested incremental service totalling 1 656 $10^3m^3/d$ (58.5 MMcfd). (Refer to Table 4-2.)

4.2.1 Simplot Canada Limited (Manitoba Delivery Area ("MDA"))

Simplot Canada Limited ("Simplot") has executed a ten-year Precedent Agreement ("PA") with TransCanada, dated 21 February 1997, for the delivery of 50.0 $10^3m^3/d$ (1.8 MMcfd) of gas, commencing 1 November 1998. The gas will be shipped from Alberta and Saskatchewan to the point of interconnection between the pipeline facilities of TransCanada and Centra Gas Manitoba Inc.'s ("Centra Manitoba") distribution facilities near Brandon Manitoba.

The incremental gas will be used as feedstock in a production process by a new larger capacity ammonia plant which will replace two original ammonia plants. The original plants are scheduled to be replaced by 1 November 1997. Simplot indicated that the increase in transportation requirement for 1 November 1998 represents normal market growth and is also necessary to enhance improvements in fertilizer production, energy efficiency, and pollution control technology.

Upstream transportation on NOVA Gas Transmission Ltd. ("NOVA") and TransGas Limited ("TransGas") has been contracted for by Simplot. Downstream transportation will be provided by Centra Manitoba. Centra Manitoba recently constructed an additional 305 mm pipeline to serve Simplot's facility. This expansion can accommodate Simplot's requirement for increased transportation service.

Simplot adopts a portfolio approach to its gas contracting practices which includes spot, short-term and long-term purchase contracts, and the utilization of natural gas storage to provide base-load volumes and backstopping flexibility. To meet its expanded requirements, Simplot plans to arrange purchase contracts with one to five-year terms from suppliers in Alberta and Saskatchewan through a competitive bid process. A certain portion of its requirements will be acquired on a month-to-month basis by way of a bidding process from at least 40 suppliers.

---

[1] Base case requirements include transportation services which are currently available and those for which the facilities necessary to enable the service to commence have been certified but yet not constructed.

Table 4-2
1998 Facilities Application

Shipper	Volume ($10^3m^3/d$)	Volume (MMcfd)	Delivery Area
A. FST Conversion Volumes			
Consumers’ Gas	3 248	114.7	Consumers Central
Consumers’ Gas - FST	338	11.9	Consumers Southwest
Union Gas	2 774	97.9	Union South West
Total	**6 360**	**224.5**	
B. New FT Services [1]			
Simplot Canada	50	1.8	Manitoba
Petro-Canada	142	5.0	Consumers Central
Petro-Canada	283	10.0	Union Central
Gaz Métro	1 181	41.7	Gaz Métro Eastern
Total Domestic	**1 656**	**58.5**	
Coastal Gas Marketing	1 400	49.4	St. Clair
Coastal Gas Marketing	864	30.5	Emerson I
RDO Foods	85	3.0	Emerson I
J.R. Simplot	100	3.5	Emerson I
Westcoast Gas Services	743	26.2	Emerson II
ProGas Limited	750	26.5	Emerson II
Enron Capital & Trade	904	31.9	Emerson II
U.S. Gypsum Company	84	3.0	Chippawa
Enron Capital & Trade	256	9.1	Niagara Falls
Renaissance	650	22.9	Niagara Falls
U.S. Gypsum Company	202	7.1	Niagara Falls
Rock-Tenn	61	2.2	Philipsburg
TransCanada Gas Services	850	30.0	East Hereford
Androscoggin Energy	895	31.6	East Hereford
CoEnergy Trading	425	15.0	East Hereford
CoEnergy Trading - short haul	1 841	65.0	East Hereford
Renaissance	34	1.2	East Hereford
Total Export	**10 144**	**358.1**	
Total New Services	**11 800**	**416.6**	
Total	**18 160**	**641.1**	

[1] 1 November 1998 Commencement Date and Ten-year Term.

4.2.2 Gaz Métropolitain & Company, Limited Partnership (Eastern Delivery Area ("EDA"))

Gaz Métro has executed a ten-year PA with TransCanada, dated 21 February 1997, for the delivery of 1 181.3 $10^3m^3/d$ (41.7 MMcfd) of gas, commencing 1 November 1998. The gas will be shipped from Alberta to the points of interconnection between the pipeline facilities of TransCanada and Gaz Métro EDA delivery points, and the points of interconnection between the pipeline facilities of TQM and Gaz Métro EDA delivery points.

The gas will be used to meet normal market growth in Gaz Métro's franchise area, mainly in the residential, commercial, institutional and industrial sectors.

Upstream transportation on NOVA will be contracted for by Gaz Métro's suppliers. Downstream transportation will be provided by Gaz Métro.

Gaz Métro uses its portfolio of gas supply contracts to supply its requirements and will continue to use a portfolio approach to meet increased requirements. Any additions to its requirements can also be accommodated through the use of Gaz Métro's "Multi Purpose" agreement with Pan-Alberta Gas Limited.

4.2.3 Petro-Canada Oil and Gas (Central Delivery Area ("CDA"))

Petro-Canada Oil and Gas ("Petro-Canada") has executed a ten-year PA with TransCanada, dated 21 February 1997, for the delivery of 141.6 $10^3m^3/d$ (5.0 MMcfd) of gas, commencing 1 November 1998. A second ten-year PA, also dated 21 February 1997 and commencing 1 November 1998, for the delivery of 283.3 $10^3m^3/d$ (10.0 MMcfd) of gas has also been executed with TransCanada. The gas will be shipped from Alberta to The Consumers' Gas Company Ltd.'s ("Consumers") and Union's pipeline systems.

The gas will be used to supply 141.6 $10^3m^3/d$ (5.0 MMcfd) of fuel gas to accommodate the expansion of Petro-Canada's Mississauga Lubes Centre, which is situated in Consumers' franchise area. As well, the gas will be used to supply 283.3 $10^3m^3/d$ (10.0 MMcfd) of fuel gas for a co-generation project which will be located next to Petro-Canada's Oakville Refinery, in Union's franchise area.

Upstream transportation on NOVA exists as Petro-Canada holds firm service agreements with NOVA. Petro-Canada has also stated that it will arrange for additional NOVA service as may be required. Downstream transportation will be provided by Consumers and Union.

Petro-Canada will be supplying gas from its own reserves to fill the requirements of these projects. Petro-Canada's reserves and productive capacity evidence demonstrated that Petro-Canada has sufficient supply to meet its market requirements including those in the current application.

4.3 New Export Services

The applied-for facilities are supported by 16 export projects, required by 12 export shippers for incremental firm service totalling 10 144 $10^3m^3/d$ (358.1 MMcfd). (Refer to Table 4-2.)

4.3.1 Westcoast Gas Services Inc. (Emerson II)

Westcoast Gas Services Inc. ("WGSI") has executed a ten-year PA with TransCanada, dated 21 February 1997, for the delivery of 743.0 $10^3m^3/d$ (26.2 MMcfd) of gas, commencing 1 November 1998. The gas will be shipped from Alberta and Saskatchewan to the point of interconnection between the pipeline facilities of TransCanada and Great Lakes at Emerson, Manitoba.

WGSI and its U.S. affiliate, Westcoast Gas Services (U.S.A.), Inc. ("WGSI (USA)"), are actively engaged in the marketing and sale of natural gas in Canada and the U.S. to a large and diverse portfolio of markets. To accommodate the requested TransCanada capacity, WGSI has entered into a ten-year Gas Transaction Agreement, dated 1 April 1994, (Gas Transaction Confirmation #1864 dated 30 October 1996) with WGSI (USA) for the sale of 713.9 $10^3m^3/d$ (25.2 MMcfd), plus fuel, commencing 1 November 1998. The gas will be used to supply WGSI's and WGSI (USA)'s overall corporate gas supply portfolio which includes monthly, year-to-year, seasonal and long-term contracts currently in place.

Effective 1 June 1997, Engage Energy US, L.P. ("Engage US") is successor in interest to both Westcoast Gas Services (America) Inc. (" WGSI (America)") and WGSI (USA). Effective 1 November 1998, Engage Energy Canada, L.P. will deliver the subject gas at Emerson to Engage US, which will take the gas both as a commodity recipient and the shipper of record with Great Lakes.

Westcoast currently markets in excess of 85 $10^6m^3/d$ (3 Bcfd) of natural gas in Canada and the U.S., of which more than 21 $10^6m^3/d$ (0.74 Bcfd) is marketed in the U.S. Great Lakes and Midwest regions. Gas sales have grown in the U.S. Great Lakes and Midwest regions from 15 $10^6m^3/d$ (0.53 Bcfd) in 1995 and Westcoast anticipates short and long-term market growth to continue at a similar rate through the 1998-99 contract year. Although the requested capacity is not currently assigned to long-term firm markets, Westcoast expects that the capacity will be fully utilized.

Upstream transportation on NOVA has been applied for and in a letter dated 31 October 1996, NOVA indicated its intent to provide the requested service. Downstream transportation will be provided by WGSI (America) under an executed ten-year PA with Great Lakes, dated 1 March 1996, to provide firm transportation of 708 $10^3m^3/d$ (25 MMcfd), plus fuel, from the international border at Emerson, Manitoba to St. Clair, Michigan. All Westcoast firm transportation entitlements on TransCanada and Great Lakes will be assigned and novated to the suppliers (identified below) through a provision in the gas purchase Letter Agreements or Gas Transaction Confirmations between WGSI and the suppliers. Another provision in these gas purchase agreements/confirmations will ensure that TransCanada will not be at risk for cost recovery of unutilized capacity. This provision is a netback structuring of the transportation arrangements whereby, if the supplier defaults under the gas purchase agreement, the supplier shall provide WGSI with the option of having the respective TransCanada and Great Lakes components of the transportation service assigned and novated back to WGSI.

WGSI signed ten-year gas purchase Letter Agreements dated 26 September 1996 with Apache Canada Ltd. ("Apache") for approximately 142 $10^3m^3/d$ (5 MMcfd) plus fuel and 30 September 1996 with

Talisman Energy Inc. ("Talisman") for approximately 283 $10^3m^3/d$ (10 MMcfd) plus fuel. Ten Year Gas Transaction Agreements, both dated 29 November 1996, have been signed with Beau Canada Exploration Ltd. ("Beau Canada") and Rigel Oil & Gas Ltd. ("Rigel"), each for approximately 142 $10^3m^3/d$ (5 MMcfd) plus fuel. The gas supply to be provided by Rigel will be sufficient to support seven years of its contractual obligation to WGSI commencing 1 November 2001. By Letter Agreement for Transportation Services dated 22 May 1997, WGSI will be assigning 141 $10^3m^3/d$, or the equivalent of Rigel's daily contract quantity, of its total FT entitlement to Union for the first three years. Union will rely upon its gas supply portfolio, supplemented as necessary by additional gas supply arrangements to ensure that its market requirements are satisfied for the three years of the assignment.

Apache, Beau Canada, Rigel and Talisman will utilize their corporate supply portfolios to provide the requisite volumes. WGSI relied on gas supply evidence filed in the GHW-1-97 hearing as sufficient information to meet the Board's filing requirements for supply. The gas supply arrangements were examined in detail in the recent GHW-1-97 hearing and found to be adequate for the project.

4.3.2 ProGas Limited (Emerson II)

ProGas Limited ("ProGas") has executed a ten-year PA with TransCanada, dated 21 February 1997, for the delivery of 750.4 $10^3m^3/d$ (26.5 MMcfd) of gas, commencing 1 November 1998. The gas will be shipped from Alberta to the pipeline facilities of Great Lakes at Emerson, Manitoba.

The gas will be used by ProGas U.S.A., Inc. ("ProGas U.S.A."), a wholly owned subsidiary of ProGas, initially for short to medium-term sales of no more than two years duration, to local distribution companies ("LDCs"), marketers, industrial/commercial end-users, and electricity generators. Even without current long-term market commitments to underpin its service request, ProGas submitted that TransCanada should accept its service request because: ProGas is able to demonstrate sufficient gas supply to fully utilize the requisite volume; policy makers and the general industry recognize that industry structure and contracting processes are changing; and, this project has a unique "netback structure" which ensures that pipeline transportation costs will be covered. ProGas further submitted that ProGas U.S.A. and ProGas have been authorized by their producers to deduct all transportation costs incurred in Canada and the U.S. prior to paying any money to its producers.

ProGas has a number of long-term, firm U.S. sales agreements which could be served by utilizing the requisite volume; however, it prefers to utilize the requisite volume for short and medium-term sales. ProGas submitted that it currently sells 6 400 $10^3m^3/d$ (226 MMcfd) on a firm basis at Emerson and also ships interruptible volumes to Emerson and downstream on Great Lakes and Viking Gas Transmission Company ("Viking") as well as diverting volumes from other export points for sale at Emerson or downstream. ProGas does not expect to displace either Canadian or U.S. gas supply but expects that expanded U.S. demand will provide the market for the incremental capacity.

Upstream transportation on NOVA exists as ProGas holds firm service agreements with NOVA for the requisite capacity. Downstream transportation will be provided by Great Lakes' system pursuant to two executed ten-year firm PAs between Great Lakes and ProGas U.S.A., both dated 29 February 1996 for service commencing 1 November 1998, to transport 283.3 $10^3m^3/d$ (10.0 MMcfd) and 424.9 $10^3m^3/d$ (15.0 MMcfd), respectively, plus fuel.

ProGas has multiple-producer gas purchase contacts with various terms. ProGas will supply the gas which underpins its current request for transportation on TransCanada from its Alberta and Saskatchewan contracted reserves. ProGas' supply capability exceeds its requirements including the requested additional capacity for the duration of the term. These supply arrangements will also be examined in the Board's upcoming proceeding on gas export licences (GHW-2-97).

4.3.3 Enron Capital & Trade Resources Canada Corp. (Emerson II)

Enron Capital & Trade Resources Canada Corp. ("Enron") has executed a ten-year PA with TransCanada, dated 21 February 1997, for the delivery of 904.1 $10^3m^3/d$ (31.9 MMcfd) of gas, commencing 1 November 1998. The gas will be shipped from Alberta to the facilities of Great Lakes at Emerson, Manitoba.

The gas will be acquired by Enron's U.S. affiliate, Enron Capital & Trade Resources Corp. ("ECTR"), pursuant to a ten-year enfolio agreement and used as part of its overall corporate gas supply portfolio. The gas represents a small component of ECTR's overall portfolio which is used to serve various market commitments totalling approximately 283 $10^6m^3/d$ (10 Bcfd).

Enron and ECTR have entered into a ten-year Enfolio Master Firm Purchase/Sale Agreement, dated 1 June 1994 and Confirmation Letter dated 30 September 1996 for 849.9 $10^3m^3/d$ (30.0 MMcfd) plus fuel.

Upstream transportation on NOVA has been applied for by Enron, and in a letter dated 18 December 1996, NOVA has indicated its intent to provide the requested service. Downstream transportation will be provided on Great Lakes' system pursuant to an executed ten-year firm PA between Great Lakes and ECTR, dated 1 March 1996, for delivery to St. Clair, Michigan.

Enron has entered into ten-year gas supply agreements with Beau Canada, Canadian Natural Resources ("CNR"), Pinnacle Resources Ltd. ("Pinnacle") and Crestar Energy Inc. for approximately 142 $10^3m^3/d$ (5 MMcfd), 425 $10^3m^3/d$ (15 MMcfd), 142 $10^3m^3/d$ (5 MMcfd) and 142 $10^3m^3/d$ (5 MMcfd) of gas, respectively, plus fuel (Confirmation Letters dated 27 March 1996, two dated 29 March 1996, and 29 August 1997, respectively).

ECTR requested that the Board grant relief from the specific detailed filing requirements as outlined in the Board's *Guidelines for Filing Requirements* ("Guidelines"). ECTR requested that the Board accept the incorporation of its gas supply evidence provided in the GHW-1-97 proceeding as sufficient supply evidence for this proceeding. ECTR's suppliers will utilize their corporate supply pools to meet the required volumes. The gas supply arrangements were examined in detail in the recent GHW-1-97 proceeding and found to be adequate for the project.

4.3.4 Enron Capital & Trade Resources Canada Corp. (Niagara Falls)

Enron has executed a ten-year PA with TransCanada, dated 21 February 1997, for the delivery of 256.4 $10^3m^3/d$ (9.1 MMcfd) of gas, commencing 1 November 1998. The gas will be shipped from Alberta to the pipeline facilities of National Fuel Gas Supply Corporation ("National Fuel") at Niagara Falls, Ontario.

The gas will be acquired by ECTR and used as part of its overall corporate gas supply portfolio. ECTR generally expects that the subject natural gas will be utilized to serve the U.S. Northeast market where ECTR has commitments to deliver over 11 330 $10^3m^3/d$ (400 MMcfd) under a portfolio of contracts.

Upstream transportation on NOVA has been applied for by Enron, and in a letter dated 18 December 1996, NOVA has indicated its intent to provide the requested service. Downstream transportation will be provided by National Fuel's system pursuant to an executed long-term FT Service Agreement between National Fuel and ECTR, dated 25 August 1997 and amended 2 September 1997, for delivery of the requisite volume to Leidy, Pennsylvania.

Enron has entered into a ten-year Master Firm Gas Purchase/Sale Agreement (dated 26 August 1993 and restated 30 January 1997) with CNR for approximately 256.4 $10^3m^3/d$ (9.1 MMcfd) of gas.

ECTR requested that the Board grant relief from the specific detailed filing requirements as outlined in the Board's Guidelines. ECTR requested that the Board accept the incorporation of the gas supply evidence provided by ECTR in the GHW-1-97 hearing as sufficient supply evidence for this hearing. CNR will utilize its corporate supply pool to meet the required volumes. The gas supply arrangements were examined in detail in the recent GHW-1-97 proceeding and found to be adequate for the project.

Enron and ECTR have entered into a ten-year Enfolio Master Firm Purchase/Sales Agreement, dated 1 June 1994 and Confirmation Letter dated 30 January 1997 for 256.4 $10^3m^3/d$ (9.1 MMcfd).

4.3.5 Coastal Gas Marketing Company (Emerson I)

Coastal Gas Marketing Company ("Coastal") has executed a ten-year PA with TransCanada, dated 21 February 1997, for the delivery of 715.0 $10^3m^3/d$ (25.2 MMcfd) and 148.7 $10^3m^3/d$ (5.3 MMcfd) of gas, commencing 1 November 1998. The gas will be shipped from Alberta to the pipeline facilities of Viking at Emerson, Manitoba.

The gas will be used by Coastal, as part of its supply portfolio, to serve both its existing and new markets in the U.S. Midwest, Gulf Coast, Southeast and Texas. Coastal currently purchases and sells over 108 $10^6m^3/d$ (3.8 Bcf/d) of natural gas in Canada and the U.S. of which more that 23 $10^6m^3/d$ (800 MMcfd) is marketed in the Midwest and Gulf Coast regions. The use of its large portfolio of markets allows Coastal the flexibility to optimize its gas supply and transportation assets in an efficient and cost effective manner.

Upstream transportation on NOVA has been applied for by Coastal and, in a letter dated 29 October 1996, NOVA has indicated its intent to provide the requested service. Downstream transportation will be provided by Viking's system pursuant to an executed 15-year PA between Viking and Coastal, dated 6 September 1996.

Coastal has entered into long-term gas supply agreements with CNR, Pinnacle, Rio Alto Exploration Ltd. ("Rio Alto"), Tri Link Resources Ltd., Ranger Oil Limited and Enerplus Energy Marketing, for a total of 864.0 $10^3m^3/d$ (30.5 MMcfd) of gas for delivery to Empress, Alberta. The supply agreements are all dated 31 August 1996 and commence 1 November 1998. The producers will utilize their corporate supply pools to meet the required volumes. The gas supply arrangements were examined in detail in the recent GHW-1-97 proceeding. The supply information submitted in that proceeding was found to be adequate for the project.

4.3.6 United States Gypsum Company (Chippawa)

United States Gypsum Company ("US Gypsum") has executed a ten-year PA with TransCanada, dated 21 February 1997, for the delivery of 83.9 $10^3m^3/d$ (3.0 MMcfd) of gas, commencing 1 November 1998. The gas will be shipped from Alberta to the facilities of TransCanada and Empire State Pipeline Company ("Empire") at Chippawa, Ontario.

The gas will be used by US Gypsum, and its affiliates, to operate a gypsum board plant located at Oakfield, New York. Any remaining volumes will serve their other plants at: Gypsum, Ohio; Stony Point, New York; and Bridgeport, Alabama.

Upstream transportation on NOVA will be contracted for by US Gypsum’s gas supplier, Husky Oil Operations Ltd. ("Husky"). Downstream transportation will be provided by Empire’s system pursuant to an executed agreement between Empire and US Gypsum, dated 2 September 1997, commencing 1 November 1997 until 31 October 2007.

US Gypsum has entered into a long-term gas supply agreement, dated 18 February 1997, with Husky for a total of 83.9 $10^3m^3/d$ (3.0 MMcfd) of gas for delivery to Empress, Alberta and commencing 1 November 1998. Husky will utilize its corporate supply pool to meet the volumes required by US Gypsum’s requests for transportation service via both the Chippawa and Niagara export points. (discussed in Section 4.3.11).

TransCanada requested that US Gypsum’s supply evidence be incorporated by reference from the GHW-1-97 proceeding. US Gypsum submitted that this was sufficient to satisfy the Board’s Guidelines. The gas supply arrangements were examined in detail in the recent GHW-1-97 proceeding and found to be adequate for the project.

4.3.7 Renaissance Energy Ltd. (Niagara)

Renaissance Energy Ltd. ("Renaissance") has executed a ten-year PA with TransCanada, dated 21 February 1997, for the delivery of 650.0 $10^3m^3/d$ (22.9 MMcfd) of gas, commencing 1 November 1998. The gas will be shipped from Alberta to the facilities of National Fuel at Niagara Falls, Ontario.

The gas will be sold to its subsidiary Renaissance Energy (U.S.) Inc. ("REI") which in turn will market the gas at Leidy, Pennsylvania to a client base of LDCs, industrial and commercial customers.

Upstream transportation on NOVA exists as Renaissance holds firm service agreements with NOVA for the requisite capacity. Downstream transportation will be provided by National Fuel’s system pursuant to an executed ten-year PA, dated 31 May 1996, between National Fuel and REI for service on a firm basis during the winter period, 1 November to 31 March. Renaissance will rely upon short-term arrangements, released capacity and interruptible transportation on National Fuel for the balance of the year.

Renaissance has signed a Canadian Gas Supply Contract, dated 1 January 1993 which is in full force and effect until 31 October 2010, with REI for the volume of gas nominated by REI.

Renaissance submitted that its corporate supply portfolio has sufficient reserves and productive capacity to satisfy its requirements, including these volumes. These supply arrangements will be examined in a future Board gas export licence proceeding.

4.3.8 Renaissance Energy Ltd. (East Hereford)

Renaissance has executed a ten-year PA with TransCanada, dated 21 February 1997, for the delivery of 33.6 $10^3m^3/d$ (1.2 MMcfd) of gas, commencing 1 November 1998. The gas will be shipped from Alberta to the proposed point of interconnection between the pipeline facilities of TQM and Portland Natural Gas Transmission System ("PNGTS") at East Hereford, Quebec.

The gas will be sold by Renaissance to Wausau Papers of New Hampshire, Inc. ("Wausau Papers") pursuant to a Long Term Gas Supplies Letter Agreement, dated 24 April 1997, for a term of up to ten years and for a Maximum Daily Quantity of 4 600 MMBtu or approximately 130 10^3m^3 (4.6 MMcf)[2]. Wausau Papers is converting the operation of its paper manufacturing plant from oil to cleaner burning natural gas. Renaissance will use existing TransCanada capacity to serve the remaining 96.3 $10^3m^3/d$ (3.4 MMcfd) of Wausau Papers requirement through a shift in delivery points from Niagara Falls, Ontario to East Hereford, Quebec. TransCanada submitted that it will be able to accommodate such a shift, noting that no other shippers will be negatively impacted.

Upstream transportation on NOVA exists as Renaissance holds firm service agreements with NOVA for the requisite capacity. Downstream transportation will be provided by PNGTS on a firm basis pursuant to an executed 20-year PA between PNGTS and Wausau Papers, dated 31 July 1996.

Renaissance submitted that its corporate supply portfolio has sufficient reserves and productive capacity to satisfy its requirements including the total volume required to serve the market downstream of East Hereford. These supply arrangements will also be examined in a future Board gas export licence proceeding.

4.3.9 Coastal Gas Marketing Company (St. Clair)

Coastal has executed a ten-year PA with TransCanada, dated 21 February 1997, for the delivery of 1 400.0 $10^3m^3/d$ (49.4 MMcfd) of gas, commencing 1 November 1998. The gas will be shipped from Alberta to the point of interconnection between the pipeline facilities of TransCanada and Great Lakes at St. Clair, Michigan.

The gas will be used by Coastal, as part of its supply portfolio, to serve both its existing and new markets in Michigan and the U.S. Northeast. Coastal currently purchases and sells over 108 $10^6m^3/d$ (3.8 Bcf/d) of natural gas in Canada and the U.S., of which more than 42 $10^6m^3/d$ (1.5 Bcfd) is marketed in Michigan and the U.S. Northeast, primarily to LDCs, electric generation companies and industrial end-users. Coastal maintains that the use of its large portfolio of markets allows Coastal the flexibility to optimize its gas supply and transportation assets in an efficient and cost effective manner.

---

[2] In these Decisions 1000 MMBtu is assumed to equal 1 MMcf

Coastal applied for upstream transportation on NOVA and, in a letter dated 29 October 1996, NOVA indicated its intent to provide the requested service. Downstream transportation will be provided on the Great Lakes system pursuant to an executed ten-year firm Service Agreement between Great Lakes and Coastal, dated 25 October 1996.

Coastal has entered into ten-year gas supply agreements with CNR, Pinnacle, Rio Alto, Tarragon Oil and Gas Limited, and Petro-Canada, all dated 3 September 1996, for a total of 1 400.0 $10^3m^3/d$ (49.4 MMcfd) of gas for delivery to Empress, Alberta commencing 1 November 1998. The producers will utilize their corporate supply pools to meet the required volumes. The gas supply arrangements were reviewed in detail in the recent GHW-1-97 proceeding. The supply information submitted in that proceeding was found to be adequate for the project.

4.3.10 TransCanada Gas Services (East Hereford)

TransCanada Gas Services ("TCGS"), a division of TransCanada Energy Ltd., has executed a ten-year PA with TransCanada, dated 28 April 1997, for the delivery of 849.8 $10^3m^3/d$ (30.0 MMcfd) of gas, commencing 1 November 1998. The gas will be shipped from Alberta to the proposed point of interconnection between the pipeline facilities of TQM and PNGTS at East Hereford, Quebec.

The gas will be sold by TCGS to TransCanada Gas Services Inc. ("TGSI"), a U.S. affiliate. TGSI plans to market the gas to various LDCs, industrial and power generation markets served by PNGTS. TCGS submitted that forecasts of demand for natural gas in the market area to be served by PNGTS indicate a significant potential for growth, particularly in the power generation sector, as natural gas consumption in New England continues to lag behind the rest of the U.S. Natural gas comprises 18 percent of all energy consumed in New England, versus 25 percent in the U.S. (excluding New England). In the New England power generation market, natural gas comprises nine percent of the fuel mix, versus 13 percent in the U.S. (excluding New England).

TGSI has committed to capacity on PNGTS based on its assessment of the future requirement for natural gas in the region, together with the certainty that this requirement cannot be served by the existing infrastructure. TGSI relies on U.S. Department of Energy statistics which indicate that the current average daily demand in the immediate vicinity of PNGTS is approximately 28 $10^6m^3/d$ (1 Bcfd). To date, TGSI has entered into one long-term, five-year gas sales PA, dated 15 September 1997, with Groveton Paper Board, Inc. for approximately 85.0 $10^3m^3/d$ (3.0 MMcfd). TGSI has applied for upstream transportation on NOVA and, in a letter dated 27 September 1996, NOVA has indicated its intent to provide the requested service. Downstream transportation will be provided by PNGTS's system pursuant to an executed 20-year PA between PNGTS and TGSI, dated 12 March 1996, for 30 000 MMBtu/d or approximately 849.8 $10^3m^3/d$ (30.0 MMcfd).

TCGS intends to utilize the requested capacity to transport gas purchased in Alberta on a market-based, risk-managed basis, as part of its overall margin-based supply pool. TCGS does not intend to allocate any specific long-term supply to this service, and indicated that it intends to meet its supply requirements for this service, and other requirements, using its overall risk-managed portfolio of long and short-term supplies as it exists from time to time. A further discussion concerning the supply evidence filed in support of this application can be found under Section 4.4.

TCGS and TGSI have entered into a ten-year Gas Purchase and Sales Agreement, dated 23 October 1996 for 849.9 $10^3m^3/d$ (30.0 Mmcfd) commencing 1 November 1998.

4.3.11 United States Gypsum Company (Niagara)

US Gypsum has executed a ten-year PA with TransCanada, dated 21 February 1997, for the delivery of 201.9 $10^3m^3/d$ (7.1 MMcfd) of gas commencing on 1 November 1998. The gas will be shipped from Alberta to the facilities of Tennessee Gas Pipeline Company ("Tennessee") at Niagara Falls, Ontario.

The gas will be used by US Gypsum, and its affiliates, to operate a gypsum board plant located at Oakfield, New York. Any remaining volumes will serve their other plants at: Gypsum, Ohio; Stony Point, New York; and Bridgeport, Alabama.

Upstream transportation on NOVA will be contracted for by US Gypsum's gas supplier, Husky. Downstream transportation will be provided by Tennessee's system pursuant to an executed 15-year firm Gas Transportation Agreement between Tennessee and US Gypsum, for the requisite volume, commencing 1 November 1998. Further downstream transportation will be provided by Columbia Gas Transmission Corporation pursuant to renewable existing FT Service Agreements 53522 and 53525, both dated 25 October 1996. In addition, further downstream transportation will be provided by East Tennessee Natural Gas Company pursuant to a 15-year PA, dated 31 July 1996 and commencing 1 November 1998.

US Gypsum has entered into a long-term Natural Gas Purchase and Sale Contract, dated 18 February 1997, with Husky for a total of approximately 300.3 $10^3m^3/d$ (10.6 MMcfd) of gas for delivery to Empress, Alberta commencing 1 November 1998 and expiring on 31 October 2008. Husky will utilize its corporate supply pool to meet the volumes required by US Gypsum's requests for transportation service via both the Chippawa and Niagara export points. The gas supply arrangements were reviewed in detail in the recent GHW-1-97 proceeding. The supply information submitted in that proceeding was found to be adequate for the project.

4.3.12 Androscoggin Energy LLC (East Hereford)

Androscoggin Energy LLC ("Androscoggin") has executed a ten-year PA with TransCanada, dated 21 February 1997, for the delivery of 895.2 $10^3m^3/d$ (31.6 MMcfd) of gas, commencing 1 November 1998. The gas will be shipped from Alberta to the proposed point of interconnection between the pipeline facilities of TQM and PNGTS at East Hereford, Quebec.

The gas will be sold to Androscoggin which will, in turn, supply International Paper Company ("International Paper") with electricity and steam, pursuant to an Energy Services Agreement, dated 31 July 1997. Sales of thermal energy generated from gas will displace steam currently generated by No. 6 fuel oil. The balance of the electricity produced by Androscoggin will be sold to Wisconsin Electric Power Company pursuant to a ten-year Energy Sales Option Agreement, dated 10 January 1997.

Androscoggin has applied for upstream transportation on NOVA and, in a letter dated 26 March 1997, NOVA has indicated its intent to provide the requested service. Downstream transportation will be provided by PNGTS on a firm basis pursuant to an executed 20-year PA between PNGTS and Androscoggin, dated 18 December 1996, to deliver 18 000 MMBtu/d or approximately 510 $10^3m^3/d$ (18 MMcfd). Androscoggin will have access to downstream transportation for the remaining

385 10^3m^3/d (13.6 MMcfd) of gas through an option to increase its firm entitlement on PNGTS by up to 23 000 MMBtu/d or approximately 652 10^3m^3/d (23 MMcfd).

Androscoggin has entered into ten-year, long-term gas supply agreements with Beau Canada, Producers Marketing Ltd., Renaissance, Rio Alto and Alta Gas Services Inc., dated 27 January 1997, 12 February 1997, 11 March 1997, 29 May 1997 and 22 July 1997, respectively, for a total of 1 260.6 10^3m^3/d (44.5 MMcfd) of gas for delivery to Empress, Alberta commencing 1 November 1998. The producers will utilize their corporate supply pools to meet the required volumes. The gas supply arrangements will also be examined in the Board's upcoming proceeding on gas export licences (GHW-2-97).

4.3.13 Rock-Tenn Company (Philipsburg)

Rock-Tenn Company ("Rock-Tenn") has executed a ten-year PA with TransCanada, dated 21 February 1997, for the delivery of 61.2 10^3m^3/d (2.2 MMcfd) of gas, commencing 1 November 1998. The gas will be shipped from Saskatchewan to the point of interconnection between the pipeline facilities of TransCanada and Vermont Gas Systems, Inc. ("Vermont Gas") at Philipsburg, Quebec.

The gas will be used by Rock-Tenn at its paperboard and converted products mill located near Sheldon Springs, Vermont.

Upstream transportation on TransGas will be provided by Rock-Tenn's supplier, Wascana Energy Inc. ("Wascana") which holds existing firm service agreements with TransGas for the requisite capacity. Downstream transportation will be provided on the Vermont Gas system pursuant to an existing FT service contract between Rock-Tenn and Vermont Gas, as supported by Vermont Gas' confirmation letter dated 21 October 1996.

Rock-Tenn has entered into a long-term gas sales arrangement with Wascana Marketing, a division of Wascana, pursuant to a ten-year Firm Sales/Purchase Agreement dated 18 December 1996, commencing 1 November 1998.

Wascana will utilize its corporate supply pool to meet the required volumes. Wascana has multiple producer contracts with various terms. The gas supply arrangements will also be examined in the Board's upcoming proceeding on gas export licences (GHW-2-97).

4.3.14 RDO Foods Co. (Emerson I)

RDO Foods Co. ("RDO") has executed a ten-year PA with TransCanada, dated 21 February 1997, for the delivery of 85.0 10^3m^3/d (3.0 MMcfd) of gas, commencing 1 November 1998. The gas will be shipped from Alberta to the point of interconnection between the pipeline facilities of TransCanada and Viking at Emerson, Manitoba.

The gas will be used by RDO at its potato processing plants located near Grand Forks, North Dakota and Parks Rapids, Minnesota.

Upstream transportation on NOVA has been applied for by RDO's supplier, ProGas. Downstream transportation will be provided by Viking's system on a firm basis. RDO and Viking are negotiating and expect to execute an agreement by the end of 1997.

RDO has entered into a ten-year gas sales agreement with ProGas for 85.0 $10^3m^3/d$ (3.0 MMcfd), pursuant to a Term Sheet dated 21 October 1996, commencing 1 November 1998.

ProGas has multiple producer gas purchase contacts with various terms. ProGas will supply the requisite gas from its Alberta and Saskatchewan contracted reserves. ProGas provided evidence to demonstrate that its supply capability exceeds its requirements, including the requested additional capacity for the duration of the term. These supply arrangements will also be examined in a future Board gas export licence proceeding.

4.3.15 J.R. Simplot Company (Emerson I)

J.R. Simplot Company ("J.R. Simplot") has executed a ten-year PA with TransCanada, dated 21 February 1997, for the delivery of 100.0 $10^3m^3/d$ (3.5 MMcfd) of gas, commencing 1 November 1998. The gas will be shipped from Alberta and/or Saskatchewan to the point of interconnection between the pipeline facilities of TransCanada and Viking at Emerson, Manitoba.

The gas will be used by J.R. Simplot to accommodate an increased natural gas requirement at its Grand Forks, North Dakota food processing plant.

Upstream transportation on NOVA will be contracted for by J.R. Simplot's supplier NGCC Ltd. Downstream transportation will be provided by Vikings's system on a firm basis pursuant to an executed 15-year PA between Viking and J.R. Simplot, dated 6 September 1996. The gas will be transported from Emerson, Manitoba to J.R. Simplot's facilities off Viking's system.

J.R. Simplot has entered into a ten-year Gas Sales Agreement with NGCC Ltd., dated 2 April 1997, for a total of 100.0 $10^3m^3/d$ (3.5 MMcfd) of gas, commencing 1 November 1998.

NGCC Ltd. intends to serve this market with gas purchased by it on the open market in Alberta. The J.R. Simplot market will be served from NGCC Ltd.'s overall portfolio of long and short-term supplies as it exists for time to time. No specific long-term supply will be allocated to this market. A further discussion concerning the supply evidence filed in support of this application follows in Section 4.4.

4.3.16 CoEnergy Trading Company (East Hereford)

CoEnergy Trading Company ("CoEnergy") has executed a ten-year PA with TransCanada, dated 21 February 1997, for the delivery of 2 266.2 $10^3m^3/d$ (80.0 MMcfd) of gas, commencing 1 November 1998. Initially, 1 841.3 $10^3m^3/d$ (65.0 MMcfd) of firm service capacity will be provided as a short-haul service from the point of interconnection between the facilities of TransCanada and Great Lakes near St. Clair, Michigan to the point of interconnection between the proposed pipeline facilities of TQM and PNGTS at East Hereford, Quebec. The remaining 424.9 $10^3m^3/d$ (15.0 MMcfd) will be provided as a long-haul service from Empress to East Hereford. TransCanada submitted that it expects to apply for facilities as part of the 1999-2000 expansion to provide long-haul service for the remainder of CoEnergy's request.

The gas will be used to supply CoEnergy's overall corporate gas supply portfolio, including markets to be served by PNGTS. CoEnergy is a large experienced marketing company, whose assets include equity production in Michigan and the mid-continent, long-term interstate pipeline contracts and Michigan-based storage.

Key components of CoEnergy's market portfolio are two ten-year Exchange Agreements with Northern Utilities, Inc. ("Northern Utilities") and Bay State Gas Company ("Bay State"), both dated 25 June 1996 (and both amended 27 August 1996). These agreements commence 1 November 1998 and require CoEnergy to deliver up to 1 416.4 $10^3m^3/d$ (50 MMcfd) to the above-mentioned affiliated companies during the months of November through March.

Regarding the remaining 848.9 $10^3m^3/d$ (30.0 MMcfd) of TransCanada capacity, CoEnergy expects to utilize this capacity through sales to LDCs, electrical generators and other end-use markets in the region.

Upstream transportation on NOVA has been contracted for by CoEnergy's suppliers. Downstream transportation will be provided by PNGTS. CoEnergy has signed a 20-year PA with PNGTS, dated 12 March 1996, to provide firm transportation of 30 000 MMBtu/d (approximately 850 $10^3m^3/d$ (30 MMcfd)), commencing 1 November 1998. Further downstream transportation will be provided by Tennessee pursuant to a Letter Agreement between CoEnergy and Tennessee, dated 31 July 1996. Under this Letter Agreement, CoEnergy may elect to receive several transportation service options to facilitate transportation of gas supply entering Tennessee from PNGTS.

Northern Utilities and Bay State have sufficient downstream capacity pursuant to 20-year Gas Transportation Contracts with PNGTS, both dated 20 January 1997 for deliveries during the months of November through March.

CoEnergy is required to provide upstream services for 1 416.4 $10^3m^3/d$ (50 MMcfd) of the winter only firm capacity that Northern Utilities and Bay State have contracted with PNGTS. CoEnergy is expecting to utilize the 1 416.4 $10^3m^3/d$ (50 MMcfd) of TransCanada capacity in the summer months through sales to Northeast Utilities, Inc., to customers using interruptible transportation on PNGTS, and to use diversions and Capacity Release/Enhanced Capacity Release services on TransCanada.

To facilitate utilization of its TransCanada capacity in the summer months, CoEnergy has arranged for a long-term release of PNGTS summer capacity under its 20-year PA with PNGTS, dated 12 March 1996.

CoEnergy has arranged to purchase ten-year term gas supply from AEC Oil & Gas Partnership ("AEC"), Gulf Canada Resources Limited ("Gulf") and Suncor Inc. ("Suncor"). The AEC Gas Purchase Agreement, dated 18 November 1996, is for 566.6 $10^3m^3/d$ (20.0 MMcfd), plus fuel. The Gulf and Suncor Gas Purchase Agreements, both dated 31 October 1996, are for 849.8 $10^3m^3/d$ (30.0 MMcfd), plus fuel, each. The producers will utilize their corporate supply pools to meet the required volumes. The gas supply arrangements were examined in detail in the recent GHW-1-97 proceeding. The supply information submitted in that proceeding was found to be adequate for the project.

Views of TransCanada

TransCanada indicated that there is little doubt that there is a shortage of gas transportation capacity out of the WCSB. TransCanada noted that its NEXUS Open Season resulted in overwhelming interest in capacity on TransCanada's system, in addition to interest in expansion capacity on other pipelines such as Northern Border Pipeline Company, TransVoyageur Transmission Limited and Alliance Pipeline Project. TransCanada submitted that most of the projects included in its 1998 Facilities Application were unchallenged.

In respect of the projects requiring access to TQM's proposed PNGTS Extension, the "PNGTS-related shippers", which were the subject of information requests and cross-examination, TransCanada contended that the market requirement was demonstrated and is supported by the fact that the Federal Energy Regulatory Commission ("FERC") has given final approval of PNGTS's downstream facilities in the U.S. TransCanada was of the view that the traditional certificate condition requiring that FT contracts have been executed prior to construction would be appropriate to ensure that only firm requirements underpin the construction of new facilities.

With respect to domestic market requirements requiring access to TQM's proposed PNGTS Extension, TransCanada noted Gaz Métro's requested additional transportation from Western Canada and contended that it is necessary to meet a net increase of 425 10^6m^3 (15 Bcf) of annual requirements in Gaz Métro's franchise area. TransCanada also noted that it is Gaz Métro's practice, resulting from its geographic position at the eastern end of the TransCanada system, to contract for its Peak Day requirements and to sell the resulting annual excess to out-of-franchise customers through the secondary market. TransCanada contended that the proposed expansion to East Hereford would change Gaz Métro's circumstances as Gaz Métro would be able to contract at a level that more closely matches daily and annual demand. TransCanada further contended that the proposed expansion to East Hereford would create opportunities for Gaz Métro to serve expanding markets in the Eastern Townships that have either gone unserved or have received limited service to date.

Views of Intervenors

The Canadian Association of Petroleum Producers ("CAPP"), Androscoggin, Bay State, CoEnergy, Consumers, Enron, Gaz Métro, J.R. Simplot, Mead Operations, Northern Utilities, ProGas, Renaissance, Simplot, TCGS, TQM, Wausau Papers, le Procureur général du Québec ("PGQ"), and the Alberta Department of Energy ("ADOE") expressed support for TransCanada's 1998 Facilities Application. CAPP suggested that the Board expressly note that the facilities TransCanada proposes to construct are contingent upon the outcome of the GH-1-97 proceeding in respect of TQM's proposed PNGTS Extension.

M&NE and Union had no objections to the Service Requests in TransCanada's Facilities Application that do not require access to TQM's PNGTS Extension. However, M&NE and Union expressed reservations with respect to the PNGTS-related projects and argued that none of these shippers had definitively indicated that they would execute FT contracts should toll methodology issues be outstanding at the time the FT contracts are proffered. M&NE and Union were of the opinion that the standard certificate condition, "that prior to construction TransCanada shall demonstrate that FT contracts have been executed", would not suffice in this case because of the interrelationship of this proceeding with other applications.

Northern Utilities suggested that it would buy the gas regardless of the toll methodology. TCGS contended that the PNGTS Project is on-track and that it would be a shipper on the pipeline. Androscoggin, CoEnergy, Wausau Papers and Northern Utilities emphasized the urgency of their immediate need for supplies of Western Canadian gas.

Consumers, Northern Utilities and Renaissance expressed the view that the traditional certificate condition "that prior to construction, TransCanada shall demonstrate that FT contracts have been executed" would be appropriate.

Gaz Métro submitted that the facilities are in the public interest and the Board has enough flexibility under section 52 of the Act to authorize the facilities required by TransCanada. Gaz Métro emphasized that its incremental annual need for 425 10^6m^3 (15 Bcf) or 1 181.3 $10^3m^3/d$ (41.7 MMcfd) is real and must be met in a timely basis. Gaz Métro contended that its amended 1998 forecast demand of 6 600 10^6m^3 (233 Bcf) is accurate. Gaz Métro further emphasized that the incremental requirement represents normal market growth and that the potential of Gaz Métro's market must not be underestimated.

Enron stressed that it has commercial responsibilities, commencing 1 November 1998, and requested that, should the potential arise for delay in the in-service date, the Board consider "splitting its decision" and render a decision on the straight-forward Service Requests in a timely fashion.

Union contended that the market evidence is directly relevant to both the GH-2-97 and GH-1-97 proceedings. Union suggested, therefore, that there are many parties in the GH-1-97 proceeding who have not had a chance to test the market evidence, and who expect to have an opportunity to do so unencumbered by any other decision of the Board on the issue.

Views of the Board

The Board finds TransCanada's forecasts of requirements to be reasonable for the purpose of assessing its facilities requirements for the 1998-99 contract year.

The Board is satisfied that the new domestic and export transportation projects are sufficiently advanced with respect to gas supply, upstream and downstream transportation arrangements, gas purchase and gas sales arrangements, and the securing of Canadian and U.S. regulatory approvals, to support TransCanada's facilities design.

In reaching this conclusion, the Board notes that two projects, CoEnergy and Renaissance (Niagara Falls Export Point), have contracted for, or have customers who have contracted for, downstream service on a winter firm service basis only. TransCanada, however, submitted that it continues to emphasize the need for shippers to have "matching" transportation on downstream pipelines to ensure that sufficient "take-away" arrangements are in place. TransCanada stated that if arrangements other than firm downstream transportation contracts can provide a reasonable assurance that a shipper has other markets and the ability to have its gas delivered off the TransCanada system, such alternate arrangements may be acceptable to it. TransCanada, therefore, accepted the Renaissance and CoEnergy projects for inclusion in its application. The Board is satisfied that TransCanada has assured itself that there is minimal risk of unutilized summer capacity in regard to these two projects. The Board further notes that no concerns were raised by other parties on this matter.

Subject to the Board's comments set out in Section 4.4, Project-Specific Supply, the Board accepts TransCanada's forecasting methodologies and its approach to independent verification of the information furnished by prospective shippers.

In view of the certificate condition discussed in Section 4.4 in respect of the J.R. Simplot and TCGS projects, and on the basis of the project-specific supply information filed in accordance with the *Guidelines for Filing Requirements* ("Guidelines") or in accordance with the Board's letter of 16 May 1997 to All Interested Persons - *Further Instructions to Assist Applicants in Complying with Part VI Supply Filing Requirements* in respect of the other projects, the Board is satisfied with the gas supply arrangements of the domestic and export shippers.

As well, subject to the Board's comments set out in Section 4.4 and Section 5.2.1, Contracting for Capacity/Service on TQM's System, the Board is of the opinion that there is a reasonable expectation that all remaining contractual arrangements and regulatory approvals can be finalized in time for those services to commence as anticipated.

To ensure that the applied-for facilities, if certificated, are used and useful over the long-term, the Board finds that it would be appropriate to condition any certificate requiring TransCanada, prior to the commencement of construction, to:

- demonstrate that, with respect to the new firm export volumes, all necessary U.S. and Canadian federal regulatory approvals, including applicable long-term Canadian export authorizations have been granted;
- demonstrate that, with respect to the transportation services of new firm volumes, the transportation service contracts have been executed;
- demonstrate that, with respect to the transportation services of new firm volumes, all necessary U.S. and Canadian regulatory approvals have been granted for any required downstream facilities or transportation services;
- demonstrate that, with respect to the transportation services of new firm volumes, gas supply contracts have been executed; and
- identify any changes to TransCanada's base case requirements and any additional requirements for which the facilities are applied for.

The Board is satisfied that the aforementioned certificate conditions will ensure that only firm requirements underpin the construction of new facilities.

The Board notes M&NE's and Union's concerns regarding whether the PNGTS-related shippers would execute FT contracts with TransCanada if a tolling methodology issue existed on TransCanada's system at the time the FT contracts are proffered. However, the Board also notes the testimony of the PNGTS-related shippers in respect of the economic importance and urgency of their projects. They indicated that an adverse tolling outcome would require a reevaluation of their projects; however, such an outcome would be only one of many factors considered in such a reevaluation. For these reasons, the Board is of the view that there is a reasonable expectation that all of the TransCanada FT contracts will be executed.

With respect to Gaz Métro's domestic market, the Board is satisfied that the 1 118.3 $10^3m^3/d$ (41.7 MMcfd) service request volume represents normal market growth and that Gaz Métro's filed supply/demand balance, therefore, meets the Board-approved TransCanada Expansion Policy requirements. Consistent with the views expressed in the GHW-3-89 Reasons for Decision and for the purposes of this application, the Board does not require detailed gas supply information in support of Gaz Métro's services since this request results from normal market growth within its franchise area.

Taking into account the specific qualifications and conditions noted above, and for the purposes of this Part III proceeding, the Board is satisfied with the gas supply arrangements outlined for domestic and export shippers.

The Board's views in these matters, on the basis of the evidence before it in the GH-2-97 proceeding, are not intended to, and cannot, prejudge any determinations that another panel of the Board may be called upon to make in respect of TQM's proposed PNGTS Extension.

4.4 Project-Specific Supply

Two of TransCanada's shippers, J.R. Simplot and TCGS, did not provide evidence of project-specific supply either in the application, through the course of the proceeding or in response to Information Requests. Both of these shippers stated that they are relying on gas available on the open market and the belief that there is sufficient overall supply in the long term to meet their requirements. These shippers were of the view that the volumes related to their projects are sufficiently small in comparison to TransCanada's total capacity that they are of minimal risk to TransCanada. As well, both parties indicated that they were willing to assume any associated price risk.

Views of Parties

J.R. Simplot contended that it is in a difficult situation in that the Board's Guidelines call for detailed long-term gas supply evidence whereas the practice in industry has been to move away from long-term gas purchases. J.R. Simplot noted that, with the exception of this aspect of gas supply, no issues were raised concerning its project. It further noted that it has a long-term market and has committed to a ten-year transportation contract and suggested that its service request should not be denied because it contracts gas from a mega-marketer that procures gas primarily on the open market. J.R. Simplot submitted that the demonstration of overall supply remains an important determinant of economic feasibility and that project-specific supply is not of equal significance. Absent project-specific gas supply information, J.R. Simplot further submitted that the Board has more than adequate evidence to conclude that the facilities to be constructed for it will be used and useful. As well, J.R. Simplot argued that since the Guidelines are simply guidelines, the Board does not have to strictly adhere to them. J.R. Simplot, therefore, requested that the Board make a case-specific finding and exercise its discretion to relax the filing requirements in this instance. J.R. Simplot urged that no condition be included in a certificate to TransCanada that would require it to obtain a Long-Term Export Licence, as this would negate the relief being sought with respect to project-specific supply.

TCGS was of the position that a suitable long-term supply is available to it in the form of the competitive market that exists within the NOVA system, which allocates the available supply by means of the price mechanism. In TCGS's view, reliance on gas available on the open market is not remarkable but, rather, is a commercially reasonable way for a shipper to proceed. TCGS submitted that it is a large sophisticated gas marketer whose overall operations dwarf the supply quantities that are being discussed in this proceeding. TCGS stated that it is not seeking a generic change in policy nor is it trying to undermine or chip away at the Board's underlying economic feasibility determination. TCGS emphasized the interplay between shipper-specific and overall or global supply and suggested that, if there were a problem, it would relate to overall supply and would have nothing to do with whether or not a new shipper has dedicated long-term shipper-specific supply. TCGS stated its preference that a certificate condition not be imposed to require that, prior to construction, TCGS must produce "traditional gas supply data". TCGS contended that this is part of the risk that it assumed from the outset.

During the course of the hearing TransCanada discussed its own policy with respect to the supply evidence required to be filed by its prospective new shippers. TransCanada responded that its current policy, the "10/10/10" rule, requires a 10-year supply contract. In accepting the supply evidence of both J.R. Simplot and TCGS, TransCanada had anticipated that its policy would be modified during the pending RH-3-97 proceeding, which has since been delayed. TransCanada indicated that it was not seeking relief from the conditions typically imposed in a certificate which require a demonstration of "applicable long-term Canadian export authorizations" and gas supply contracts.

Union expressed concern that TransCanada had not followed its own policy for supply and market requirements. In this context, Union argued that a fundamental issue of fairness was raised in that shippers were being treated differently in TransCanada's application. Some shippers have provided the full range of required information, whereas J.R. Simplot and TCGS were allowed in the queue without meeting the requirements for project-specific supply. Union also noted that there were shippers not allowed in the queue for this facility application who would be able to meet TransCanada's existing policy. Union noted that TransCanada has a considerable queue for 1998 service that was not met by this application, as well as a considerable queue for service in 1999. Yet, Union suggested, TransCanada has filled the application with shippers who have not met the requirements, including one of TransCanada's affiliates. Union noted, furthermore, that the construction of facilities on the TransCanada system is a cost to all system users and, therefore, is a potential risk to all shippers not only J.R. Simplot and TCGS.

Views of the Board

In respect of project-specific supply, the Board has been asked to consider the information provided by two shippers, J.R. Simplot and TCGS, whose evidence does not fully comply with TransCanada's Expansion Policy Requirements or the Board's Guidelines. The Board is not persuaded by the shippers' arguments that the magnitude of the volumes at issue is not significant when compared to TransCanada's overall system capacity and the requirements of this facilities application. Nor is the Board prepared, on the evidence, to accept that two of the shippers supporting the application should be permitted at this time to simply rely on a market pricing mechanism to demonstrate a long term supply commitment to the project.

The Board notes Union's argument concerning a fundamental issue of fairness and also notes that all the other shippers supporting this application have provided sufficient supply information for the Board to be satisfied that there is adequate gas supply available to support the project.

The Board is of the view, on the basis of the evidence adduced in this proceeding, that a generic change to TransCanada's policy is not warranted or appropriate at this time. In this light, the Board notes that J.R. Simplot, TCGS and TransCanada are not seeking such relief. In this regard, J.R. Simplot and TCGS indicated that they were simply seeking a case-specific ruling. The Board is also aware, however, that issues relating to TransCanada's Expansion Policy Requirements, including project-specific gas supply, were intended to be addressed in the Board's RH-3-97 proceeding which has since been adjourned *sine die*. These shippers and TransCanada had anticipated that the policy might have been relaxed to accommodate the provision of less information in the area of project-specific gas supply.

The Board also notes the submissions of parties, including CAPP and ADOE, that the facilities are needed and that construction should be not be delayed pending a hearing on the Expansion Policy Requirements issue.

In these circumstances, the Board will exercise its discretion to accommodate the gas supply evidence filed by J.R. Simplot and TCGS. However, the Board will not depart from its practice of imposing the standard certificate conditions that, in respect of new firm export volumes, all necessary applicable long-term Canadian export authorizations have been granted and gas supply contracts have been executed. The Board is satisfied that such conditions provide an acceptable means of dealing with the issue at this time.

Chapter 5

Facilities

5.1 Specific Facilities

The facilities included in TransCanada's 1998 Facilities Application, and considered in the GH-2-97 proceeding, consist of 308.4 km of pipeline, 11 permanent compressor units, manifolding at Stations 21, 25, 30, and 55, aftercooler units at Stations 2, 13 B-F, 49 B and C, 62, 88 B and C, and 1301, and meter station upgrades at Emerson II, Dawn, Niagara Export, Parkway and Philipsburg sales meter stations. The compressor units, totalling 249.4 MW of power, comprise eight new 28.3 MW turbocompressors at Stations 2, 13, 43, 49, 62, 80, 95, and 107, two new 6.3 MW turbocompressors at Station 148, and one new 10.4 MW turbocompressor at Station 1301. The estimated total capital cost of the applied-for facilities is $824.9 million ($1997). Further details regarding the locations and costs of these facilities are provided in Figure 5-1 and Table 5-1.

Included in TransCanada's application is a request for approval of the Winchester Shortcut, a 27.9 km section of 1067 mm pipeline located in new right-of-way between MLV 1219+16.1 km and MLV 1401. TransCanada indicated that the Winchester Shortcut will provide loss of line protection, improve operating flexibility in a critical part of its system and, along with proposed facilities on the North Bay Shortcut and Montreal Line, provide additional capacity to accommodate domestic and export growth in the Eastern Delivery Area ("EDA").

TransCanada indicated that all facilities are expected to be in service by 1 November 1998, with the exception of the aftercoolers at Stations 13 B-E, 49 B, 88 B and C, and 107 B, which are expected to be in service by December 15, 1998.

5.2 Appropriateness of Design

TransCanada's 1998 Facilities Application reflects a redesign from its initial NEXUS Phase 1 Application, which was for a higher-pressure pipeline to be constructed over a number of years, to a more conventional pressure, single-year design. TransCanada indicated that the higher pressure design was optimal only when the requisite volumes of gas are brought on-stream within a three-year period and that a significant increase in tolls would be experienced in the intervening years. The facilities comprising the 1998 Facilities Application provide a similar level of incremental capacity as NEXUS Phase 1, but at a cost of approximately $277 million less.

In determining the facilities for proposed expansion on the Western and Central Sections, TransCanada used a combination of theoretical design and practical operating considerations to ensure that the proposed facilities meet the forecast requirements. TransCanada indicated that the applied-for facilities represent the optimal design to meet requirements for the 1998-99 operating year.

A computer program called OPTO was used to generate theoretical design alternatives on the Western and Central Sections by comparing different combinations of new pipeline loop and compression. TransCanada did not include a flow-split analysis on the Great Lakes system because Great Lakes was unable to construct additional facilities to commence service for November 1998.

Figure 5-1
TransCanada PipeLines Limited
Location of Applied-for Facilities

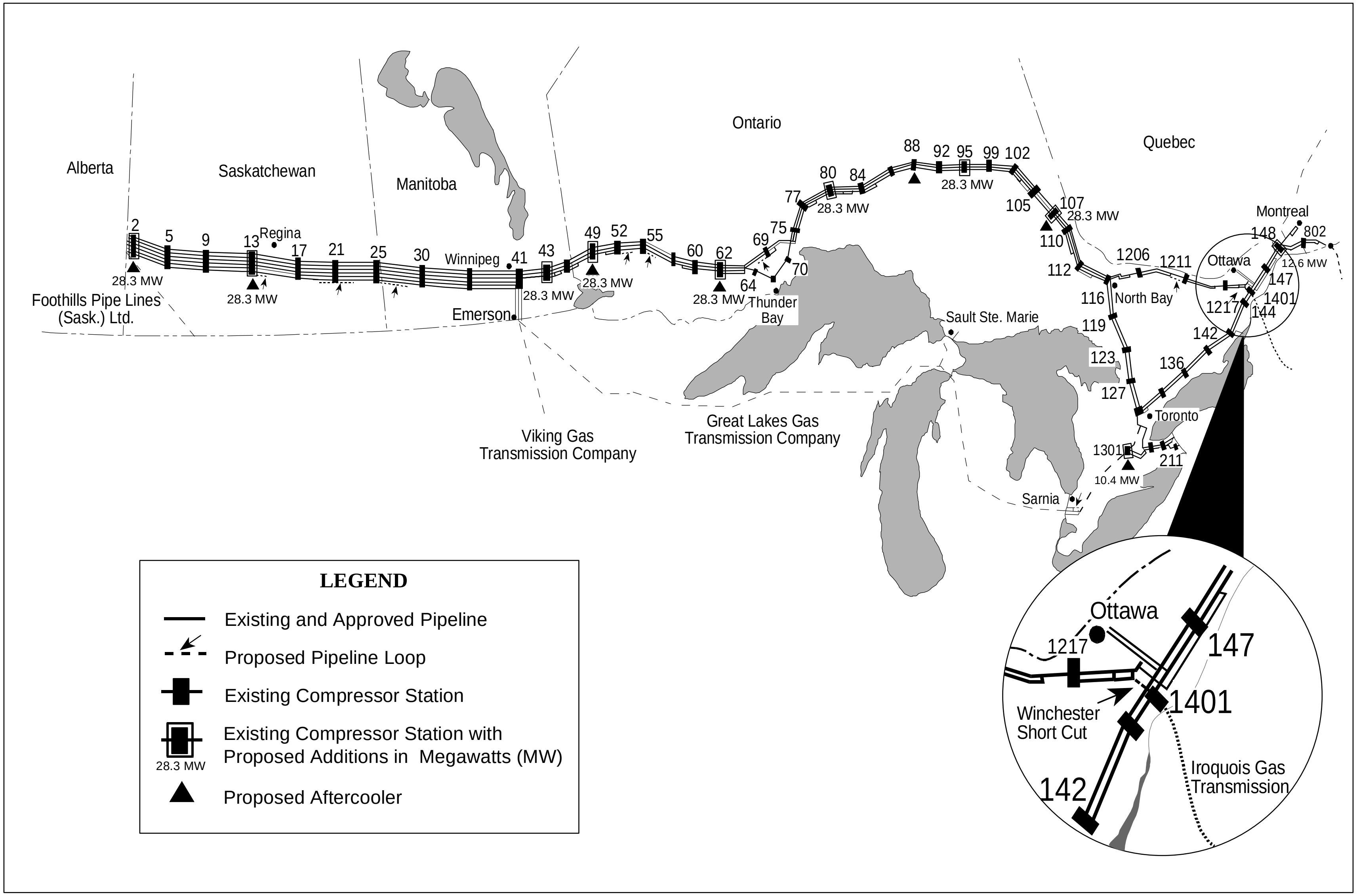

Table 5-1
Description and Estimated Cost of the Applied-for Facilities

Line	Location	Length (km)	Direct Cost ($000)
Western Section			
100-7	MLV 13 to MLV 14	23.6	23 385
100-7	MLV 20 to MLV 21	23.1	19 652
100-7	MLV 21 to MLV 22	26.4	25 140
100-7	MLV 25 to Sask./Man. Border	2.9	2 719
100-7	Sask./Man. Border to MLV 29	80.8	71 841
Central Section			
100-4	MLV 52 to MLV 53A	32.9	41 606
100-4	MLV 55 to MLV 56	15.2	21 975
100-4	MLV 67 to MLV 69	22.8	28 083
North Bay Shortcut			
1200-2	MLV 1209 to MLV 1210	18.8	25 965
1200-2	MLV 1210 to MLV 1211	22.5	30 088
Winchester Shortcut			
1200-2	MLV 1219 + 16.1 km to MLV 1401	7.9	38 840
Dawn Extension			
500-3	MLV 501 to MLV 501 + 11.5 km	11.5	15 660
	Total Pipeline	308.4	344 953

Compressor Plant Additions and Piping Modifications	Power	Direct Cost ($000)
Western Section		
Station 2	28.3 MW (ISO)	26 453
Station 13	28.3 MW (ISO)	27 637
Aftercooler Unit at Station 2H		6 750
Aftercooler Units at Stations 13 B to E		33 804
Aftercooler Unit at Station 13F		9 018
Manifolding at Stations 21 and 25		2 092
Standby Plant and Spares		3 790
1 - Aero Assembly		565
Emerson Extension		
Upgrade Metering at Emerson II Meter Station		605
Central Section		
Station 43	28.3 MW (ISO)	24 982
Station 49	28.3 MW (ISO)	26 541
Station 62	28.3 MW (ISO)	26 351
Station 80	28.3 MW (ISO)	27 140
Station 95	28.3 MW (ISO)	26 187
Station 107	28.3 MW (ISO)	26 733
Aftercooler Unit at Station 49B		10 487
Aftercooler Unit at Station 49C		13 806
Aftercooler Unit at Station 62D		11 184
Aftercooler Units at Stations 88 B and C		20 168
Aftercooler Unit at Station 107B		11 184
Aftercooler Unit at Station 107C		11 850
Manifolding at Station 55		2 148
Standby Plant and Spares		8 600
8 - Aero Assemblies		4 689
Parkway Line		
Upgrade Metering at Parkway Meter Station		265
Montreal Line		
Station 148	2 x 6.3 MW (ISO)	26 562
1 - Aero Assemblies		304

Compressor Plant Additions and Piping Modifications	Power	Direct Cost ($000)
Philipsburg Extension		
Upgrade of Metering at Philipsburg Meter Station		528
Kirkwall/Niagara Line		
Station 1301	10.4 MW (ISO)	18 776
Aftercooler Unit at Station 1301		3 474
Upgrade Metering at Niagara Export Meter Station		1 677
Dawn Extension		
Upgrade Metering at Dawn Meter Station		6 319
Total Compression and Piping Modifications		420 669
Total Direct Costs		**765 622**
Associated Indirect Costs		59 238
Total Capital Costs		**824 860**

TransCanada indicated that after the optimum theoretical facilities were identified the design was then adjusted on the basis of operating considerations. In some cases, loop lengths were extended and in some cases shortened so that the loop sections could be tied-in to the existing system at practical locations. In other cases the theoretical design was refined to allow compressor stations to discharge at pressures lower than the maximum allowable operating pressure, which resulted in less upstream looping requirements. Another design adjustment was TransCanada's proposed 28.3 MW standard size for the six compressor units on the Central Section. TransCanada indicated that this design decision enabled it to secure advantageous prices and to realize operational savings by minimizing its parts inventory.

No parties expressed concern with respect to the specific facilities proposed by TransCanada. Parties did, however, express concern related to TransCanada's proposed contracting for service/capacity on TQM's proposed PNGTS Extension, as discussed below in Section 5.2.1.

5.2.1 Contracting for Capacity/Service on TQM's System

Background

Approximately 44 percent of the total 11 800 $10^3m^3/d$ (416.6 MMcfd) in new FT services underpinning TransCanada's 1998 Facilities Application are destined for markets located in the Eastern Townships of Quebec and to markets located in the U.S. Northeast. In order to meet these demands, TransCanada proposed a facilities design which would deliver these volumes into the TQM pipeline system at Saint Lazare, Quebec. TransCanada would then contract with TQM to deliver these volumes to both Waterloo, Quebec (to Gaz Métro) and into PNGTS at the proposed point of interconnection near East Hereford, Quebec for subsequent delivery to export shippers.

TQM subsequently filed an application with the Board on 30 April 1997 to expand its system from Lachenaie, Quebec on the existing TQM pipeline system to the proposed point of interconnection with PNGTS at East Hereford, Quebec. TQM's PNGTS Extension Application is currently being considered by the Board under Hearing Order GH-1-97.

TransCanada had, at one time, considered the option of interconnecting with PNGTS via an extension of its system from Station 804 near Sabrevois, Quebec. TransCanada indicated that, at the request of Gaz Métro, the Sabrevois route option had been abandoned in favour of TQM's proposed PNGTS Extension from Lachenaie, Quebec. TransCanada indicated that the advantages of shipping via the TQM route included access to new markets, regulatory and environmental considerations and a price cap of $256.8 million on the cost of expanding the TQM system which would limit any potential cost overruns for this alternative.

The term "TBO", refers to TransCanada's acquisition of rights to transportation on other pipeline systems, in order to increase TransCanada's aggregate capacity in a more economical manner than by the construction of its own facilities. TransCanada initially enhanced its ability to deliver gas to eastern Canadian and export markets by acquiring rights to transportation on the Great Lakes and Union systems. Since that time, on an almost annual basis, TransCanada has performed calculations to see if it could expand more economically on its own system, by constructing facilities through Northern Ontario, or by acquiring further transportation rights on the Great Lakes and/or Union systems.

In a series of decisions in the early 1980s, the Board certificated facilities for the extension of TransCanada's system into Quebec. These facilities were ultimately built by TQM. The Board approved fixed tolls for TQM and because TransCanada is currently the only firm transportation shipper on TQM's system, TQM's annual Cost of Service has been billed to TransCanada, and recovered as part of TransCanada's annual Cost of Service through the TBO account.

In the RH-2-95 proceeding, TransCanada submitted an "Incentive Cost Recovery and Revenue Sharing Settlement" ("Incentive Settlement") to the Board which was subsequently approved. This Incentive Settlement provided the framework for determining TransCanada's Net Revenue Requirement for the four-year period from 1996-1999. In addition, it contained provisions relating to the treatment of TBO costs. With respect to TBO capacity, TransCanada is prohibited from increasing its contractual capacity with either Great Lakes, Union or TQM (from the level stated in the Incentive Settlement) without the prior approval of the Tolls Task Force or the Board.

TBO Issue

TransCanada applied to the Board in this proceeding for approval to contract with TQM for service/capacity between Lachenaie and East Hereford. In TransCanada's view, the proposal to contract for capacity on TQM to serve its expansion queue is a matter relevant to the factors the Board is required to consider under section 52 of the Act, and is encompassed by the issues identified in the GH-2-97 Directions on Procedure (Issues 1, 2 and 6). In addition, because of the Incentive Settlement, TransCanada felt it was necessary to request an explicit ruling by the Board rather than one which would be merely implicit in its ultimate decision on the GH-2-97 facilities.

TransCanada requested that the Board authorize its contractual commitment to TQM for volumes to flow on TQM's proposed PNGTS Extension as TBO volumes, authorize the recovery of the related costs, and authorize these costs as part of TransCanada's integrated system.

CAPP and Union were of the position that it was important to make a clear distinction between the Part III and Part IV aspects of the TBO issue. In their view, the GH-1-97 proceeding would be the appropriate forum to address specific issues relating to the cost and routing of the TQM's proposed PNGTS facilities. Issues related to the resulting tolling treatment of these facilities (which ultimately impacted on TransCanada shippers) would either be addressed in GH-1-97 or in a subsequent TransCanada Part IV proceeding.

Various approaches for the Board to consider were suggested by intervenors regarding the TBO issue which included:

- Approve the applied-for facilities and approve TBO but only to the limited extent of a Part III design issue;
- approve all of the applied-for facilities but defer or sever approval of TransCanada's request to contract for service on TQM pending a decision on tolling principles to be applied to TQM's PNGTS facilities; and
- approve facilities involving non-PNGTS related volumes only, and direct TransCanada to seek a partial facilities release.

Views of the Board

The Board, in its letter dated 2 September 1997, expressed its willingness to consider TransCanada's request for approval of TBO on TQM's system within the context of a "design issue" in this Part III proceeding, much the same as the Board would consider such requests on the Great Lakes or Union systems. The Board did not consider it relevant or appropriate to consider any Part IV matters at this time, in this proceeding. Furthermore, in this instance, another panel of this Board will consider the merits of the proposed facilities on TQM's proposed PNGTS Extension which are associated with the option of contracting for TBO.

In these circumstances, therefore, the Board, in this proceeding, has had regard only to the very general design issue which emanates from the TBO option. The Board has carefully considered the evidence which has been adduced on the record of the GH-2-97 proceeding with respect to TransCanada's decision to request TBO service on TQM's system rather than build the requisite facilities itself. TransCanada has explained that factors supporting its decision included certainty regarding cost, access to new markets, and environmental considerations.

On the basis of the record established in this proceeding, the Board is satisfied that TransCanada's design considerations appear to be reasonable in the circumstances and that it would be appropriate for TransCanada, in this instance, to contract for capacity on TQM to accommodate the service requests to the proposed new export point rather than build its own facilities, subject to the following condition:

Unless the Board otherwise directs, TransCanada shall, prior to the commencement of construction of any of the approved facilities, demonstrate to the Board's satisfaction that, in respect of new firm export volumes, all necessary United States and Canadian federal regulatory approvals, including applicable long-term Canadian export authorizations, have been granted.

In the Board's view, this standard certificate condition encompasses the requirement that all subsequent approvals of this Board relating to TQM's proposed PNGTS Extension be obtained prior to the commencement of construction of the applied-for facilities.

The Board's acceptance of TransCanada's design decision in this Part III proceeding does not extend to an approval of the dollar amount of the price cap or to the manner of recovery of such costs. Nor does it resolve issues concerning the size of pipe, the location of the pipe or any other matter which may properly be considered in GH-1-97.

It is evident that the Board cannot go as far as TransCanada has requested in respect of an approval related to TBO. The Board cannot approve the contracting for TBO in the sense contemplated by the Incentive Settlement as this would clearly constitute a Part IV matter.

The Board reiterates that it is not ruling on TransCanada's tolling assumptions. These will be dealt with in another proceeding. On the facts of this case, however, in the context of the limited design question, the Board is satisfied with the underlying assumptions related to the movement of western Canadian gas to support the PNGTS-related facility requirements.

The Board is of the view that the proposed design, including the contracting for TBO on the proposed TQM Extension, is appropriate for the expansion of TransCanada's system at this time. However, should the Board, for any reason, not approve TQM's proposed PNGTS Extension or should there be a delay, it will, of course, be open to TransCanada to make an appropriate facilities release application in respect of any requests for service to proposed destinations other than the TQM interconnect and East Hereford. It will be incumbent on TransCanada, at that time, to demonstrate that the facilities for which release is sought are appropriate from a design perspective and consistent with the environmental assessment which supports the recommendation to issue a certificate in this instance.

Decision

The Board approves TransCanada's request to contract for firm service capacity on TQM's proposed PNGTS Extension within the context of the proposed design of TransCanada's applied-for facilities. This approval is conditional upon TQM receiving all necessary regulatory approvals for the extension.

The Board's approval in GH-2-97 of TransCanada's design decision to contract for TBO does not extend to any Part IV matters such as the cost authorized to be

recovered through TBO or toll treatment. The Board's approval also does not extend to matters such as the location of TQM's proposed PNGTS Extension, the appropriate pipe size or any other matters which are properly considered in the GH-1-97 proceeding or in any other proceeding.

The Board considers the proposed design of the applied-for facilities to be appropriate for the expansion of TransCanada's system at this time. Upon the issuance of a certificate, the certificate conditions set out in Appendix II of these Reasons will be included in the certificate to ensure that the proposed facilities are required by the present and future public convenience and necessity.

5.3 Deferral Account for Contracting for Additional Service on TQM

Prior to the oral hearing, the Board determined that the issue of additional transportation service or capacity on the TQM system was appropriately considered within the context of Issue 2 (i.e. the appropriateness of the design of the proposed facilities, included in Appendix III of the GH-2-97 Directions on Procedure. However, issues concerning toll methodology (and Part IV matters) were not relevant to the GH-2-97 proceeding.

To address the concerns raised by some parties, the Board decided to include the issue of "the appropriateness of establishing a deferral account for any costs related to TransCanada's contracting for additional transportation service or capacity on TQM's system" in the List of Issues for GH-2-97.

TransCanada submitted that the proposed deferral account does not qualify or meet the criteria established by the Board for approval of deferral accounts for TransCanada (i.e. absence of control over costs, inability to reasonably forecast level of costs, and materiality of potential cost). TransCanada further suggested that a deferral account would not be necessary because:

- no costs will be incurred with respect to the capacity prior to the expected in-service date of 1 November 1998;
- the determination of the toll treatment regarding TQM-PNGTS TBO costs will be made prior to the in-service date;
- a price cap exists for costs relating to construction of the TQM-PNGTS facilities; and
- there is a deferral account mechanism in clause 5.5 of the Incentive Settlement.

No intervenors expressed support or otherwise commented upon the creation of a deferral account for this purpose.

Views of the Board

The Board agrees with TransCanada that it would be unnecessary to establish a deferral account in respect of TBO costs on TQM's proposed PNGTS Extension.

5.4 Contracting for M12 Service on Union related to FST Conversion

In RH-1-97, the Board approved TransCanada's FST Conversion Proposal. This proposal included a combination of storage, balancing and transportation contracts to replace 4 255 10^6m^3 (150.2 Bcf) of FST with FT service effective 1 November 1998. A component of the FST Conversion Proposal was the approval of contracting by TransCanada of an additional 11 670 $10^3m^3/d$ (412 MMcfd) of M12 capacity on the Union system. This was due to the decision by shippers to opt for a change from Dawn to Parkway of the designated delivery point for the converted volumes.

In GH-2-97, TransCanada confirmed that it has only requested 9 915 $10^3m^3/d$ (350 MMcfd) of additional M12 service effective 1 November 1998. TransCanada stated that its original request of 11 670 $10^3m^3/d$ (412 MMcfd) was reduced, in part due to the addition of four aftercoolers (Section 58 Application for 1997 Construction - No. 8), as well as the creation of additional winter peak day capacity relating to GH-2-97 facilities.

TransCanada indicated that it would not contract for more than the 9 915 $10^3m^3/d$ (350 MMcfd) of M12 capacity, and that, if other circumstances arose, it would return to the NEB for approval.

Views of the Board

The Board accepts TransCanada's commitment that it will not contract for M12 capacity on the Union system in excess of 9 915 $10^3m^3/d$ (350 MMcfd) in relation to the conversion of FST volumes to FT volumes.

5.5 Retirement of Compressors

In its application, TransCanada proposed to retire the following compressor units during 1999 due to expensive operating costs as well as unacceptable emissions levels:

- Station 49 "A" Plant, Unit 1 to 4 (2.5 MW each) and Unit 5 (1.3 MW), and
- Station 80 "A" Plant, Units 1 to 5 (1.9 MW each).

With respect to the accounting treatment of the proposed retirements, TransCanada applied that they be treated as "ordinary retirements", pursuant to Section 39 of the *Gas Pipeline Uniform Accounting Regulations* ("GPUAR").

Views of the Board

The Board accepts TransCanada's rationale for retiring the above-mentioned compressor units. In this regard, the Board believes that the retirement of these units fall within the guidelines set out under section 39 of the GPUAR.

Decision

The retirement of the compressor units identified above may be treated as "ordinary retirements" pursuant to section 39 of the GPUAR.

5.6 Exemption from the Leave to Open Provisions of the Act

TransCanada requested exemption, pursuant to section 58 of the Act, from the provisions of section 47 of the Act in respect of the requirements for leave to open for the applied-for looped sections of pipeline.

Views of the Board

The Board is of the view that the applied-for looping facilities may be exempted from the requirements for leave to open with the exception of looping in Class 3 locations as described in subsection 4.3.2 of Canadian Standard Association Z662-94, *Oil and Gas Pipeline Systems*.

Decision

The Board will grant TransCanada an exemption from the provisions of section 47 of the Act for the applied-for looping facilities. This exemption will not apply to the new section of mainline pipeline referred to as the Winchester Shortcut.

Chapter 6

Economic Feasibility

The Board examines the economic feasibility of facilities by assessing the likelihood that the facilities will be used at a reasonable level over their economic life, and by determining whether the demand charges will be paid. In the course of its examination, the Board considers several factors, including supply, markets and contractual matters, all of which were addressed in TransCanada's evidence.

TransCanada submitted a report by Sproule, entitled *The Future Natural Gas Supply Capability for the Province of Alberta and the Western Canada Sedimentary Basin 1996-2018*, which concluded that there will likely be a sufficient long-term gas supply to keep the pipeline, including the subject facilities, utilized at a reasonable level over its economic life.

TransCanada projected that gas demand in Manitoba, Ontario and Quebec will grow at an average annual rate of 2.1 percent over the forecast period 1995 to 2010. TransCanada estimated that gas demand in Ontario and Quebec will exceed contracted pipeline requirements by some 7.8 10^9m^3 (275 Bcf) in 2005, requiring the construction of additional pipeline capacity beyond that applied for and/or additional gas imports.

To demonstrate the long-term nature of gas demand in the U.S. Midwest and U.S. Northeast markets served by its pipeline system, TransCanada presented several long-term gas demand forecasts which showed that annual growth rates, over the forecast period 1995 to 2010, will range between 0.61 and 1.79 percent in the U.S. Midwest and between 0.98 and 1.64 percent in the U.S. Northeast.

Views of Parties

TransCanada argued that the availability of gas supply and the existence of significant available market demand has been demonstrated on a macro-forecast basis. TransCanada noted that the market evidence presented in the report entitled *Natural Gas Demand in the U.S. Northeast* was not challenged. With respect to project-specific supply, TransCanada asked that the standard certificate conditions apply. These conditions require, prior to the construction of any approved facilities, that all necessary U.S. and Canadian federal regulatory approvals, including applicable long-term Canadian export authorizations, have been granted and that gas supply contracts have been executed.

TransCanada suggested that the Board could impose the standard certificate condition, that expansion volumes on the TransCanada system require executed transportation contracts, should the Board find it difficult to render a finding of economic feasibility. TransCanada further submitted that such a condition would remove any doubt the Board may have about PNGTS-related shippers signing FT contracts because of some possibility that TQM's proposed PNGTS Extension might be incrementally tolled.

Some parties expressed doubts about the willingness of the PNGTS-related shippers to sign FT contracts with TransCanada because they could not assure the Board that they would sign FT contracts if the tolling methodology on the TransCanada system remained an issue at the time FT contracts are proffered.

M&NE and Union submitted that, as long as significant tolling and cost allocation issues remain outstanding, it is impossible to demonstrate the economic feasibility of the proposed PNGTS-related facilities, since shippers cannot be expected to execute the requisite FT contracts until those tolling and cost allocation issues are resolved.

M&NE contended that the standard certificate condition, to provide executed FT contracts prior to construction, would not suffice in this case because of the interrelationship of this proceeding with other applications. M&NE suggested that the pending status of these applications may cause shippers to lose interest and not execute the FT contracts. M&NE submitted that, as TransCanada cannot demonstrate the economic feasibility of its PNGTS-related facilities until the toll methodology issues are resolved, the Board should proceed to resolve these toll methodology issues as early as possible to save time and be fair to parties.

Union stated that there are limits to the gaps that certificate conditions can fill in the absence of evidence of economic feasibility due to the lack of certainty related to the execution of the PNGTS shippers FT contracts. Union submitted that the Board would not be meeting its mandate if it issued a certificate conditioned, in effect, on the applicant establishing economic feasibility at some future date.

CAPP stated that its focus in raising issues related to the recovery of TBO costs is with respect to the proper allocation of costs and that these issues should not impact any shipper's decision to sign a transportation contract.

CoEnergy submitted that the needs of Northern Utilities' market are urgent and critical and there is also an urgency from CoEnergy's perspective. CoEnergy noted that no party took issue with gas supply, upstream and downstream transportation, or with the strength of its market. CoEnergy further noted that M&NE was the only party to question the signing of firm transportation agreements.

CoEnergy argued that there can be no question that all of its arrangements are solid and dependable, as supported by the Board's GHW-1-97 Reasons for Decision granting CoEnergy an Export Licence. CoEnergy conceded that before signing the FT agreements, shippers will take into account all of the surrounding factors, including, but not limited to, any changes in toll design or in the anticipated level of the toll. CoEnergy submitted that, if the Board considers the strength of the supply and market, the strength of CoEnergy as a participant in the gas business, and the urgency that ties the supply to the market in this case, the Board should have all the comfort it needs to determine that the applied-for facilities will be utilized at a reasonable level over their useful life.

With respect to economic feasibility and the issue of whether the FT contracts will be executed, PGQ stated that the Board's letter dated 2 September 1997 left no doubt that rate issues were not part of this public hearing.

Views of the Board

In previous sections of these Reasons for Decision the Board has examined issues related to supply, markets and transportation. While some parties have questioned whether FT contracts will ultimately be signed, this issue is not unique to the present case. The Board has traditionally considered transportation service contracts as one of a number of elements in its determination of economic feasibility. In this case, all shippers have signed Precedent Agreements. When Precedent Agreements are filed as evidence, the Board will consider the likelihood that the transportation service contracts will ultimately be executed. The standard certificate conditions are imposed to provide assurance against future unforseen events which might affect the signing of transportation contracts, in an effort to ensure that only the facilities necessary to meet the requirements of shippers holding executed transportation contracts are constructed.

The Board is cognizant that some of the PNGTS-related shippers would not commit to signing FT contracts with TransCanada without a determination of the tolling treatment. In this regard, shippers have indicated that they will take into account all surrounding factors, including, but not limited to, any changes in toll design or in the anticipated level of the toll. The Board does note, however, the testimony of these shippers with respect to the economic importance and urgency of their projects. In this case, the Board is of the view that there is little risk of the pipeline not being fully utilized due to some shippers not signing FT contracts, particularly in light of the evidence supporting the need for the applied-for facilities.

The Board notes the evidence of continued increases in the demand for natural gas forecasted in TransCanada's market area, as well as the existence of a queue of service requests until the 2000 contract year.

The Board is satisfied that the evidence demonstrates the existence of long-term gas supply and demand, that there is a strong likelihood that the facilities, which would be part of the integrated TransCanada system, will be used at a reasonable level over their economic life, and that the demand charges will be paid.

The Board is of the view that certificate Conditions 12 and 13, included in Appendix II, will ensure that all necessary gas supply and transportation service contracts and regulatory approvals will be in place prior to the commencement of construction of the applied-for facilities.

Chapter 7

Disposition

The foregoing Chapters constitute our Decisions and Reasons for Decision in respect of the application heard before the Board in the GH-2-97 proceeding.

The Board has found that the facilities proposed by TransCanada are required by the present and future public convenience and necessity. Therefore, the Board will recommend to the Governor in Council that a certificate be issued. The certificate will be subject to the conditions outlined in Appendix II.

Upon the issuance of a certificate, the Board will issue an order pursuant to section 58 of the Act, exempting each of the applied-for looping facilities from paragraphs 31(c), 31(d), 33 and 47 of the Act, subject to the exemption order condition included at the end of Appendix II.

K.W. Vollman
Presiding Member

R. Priddle
Member

R.D. Revel
Member

Calgary, Alberta
November 1997

Appendix I

List of Issues

1. The economic feasibility of the proposed facilities.

2. The appropriateness of the design of the proposed facilities.

3. The safety of the design and operation of the proposed facilities.

4. The potential environmental and socio-economic effects of the proposed facilities, including those factors outlined in section 16 of the *Canadian Environmental Assessment Act*.

5. The appropriateness of the route selection, land requirements and the land rights acquisition process.

6. The appropriate terms and conditions to be included in any approval which may be granted.

7. The scope of the project for the purposes of the *Canadian Environmental Assessment Act*.

8. The appropriateness of establishing a deferral account for any costs related to TransCanada's contracting for additional transportation service or capacity on TQM's system, in the event that the Board approves this application.

Appendix II

Certificate Conditions

1. The pipeline facilities in respect of which this certificate is issued shall be the property of and shall be operated by TransCanada.

2. Unless the Board otherwise directs:

   (a) TransCanada shall cause the approved 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, except as varied in accordance with subsection (b) hereof; and

   (b) TransCanada shall cause no variation to be made to the specifications, drawings or other information or data referred to in subsection (a) without prior approval of the Board.

3. Unless the Board otherwise directs, TransCanada shall implement or cause to be implemented all of the policies, practices, recommendations and procedures for the protection of the environment included in or referred to in its application or as otherwise adduced in evidence through the application process.

<u>Prior to Commencement of Construction</u>

4. Unless the Board otherwise directs, TransCanada shall file, for Board approval, at least five working days prior to the commencement of construction of the sensitive watercourse crossings identified in Attachment A, additional information regarding these watercourse crossings.

   The additional information shall set out:

   (a) construction designs of the crossing;

   (b) in-stream timing restrictions;

   (c) site-specific mitigative and restorative measures to be employed as a result of undertakings to regulatory agencies;

   (d) evidence to demonstrate that all issues raised by regulatory agencies have been adequately addressed, including all necessary updates to the environmental assessments where deficiencies have been identified; and

   (e) status of approvals, including environmental conditions.

5. Unless the Board otherwise directs, TransCanada shall, at least ten days prior to the commencement of construction of the approved 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.

6. Unless the Board otherwise directs, TransCanada shall, at least ten days prior to the commencement of construction of the approved facilities, file with the Board the results of the heritage resource surveys referred to in the application, including any corresponding avoidance or mitigative measures.

7. Unless the Board otherwise directs, TransCanada shall file with the Board an up-to-date pre-construction noise survey for Compressor Station 13 by the end of June 1998 or prior to the commencement of construction, whichever is later.

8. Unless the Board otherwise directs, TransCanada shall file with the Board, upon completion, the results of:

   (a) surveys of the vegetation, wildlife, migratory birds and plant and animal species of special status, that were conducted during the summer of 1997;

   (b) further surveys of the Clay Creek, Assiniboine River, MLV 25-27, heronry at MLV 52 - 53, and the Winchester Bog prior to the construction in these areas; and

   (c) in respect of the surveys referenced in (a) and (b) the measures developed in consultation with Environment Canada and the provincial authorities.

9. Unless the Board otherwise directs, TransCanada shall, prior to the commencement of construction, file with the Board copies of any permits or authorizations which contain environmental conditions for the applied-for facilities issued by federal, provincial and other permitting agencies. In addition, TransCanada shall maintain an information file(s) in the construction office(s) which would include any changes made in the field and permits obtained following the commencement of construction.

10. Unless the Board otherwise directs, TransCanada shall, prior to the commencement of construction, file with the Board an update of the summary detailing the results of discussions with all appropriate special interest groups and regulatory agencies. In addition, TransCanada shall maintain an information file(s) in the construction office(s) which includes:

    (a) a detailed listing of all site-specific mitigative measures to be employed as a result of undertakings to special interest groups or regulatory agencies; and

    (b) an explanation of any constraints identified that may affect the construction program.

11. Unless the Board otherwise directs, TransCanada shall, at least fifteen days prior to the commencement of the hydrostatic testing portion of the project, submit for Board approval additional information regarding standard conditions or specific mitigative measures that TransCanada intends to use for hydrostatic testing.

12. Unless the Board otherwise directs, TransCanada shall, prior to the commencement of construction of any of the approved facilities, demonstrate to the Board's satisfaction that:

(a) in respect of new firm export volumes, all necessary United States and Canadian federal regulatory approvals, including applicable long-term Canadian export authorizations, have been granted; and

(b) in respect of the transportation services of new firm volumes on the TransCanada system:

   (i) transportation contracts have been executed;

   (ii) all necessary United States and Canadian regulatory approvals have been granted in respect of any necessary downstream facilities or transportation services; and

   (iii) gas supply contracts have been executed.

13. Unless the Board otherwise directs, TransCanada shall, prior to the commencement of construction of any of the approved facilities, submit for Board approval:

   (a) requirements tables in the same format as Tables 2, 3 and 5 of Sub-tab 1 under the Tab "Requirements" of Exhibit B-1 of the GH-2-97 proceeding, showing the base case requirements and those requirements for which Condition 12 has been satisfied; and

   (b) flow schematics of the TransCanada system demonstrating that those approved facilities which are to be released for construction are necessary to transport the requirements referred to in subsection (a).

<u>During Construction</u>

14. Unless the Board otherwise directs, TransCanada shall, during construction, ensure that specialized habitat for wildlife and plants with a designated status will be avoided, relocated or restored in consultation with appropriate regulatory agencies.

15. Unless the Board otherwise directs, TransCanada shall, prior to the commencement of seeding for each pipeline loop, provide confirmation that the approval of any seed mixtures or other revegetation actions, required in the revegetation of work sites, has been received from Saskatchewan Environment and Resource Management, Manitoba Natural Resources, Prairie Farm Rehabilitation Administration and Ontario Ministry of Natural Resources, as appropriate.

16. Unless the Board otherwise directs, TransCanada shall file with the Board, prior to seeding, any variations in the recommended seed mixes as outline in the assessment reports, unless these changes are requested by the landowner.

17. Unless the Board otherwise directs, TransCanada shall, during construction, maintain for audit purposes at each construction site, a copy of the welding procedures and non-destructive testing procedures used on the project together with all supporting documentation.

18. Unless the Board otherwise directs, TransCanada shall file with the Board a report on the results of the salvage of any archaeological site encountered during construction.

Post Construction

19. Unless the Board otherwise directs, TransCanada shall, within six months of placing any of the approved facilities into service, file with the Board a report providing a breakdown of the costs incurred in the construction of the approved facilities, in the format used in Schedules 3 through 34 of Sub-tab 9 under Tab "Facilities" of Exhibit B-1 of the GH-2-97 proceeding, setting forth actual versus estimated costs, including reasons for significant differences from estimates.

20. Unless the Board otherwise directs, TransCanada shall file with the Board, a post-construction environmental report within six months of the date that each approved facility is placed in service. The post-construction environmental report shall set out the environmental issues that have arisen up to the date on which the report is filed and shall:

    (a) provide a description of all minor amendments to practices, procedures and recommendations which have been implemented during the construction process;

    (b) indicate the issues resolved and those unresolved; and

    (c) describe the measures TransCanada proposes to take in respect of the unresolved issues.

21. Unless the Board otherwise directs, TransCanada shall file with the Board, on or before the 31 January that follows each of the first two complete growing seasons following the filing of the post-construction environmental report referred to in Condition 20:

    (a) a list of the environmental issues indicated as unresolved in the report and any that have arisen since the report was filed; and

    (b) a description of the measures TransCanada proposes to take in respect of any unresolved environmental issues.

22. Unless the Board otherwise directs, TransCanada shall, within three months after the commencement of operation of the upgraded station facilities, file with the Board the results of the source NO_x emission testing, and indicate whether the compressor units are in compliance with the Canadian Council of Ministers of the Environment National Emission Guidelines for Stationary Combustion Turbines (December 1992, CCME-EPC/AITG-49E).

23. Unless the Board otherwise directs, TransCanada shall, within eight months after the commencement of operation of the upgraded station facilities, file with the Board, environmental noise assessment surveys indicating whether post construction noise levels resulting from all equipment operating at full power are in accordance with the noise levels as predicted within TransCanada's assessments.

24. Unless the Board otherwise directs, TransCanada shall within one year after the commissioning of new compression facilities proposed within the application, file with the Board a status report of any noise complaints received as a result of station operations, including the mitigative measures TransCanada would undertake to address those complaints.

Expiration of Certificate

25. Unless the Board otherwise directs prior to 31 December 1999, this certificate shall expire on 31 December 1999 unless the construction and installation with respect to each of the additional facilities has commenced by that date.

Table A1-1
Attachment A

TransCanada PipeLines Limited - 1998 Facilities Application
Sensitive Watercourse Crossings - Saskatchewan, Manitoba and Ontario

Watercourse	Location
Tributary to Brennand Creek	MLV 25 + 12.6 km
Assiniboine River	MLV 25 + 30.7 km
Oak River*	MLV 28 + 24.3 km
Tributary to Sportsman's Bay	MLV 52 + 13.5 km
Wabigoon River Tributary (wetland)	MLV 52 + 22.1 km
Eagle River	MLV 52 + 31.9 km
Scandrett Creek Tributary Headwater Pond (adjacent)	MLV 67 + 15.0 km to MLV 67 + 15.2 km
Scandrett Creek Tributary Pond (adjacent)	MLV 67 + 17.1 km to MLV 67 + 17.8 km
Chalk River	MLV 1209 + 3.9 km
Petawawa River	MLV 1209 + 17.3 km
Indian River	MLV 1210 + 18.3 km
East Castor River (Channelized Headwater)*	Winchester + 0.8 km
South Nation River	Winchester + 12.8 km
Toyes Creek*	Winchester + 15.1 km
Clay Creek*	MLV 501 + 4.8 km
Coyle Drain*	MLV 501 + 5.9 km
Capes Drain*	MLV 501 + 11.0 km

* Either wet or dry crossings may potentially be used, based upon site conditions at the time of construction.

EXEMPTION ORDER CONDITION

1. Unless the Board otherwise directs, for any specific loop section referred to in this Order, this exemption order will not be effective until the following conditions are satisfied:

   (a) except as provided in subsection (b) hereof, TransCanada shall demonstrate to the satisfaction of the Board that all required land rights have been obtained along the entire loop section; and

   (b) in the event that all required land rights have not been acquired within a specific loop section referred to in this Order, any portion or portions thereof may be constructed provided that, prior to commencing construction on any portion or portions of the loop section, TransCanada shall demonstrate to the satisfaction of the Board that the rights, as prescribed in the Act, of the landowners along the portion or portions of the loop section for which TransCanada has not yet obtained the required land rights will not be prejudiced by the construction of the portion or portions of the loop section.