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June 30, 2009

Ontario Energy Board
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Sharon Wong
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Reference: 9483/3640

Attention: Ms. Kirsten Walli, Board Secretary

Re: EB-2008-0411: Union Gas Limited
Answers to Non-Confidential Undertakings

Dear Ms. Walli:

Please find attached Union's Answers to the Non-Confidential Undertakings given at the hearing on June 22 and 23, 2009.

Answers to the Confidential Undertakings will be filed separately and copied to those who signed the Confidentiality Declaration and Undertaking.

Yours truly,

Sharon Wong

c: All Intervenors in EB-2008-0411

21897640.1

UNION GAS LIMITED

Response to Undertaking
from Board Staff

To provide Union's estimated costs of operating the St. Clair Line from 2003 to 2007.

Response

See table below:

Union Gas Limited St. Clair Line						
2003-2008 Net Revenues and Estimated Operating Costs (\$ 000's)						
	2003	2004	2005	2006	2007	2008
Net Revenue	400	836	642	297	120	510
Operations						
St. Clair River crossing toll *	342	342	342	342	342	342
Operations and maintenance	24	25	26	26	27	28
Insurance	11	12	12	12	13	13
Property taxes	100	96	96	92	94	95
Capital taxes	21	20	19	18	17	4
Depreciation	275	277	278	278	278	276
Total operating expenses	\$773	\$771	\$773	\$769	\$771	\$758
EBIT	-\$373	\$65	-\$131	-\$472	-\$651	-\$248

*Actual Cost, Based on the September 16, 1996 agreement between St. Clair Pipelines (1996) Ltd. and Union Gas.

Witness: Greg Tetreault
Date: June 22, 2009

UNION GAS LIMITED

Response to Undertaking
from Federation of Rental Housing Providers of Ontario ("FRPO")

To provide Union's estimated Rate of Return of the St. Clair Line over the last six years

Response

Using the revenue and estimated operating expenses filed with the Market Valuation report and Union's response to Undertaking J1.1, the calculation of rate of return on common equity of the St. Clair Line assets would be:

2003	-20%
2004	-9%
2005	-14%
2006	-24%
2007	-28%
2008	-16%

Undertaking J1.1 only shows EBIT while the returns in J1.2 are based on net income applicable to common equity. There were operating losses in five of the six years but there were negative returns in all years when interest and income taxes are considered.

Union confirms that the allocation of costs used to determine its response to Board Staff IR #8 is consistent with the methodology used to allocate costs in the Market Valuation report.

Witness: Greg Tetreault
Date: June 22, 2009

UNION GAS LIMITED

Response to Undertaking
from Board Staff

To provide number of shippers who are currently C1 customers on the St. Clair Line that have signed precedent agreements with Dawn Gateway.

Response

There is one firm C1 shipper currently using the St Clair to Dawn transportation service. That shipper is not one of the five shippers that signed the Dawn Gateway precedent agreement.

Witness: Mark Isherwood
Date: June 22, 2009

UNION GAS LIMITED

Response to Undertaking
from Board Staff

If the St. Clair Line was sold at a price that exceeded net book value, Union is asked to confirm that it would use the following accounting treatment:

- that the asset would be classified as a group asset and the group method applies to both financial statements and regulatory accounting;
- on the sale of the St. Clair Line, and assuming the price exceeded net book value, the gain would be recorded by increasing the accumulated depreciation and would not be recognized in the income statement; and
- the above treatment would result in a reduction of the rate base and consequently to the utility rates.

Response

The accounting treatment set out in the question is the treatment that is normally accorded to the sale or retirement of Union's plant assets in the normal course. Union would also note that if the proceeds of the sale of an asset in the normal course were above the assets' original cost, then the portion of the gain above the original cost would be for the credit of Union's shareholder.

If the St. Clair Line and related assets were sold at net book value, as proposed, then Union would eliminate the original cost of the assets by crediting the appropriate plant accounts and by charging the accumulated depreciation account. The proceeds from the sale would be credited to the accumulated depreciation account eliminating the net book value of the asset, and there would be no gain or loss. Eliminating the value of the assets would result in a reduction in rate base and a reduction in rates (as indicated in paragraph 45 of Union's pre-filed evidence).

However, if the Board were to order that the St. Clair Line could only be sold to Dawn Gateway LP on condition that the sale price were higher than the net book value, Union's position is that any gain on the sale above net book value should only be for the credit of Union's shareholder because the gain would be as a result of an extraordinary transaction out of the ordinary course. If the Dawn Gateway joint venture agreed to purchase the asset at this higher price, the gain would be as a result of the purchaser placing special value on the asset for special purpose use in the Dawn Gateway Line, and not because the original depreciation amount charged on the asset was too high.

Witness: Steve Baker
Date: June 22, 2009

A gain on the retirement of an asset resulting from an event not reasonably contemplated in the determination of the provision for depreciation that unduly decreases the accumulated depreciation balance is credited to income as an extraordinary item. This is consistent with the accounting treatment outlined in the OEB's Uniform System of Accounts for Class "A" Gas Utilities in Appendix A section 3A Retirements of Depreciable Plant which states:

Extraordinary Retirements - result from causes not reasonably assumed to have been anticipated or contemplated in prior depreciation or amortization provisions. Such causes include unusual casualties due to fire, storm, flood, etc., sudden and complete obsolescence, or unexpected and permanent shutdown of an operating assembly or plant. An extraordinary retirement results in a loss (or gain) to the extent that the net charges (or credits) would unduly deflate (or inflate) the accumulated depreciation or amortization accounts.

A loss (or gain) is comprised of the difference between the book value of the plant plus cost of removal less salvage and insurance recoveries and the related depreciation or amortization determined in an equitable manner.

Losses as a result of an extraordinary retirement shall be charged to Account No. 171, "Extraordinary Plant Losses". Gains, if any, as a result of an extraordinary retirement shall be credited to income as an extraordinary item.

Witness: Steve Baker
Date: June 22, 2009

UNION GAS LIMITED

Response to Undertaking
from Canadian Manufacturers and Exporters (“CME”)

To provide EBLO 226 Decision.

Response

Copy of EBLO 226 Decision attached hereto.

Witness: Bill Wachsmuth
Date: June 23, 2009

UNION GAS LIMITED

Response to Undertaking
from Canadian Manufacturers and Exporters (CME)

If a shipper wants to transport gas from Michigan to Dawn on the St. Clair Line today, how many nominations does the shipper have to make and which company controls the flow of gas.

Response

Starting at Belle River Mills a shipper is required to complete two nominations with two separate companies to transport gas from Michigan to Dawn, Ontario. The shippers would first nominate with MichCon, from a receipt point on their system to the St Clair delivery point at the MichCon Union interconnect at the international border located in the middle of the St Clair River. The shipper would pay MichCon both a toll and fuel (fuel may be provided in kind or by an additional toll). The shipper would then enter a second nomination with Union to transport gas from the St Clair receipt point at the MichCon Union interconnect to Dawn. The shipper would pay Union both a toll and fuel (again fuel may be gas in kind or an additional toll). There are currently two operators, MichCon and Union, that schedule the gas flows on the separate pipelines.

Under the Dawn Gateway proposal there would be one nomination on Dawn Gateway to transport gas between Belle River Mills and Dawn and one pipeline operator scheduling the gas flows. Although there would be 2 contracts (U.S. and Canada) the customer will eventually negotiate and pay one toll and provide one fuel in kind.

Witness: Mark Isherwood
Date: June 23, 2009

UNION GAS LIMITED

Response to Undertaking
from Board Staff

Explain why it is difficult to match contracts under the current structure. Why is it possible to match contracts under the new structure and would it have been possible contractually to do that under the old (current) structure.

Response

Under the existing structure today a customer would have to negotiate two contracts and two rates with two separate companies (MichCon and Union) to transport gas between Michigan and Ontario. Currently the two companies and the shippers are separately trying to maximize the value they receive from the transaction relative to the difference between the Michigan and Ontario gas prices (market value). This often contributes to the two rates combining for a total price that is not market competitive. For example, if the difference in price between Michigan and Dawn is \$0.10 per GJ, a marketer would be willing to pay something less than the \$0.10 per GJ to move gas. In two independent negotiations the marketer is trying to negotiate with MichCon as well as with Union. If the total cost from both MichCon and Union (i.e. the toll and fuel charge from both) is higher than \$0.08 or \$0.09 per GJ, the path would be uneconomic and gas will not flow.

Today, shippers have the ability to negotiate a range rate for short term contracts that allow both MichCon and Union to capture market values. It is this flexibility that often results in both MichCon and Union pricing their respective services at an amount that does not work from a shipper's perspective.

Under the current structure, it would be very difficult for Union and MichCon to contractually agree to a system that would eliminate both company's desire and objective to maximize their own revenues from their own pipeline assets. The benefit of the Dawn Gateway proposal is that Spectra and DTE each owns a 50/50 share of the entire pipeline from Belle River to Dawn, and therefore both owners would have an equal interest in maximizing the revenue earned over the entire line. In Union's view, this is what is required in order to attract long term supply on this transportation path to the Dawn Hub.

Under the Dawn Gateway proposal, there would be one marketer, coordinating marketing efforts and negotiating one price for the point to point service from Michigan to Ontario.

The Dawn Gateway October Open Season conducted by DTE was coordinated with two other separate MichCon open seasons, one for storage and one for upstream

Witness: Mark Isherwood
Date: June 23, 2009

transportation. On a coordinated basis, customers could bid for capacity connecting with upstream interstate pipelines directly connected to the Rockies supply or new shale supply at Willow Run or storage and move that gas all the way to Dawn. This was the first time the path was marketed in a coordinated way. The result was 280,000Dth/day of firm long term contracts, more than 400% of what is currently contracted on a short term basis today.

Dawn Gateway offers many other benefits compared to the current framework, including:

- Addresses separate fuel rates between Belle River Mills and Dawn and upstream as well
- Allows one party to operate the entire path
- Under group 2 NEB regulation, allows for fixed tolls for the term of the contracts
- Removes the underperforming St. Clair Line from Union's rate base, providing benefit to Union's customers

Expands the existing path to allow for enhanced connectivity to Michigan storage and upstream gas supplies

Witness: Mark Isherwood
Date: June 23, 2009

UNION GAS LIMITED

Response to Undertaking
from Canadian Manufacturers and Exporters ("CME")

Undertaking to produce Decision of EBLO 244.

Response

EBLO 244 Decisions attached hereto.

Witness: Bill Wachsmuth
Date: June 23, 2009

UNION GAS LIMITED

Response to Undertaking
from Board Staff

To provide Application RP-1999-0030.

Response

Copy of Application and pre-filed evidence for RP-1999-0030 attached.

Witness: Bill Wachsmuth
Date: June 23, 2009

UNION GAS LIMITED

Response to Undertaking
from Federation of Rental Housing Providers of Ontario ("FRPO")

Explain why there cannot be additional displacement in the summer by using volumes on St. Clair Line to inject into storage at Bickford.

Response

There are currently 4 pools connected to the NPS 24 Bickford to Dawn Line. These include the Bickford, Terminus, Sombra and St. Clair Pools. These pools are operated between a minimum pressure of 2000 kPag and a maximum operating pressure of 8670 kPag. The NPS 24 Bickford to Dawn Line operates between 2198 and 7750 kPag during the summer to fill these pools.

When the Bickford to Dawn Line is operating between 2198 and 5171 kPag, Union can accept up to 214,000 GJ/d of supply from the St. Clair Line with delivery pressures at the international border, at the St. Clair river, of 5171 kPag for injection into storage. However, once the pool pressures approach the prevailing pipeline pressure at Bickford (typically within 40-65 days after the start of the summer injection season), compression is required to fill the pools. The Dawn Compressor Station supplies pressures up to 6895 kPag to the Dawn to Bickford Line to ensure that the storage pools can be filled to their individual pool maximum operating pressures (PMOP) prior to the end of the injection season. Since the pressures on the Bickford to Dawn Line exceed the St. Clair Line's delivery pressure of 5171 kPag during this period, no capacity is available from the St. Clair Line. As a result there is no firm summer transportation capacity available on the existing NPS 24 Dawn to Bickford pathway without impacting the storage injection operations.

Given parties often contract on the St. Clair Line for a season at a time, Union manages the pipe capacity based on the more typical operation when injections are not possible.

Witness: Karen Hockin
Date: June 23, 2009

DECISION WITH REASONS

E.B.L.O. 226
E.B.L.O. 226-A

IN THE MATTER OF the Ontario Energy Board Act, R.S.O. 1980, chapter 332, and in particular Sections 46 and 48 thereof;

AND IN THE MATTER OF an Application by Union Gas Limited for leave to construct a natural gas pipeline and ancillary facilities in the Townships of Moore and Sombra, both in the County of Lambton.

BEFORE

R.W. Macaulay, Q.C.
Presiding Member

O.J. Cook
Member

C.A. Wolf Jr.
Member

September 1, 1988

DECISION WITH REASONS

Table of Contents

	<u>Page</u>
1. <u>INTRODUCTION</u>	
1.1 <u>THE APPLICATION</u>	1
1.2 <u>DESCRIPTION OF PROPOSED FACILITIES</u>	2
1.3 <u>PURPOSE OF PROPOSED FACILITIES</u>	7
2. <u>BACKGROUND</u>	
2.1 <u>DESCRIPTION OF NATURAL GAS SYSTEMS</u>	9
2.1.1 Introduction	9
2.1.4 Significance of Natural Gas to Ontario's Economy	10
2.2 <u>THE TRANSMISSION AND DISTRIBUTION OF NATURAL GAS</u>	13
2.2.1 Introduction	13
2.2.4 Transmission	14
2.2.16 Distribution	18
2.2.18 Union	18
2.2.32 Consumers'	22
2.2.40 ICG	25
2.2.47 Systems Management	27
2.3 <u>DEREGULATION</u>	29
2.3.1 Background	29
2.3.11 Traditional Sales Service - Physical Flow	33
2.3.18 Traditional Sales Service - Contractual Obligations	35
2.3.22 Differences Between Traditional and Contract Carriage Services	36

DECISION WITH REASONS

		<u>Page</u>
2.4	<u>HISTORY OF GAS REGULATION</u>	41
2.4.1	Ontario	41
2.4.7	Federal	43
2.5	<u>INTERPROVINCIAL AND INTERNATIONAL NATURAL GAS PIPELINE LINKS REGULATED BY THE NEB</u>	45
2.5.3	Champion Pipeline Corporation Ltd.	45
2.5.6	Niagara Gas Transmission	46
2.5.10	Union - Panhandle Eastern Pipeline Company	47
2.5.11	NOVAcorp International Pipelines Ltd.	48
2.5.13	TCPL Dawn Extension	48
3.	<u>THE HEARING</u>	
3.1	<u>THE HEARING</u>	50
3.1.5	Appearances	51
3.1.6	Witnesses	52
3.2	<u>POST HEARING NOTICES AND PROCEEDINGS</u>	54
3.2.1	TCPL's July 19, 1988 Notice of Motion	54
3.2.4	The Reopened Hearing	55
3.2.5	Appearances	56
3.2.8	TCPL's June Notice of Motion	56
3.2.15	TCPL's August 23 Notice of Motion	58
3.2.21	The ex parte Decision Survey	60
3.3	<u>NEED FOR THE PROPOSED FACILITIES</u>	62
3.3.1	Access to Michigan Storage	62
3.3.3	Access to Alternate Gas Supplies	63
3.3.6	Enhanced Bargaining Position	64
3.3.9	Enhanced Security of Supply	65
3.3.11	Positions of Other Parties	66

DECISION WITH REASONS

3.3.11	TCPL	66
3.3.12	Consumers'	66
3.3.13	Northridge	66
3.3.16	CIL	67
3.3.17	Board Staff	68
3.3.21	Board Findings	68
3.4	<u>ROUTE, CONSTRUCTION, LANDOWNER AND ENVIRONMENTAL IMPACT</u>	72
3.4.1	Positions of the Parties	72
3.4.1	Union	72
3.4.7	TCPL	74
3.4.9	Board Staff	74
3.4.12	Board Findings	75
3.5	<u>ECONOMIC FEASABILITY</u>	79
3.5.1	Positions of the Parties	79
3.5.1.	Union	79
3.5.4	TCPL	80
3.5.5	Consumers'	81
3.5.6	Northridge	81
3.5.8	Board Staff	82
3.5.12	Union's Reply	83
3.5.13	Board Findings	84
3.6	<u>THE TCPL ALTERNATIVE</u>	86
3.6.1	Description	86
3.6.3	Positions of the Parties	87
3.6.3	TCPL	87
3.6.6	Union	88
3.6.9	Consumers'	89
3.6.10	Northridge	89
3.6.12	CIL	90
3.6.13	Board Staff	90
3.6.15	Board Findings	91

DECISION WITH REASONS

3.7	<u>RESULTS OF POST HEARING NOTICES AND PROCEEDINGS</u>	94
3.7.1	The Reopened Hearing	94
3.7.2	Board Findings	94
3.7.5	The Board's ex parte Decision	96
3.7.6	Board Findings	96
3.8	<u>JURISDICTION</u>	98
3.8.1	TCPL's Motion	98
3.8.3	Positions of the Parties	99
3.8.3	TCPL	99
3.8.10	Union	102
3.8.22	Consumers'	107
3.8.24	CIL	107
3.8.26	Board Staff	108
3.8.38	TCPL's Reply	112
3.8.53	Supplementary Evidence	117
3.8.57	Board Findings	118
3.9	<u>COSTS AND COMPLETION OF THE PROCEEDINGS</u>	130
3.9.1	Costs	130
3.9.4	Board Findings	131
3.9.8	Completion of the Proceeding	132
4.	<u>APPENDICES</u>	
4.1	Union's Proposed St. Clair - Bickford Line (overview Map)	
4.1.1	Union's Proposed St. Clair - Bickford Line (detailed Map)	
4.2	TCPL and Connecting Systems (Map)	
4.3	Union's Gas Pipeline Systems (Map)	
4.4	Consumers' Gas System (Map)	
4.5	ICG Distribution Network (Map)	
4.6	Gas Pipeline Companies Regulated by the NEB (Map)	

DECISION WITH REASONS

- 4.7 TCPL & Champion Temiscaming
Extension ((Map)
- 4.8 Niagara Cornwall Export Pipe Line
(Map)
- 4.9 Panhandle, Windsor & Leamington N.
Lines (Map)
- 4.10 TCPL Dawn Extension (Map)
- 4.11 Conditions of Approval
- 4.12 Additional Condition of Approval
- 4.13 Recommendations of the Ministry of
Consumer and Commercial Relations
(letter)
- 4.14 TCPL Notice of Motion on
Jurisdiction
- 4.15 List of Case Citations
- 4.16 Unicorp Canada Corporation
(Organization Chart, 1988)

5. GLOSSARY

1. INTRODUCTION

1.1 THE APPLICATION

1.1.1

In an application dated April 21, 1988 (the Application), Union Gas Limited (Union, the Company or the Applicant) applied to the Ontario Energy Board (the OEB, or the Board) pursuant to Sections 46 and 48 of the Ontario Energy Board Act, R.S.O. 1980, chapter 332, (the Act) for an order or orders granting leave to construct a natural gas pipeline and ancillary facilities in the Township of Moore and the Township of Sombra, both in the County of Lambton.

1.2 DESCRIPTION OF THE PROPOSED FACILITIES

1.2.1

Union requested leave to construct the facilities shown in Appendices 4.1 and 4.1.1 which are described as follows:

- (a) 5.68 kilometres of NPS 24 (610mm) pipeline from a proposed valve in the west quarter of Lot 13, Front Concession, Moore Township (the St. Clair Valve Site), to a point of interconnection with Union's existing Sarnia Industrial Line at a proposed station to be located in the southwest corner of Lot 25, Concession I, Moore Township (the Sarnia Industrial Line Station), together with valving facilities at each location; and
- (b) 6.05 kilometres of NPS 24 pipeline from the above defined interconnection with the Sarnia Industrial Line to Union's existing Bickford Pool Compressor Station in the Township of Sombra.

1.2.2

The facilities described in (a) and (b) are together known as the St. Clair - Bickford Line and total 11.73 kilometres in length.

1.2.3

Union's proposed line from the St. Clair Valve Site to the Bickford Pool Compressor Station would connect with a 700 metre NPS 24 pipeline to be constructed by St. Clair Pipelines Limited (St. Clair Pipelines) which would extend from the St. Clair Valve Site to the international boundary between the United States of America and Canada, at the centre of the St. Clair River. At that point it would connect with an NPS 24 pipeline to be constructed by Michigan Consolidated Gas Company of Detroit, Michigan, United States of America (MichCon), which in turn would extend from the international boarder to MichCon's Belle River Mills Compressor Station (Belle River Mills) inshore from the St. Clair Riverbank in Michigan.

1.2.4

In addition to the construction of the 11.73 kilometre St. Clair - Bickford Line, the Application also contemplated the construction of the Sarnia Industrial Line Station to provide check measurement and control for volumes flowing in either direction. A sectionalizing block valve would be located at the St. Clair Valve Site some 300 metres inshore of the St. Clair River, thereby separating the river

crossing pipe from the St. Clair - Bickford Line and its interconnections with Union's existing and future distribution systems. The initial capacity of the St. Clair - Bickford Line would be 200 MMcf/d. This initial capacity was calculated utilizing MichCon's maximum compression available at Belle River Mills, which was proposed to initially be 750 psig at the international boundary, and would provide more than the design minimum inlet pressure at Union's Dawn Compressor Station (Dawn).

1.2.5

The volumes to be transported through the St. Clair - Bickford Line are capable of being delivered to the Bickford Storage Pool or directly to Dawn, through the Bickford Storage Pool Line (the Bickford Line), for further transportation or storage. It was noted in Union's evidence that the use of the Bickford Line would be restricted to varying degrees during 280 days of the year, thus limiting the flow of volumes through both the St. Clair - Bickford Line and the Bickford Line to approximately 73 percent of their annual capacity.

1.2.6

Union's Sarnia Industrial Line serves a domestic market normally in excess of 100 MMcf/d. When the Bickford Storage facilities are unable to take the volumes delivered through the St. Clair - Bickford Line to storage, or directly to Dawn, Union claimed it would be able to direct

the delivery of these volumes to the Sarnia Industrial Line.

1.2.7

Union's witnesses testified that the Company will need additional pipeline capacity from its Bickford and Terminus storage pools to Dawn when expected storage and transportation needs materialize. This additional pipeline capacity could make the total annual capacity of the St. Clair - Bickford Line available for transportation directly to Dawn and increase the deliverability and operating flexibility of the Bickford and Terminus storage pools.

1.2.8

Increases in the capacity of the St. Clair - Bickford Line could be accomplished by adding compression either in Ontario or in Michigan as deemed appropriate at the time.

1.2.9

The design specifications meet Class 2 location design criteria in what is now a Class 1 location. Union justified the use of Class 2 design criteria on the basis of future use and expansion in the Sarnia area through which the pipeline would run.

1.2.10

The total cost of construction for the St. Clair - Bickford Line and associated facilities was estimated by Union to be \$9,352,000.

DECISION WITH REASONS

1.2.11

Union stated that its construction procedures will be in accordance with the Board's "Environmental Guidelines for the Construction and Operation of Hydrocarbon Pipelines in Ontario", and will also accommodate the environmental impact mitigation measures recommended by the environmental consultants retained by Union.

1.3 PURPOSE OF THE PROPOSED FACILITIES

1.3.1

The St. Clair - Bickford Line would, according to Union, provide it and other Ontario local distribution companies (LDCs), with access to underground storage in Michigan. This additional gas storage in Michigan would allow Union to meet the anticipated storage requirements of the Company and its customers.

1.3.2

Union also intends to use the proposed facilities as a means by which it can access competitively priced United States gas supplies, initially through contractual arrangements with ANR Pipeline Company (ANR) in the United States.

1.3.3

Other eastern Canadian LDCs expressed an interest in contracting for transportation services on the St. Clair - Bickford Line in order to also acquire competitively priced supplies of firm and spot gas in the United States.

DECISION WITH REASONS

1.3.4

Union claimed that the proposed pipeline would enhance Ontario's security of gas supply due to increased access to Michigan storage, United States gas supplies and the array of United States transportation alternatives. Union and other Ontario LDCs would therefore be less vulnerable due to interruptions in the supplies of Alberta gas delivered to them by way of the NOVA, AN ALBERTA CORPORATION (NOVA), Great Lakes Transmission Company (Great Lakes) and Trans-Canada PipeLines Limited (TCPL) systems.

2. BACKGROUND

2.1 DESCRIPTION OF NATURAL GAS SYSTEMS

Introduction

2.1.1

The natural gas industry consists of four major components: producers, consumers, pipeline systems and storage facilities. Canada's natural gas industry is, in many ways, unique when compared to other industries or to the natural gas industry in the United States. Issues such as Union's current application require the understanding and consideration of the natural gas pipeline systems, contractual arrangements and jurisdictions involved in the flow of gas from the wellhead in Alberta to the burner tip in Ontario.

2.1.2

The majority of the natural gas consumed in Ontario is produced from reserves in Alberta. Smaller volumes of Ontario's gas supply

originate in other locations such as Saskatchewan. The descriptions of natural gas systems and arrangements that are provided herein focus on Alberta supplies as being generally representative of domestic sourced gas supplies from outside Ontario, and are not intended to imply that Alberta is Ontario's exclusive source of gas supply.

Significance of Natural Gas to Ontario's Economy

2.1.3

Natural gas is the dominant non-transportation fuel in Ontario, satisfying about 44 percent of the province's "off the road" energy needs. Nearly 60 percent of Ontario's households are currently heated with natural gas. Approximately 54 percent of the province's commercial and institutional sectors' energy demands are met by natural gas. Ontario's industries account for about 43 percent of the province's total energy consumption. Natural gas provides approximately 30 percent of Ontario's industrial fuel and energy related feedstock requirements, compared with oil and coal which provide roughly 25 percent and 21 percent, respectively.

2.1.4

Healthy economic growth and employment depend on the competitiveness of the province's resource, manufacturing and high-technology industries in domestic and international

markets. Energy intensive industries, where energy costs range from 17 percent to 80 percent of the cost of manufacturing, provide 20 percent of the province's manufacturing jobs and output. When taken in total, Ontario's resource-based and manufacturing industries account for almost 40 percent of the economic output and provide three out of every ten jobs in the province. The availability and price of gas, and the health of the Ontario LDCs, is of tremendous significance to the well-being of the province.

2.1.5

The availability of gas supplies is a significant factor in determining industrial plant sites. Ontario's established natural gas distribution system and Board approved rate schedules currently allow industries to consider remote locations and thereby bolster the province's regional development aspirations.

2.1.6

Some of the province's industries, such as the fertilizer industry, are inextricably tied to natural gas as a raw material. Such "feedstock" uses account for about 8 percent of the total industrial demand for gas in Ontario. As much as 40 percent of the industrial use of gas as a fuel is in "dual-fired" facilities where users can switch between an alternate fuel and gas on short notice. To maintain its share of the Ontario industrial fuel market, natural gas

supply and pricing must remain competitive with alternative energy forms and in line with gas and fuel costs in other competing manufacturing centres, particularly in the United States.

2.1.7

In 1986 Ontario's demand for natural gas represented 33 percent of the total Canadian use and 24 percent of the combined domestic and export markets for Canada's natural gas production. Ontario's natural gas use is therefore also important to the western producing provinces.

2.2 THE TRANSMISSION AND DISTRIBUTION OF NATURAL GAS

Introduction

2.2.1

This Chapter provides a brief summary of the transmission and distribution of natural gas in Canada. It provides the necessary background to understand the custody, control and ownership of natural gas as it moves to and within provincial markets.

2.2.2

Natural gas was first discovered in Canada near Niagara Falls, Ontario in 1794. The first natural gas well was completed in Moncton, New Brunswick, in 1859, followed by discoveries in Port Colborne, Ontario in 1866, in Kamsack, Saskatchewan in 1874 and the drilling of Ontario's first commercial well near Kingsville in 1889.

2.2.3

Alberta, although destined to add dramatically to the known store of energy in Canada, did not drill its first gas well until 1890. However, the drilling of the Leduc discovery well in 1947 touched off an intensive, widespread and long-term exploration program which has revealed very large reserves of natural gas and oil throughout western and northern Canada. These discoveries in the late 1940s and early 1950s came at about the same time as advances in the technologies of manufacturing large diameter pipe and installing it over long distances. This conjunction of circumstances made the development of projects to move gas to major population centres attractive.

Transmission

2.2.4

To address the problem of moving Alberta gas to the distant markets of eastern Canada, TCPL was incorporated in 1951 by Special Act of Parliament. In 1954, TCPL received permission to remove natural gas from Alberta. It was also granted a permit from the federal Board of Transport Commissioners to construct a pipeline from Alberta to Quebec. In June, 1956, further legislation was passed by the federal government establishing a Crown corporation to construct the northern Ontario section of the pipeline.

2.2.5

Construction of the initial pipeline system from the Alberta/Saskatchewan border to Quebec was completed in 1958, and the benefits of natural gas were made available to millions of Canadians not previously served. A petrochemical industry, which is critically dependent on natural gas as a feedstock, has developed as a result. At the same time, opportunities arose for new export revenues from the sale of natural gas to the United States of America.

2.2.6

In 1963, TCPL purchased the northern Ontario section of the pipeline from the Northern Ontario Pipe Line Crown Corporation and thus took possession of the entire gas transportation system from Alberta to Quebec.

2.2.7

Most of the natural gas used in Ontario comes from approximately 650 producers in Alberta. The gas is collected and combined from the various producing areas into transmission lines, owned principally by NOVA, for delivery to long-distance carriers.

2.2.8

Gas for Ontario and other eastern markets leaves Alberta and the NOVA system at Empress, Alberta, where it enters the pipeline facilities of TCPL at Burstall, Saskatchewan.

2.2.9

As gas flows eastward from Alberta, the gas pressure decreases due to friction with the pipe wall. In order to achieve the required flow rates, the gas must be recompressed at compressor stations located along the transmission line at intervals of 80 to 160 kilometres.

2.2.10

Between Burstall and Winnipeg there are as many as five parallel pipelines. Volumes from Alberta are supplemented in Saskatchewan by gas from Saskatchewan Power Corporation, Consolidated Natural Gas Limited and Steelman Gas Limited.

2.2.11

From Winnipeg, two parallel lines move gas into Ontario and Quebec, with portions of a third line also in service in northern Ontario. The northern line branches at North Bay. One branch, the North Bay Shortcut, runs generally east and then south through eastern Ontario, while the other runs south to Toronto. There it branches again, with two lines travelling east along the north shore of Lake Ontario to Montreal while a third skirts west of Toronto and runs south to the Niagara peninsula, connecting at the international border with pipelines serving the northeastern United States.

2.2.12

Gas also travels eastward from Winnipeg to markets in southwest Ontario and the midwestern United States through the facilities of Great Lakes, which is 50 percent owned by TCPL. The Great Lakes system runs south of Lake Superior and Lake Huron across Minnesota and northern Wisconsin, then south through the State of Michigan with links to Canadian systems at Sault Ste. Marie and Sarnia. Near Sarnia, in Dawn Township, the gas is received by Union and transmitted across southwestern Ontario on its Dawn-Trafalgar transmission pipeline to the Trafalgar Station, near Oakville, where it either rejoins the TCPL pipeline running south to Niagara and east toward Montreal, or connects with the distribution system of The Consumers' Gas Company Ltd. (Consumers').

2.2.13

Expansion of the initial pipeline system by TCPL has continued in the form of new pipelines, looplines, additional compressor stations and additional power at existing stations, all to meet the increasing demand for natural gas. The total book value of TCPL's assets is now more than \$6 billion.

2.2.14

The present TCPL system which extends along a 4,400 kilometre right-of-way, consists of 9,345 kilometres of pipeline and loopline and approximately 795,100 kilowatts of compressor power at 48 compressor stations.

2.2.15

The map in Appendix 4.2 shows the TCPL and Great Lakes systems.

Distribution

2.2.16

There are three major gas distributors in Ontario which together serve approximately 1,700,000 customers: Consumers', ICG Utilities (Ontario) Ltd (ICG) and Union. Under rights granted by the OEB, Union operates in south-western Ontario, Consumers' in southern, central, and eastern Ontario, and ICG in northwestern, northern and eastern Ontario.

2.2.17

The three major gas distributors in Ontario, under the jurisdiction of the OEB, have different systems. The unique aspects of each distributor require different approaches to managing variations in demand, particularly during winter peaks.

Union

2.2.18

Union was incorporated in 1911, and has been involved in producing and distributing natural gas since that time. In 1942, Union became engaged in the storage of gas.

2.2.19

In 1953 Union incorporated Ontario Natural Gas Storage and Pipelines Limited as a wholly-owned

subsidiary, which in 1957 took over Union's storage and transmission facilities as well as Union's wholesale operations. The two companies and their respective operations were fully amalgamated in 1961.

2.2.20

In 1958, Union purchased the majority of the assets of Dominion Natural Gas Company Ltd., and simultaneously sold all its assets situated in Lincoln and Welland Counties to the Provincial Gas Company Ltd. At approximately the same time, Union also purchased several other small local distributors and manufacturers of gas.

2.2.21

In 1985, Union reorganized its corporate and financial structure in order to segregate its utility assets from its non-utility assets. Union Enterprises Ltd., which previously was a wholly-owned subsidiary of Union Gas, began operating as the parent company with two wholly-owned subsidiaries, Union Gas Limited (utility operations) and Union Shield Resources (which was in turn a holding company for Precambrian Shield Resources Limited and Numac Oil & Gas Ltd.).

2.2.22

Unicorp Canada Corporation was created by the amalgamation of Unicorp Financial Corporation and Sentinel Holdings Limited in late 1979. Unicorp Canada Corporation is the parent company

of Union Enterprises Ltd. and Unicorp American Corporation. Unicorp American Corporation is involved, through its subsidiaries and its investments, in the energy, real estate and financial services industries. Unicorp Canada Corporation has several holdings in Canada and in the United States as outlined in the organization chart in Appendix 4.16. The Canadian holdings are in the energy field as well as in utility operations. Unicorp Canada Corporation also holds investments in a number of unrelated industries.

2.2.23

In November of 1986, Union Enterprises Ltd.'s 67 percent interest in Precambrian Shield Resources Limited (PSR) was amalgamated with Bluesky Oil & Gas Ltd. and exchanged for a 38 percent interest in Mark Resources Inc. through a reverse takeover transaction. Mark Resources Inc. became in turn, a co-owner, with Union Enterprises Ltd., of PSR Gas Ventures Inc. which had previously been a subsidiary of Precambrian Shield Resources Limited. PSR Gas Ventures Inc. operated as a marketer of natural gas in both Canada and the United States.

2.2.24

In 1988, PSR Gas Ventures Inc. split away from Mark Resources Inc. and amalgamated with Enron Canada Ltd. to form Unigas Corporation, which is now the Canadian natural gas marketing arm of Unicorp Canada Corporation.

2.2.25

In 1987, Union Enterprises Ltd. established a natural gas marketing subsidiary in the State of Ohio called Unicorp Energy Inc., which operates exclusively in the United States.

2.2.26

An organization chart showing Unicorp Canada Corporation and its subsidiary companies is attached as Appendix 4.16.

2.2.27

Originally, Union's supply of natural gas came from Ontario sources, but as of 1947, supplementary supplies were obtained from Panhandle Eastern Pipe Line Company in the United States. Once TCPL's pipeline facilities were completed in 1958, Union entered into a long-term contract with TCPL for supplies of western Canadian natural gas. Union's distribution system expanded rapidly from then onward.

2.2.28

Union operates a fully integrated gas distribution system employing production, underground storage, transmission and distribution facilities. In its 1988 fiscal year, Union sold over 7,000 10^6m^3 of gas to approximately 544,000 customers. Union annually stores 2,000 10^6m^3 of gas for its own use and stores some 650 10^6m^3 of gas for other utilities. In providing storage and transportation services, Union receives gas at both TCPL's Dawn and Trafalgar delivery points.

2.2.29

Union's total assets exceeded \$1.3 billion on March 31, 1988 and its net utility plant investment was approximately \$957 million. Union's gathering, storage, transmission and distribution pipelines totalled 19,364 kilometres at March 31, 1988.

2.2.30

The storage made available by Union plays a significant role in enabling TCPL to optimize the use of its delivery system. If Union had not been able to store gas for itself and others, the TCPL delivery system would not be as efficient as it is. Union receives and stores gas in the off-peak period and is then able to use that gas to supplement deliveries from TCPL in the peak period to its customers which include other utilities such as Consumers', ICG, the City of Kingston and Gaz Metropolitan inc. (GMi). Union is the largest operator of underground storage pools in Ontario.

2.2.31

The map in Appendix 4.3 shows Union's system.

Consumers'

2.2.32

Consumers' was incorporated in 1848 by a Special Act of the Province of Canada. Consumers' was formed for the purpose of manufacturing and selling gas in the City of Toronto. Although

rates for the sale of natural gas became subject to control in Ontario, no such control applied in the case of manufactured gas.

2.2.33

In 1954, in anticipation of expanded operations and a change from a manufacturer and distributor of gas to a distributor of natural gas only, Consumers' was re-incorporated under the Corporations Act (1953). With this change, Consumers' became subject to the provisions of the Ontario Fuel Board, which then approved all rates to be charged to natural gas customers.

2.2.34

Consumers' arranged for the supply of natural gas from the United States in 1954, and also expanded its operations beyond the limits of the City of Toronto. This was accomplished through the acquisition of new franchises in municipalities not previously served, and through the acquisition of certain manufactured gas systems in other areas which were then converted to natural gas.

2.2.35

In 1958, once the TCPL system was completed, Consumers' discontinued its purchases of natural gas from the United States, and contracted with TCPL for long-term supplies from western Canada.

2.2.36

Consumers' is Canada's largest natural gas distribution utility, serving customers in

Ontario, western Quebec and northern New York State. The company currently has total assets of about \$1.9 billion and distributes gas to approximately 950,000 customers through its network of over 19,000 kilometres of mains.

2.2.37

In addition to its regulated gas distribution activities, Consumers' is engaged in:

- o the exploration for and the production of oil and gas, primarily in southwestern Ontario;
- o the operation of underground gas storage facilities in Ontario, through a subsidiary; and
- o contract well drilling for gas and oil in Ontario and the northeastern United States.

2.2.38

Underground storage located in southwestern Ontario is a key component of Consumers' integrated natural gas transmission and distribution system. Tecumseh Gas Storage Limited (Tecumseh), located in the Sarnia area, provides storage facilities for the Consumers' system. Jointly owned by Consumers' and Imperial Oil Limited, Tecumseh operates storage reservoirs with a working capacity of $1,670 \times 10^6 \text{ m}^3$. Additional storage capacity of up to $365 \times 10^6 \text{ m}^3$ is secured under long-term agreements with Union. Consumers' also operates a small underground storage reservoir in the Niagara

peninsula, Crowland, which is used to meet local peak day requirements.

2.2.39

The map in Appendix 4.4 shows Consumers' system.

ICG

2.2.40

ICG began as Northern Ontario Natural Gas Company Ltd. (Northern), and Twin City Gas Company Ltd. (Twin). These were originally separate corporations, but Northern ultimately acquired over 97 percent of Twin's voting shares. Thereafter the two entities essentially operated as one.

2.2.41

Initial construction of what were to become ICG's distribution systems began in 1957, coincident with the construction of the TCPL system. Although the first gas delivery on these systems was in December of 1957, construction continued until 1959, which marked the real beginning of commercial operations of substance.

2.2.42

In 1968, the company was reorganized through the statutory amalgamation of three interrelated Ontario gas distributors: Northern, Twin and Lakeland Natural Gas Ltd. The resulting entity was renamed Northern and Central Gas Corporation Ltd. (Northern and Central). The majority of Northern and Central's business was the distribution of natural gas, but it also acted as a

holding company for a number of other corporate activities. Northern and Central's gas distribution operations were later separated from its other businesses, leaving Northern and Central as an essentially "pure" utility.

2.2.43

In October of 1984, Inter-City Gas Corporation, a holding company, and two of its subsidiaries, ICG Resources Ltd. and Vigas Propane Ltd., purchased all the common shares of Northern and Central. Northern and Central's name was officially changed to ICG Utilities (Ontario) Ltd in 1986. ICG Utilities (Canada) Ltd. currently owns 100 percent of ICG Utilities (Ontario) Ltd.

2.2.44

ICG operates a natural gas distribution system serving 120 communities by way of approximately 5,500 kilometres of pipeline originating at 84 interconnections on the TCPL transmission system. The ICG system essentially consists of a series of laterals off the TCPL pipeline as it crosses Ontario. The individual laterals are not interconnected. As noted, ICG serves customers from northwestern to eastern Ontario. ICG estimated that its net utility plant will have an average book cost of approximately \$357 million in 1988. ICG projected that in 1988 it would sell approximately 3,100 10^6m^3 of gas and serve approximately 165,000 customers.

2.2.45

The storage available to ICG is very limited. It contracts with Union for approximately $99.1 \times 10^6 \text{ m}^3$ of gas storage and has its own liquid natural gas storage facility with a capacity of about $14.2 \times 10^6 \text{ m}^3$, when converted to gas. This facility and Union's storage are used for winter peaking purposes.

2.2.46

The map in Appendix 4.5 shows ICG's system.

Systems Management

2.2.47

Consumers', ICG and Union, together with TCPL and Great Lakes, provide the complex network of pipelines and storage which serve Ontario with natural gas. In the summer, this network has excess pipeline capacity in many of its segments, and consequently there are alternative ways in which gas can be routed through the province, sometimes reversing the normal direction of flow. This flexibility permits each utility to undertake maintenance and construction projects during the off-peak period of the year while continuing to supply gas. In addition, gas injection into the underground storage pools in southwestern Ontario during the summer is facilitated by the ability to transport gas in two directions in the Union line between Dawn and Trafalgar, and in certain segments of TCPL's system.

2.2.48

Gas is injected into storage during the summer off-peak period. As winter approaches and demand increases, injection of gas into the storage pools slows and then stops. Once the demand exceeds the limits of the supply agreements between TCPL and the Ontario LDCs, gas flows into the distribution system from the underground storage pools. On peak demand days, the combined ability of TCPL and the storage pools to meet the demand approaches its limit.

2.2.49

At times of peak demand, any failure of a pipeline, compressor or valve may threaten significant portions of an LDC's customer base. This is true if the failure occurs anywhere between gas wells in Alberta and the point of use in Ontario. Serious failures to date have been rare and when they have occurred, all suppliers who had gas available cooperated to deliver it to those affected.

2.3 DEREGULATION

Background

2.3.1

The following chronology of the major events of deregulation is provided as background information:

2.3.2

On October 31, 1985 the Governments of Canada, Alberta, British Columbia and Saskatchewan signed the Agreement on Natural Gas Markets and Prices (the Agreement). The stated intent of this Agreement was:

...to create the conditions for such a regime (a more flexible and market oriented pricing regime), including an orderly transition which is fair to consumers and producers and which will enhance the possibilities for price and other terms to be freely negotiated between buyers and sellers.

2.3.3

The Agreement provided, among other things, that:

DECISION WITH REASONS

- o access to natural gas supplies would be immediately enhanced for Canadian buyers;
- o during the 12 month transition period commencing November 1, 1985, gas consumers would be able to enter into supply arrangements with producers at negotiated prices (direct sales);
- o effective November 1, 1986, the administered price of gas at the Alberta border would be removed; and
- o the parties to the agreement would foster a competitive market for natural gas in Canada.

2.3.4

The then Federal Minister of Energy, the Honourable Ms Carney, at the time of the signing of the Agreement and on many occasions since, interpreted the Agreement as permitting all buyers of gas to have access to the many sellers of gas, and that governments would not interfere with the working of a competitive market. She issued a communique relating to the Agreement, which said in part:

...by November 1, 1986 all natural gas buyers and sellers in Canada will be released from unnecessary government intervention in the marketplace.

2.3.5

Although Ontario was not a signatory to the Agreement, this Board accepted the above interpretations, and moved to accommodate the principle of a competitive market.

2.3.6

The transition period (November 1, 1985 to October 31, 1986) saw producers and brokers offering direct purchase options. Under direct purchase, customers without a gas sales contract with an LDC could negotiate directly with a broker or producer and purchase gas outside Ontario. The LDC could either transport the gas without taking title (contract carriage) or purchase the gas from the customer outside Ontario and continue to sell to the customer under Board approved rates (buy/sell).

2.3.7

The LDCs, TCPL and its system gas producers met this competition to system gas sales through two discount fund arrangements. The LDCs introduced Market Responsive Programs (MRPs) and Competitive Marketing Programs (CMPs). The customer and LDC negotiated discounts under an MRP, or the customer, LDC and TCPL jointly negotiated CMP discounts. Either program provided the discount needed to retain that customer as a purchaser of system gas.

2.3.8

The LDCs were not, however, released from any contracts for the purchase of gas; only the

pricing of supplies under contract was subject to negotiation.

2.3.9

Following a hearing early in 1986, the National Energy Board (NEB) issued Decision RH-5-85 finding that:

- (a) transportation service to direct purchasers of natural gas would reduce the operating demand volume (ODV) of the LDC and displace gas supplies previously acquired from TCPL, thus removing double demand charges;
- (b) a distinction would be made between incremental and displacement sales in defining displacement volumes for tariff purposes; and
- (c) a recommendation be made, such that non-system gas sales bear some portion of TOPGAS carrying charges.

2.3.10

The NEB RH-3-86 Decision also removed constraints on TCPL's gas marketing agent, Western Gas Marketing Limited (WGML), which had previously been prevented from making direct sales. WGML/TCPL is now, therefore, able to compete to retain system gas' market share in Ontario by using direct sales as well as by using the MRP and CMP discount arrangements with the LDCs and the end-user. In 1987 the Board ordered that

MRPs and CMPs are to be discontinued on October 31, 1988.

Traditional Sales Service - Physical Flow

2.3.11

Traditional sales service involves TCPL purchasing, transporting and supplying gas to the Ontario LDCs for their sale in Ontario. With a few exceptions this was the case until November 1, 1985. This type of service arrangement still serves most of the Ontario natural gas market.

2.3.12

An end-user or the shipper will generally have title to the gas as it moves from the wellhead through the field gathering systems. At the interconnect of the NOVA system and the field gathering systems, TCPL or its agent takes title to the gas it purchases. Custody and control of the gas transfers from the field producer to NOVA. The NOVA system is essentially an extension of the field gathering system which interconnects with the TCPL system. NOVA's rates are subject to its own Act, NOVA, AN ALBERTA CORPORATION Act, which provides for regulation (by exception) by the Alberta Public Utilities Board.

2.3.13

Gas flows through NOVA's system to the Empress station at the Alberta/Saskatchewan border, where TCPL's system interconnects with the NOVA

system. Custody and control of the gas then shift to TCPL which continues to hold title to the gas it has purchased. The gas then flows eastward through TCPL's facilities reaching Ontario either through TCPL's Northern Line or through the Great Lakes system. The TCPL system is regulated by the NEB and the portion of the Great Lakes system within the United States of America is regulated by the United States Federal Energy Regulatory Commission (FERC). The gas that flows through TCPL's Northern Line can be delivered to Ontario through a number of interconnections with the Ontario LDCs. The gas flowing through the Great Lakes system is delivered to Ontario at Dawn.

2.3.14

Custody, control and title to the gas typically shift to the LDC at the delivery point where the TCPL inter-provincial system connects with the LDC's system. The LDC may then transfer custody and control as the gas enters storage facilities such as Tecumseh or Union's storage, or the Union transmission system.

2.3.15

TCPL retains title to gas that it has contracted with Union to carry through Union's Dawn-Trafalgar transmission system for delivery to the LDC at delivery points in Ontario and Quebec. However, Union owns all of the line-pack gas in that system.

2.3.16

The LDC retains title to gas in storage but custody and control may shift to the storage company and/or transmitter. For example, under Consumers' storage contracts with Union, Consumers' takes title to the gas at Dawn and owns its gas in storage, but Union has custody and control of the gas during storage and transmission to a delivery point on Consumers' system. The OEB regulates the rates for all gas storage and transmission on the LDCs' systems within Ontario.

2.3.17

Gas sold to an LDC passes through its distribution system to the sales customers. Title, custody and control of the gas remain with the LDC until the gas is delivered to the customer's plant gate or meter. Title, custody and control then shift to the customer. The LDC's facilities and distribution rates are subject to the jurisdiction of the OEB.

Traditional Sales Service - Contractual Obligations

2.3.18

Gas flows from west to east under a number of contractual arrangements. TCPL pays for the supplies of gas from its contracted producers on a net-back pricing basis. The producer's price is equal to the market price less all transportation costs etc. not borne directly by the producer, and a margin to WGML.

2.3.19

The Ontario LDCs have gas supply contracts with TCPL. The price paid by the LDCs reflects the price paid by TCPL to its producers, the cost of transportation on TCPL's system and any other charges borne by TCPL under the net-back scheme.

2.3.20

Traditional sales service end-users purchase gas from the LDC under established terms and rate schedules approved by the OEB.

2.3.21

The flow of gas is initiated by the LDC when it nominates the daily amount of gas it wishes to take under its demand contracts with TCPL. Typically a nomination stands until notice is given to change it.

Differences Between Traditional Sales Service and Direct Purchase with Contract Carriage Service

2.3.22

Since November 1, 1985, the Ontario end-user has been able to directly purchase natural gas from western producers. The resulting arrangements have changed the way in which some gas reaches Ontario end-users.

2.3.23

Under a traditional sales service arrangement, TCPL holds all regulatory approvals related to the movement of its gas in Alberta, and on its own system under the jurisdiction of the NEB.

The LDC holds all franchise and other OEB regulatory approvals required within Ontario.

2.3.24

An end-user, or its agent(s) who purchases directly, must obtain removal permits and exemption orders in Alberta. Pricing orders and a transportation order to require contract carriage on TCPL's system must be obtained from the NEB. Contract carriage arrangements with the Ontario LDC are subject to OEB approval.

2.3.25

The physical flow of gas is essentially the same for traditional sales service and contract carriage from the wellhead to the burner tip. NOVA maintains custody and control in Alberta. The important difference is in the ownership of the gas. In the case of a direct purchase, title to the gas while in the NOVA system no longer rests with TCPL, but is either with the end-user, its agent or the producer.

2.3.26

East of the NOVA/TCPL interconnect at Empress, the actual physical transportation of gas on the TCPL system, on behalf of a direct purchase customer, is notional only. In the case of direct purchase, the actual gas transported is not owned by the direct purchaser or its agent during the period of transportation in TCPL's system. TCPL owns all the line-pack gas in its system, regardless of direct purchase.

2.3.27

Even though natural gas moves at approximately 30 km/hr, which would equate to approximately 4.5 days for gas to move from Alberta to Ontario, through displacement, gas is deemed to be delivered in Ontario instantaneously with its input into the system in Alberta. That is, gas is injected into the TCPL system in Alberta and exchanged with an equal amount of gas that is withdrawn from TCPL's line-pack in Ontario.

2.3.28

The charges paid by the end-user to TCPL for transportation are in accordance with NEB approved rates, but are based on the notional transportation of the gas. As a result, the contractual relationship between TCPL and the direct purchaser does not match the physical operation of the system. The rate charged by TCPL is for transportation of the direct purchaser's gas, but physically, only TCPL's gas is transported. However, the customer pays a price to TCPL that is based on the presumption that the gas it owns has actually travelled from Alberta as opposed to having been instantaneously exchanged.

2.3.29

Under a contract carriage agreement, ownership of the gas delivered to the end-user's plant varies according to load balancing arrangements. Load balancing occurs when the LDC provides make-up supplies, or takes excess deliveries to

accommodate fluctuations in the rate at which the end-user consumes gas. If the end-user takes all the gas it has delivered to the LDC, the title to that gas will remain with the end-user while carried by the LDC. Custody will be with the LDC as it transports gas to the plant gate, at which time custody will be transferred to the end-user. Again, the transportation is notional. The LDC owns its system's line-pack, and provides instantaneous deliveries to end-users. If the end-user requires gas in excess of the amount transported for the end-user by TCPL and the LDC, then this supply will be supplemented by gas to which the LDC has title, custody and control to the end-user's plant gate.

2.3.30

If the end-user delivers more gas to the LDC than the user requires, the gas not required by the end-user may be purchased by the LDC. Title, custody and control changes and the gas is commingled as part of the LDC's integrated gas supply. Only the amount the end-user requires is in the custody of and transported by the LDC's system to the end-user's plant gate, with the end-user retaining title.

2.3.31

Unlike Union and Consumers', ICG presently does not provide load balancing for contract carriage customers. Therefore, title is not an issue. The end-user simply retains title and uses what-

DECISION WITH REASONS

ever gas is delivered to the TCPL/LDC metering station on its behalf. The end-user's nominations at Empress must be very closely matched by its consumption.

2.4 HISTORY OF GAS REGULATION

Ontario

2.4.1

When Ontario's gas industry was in its infancy, all regulatory matters were under the jurisdiction of the Minister of Public Works. The Gas Inspection Act was enacted to ensure the safety of works and the integrity of franchises.

2.4.2

In 1918, Ontario passed the first of a series of Natural Gas Acts. These statutes initially placed the entire natural gas industry under the jurisdiction of the Ontario Railway and Municipal Board (ORMB). The Natural Gas Advisory Board assisted the ORMB in regulatory matters.

2.4.3

The 1919 Natural Gas Act superceded the 1918 Act and enshrined the government's right to supervise all drilling. However, the 1919 Act did

not provide the power to authorize rate adjustments. Therefore, another Natural Gas Act was passed in 1920 which empowered the Natural Gas Commissioner to increase rates and to limit and regulate the use of natural gas.

2.4.4

This Act was amended once more in 1921. At that time, the control and regulation of the production, transmission, distribution and sale of natural gas was placed under the jurisdiction of the Minister of Mines. Natural gas companies were removed from the jurisdiction of the ORMB. The Natural Gas Referee took over in its stead, and was empowered to fix rates. All administrative responsibilities were transferred to the Natural Gas Commissioner.

2.4.5

In 1923, the Referee was replaced by the Natural Gas Board of Reference for a short period. In 1924, the Referee took over the rate-fixing jurisdiction once more.

2.4.6

In 1954, the Ontario Fuel Board Act was passed, which placed all regulatory matters pertaining to natural gas under the jurisdiction of the Ontario Fuel Board. In 1960, the Ontario Energy Board Act was proclaimed and superseded the Ontario Fuel Board Act. All rate control powers transferred to the Ontario Energy Board.

Federal

2.4.7

The concept of a national energy board emerged from the recommendations of two Royal Commissions that reported following the Pipeline Debate of 1956. The pipeline controversy centred around the emergence of the eastern Canadian energy market and the western Canadian oil and natural gas resources. Since the western reserves were physically distant from major Canadian markets, the Province of Alberta sought markets in the United States. However, the federal government was concerned that adequate gas and oil pipeline links be established with the eastern Canadian market.

2.4.8

In 1957, the Gordon Royal Commission on Canada's economic prospects commented on the extent and importance of Canada's energy resources. The Commission recommended the development of a comprehensive energy policy and the formation of a national energy authority to advise the government on all matters connected with the long-term energy requirements in Canada.

2.4.9

The Borden Royal Commission was also appointed in 1957 to recommend the policies to best serve the national interest regarding the export of energy and energy resources. This Commission was further asked to report on the regulation

of prices or rates, the financial structure and control of pipeline companies, and all other matters concerning the efficient operation of inter-provincial and international pipelines. This last report contained extensive recommendations regarding the formation of a "national energy board". Legislation was introduced in 1959 and was enacted as the National Energy Board Act.

2.4.10

The overall purpose of the National Energy Board Act was to consolidate government actions in the energy field. The National Energy Board (NEB) was to recommend policy to the federal government, and later implement the national energy policy. The National Energy Board Act was largely based on the the legislation it replaced: the Pipe Lines Act and the Exportation of Power and Fluids and Importation of Gas Act.

2.5 INTER-PROVINCIAL AND INTERNATIONAL NATURAL
GAS PIPELINE LINKS REGULATED BY THE
NATIONAL ENERGY BOARD

2.5.1

Short pipeline links within the jurisdiction of the NEB, joining provincially regulated systems in adjacent provinces, and similarly between provincially regulated systems and systems in the United States, are common. The extent of this practice is illustrated in Figure 18 from the 1987 Annual Report of the NEB (Appendix 4.6).

2.5.2

Several pipeline links under NEB jurisdiction which connect Ontario with Quebec, and Ontario with the United States of America, are as follows:

Champion Pipeline Corporation Ltd. (Champion)

Noranda

2.5.3

Champion owns a 98 kilometre pipeline connecting TCPL's pipeline at Earlton, Ontario to the local

distributor, Le Gaz Provincial du Nord de Québec Ltée. (Le Gaz) in Noranda, Quebec.

Temiscaming

2.5.4

Champion owns a 1.98 km pipeline extending from the Town Border Station in Thorne, Ontario across the Ottawa River to the facilities of the local distributor, Le Gaz, in Temiscaming, Quebec. Northern and Central Gas, now known as ICG, was the local distributor in Thorne at the time of construction.

2.5.5

Both Champion and Le Gaz were wholly-owned subsidiaries of Northern and Central Gas Corporation Limited (Appendix 4.7).

Niagara Gas Transmission (Niagara)

Cornwall-Massena

2.5.6

Niagara owns and operates a 14 km transmission pipeline from the take-off point on the TCPL system near Cornwall, Ontario to the international boundary where it interconnects with the St. Lawrence Gas Company, Inc. (St. Lawrence), an LDC in northern New York State. ICG is the franchised distribution company which supplies local gas demand in Cornwall.

2.5.7

Both Niagara and St. Lawrence are wholly-owned subsidiaries of Consumers' (Appendix 4.8).

Ottawa-Hull

2.5.8

The short pipeline link between the high-water mark on each side of the Ottawa River is owned by Niagara and interconnects Consumers' system in Ottawa with that of Gazifère de Hull de Québec (Gazifère de Hull) in Hull.

2.5.9

Both Niagara and Gazifère de Hull are owned by Consumers'.

Union - Panhandle Eastern Pipeline Company (Panhandle Eastern)

2.5.10

In 1947, Union began receiving deliveries of United States sourced gas from Panhandle Eastern through two NPS 12 pipelines constructed under the Detroit River. The two pipelines of about 1 km in length from the Canada/United States border to Union's Ojibway Meter Station near Windsor are owned by Union, and were certificated by the NEB under Section 95 of the NEB Act in 1960. These lines connect the line owned by Union, extending from the Ojibway Meter Station to Union's Dawn Compressor Station in Sarnia (the Panhandle Line), and Panhandle Eastern's network in the United States. Union's Panhandle

Line is under the jurisdiction of the OEB.
(Appendix 4.9)

NOVAcorp International Pipelines Ltd. (NOVAcorp)

2.5.11

On June 27, 1988, the NEB announced its approval of the construction of the Canadian portion of a pipeline to cross the Detroit River near Windsor. The NOVAcorp pipeline will be 0.7 km long, extending from Union's Ojibway Meter Station to the Canada/United States border. The continuing portion of this pipeline from the border into the United States will be owned by National Steel Corporation (National Steel).

2.5.12

The existing Canadian pipeline network, including the facilities of TCPL and Union, will be used to carry gas from western Canada to the proposed junction with the NOVAcorp line near Windsor for direct delivery to National Steel's plants at Ecorse and River Rouge, Michigan.

TCPL Dawn Extension

2.5.13

TCPL's Dawn Extension connects to the Great Lakes system at the Canada/United States border near the middle of the St. Clair River near Sarnia and terminates at Union's Dawn Compressor Station. This existing system consists of 0.39 km of dual NPS 24 pipe under the river and

DECISION WITH REASONS

about 23 km of NPS 36 pipe from the river to Dawn. Pursuant to NEB Order No. XG-7-88, TCPL is now authorized to construct an additional 8.8 km of NPS 36 loop to be placed in service on this system, by November 1, 1988. (Appendix 4.10)

3. THE HEARING

3.1 THE HEARING

3.1.1

In its Notice of Hearing dated May 20, 1988, the Board appointed Thursday, June 16, 1988, as the first day of this hearing. In its Procedural Order-1 dated May 20, 1988, the Board called for all evidence, interrogatories and responses to interrogatories to be filed by June 13, 1988.

3.1.2

By Notice of Motion dated June 6, 1988, TCPL brought a motion before the Board requesting an order that Union's Application was not within the Board's jurisdiction. The Board, with the consent of all parties present, deferred hearing the motion regarding jurisdiction until the conclusion of evidence.

3.1.3

Mr. Peter Gout, an owner of storage facilities in Michigan, applied at the hearing for late intervenor status. The Board denied Mr. Gout

full intervenor status because the substance of his intervention was the private litigation between himself and Union which was already before the Courts, and which was not relevant to the matter before the Board. The Board allowed that Mr. Gout could renew his application at a later date if he could present additional evidence relevant to this proceeding pertaining to Michigan storage.

3.1.4

The hearing of evidence began on Thursday, June 16, 1988, and was completed on Monday, June 20, 1988. Oral argument from all parties, except Northridge Petroleum Inc. (Northridge), was presented on Wednesday, June 22, 1988. Northridge was permitted to file written argument by Friday, June 24, 1988. Board Staff and Union were granted the right to reply to argument by July 1, 1988, but no replies were submitted.

Appearances

3.1.5

The following parties made appearances and participated in the hearing:

Union Gas Limited	B. Kellock, Q.C.
Counsel to Board Staff	J. Champion
C-I-L Inc.	P. Jackson
The Consumers' Gas Company Ltd.	P. Atkinson

DECISION WITH REASONS

Mr. Peter Gout	J. A. Giffen, Q.C.
Northridge Petroleum Marketing Inc.	P. Budd G. Ferguson
St. Clair Pipelines Limited	S. Lederman
TransCanada PipeLines Limited	J. Murray J. Francis, Q.C. J. Schatz

Witnesses

3.1.6

The following witnesses gave testimony during the course of the hearing:

for Union - (Panel 1)	P. D. Pastirik, Manager, Financial Studies, Union
	A. F. Hassan, Manager, Gas Supply Logistics, Union
	W. J. Cooper, Senior Vice President, Marketing & Gas Supply, Union
	G. D. Black, Manager, Storage & Transportation Services, Union
	W. G. James, Manager, Facilities Planning, Union

DECISION WITH REASONS

for Union - (Panel 2)

R. Bryant,
Manager, Pipeline
Engineering, Gas
Supply Engineering,
Union

P. G. Prier,
Project Manager,
Ecological Services
for Planning Ltd.

for Northridge -

D. W. Minion,
Chairman, Northridge

G. E. Ferguson,
Regional Manager,
Eastern Canada,
Northridge

for TCPL -

A. A. Douloff,
Vice President,
Transportation, TCPL

M. Feldman,
Manager, Facilities
Planning, TCPL

A. S. Cheung,
Senior Engineer,
Facilities Planning,
TCPL

3.1.7

A verbatim transcript of the proceedings, together with a copy of all exhibits is retained in the Board files and is available to the public.

3.2 POST HEARING NOTICES AND PROCEEDINGS

TCPL's July 19, 1988, Notice of Motion

3.2.1

Subsequent to the close of the evidentiary phase of the hearing and the receipt of all arguments, TCPL submitted a Notice of Motion to the Board dated July 19, 1988, wherein it requested leave of the Board to receive additional evidence in these proceedings. TCPL specifically sought to enter Transcript excerpts dated July 8, 1988, and July 11, 1988, from another Board Hearing, under Board File No. E.B.R.L.G. 32, dealing with the security of Ontario's gas supplies. TCPL contended that these excerpts are relevant to the issue of jurisdiction raised in the E.B.L.O. 226 hearing.

3.2.2

In its Notice of Motion, TCPL advised that the cited Transcript and an Affidavit of Jill Catherine Schatz, a solicitor in the Legal Department of TCPL, sworn to on July 19, 1988, would be used at the hearing of the motion.

The Affidavit by Ms Schatz, which was withdrawn upon consent, dealt with a Transcript relating to an Application by Empire State Pipeline (Empire) to the Public Service Commission of the State of New York (NY PSC) for authorization to construct and operate a natural gas pipeline from Grand Island, New York to Syracuse, New York (the Empire Pipeline). TCPL claimed the Transcript was relevant to the E.B.L.O. 226 hearing, and was not available to TCPL prior to the close of evidence and the making of its argument on June 22, 1988.

3.2.3

By copies of its Notice of Motion, TCPL advised all intervenors in the E.B.L.O. 226 proceeding of its intentions.

The Reopened Hearing

3.2.4

The Board issued a Notice of Hearing of Motion to all active participants in the E.B.L.O. 226 proceeding on August 2, 1988, wherein Tuesday, August 16, 1988, was set as the date on which it would hear TCPL's Motion (the Reopened Hearing). The Reopened Hearing was convened under Board File No. E.B.L.O. 226-A on August 16, 1988, and lasted 1 day.

Appearances

3.2.5

The following parties made appearances and participated in the Reopened Hearing:

TransCanada PipeLines J. Francis, Q.C.
Limited

Union Gas Limited J.D. Murphy

Counsel to Board Staff J. Campion

3.2.6

The results of the Reopened Hearing are presented in section 3.7 of this Decision.

3.2.7

A verbatim transcript of the proceedings in the Reopened Hearing together with a copy of all exhibits is retained in the Board files and is available to the public.

TCPL's June Notice of Motion

3.2.8

After the conclusion of evidence and argument in these proceedings, TCPL submitted an undated Notice of Motion (the June Notice), seeking to have documents which were not available to TCPL prior to its making argument on June 22 and which TCPL claimed were relevant to the jurisdictional issue raised in this proceeding.

3.2.9

In its June Notice TCPL sought to have three documents, referenced in an affidavit of Jill Catherine Schatz sworn to on June 28, 1988; entered into evidence: the application by Empire to the NY PSC for authorization to construct the Empire Pipeline, the prefiled testimony of W.J. Cooper of Union in support of Empire's application, and a letter from the said W.J. Cooper to Empire dated June 14, 1988.

3.2.10

TCPL's June Notice also sought to cross examine W.J. Cooper with regard to the matters raised in the documents it proposed for filing.

3.2.11

In a letter of June 29, 1988, to the Board, Mr. G.F. Leslie, Counsel for Union, stated that Union had no objection to the filing of the three documents which were the subject of TCPL's June Notice. He further stated that the clarification TCPL sought to obtain through its cross examination of W.J. Cooper had been provided to Counsel for TCPL. In that letter Mr. Leslie went on to state that Mr. Francis had told Union that under the circumstances he did not need to pursue the June Notice and had authorized Mr. Leslie to request that the Board dispose of the matter of the June Notice on the basis of Mr. Leslie's June 29 letter.

3.2.12

On July 4, 1988 Mr. Francis wrote to the Board acknowledging Mr. Leslie's letter of June 29, 1988, and gave notice that he was discontinuing TCPL's June Notice. In his July 4 letter Mr. Francis made the "suggestion" that Mr. Leslie's June 29 letter and the three exhibits referred to in the June Notice be marked as exhibits.

3.2.13

On the basis of TCPL's discontinuing its motion, the Board withdrew the three exhibits which were the subject of the Notice, and the J.C. Schatz affidavit of June 28 from the Exhibit List.

3.2.14

Due to a clerical error, these documents had been prematurely entered as Exhibit Nos. 21.2, 21.3, 21.4 and 21.5 in this proceeding. The Board informed all parties of the withdrawal of these exhibits by letter dated August 18, 1988 which enclosed the final corrected Exhibit List.

TCPL's August 23 Notice of Motion

3.2.15

Thirty-two days after having made its argument in the main hearing, TCPL filed its fourth Notice of Motion in this proceeding dated August 23, 1988 (the August 23 Notice).

3.2.16

TCPL's August 23 Notice was to request the filing of the same three documents that were the subject of its June Notice as described above in paragraph 3.2.9.

3.2.17

In its August 23 Notice TCPL claimed that the proposed filings were relevant to the jurisdictional issue raised in this proceeding in that they were claimed to clarify the relationship between the Empire Pipeline project and the proposed St. Clair - Bickford Line. The August 23 Notice also acknowledged the Board's having previously received as exhibits the Transcript excerpts which also dealt with the Empire Pipeline's relationship to this proceeding and which were the subject of the Reopened Hearing on August 16, 1988.

3.2.18

TCPL advised that it intended to use the affidavit of Jill Catherine Schatz sworn to on June 28, 1988, and the affidavit of John Herbert Francis sworn to on August 22, 1988 (which presented a chronological account of the events, and Mr. Francis' interpretation of these events, leading to the filing of the August 23 Notice) in the hearing of this latest motion.

3.2.19

By copy of its August 23 Notice TCPL informed all active parties to the E.B.L.O. 226 proceeding of its intentions.

The ex parte Decision Survey

3.2.21

On August 26, 1988 the Board, by electronic written notice, informed all parties to the E.B.L.O. 226 proceeding that it deemed the prolonged nature of this proceeding to have created a special circumstance warranting the Board to invoke subsection 15(2) of the Act in an effort to minimize the time, expense and inconvenience to all parties when dealing with TCPL's August 23 Notice.

3.2.22

The Board asked all parties to indicate if they objected to the filing of the documents proposed by TCPL in its August 23 Notice, and if they objected to the Board deciding ex parte to grant this motion. In its communique, the Board stated that if no objections were received by the close of business on August 29, 1988, the Board would issue a decision accepting TCPL's motion.

DECISION WITH REASONS

3.2.23

The results of this survey of the parties, and the Board's ex parte decision under Board File No. E.B.L.O. 226-A are presented in section 3.7 of this Decision.

3.3 NEED FOR THE PROPOSED FACILITIES

Access to Michigan Storage

3.3.1

A prime purpose of the proposed facilities, as described by the Applicant, was to enable it to enter into arrangements with MichCon to access Michigan storage space in 1989, and meet Union's immediate storage requirements for its domestic markets that, according to the Company, cannot otherwise be accommodated by developed storage in Ontario.

3.3.2

Further, Union plans to integrate Michigan and Ontario storage facilities through the proposed connection of MichCon's Belle River Mills Compressor Station to Union's Dawn Compressor Station. The proposed St. Clair-Bickford Line would, according to Union, be a key component of this integration plan. Union argued that such integrated storage capabilities would yield additional flexibility for the Company

and its transportation customers when they purchase United States gas.

Access to Alternate Gas Supplies

3.3.3

Union's witnesses identified a priority need to diversify Union's gas supply services by means of the proposed facilities which would increase access to additional storage facilities and potentially provide access to alternate supplies of competitively priced gas from the United States.

3.3.4

Deregulation of the gas industry was cited by Union as having created an environment in which TCPL and others will take advantage of their increased ability to export gas into markets in the United States. Consequently, according to Union, service on the TCPL/Great Lakes and NOVA systems can be expected to be more vulnerable to disruptions as firm capacity becomes fully utilized. Interruptible service on these systems was characterized by Union as already being constrained. Union claimed it and the other Ontario LDCs could no longer afford to totally rely on the TCPL/Great Lakes and NOVA systems for essentially all their supply.

3.3.5

The need for supply diversification was, therefore, seen by Union to be essential, in order

for the LDCs to fulfill their mandate to provide a reliable supply of natural gas to Ontario consumers.

Enhanced Bargaining Position

3.3.6

Union argued that, based on its experience in the United States gas supply market through its interconnection with Panhandle Eastern, the proposed facilities would increase its access to supplies of less expensive spot gas and competitively priced firm gas from the United States.

3.3.7

Despite price deregulation, Union claimed it has not been able to successfully negotiate fully market competitive gas prices under its existing CD and ACQ contracts with TCPL. Union's access to United States gas via its Panhandle Line has, however, according to the testimony of Union's witnesses, provided the leverage to negotiate discounts amounting to \$15.9 million to date under its contracts with TCPL. However, Union claimed that its United States gas purchases via the Panhandle Line are limited, as recognized by the Board in its Reasons for Decision in E.B.R.O. 412-III dated January 22, 1988.

3.3.8

Union expected that the increased ability to access and store spot and firm United States

gas, which the proposed facilities would provide, will enhance its bargaining power when negotiating the price of western Canadian supplies. Union estimated that this enhanced bargaining power would result in gas cost savings of at least \$10 million per year for its sales customers.

Enhanced Security of Supply

3.3.9

Improved security of supply was another of Union's significant objectives. Increasing capacity constraints on the NOVA, Great Lakes and TCPL delivery systems were claimed by Union to be responsible for the deliverability problems experienced in January, 1988, and TCPL's unexpected reduction in the interruptible service available to Ontario LDCs.

3.3.10

Union expects that its security of supply will be improved by having increased access to the broader United States gas reserves base, and transportation alternatives. Also, the proposed pipeline interconnection with MichCon's Belle River Mills storage system was seen by Union as a way to further enhance its security of supply. Evidence was submitted by Union that it is currently negotiating a gas exchange agreement with MichCon for this purpose.

Positions of Other Parties

TCPL

3.3.11

TCPL acknowledged the value of Union's goals. However, TCPL did not agree with the means by which Union proposes to achieve these goals. TCPL's alternative to Union's proposed facilities is addressed in section 3.6 of this Decision.

Consumers'

3.3.12

Consumers' main concern was security of supply. Its position was that the existing delivery system is "too tight". It viewed the proposed facilities as a project which will enhance the deliverability of gas from a more diversified supply.

Northridge

3.3.13

Northridge supported Union's objective. Its position was that the proposed facilities, when linked through the facilities of St. Clair Pipelines to MichCon, would benefit both suppliers and purchasers of natural gas. The ability to access gas supplies and storage from an expanded number of sources would, according to Northridge, improve the climate of competition in the natural gas marketplace. Northridge argued that:

3.3.14

A substantial segment of the present Ontario gas market has not yet enjoyed the benefits of deregulation due to the lack of available supply alternatives, that is, lack of effective competition. Potential suppliers and customers have also been prevented from realizing these benefits because access to monopoly pipelines is frequently limited or restricted by government regulations.

3.3.15

Access to alternate gas supply sources through the proposed Union facilities, should provide that sort of competition in the Ontario gas market. The proposed facilities will also improve the operating flexibility of Union and other parties, such as Northridge and/or end-users, by providing alternative supply capabilities and increased access to storage. These advantages, which should be available to all purchasers or potential purchasers on a non-discriminatory basis, will enhance Ontario's security of supply and provide opportunities to minimize transportation and supply costs.

C-I-L Inc. (CIL)

3.3.16

CIL took no position on whether the proposed facilities should, or should not, be built.

Board Staff

3.3.17

Board Staff held that, subject to economic feasibility, Union has proven a need for the proposed facilities, at least in the short run.

3.3.18

On the basis of Union's evidence that it could supply its long-term storage requirements from facilities in Ontario, Board Staff concluded that a short-term need for 2 Bcf of incremental storage was not sufficient reason for the Board to grant this Application.

3.3.19

Similarly, Board Staff did not endorse Union's argument regarding enhanced security of supply since, according to Board Staff, there was no compelling evidence that the existing delivery system, including Alberta gas producers, would have any difficulty in meeting the long-term needs of Ontario gas customers.

3.3.20

However, Board Staff agreed that the proposed project would yield potential savings on Union's discretionary gas purchases and increase the Company's negotiating leverage when bargaining with TCPL and WGML.

Board Findings

3.3.21

Numerous previous public proceedings before this Board and the NEB have already established that

TCPL's existing delivery system is "tight", and that Union's storage facilities are near capacity.

3.3.22

During the recent hearing of TCPL's 1988 and 1989 Facilities Application before the National Energy Board (Order No. GH-2-87), TCPL's evidence indicated that excess capacity on its system will be greatly reduced, starting in 1988. Previous excess capacity permitted the LDCs in eastern Canada to meet their requirements, partly through discretionary purchases.

3.3.23

In this Board's Report to the Lieutenant Governor, dated May 2, 1988, under Board File No. E.B.O. 147, on the matter of an application by Tecumseh for a regulation designating the Dow Moore 3-21-XII Pool as a gas storage area, the implications of this tightened supply situation became apparent:

Correspondence between Consumers' Gas and TCPL filed in evidence indicates that there is no spare capacity available, i.e. no peaking service (PS) or temporary winter service (TWS) and only limited interruptible service (IS).

... the development of additional storage is essential for the satisfactory operation of the system, assuming that incremental firm service volumes are available. The purpose of contracting (storage capacity) with Tecumseh is to absorb the summer season surplus through injections to storage in order

to supply the winter deficiency through withdrawals from storage.

3.3.24

The above scenario was limited to the existing TCPL delivery system which is currently the only significant delivery service to eastern Canada. Hence, the emphasis is on storage. There is an obvious need for increased access to diversified supply services in order to enhance the deliverability of gas to Union, the other LDCs and their customers.

3.3.25

Reinforcement of gas supply to Union for sales within Union's franchised municipalities, including the Sarnia industrial area, and to Union's storage and transportation customers (including Consumers' and GMi, and their metropolitan service areas), requires access to alternative sources of supply.

3.3.26

Storage continues to be extremely important. Storage can provide Union with additional flexibility in its exercise of the various purchase options that can be made available by the proposed facilities and their upstream interconnections.

3.3.27

The Board finds that there is a need for the Ontario gas market to receive the benefits that can flow from the competition that enhanced gas supply alternatives will generate. The Board

finds that the proposed facilities will contribute to a more competitive and open gas supply market, wherein both Union and its storage and transportation customers will have increased bargaining power, purchasing options, flexibility and strengthened back-up supplies. This is consistent with the public interest criterion of providing reliable service to the Ontario consumer at the lowest possible cost.

3.3.28

The Board finds that Union's proposal will enhance security of supply, system reliability and system flexibility. Supply to both the Sarnia industrial area and major gas markets elsewhere in southern and eastern Ontario will be reinforced as a result of the proposed facilities and their link with Union's Dawn-Trafalgar transmission system.

3.3.29

The Board, therefore, finds that the proposed facilities will fill a need in the public interest.

**3.4 ROUTE, CONSTRUCTION, LANDOWNER AND
ENVIRONMENTAL IMPACTS**

Positions of the Parties

Union

3.4.1

Union changed its prefiled route alignment, to locate the pipeline adjacent to the south side of the road allowance on Moore Road No. 2, from the western extremity of Lot 12, Front Concession to the eastern half of Lot 26, Concession II. The realignment is entirely within lands owned by M. Ladney and C. A. Apcynski who requested the relocation of the pipeline to the land which is zoned industrial. The previous location was not compatible with the landowners' plans for future industrial development in this area.

3.4.2

Union also agreed to comply with the recommendations set out in a letter from the Ministry of

Consumer and Commercial Relations, dated June 10, 1988, concerning the proximity of the proposed pipeline to two houses on Lot 27, Concession II.

3.4.3

With respect to the siting of the Sarnia Industrial Line Station, Union's witness explained that the proposed location was based on road accessibility, suitability of the terrain and landowner consent.

3.4.4

A comparison of the component costs of Union's NPS 24 Kirkwall Line (EBLO 218/219) and the proposed pipeline was made by Union's witness.

3.4.5

Union confirmed that it used Class 2 location design factors because the area is a designated industrial zone, and future development would cause the area to be reclassified from its present Class 1 location. Mr. Ladney's possible construction of a plastics plant was cited as an example of future development.

3.4.6

Union explained that the environmental assessment study filed in this hearing will be part of the construction contract, and its mitigation recommendations will therefore be imposed on the pipeline contractor.

TCPL

3.4.7

TCPL claimed that its alternative is environmentally superior to Union's proposal because it does not require a new utility corridor.

3.4.8

TCPL argued that no leave to construct order should be issued by the Board until all necessary regulatory approvals have been granted, including all necessary import and export approvals. Union countered that the amended negotiated condition described below is sufficient and that some judgments must be left to the utility's management.

Board Staff

3.4.9

Conditions of Approval (Appendix 4.11) were introduced by Board Staff during the hearing. These conditions address construction, monitoring and reporting requirements and were accepted by Union. As originally filed and agreed to by Union, these conditions called for the leave to construct to expire on December 31, 1988.

3.4.10

One further condition of approval, which was proposed by Board Staff for addition to any order or approval that the Board may decide to grant, was agreed to by Union's Counsel:

DECISION WITH REASONS

The Board's approval for the construction of the St. Clair to Bickford transmission line proposed by Union Gas Limited is contingent upon St. Clair Pipelines Limited and Michigan Consolidated Gas Company receiving all the regulatory approvals necessary to construct the pipelines from the St. Clair Valve Station to MichCon's Compressor Station at Belle River Mills, Michigan, in order to complete the connection to the storage facilities situated in the State of Michigan, one of the United States of America.

Copies of the approvals issued by FERC, or whatever approvals may be necessary in the United States, the Michigan Public Service Commission and the National Energy Board shall be filed with the Board prior to the commencement of construction of the St. Clair - Bickford transmission line.

3.4.11

Union later suggested that the first line in paragraph two should read "Copies of the approvals issued by or through FERC, the Michigan ...". This wording was proposed in order to accommodate the issuance of a Presidential permit which is required to make the international connection, and would be processed through FERC.

Board Findings

3.4.12

The Board finds that Union has been diligent in addressing landowner and environmental concerns in its final route selection, and has properly

DECISION WITH REASONS

sought to mitigate these concerns through consultation and negotiation.

3.4.13

The selection of Class 2 location pipe is found by the Board to be prudent, given the potential for industrial development along the pipeline route during the lifetime of the line.

3.4.14

The Board notes that the Applicant's environmental assessment studies for the pipeline routes were in accordance with the Board's guidelines, and were reviewed and approved by the Ontario Pipeline Coordination Committee.

3.4.15

The Board notes that the route selection was responsive to revisions initiated by concerned landowners prior to the hearing and, therefore, no landowners found it necessary to object.

3.4.16

The Board finds the revised route proposal to be appropriate. The fact that the alternative proposed by TCPL does not require a new pipeline corridor is recognized but is considered insufficient grounds for rejecting Union's proposal.

3.4.17

The Board finds that the construction costs are consistent with those of other current pipeline projects of equivalent pipe size.

3.4.18

The Board approves the form of the Agreement for Land Use filed by the Applicant.

3.4.19

The Board finds that leave to construct shall be conditional on the initial requirements proposed by Board Staff and agreed to by Union. However, given that these proceedings have now been protracted, the Board finds that it is no longer reasonable to condition its approval to the original, agreed upon, expiry date. The Board, therefore, now specifies that its leave to construct shall expire on December 31, 1989. These conditions as filed, and amended regarding the expiry date, are presented in Appendix 4.11 to this Decision.

3.4.20

The Board finds the additional condition regarding regulatory approval, agreed to by Counsels to Board Staff and for Union, and subsequently revised by Union, is appropriate and shall also be included as a condition of approval. This condition is presented in Appendix 4.12 to this Decision.

3.4.21

The Board finds that the recommendations set out in the letter from the Ministry of Consumer and Commercial Relations, dated June 10, 1988, and accepted by Union, are appropriate and

DECISION WITH REASONS

shall also be included as conditions of approval. These conditions are presented in Appendix 4.13 to this Decision.

3.4.22

The Board finds that the granting of a leave to construct order does not need to be conditioned upon the prior granting of all necessary import and export approvals, as recommended by TCPL. However, as noted earlier, the Board directs Union to file copies of all requisite regulatory approvals prior to commencing construction.

3.4.23

The Board, therefore, finds that, in complying with the conditions as defined in Appendices 4.11, 4.12 and 4.13, Union will have dealt with environmental and landowner concerns and the public interest in a responsible and acceptable manner.

3.5 ECONOMIC FEASIBILITY

Positions of the Parties

Union

3.5.1

In its economic justification for this project costing \$9,352,000, Union estimated savings of \$2.5 million in both 1988 and 1989 as a result of purchases of United States spot gas and \$750,000 in each year due to purchases of United States firm gas. Union forecast an ongoing annual \$10 million savings to be achieved as a result of increased negotiating leverage when bargaining with TCPL. The expected total savings were specified by Union to be \$13,250,000 in each of 1988 and 1989.

3.5.2

Union identified various costs to be deducted from these potential savings, such as the costs of transportation by St. Clair Pipelines, Ontario Hydro lease payments, municipal, capital

and current income taxes. The net cash flow, after deducting these expenses, was claimed by the Applicant to be \$7,546,600 in 1988 and \$7,700,197 in 1989.

3.5.3

The capital cash flow was projected by Union to be \$8,745,859 in 1988 and \$6,401 in 1989. Union then calculated the accumulated net present values of the net cash flow and capital streams as yielding a profitability index of .816 in 1988 and 1.559 in 1989.

TCPL

3.5.4

In its direct evidence, TCPL submitted data comparing the annual cost of transporting 200 MMcf/d of firm or interruptible gas, at different load factors, from the St. Clair River to Dawn on TCPL's Dawn Extension with the annual fixed and operating costs of the St. Clair-Bickford Line, exclusive of any transportation costs to be imposed by St. Clair Pipelines. The claimed savings in favor of the TCPL option, under various load factors and combinations of firm and interruptible service, ranged from \$941,000 to \$1,716,000 per annum. This evidence showed, according to TCPL, that it can offer the transportation service Union is seeking at a lower cost, and without duplicating facilities. The substance of TCPL's alternative proposal is dealt with in section 3.6 of this Decision.

Consumers'

3.5.5

Consumers' had no specific submissions on this topic.

Northridge

3.5.6

Northridge submitted that, with improved access to United States supplies of gas, Union and others should be in a stronger bargaining position with WGML. American gas supplies were claimed to be at least as competitive as Canadian supplies, and to be "highly available". Notwithstanding that United States producers are generally less willing than Canadian producers to contract for 10 to 20 year supplies of gas, long-term American supplies are, according to Northridge's experience, available. Both Union and Northridge gave evidence that sufficient United States spot and firm gas are available to support Union's claims of economic advantages. Northridge submitted that the Union proposal is the least expensive alternative in a generic sense and, on the evidence, the cost of the facilities appears to be recoverable within two years.

3.5.7

The Union proposal will, according to Northridge, provide significant additional firm pipeline capacity for the Ontario market at minimal cost. Therefore, Northridge submitted

that it is a relatively inexpensive proposal, which will be paid for quickly, and result in substantial gains to Ontario consumers, utilities and other market participants. In addition, because the facilities will influence a trend to more competitive gas prices for end-users and distributors in Ontario, there should be further benefits to the provincial economy.

Board Staff

3.5.8

Board Staff accepted that the existence of the United States gas alternative would result in some level of negotiated savings to the Company.

3.5.9

Board Staff did not accept the \$10 million per year savings forecast which Union claimed to be a conservative estimate. Board Staff cited Union's admission that, in order to achieve the \$10 million forecast, it would have to be prepared to acquire 52 Bcf of United States gas to displace TCPL/WGML supplies at the projected level of savings. This amount of displacement seemed particularly large to Board Staff, and not justifiable in spite of the testimony of Union's and Northridge's witnesses that such volumes would be available from the United States at competitive market prices.

3.5.10

Board Staff further questioned Union's attempt to justify its claimed \$10 million savings,

based on a comparison of its proposed negotiated savings with the savings obtained in 1987 under TCPL's "Summer Incentive CMP" discount program. Board Staff submitted that this was not a useful comparison since other utilities obtained similar discount relief from TCPL, without having access to Union's Panhandle system and American gas.

3.5.11

Board Staff concluded that, while some amount of negotiated savings will be realized, the exact amount cannot be easily determined. Board Staff estimated that, without negotiated savings, economic feasibility would be attained over six years as demonstrated in Union's response to Board Staff interrogatory No. 41, wherein it projected the savings to be obtained from United States spot and firm discretionary supplies over that period. Board Staff acknowledged that there were additional unquantifiable benefits that would result from enhanced security of supply, short-term access to storage and other long-term benefits, and that these would be additive to the savings generated by purchasing discretionary supplies from the United States.

Union's Reply

3.5.12

In addressing the credibility of its initial \$10 million negotiated savings per year forecast, Union presented a chart which, in its

submission, established that estimated savings of \$11 million in commodity and transportation demand charges payable to TCPL would be realized. Union acknowledged that TCPL demand charges are payable whether firm gas is taken from TCPL, or displaced by gas from United States sources.

Board Findings

3.5.13

The Board finds Union's conclusions regarding its estimated savings of \$10 or \$11 million due to improved negotiating leverage to be somewhat tenuous and less than fully substantiated. The leverage that access to United States supplies can provide is accepted, but it is difficult for this Board to quantify the level of savings that will result.

3.5.14

The Board notes that no evidence was presented to dispute the operating and capital costs submitted by Union.

3.5.15

In spite of the observed weaknesses in Union's estimates, the Board notes that the savings expected to result from United States spot and firm discretionary gas purchases can reasonably be expected to exceed the costs to be incurred within six years. Thus, the Board finds that

DECISION WITH REASONS

Union's proposal is economically feasible since the profitability index will likely be acceptable over six years, and will certainly meet the Board's criterion over the lifetime of the project.

3.5.16

The Board finds Union's proposed project to be in the public interest on the basis of the Company's Stage 1 analysis as prescribed by the Board. The Board concurs with Union that quantification of Stages 2 and 3 benefits is, therefore, unnecessary.

3.6 TCPL ALTERNATIVE

Description

3.6.1

TCPL described its existing Dawn Extension as extending from an interconnection with Great Lakes, at the international border near the middle of the St. Clair River near Sarnia, to an interconnection with Union's transmission line at Dawn. The existing system consists of 0.39 km of dual NPS 24 river crossing pipe, 23.34 km of NPS 36 pipe to TCPL's Dawn Sales Meter Station and 0.81 km each of NPS 36 and NPS 20 loop to Union's Dawn Compressor Station.

3.6.2

TCPL confirmed that it recently was authorized by the NEB to construct 8.8 km of NPS 36 loop which is expected to be in service by November 1, 1988. TCPL claimed that it could provide 200 MMcf/d of firm transportation service by extending this loop with an additional 5.8 km

of NPS 36 pipe, and installing additional metering facilities at Dawn, for a total capital cost of \$6.1 million. About 100 MMcf/d of interruptible capacity would then also be available on the Dawn Extension. TCPL submitted that no new easements would be required to construct this additional loop. If the entire service were to be provided on an interruptible basis, TCPL advised that no additional facilities would be required on its Dawn Extension.

Positions of the Parties

TCPL

3.6.3

TCPL submitted that its alternative would eliminate the need to construct Union's proposed St. Clair Valve Site, the Sarnia Industrial Line Station and the NPS 24 pipeline from the St. Clair Valve Site to the Bickford Storage Pool, as well as the need for a new utility corridor.

3.6.4

In addition to matching Union's projected gas cost savings, TCPL claimed that its alternative proposal would result in transportation cost savings to Union and other Ontario LDCs ranging from \$790,000 to over \$1.7 million per year, under various assumed load factors and types of service. TCPL asserted that its alternative can provide the same benefits that Union indicated would result from its proposal.

3.6.5

During cross-examination, TCPL's witnesses acknowledged that the Dawn Extension is used to import gas flowing eastward on the Great Lakes system. Therefore, the ability to move gas westward from storage in Ontario to storage in Michigan would be achieved by displacement rather than by reverse flows. TCPL also conceded that Union would have less supply flexibility under the TCPL alternative because TCPL would not carry United States gas when this would cause WGML's gas to be displaced, since it could not do so under its current TOPGAS contractual commitments.

Union

3.6.6

Union's position was that TCPL's alternative is not a credible option. Union stated that Great Lakes has shown no interest in allowing it to move gas back and forth between Belle River Mills and Dawn. The fact that TCPL will not carry self-displacement gas, in Union's view, further renders the Great Lakes/TCPL system useless as a bargaining tool, or as a method of accessing alternative, less expensive, United States gas supplies.

3.6.7

Union stressed the importance of its ability to obtain advantageous alternative supplies of gas, even if self-displacement is involved. The TCPL alternative was not acceptable to

Union because its ability to negotiate savings is dependent upon Union having access to alternative supplies of gas, even when allowances must be made for unabsorbed demand charges.

3.6.8

Further, Union was convinced that, in the absence of enhanced supply alternatives, Union would have no leverage in current or future negotiations with TCPL, and that it would be forced to accept terms set forth by TCPL. Union was not comforted by the occasional availability of discounts under TCPL's interruptible service.

Consumers'

3.6.9

Consumers' supported Union's Application and did not address TCPL's alternative.

Northridge

3.6.10

Northridge argued that the TCPL alternative would not provide Union or others with the competitive edge that would result from Union's ability to own and control the facilities. Northridge supported Union's claim that the TCPL alternative would not be a feasible alternative because TCPL would refuse to transport any gas identified by TCPL as self-displacement gas. Northridge related that its negotiations with Great Lakes for transportation space to move Alberta gas have been lengthy

and difficult. Northridge submitted that Union's proposal would provide the best option to redress existing competitive and capacity constraints, and would yield the greatest assurance of real benefits to Ontario.

3.6.11

Northridge claimed that the facilities proposed by Union would be justified by the negotiating leverage they would provide. If a pipeline crossing the St. Clair River were not to be built by a distribution company, such as Union, then Northridge stated it is prepared to build such a pipeline itself. Northridge submitted that it had already initiated pre-application studies for a river crossing pipeline, but abandoned these when Union came forward with its proposal.

CIL

3.6.12

CIL did not address TCPL's alternative.

Board Staff

3.6.13

Board Staff's position was that the TCPL alternative will provide Union with less control, access, volume flow and ability to access storage in Michigan than will the Union proposal. Despite TCPL's intention to supply Union by means of its proposed alternative, Board Staff was concerned that TCPL's conflicting obligations to its corporate affiliate, WGML, would

cause it to deny the transmission of alternative supplies to Ontario consumers.

3.6.14

Board Staff submitted that the leverage which Union might obtain when negotiating prices with TCPL and WGML will not be available if the TCPL alternative is the only option available to Union.

Board Findings

3.6.15

The Board finds that the TCPL alternative would not provide the interconnection with MichCon, or facilitate the various arrangements envisaged in the Union proposal, particularly with regard to the integration of Ontario and Michigan storage, since the Dawn Extension would be restricted to only the easterly movement of gas.

3.6.16

The Board finds that extending the looping of the Dawn Extension, together with the other elements comprising the TCPL alternative, does not enhance security of supply since it is not an independent pipeline with access to diversified sources of gas supply.

3.6.17

The Board notes that TCPL's TOPGAS obligation and its resultant inability to transport self-displacement gas will not allow Union to achieve

its supply diversification objective. The Board further finds that the TCPL alternative will not provide Union the ability to access Michigan storage and consequently will deny Union the ability to take advantage of the benefits of such storage.

3.6.18

The TCPL alternative will not improve Union's negotiating leverage since it largely eliminates the alternative of competitively priced United States gas supplies. The competitive reality of delivery facilities owned and directly controlled by Union and its affiliates would also be absent under TCPL's alternative.

3.6.19

The Board finds that the TCPL alternative will place operational control in the hands of Union's sole major supplier, and that it thus lacks the flexibility and independence of control that is inherent in Union's proposal.

3.6.20

While the Board accepts that the TCPL alternative eliminates the need for a new utility corridor, the Board considers this to be only of marginal benefit.

3.6.21

The Board accepts TCPL's uncontested evidence that the total estimated capital cost of an additional loop on its Dawn Extension, plus metering facilities at Dawn, would be \$6.1

DECISION WITH REASONS

million, and be more attractive than the estimated \$9.35 million cost cited for Union's proposed facilities, all other things being equal.

3.6.22

The Board is not satisfied that the economic advantage claimed by TCPL will outweigh the opportunities that will be lost to Union and its customers by having the TCPL alternative as Union's only option. The Board, therefore, finds the TCPL alternative proposal to be deficient as a means to meet the needs which have been found as fact. The Board therefore rejects the TCPL alternative.

**3.7 RESULTS OF POST HEARING NOTICES AND
PROCEEDINGS**

The Reopened Hearing

3.7.1

None of the parties to the E.B.L.O. 226 proceeding objected to TCPL's motion which was the subject of the Reopened Hearing.

Board Findings

3.7.2

The Board has reluctantly agreed to permit TCPL to file excerpts from Transcript pages 461 to 465 (inclusive), pages 586 to 590 (inclusive) and pages 607 to 611 (inclusive) obtained in another hearing before a differently constituted panel of this Board (E.B.R.L.G. 32). The evidence contained in the filed Transcript pages was available and could have been adduced when this matter first came before this Board. This evidence has been reviewed by the Board and given little weight.

3.7.3

The Board has no hesitation in observing that the Empire State project is not a certainty, and in the Board's view, its imminence or lack of imminence does not detract from the fact that the Board believes that the pipeline applied for is a wise venture for Union to undertake, even if no Empire State project is ever realized. The Board noted, during the hearing of the motion, the recent decision of the Federal Court of Appeal, (The Minister of Employment and Immigration and the A.-G. Canada v. Harvinder Singh Sethi (unreported) June 20, 1988 Ct. File No. A-493-88), in which the Court commented upon the uncertainty of legislation culminating in reality. The Board finds much truth in that decision, which is equally applicable to the uncertainty of the realization of the Empire State project. Before the Empire State Project can become a reality, approvals must be obtained from the New York State Public Service Commission, the New York State Power Authority, the (U.S.) Federal Energy Regulatory Commission, the (Canadian) National Energy Board and very likely this Board as well. None of these approvals are as yet in hand and many have yet to be applied for. The Board has, therefore, concluded that immense uncertainty surrounds the future of the Empire Pipeline project.

3.7.4

It is the Board's view that the Board's cost of hearing the TCPL motion should be paid by TCPL, after being fixed by the Board's Assessing Officer. The Board's decision is based upon the proposition that, if TCPL had been better prepared, the information could have been obtained before the conclusion of evidence and argument in the main case. In addition, the Board finds that the evidence was not of assistance to the Board in reaching its decision on the issue of jurisdiction.

The Board's ex parte Decision

3.7.5

None of the parties to the E.B.L.O. 226 proceeding objected to TCPL's August 23 Notice, or to the Board's granting TCPL's motion by an ex parte decision.

Board Findings

3.7.6

The Board notes that there were no objections to the filings proposed by TCPL. The Board further notes that the subject matter of the proposed filings bears some relationship to the matter now before this Board. However, the Board also notes that, in light of the quantity of evidence already on the record regarding the Empire Pipeline project, and the Board's

DECISION WITH REASONS

findings in the Reopened Hearing, the proposed documents do not contribute to the Board's understanding of the matter of Union's Application or the jurisdictional issues that have arisen therefrom.

3.7.7

While the Board is inclined to dismiss TCPL's motion, it will reluctantly allow the filing of the three documents proposed by TCPL if only to assure that all parties have been unencumbered in their efforts to structure a record supportive of their positions.

3.7.8

In allowing this motion the Board reiterates its position that there must be some finality to the conclusion of a proceeding. The Board is satisfied that the record with regard to Union's proposed project and the jurisdictional issues associated therewith is sufficiently complete for the purpose of this proceeding.

3.8 JURISDICTION

TCPL's Motion

3.8.1

Counsel for TCPL made a motion to the Board at the outset of the hearing for an Order declaring that the subject matter of Union's Application was "not within the jurisdiction of the Ontario Energy Board", but rather was "within the exclusive jurisdiction of the National Energy Board" (Appendix 4.14). The grounds for this motion were that the proposed pipeline fell within federal and not provincial jurisdiction, and that the project was a "pipeline" within the definition as set out in Section 2 of the National Energy Board Act R.S.C. N-6, as amended (the NEB Act).

3.8.2

The hearing of this motion was deferred until all the evidence had been heard. This was acceptable to all the parties. The jurisdictional arguments that follow concluded the hearing.

Positions of the Parties

TCPL

3.8.3

Counsel for TCPL argued that the proposed pipeline is part of a larger undertaking that goes beyond Ontario and Union's primary goals to access storage and alternate supply. In support of this argument, and its conclusion that the proposed pipeline is a work or undertaking within the jurisdiction of the NEB, he asserted that:

- (a) the Ontario gas customer will be drawn into a North American network of supply and transportation because of Union's corporate affiliation with the Empire State Project in the State of New York, and Union's contemplated use of the proposed pipeline and its interconnections in the long run to market gas in Michigan and the Northeastern United States;
- (b) Union's corporate partnership with ANR will provide access to gas from the State of Louisiana and the United States Gulf Coast Area;
- (c) although the physical work proposed by Union is within Ontario, the agreements and use of facilities outside Ontario extend the undertakings beyond Ontario;

DECISION WITH REASONS

- (d) Union wants to create a pool combining storage in Ontario and Michigan and to attract pipelines to it, thereby establishing a trading centre from which Union could offer a portfolio of storage and transportation services to United States customers;
- (e) St. Clair Pipelines was incorporated at the last minute solely for legal and jurisdictional reasons;
- (f) the entire interconnected system from Belle River Mills to the Bickford Pool will be controlled by MichCon when gas is flowing west, making it an international facility in the context of North American trading; and
- (g) it may not be in the public and national interests for the OEB to be asked to approve an interconnection between storage facilities in Ontario and Michigan.

3.8.4

Counsel for TCPL made the following citations and conclusions drawn therefrom:

3.8.5

1. Re Westspur Pipeline Co. Gathering System (1958), C.R.T.C. 158 (Bd. of Transport Commissioners).

- (a) Physical connection alone does not make the proposed pipeline a part of an inter-provincial/international system.
- (b) Ownership does not determine the character of a system. Despite the fact that St. Clair Pipelines has made application to the NEB for the river crossing, Union is still involved in an international undertaking.
- (c) Operation of the proposed pipeline will be under the control of a Michigan corporation.
- (d) The proposed pipeline cannot be limited to a local segment. It must be viewed as a part of the larger undertaking regardless of the way in which title is held.

3.8.6

- 2. Alberta Government Telephones v. C.R.T.C. et al. (1985), 15 D.L.R. (4th) 515; [1985] 2 F.C. 472; 17 Admin. L.R. 149 (F.C.T.D.); (1985) 24 D.L.R. (4th) 608; [1986] 2 F.C. 179; 17 Admin. L.R. 190 (F.C.A.)

3.8.7

The fact that Union proposes to stop its legal title near the shore of the river

does not mean that its proposal is not part of an undertaking extending beyond the province. Beyond the interconnection there is no functional distinction because the continuing line becomes part of a system controlled by a utility outside Ontario.

3.8.8

3. International Brotherhood of Electrical Workers and Westcoast Transmission Company Ltd., Report of Canadian Labour Relations Board, April 1974.

3.8.9

The assumption that an operation is primarily intra-provincial is only valid if the focus is on the source and the initial delivery point of gas. However, it was clear to TCPL that the proposed pipeline is not limited to an intra-provincial operation but is central to an extended operation envisaged in a larger plan.

Union

3.8.10

Counsel for Union emphasized that the only existing legislation which has anything to do with the constitutional argument is the NEB Act which has only one provision which is of any relevance to the OEB in this case, and that is its definition of a pipeline in Section 2:

Pipeline means a line for the transmission of gas or oil connecting a province with any other or others of the provinces or extending beyond the limits of a province.

3.8.11

He observed that the language above tracks closely the language of Section 92 (10)(a) of the Constitution Act, 1867, which is an exception to provincial jurisdiction.

3.8.12

He referred to the Decision of the Federal Court of Appeal In the Matter of a reference by the National Energy Board pursuant to subsection 28(4) of the Federal Court Act, [1987] F.C.J. No. 1060, Ct. File No. A-472-87, November, 1987, (F.C.A.), (the bypass case). He claimed that in this case there is a distinction between works and undertakings, stating that works are physical things and undertakings are arrangements that make use of works. He argued that the NEB Act focuses only on works.

3.8.13

He submitted that unless the proposed pipeline, located entirely in Ontario, is a work which will connect Ontario to another province or country, it is not a pipeline within the meaning of the NEB Act and does not fall within NEB jurisdiction.

3.8.14

He emphasized that the proposed pipeline will be an integral part of Union's system which

already extends as far as the Sarnia Industrial Line, a distance of 3.1 km from the St. Clair River.

3.8.15

He explained that the proposed pipeline will be routed through industrially zoned land where Union holds franchises for gas distribution to present and future customers.

3.8.16

He submitted that this case is the reverse of the (Cyanamid) bypass case in the sense that the argument would be that the small St. Clair Pipelines interconnection is an integral part of Union's large intra-provincial system. However, because the St. Clair Pipelines link reaches the international border, he claimed it cannot for jurisdictional reasons be subject to OEB control. He stated that if the focus is on the pipeline, which is all the legislation requires, there are two separate pipelines. The point of demarcation, he submitted, is wherever Union's system stops. He contended that the most logical place for the interconnection between St. Clair Pipelines and Union is at the river bank.

3.8.17

He noted that the Ojibway crossing link between Union and Panhandle Eastern happened before there were thoughts of jurisdiction, and the NEB was created later. He argued that the NEB decided to regulate this link and issued some

ex post facto orders, but that this does not make Union a "company" within the NEB Act since Section 25 (2) simply says that, for those pipelines that have been operating prior to a certain date, they may continue to operate providing they get a certificate. He noted that there was never any certificate from the NEB to construct that line. Nevertheless, he said, the NEB seems satisfied to exercise jurisdiction over the pipe that is in the river at Ojibway. He proposed that the same situation applies in this case.

3.8.18

He observed that the NEB, under its statute, exerts authority with respect to the import and export of gas to and from Canada, and it also has the authority, under Parts VI and VI.1 of the NEB Act, to regulate the flow of gas in and out of provinces. Union's point was that Parliamentary jurisdiction extends only to regulating the movement of gas in and out of Canada, and in and out of the provinces, not to regulating local distribution companies.

3.8.19

With respect to TCPL's preoccupation with Union's involvement in a broader sense, he responded by explaining that Unicorp is already involved in the North American energy picture through Unicorp Energy Inc. He explained that Unicorp controls, through Union Enterprises, Union which has been part of the North American

energy system for a long time. He pointed out that TCPL's gas supply arrives from the Great Lakes system at Dawn, is delivered to Oakville and back into TCPL's system by Union's Dawn-Trafalgar Transmission system. According to Union's Counsel, this has been an established fact for many years which is not going to be changed by the Application before this Board (see map in Appendix 4.2).

3.8.20

This case shows, according to Union's Counsel, that some of the Unicorp companies, for example St. Clair Pipelines, will be federally regulated, and some, such as Union Gas, will be provincially regulated. He noted that Union's intra-provincial gas distribution system is regulated by the OEB, and only so far as it engages in imports and exports, which it has been doing for a long time, is it federally regulated.

3.8.21

The point he made was that each member of the Unicorp family will have a role to play in Unicorp's grand scheme. Nevertheless, the evidence in this case, he claimed, establishes what Union's system is at present, and what it will be should the proposed pipeline be constructed.

Consumers'

3.8.22

The position of Counsel for Consumers' was that this is a relatively straightforward case of a project within the Province of Ontario in that Union has already recognized the NEB's jurisdiction over the river crossing portion which provides the international connection. He submitted that the work, i.e. the proposed pipeline, is located solely within Ontario and attracts provincial jurisdiction only.

3.8.23

He did not see any major distinction between the decision that Union is seeking from the Board and those of the Divisional Court, the Court of Appeal and the Federal Court in the bypass case. This was seen by Consumers' Counsel to be an easier case because of the nature of the pipeline proposal, and particularly because Union has recognized the jurisdiction of the NEB.

CIL

3.8.24

Counsel for CIL did not take any jurisdictional position. However, she observed that the bypass case does not resolve the issue of jurisdiction in this case. She pointed out that TCPL was not proposing to operate the Cyanamid bypass pipeline and, particularly, that the operation of the bypass pipeline was not necessary,

integral or vital to the operation of the overall, integrated, inter-provincial undertaking of TCPL.

3.8.25

She suggested that there is a stronger argument for the point of interconnection between Union and the international pipeline work to be at the Sarnia Industrial Line Station because this is the point from which gas is distributed into the Sarnia industrial area.

Board Staff

3.8.26

Counsel to Board Staff urged the Board to define the undertaking in accordance with the Application as transporting gas from a point in Ontario to another point in Ontario as an appropriate limitation, having regard to S. 92 (10) of the Constitution Act, 1867, and the ejusdem generis rule, "it is transportation we are looking at and that is all". Counsel to Board Staff's position was that the limit of the Board's jurisdiction is at the point where the wholly provincial facility connects with a facility that leads to an international or inter-provincial interconnection. In this case, he claimed, that point is at the St. Clair Valve Site.

3.8.27

He emphasized that neither the procurement of gas nor the international marketing issue raised by TCPL are relevant since these factors do not

change the nature of the undertaking, which is limited solely to transportation, and is based on the history of NEB jurisdiction upstream of interconnections with provincial undertakings that are subject to OEB jurisdiction.

3.8.28

He identified five cases in which the Courts have held that the high degree of integration between the federal and provincial undertaking was such that the local enterprise was governed by laws enacted by the Federal Parliament. In each case, Counsel to Board Staff concluded that the present Application is distinguishable from the reference decision in that the proposed pipeline will be closely integrated with the provincial system. He submitted that the proposed pipeline is not a federal undertaking but is a true local transportation work or undertaking wholly operated and built within Ontario, having regard to the ownership of the facility, the physical relationship between Union's existing system and both the proposed pipeline and St. Clair Pipelines, and the operational characteristics of the facility.

3.8.29

Counsel to Board Staff referred to the trilogy of the bypass cases, i.e. the Divisional Court judgments, the Federal Court of Appeal judgments and the Supreme Court of Ontario judgments, and submitted that they are directly applicable to this case.

3.8.30

He dealt with the ratio of the Divisional Court where it says:

The typical bypass facility located entirely within Ontario remains a local work under s.92 (10)(a) because:

1. It is owned, controlled and maintained by a separate entity from the interprovincial work.

3.8.31

He submitted that the proposed pipeline operates separately from the inter-provincial work in that it operates from the St. Clair Valve Site all the way to the Bickford Pool.

Further,

2. It is operated separately from the interprovincial work.

3.8.32

He submitted that while the proposed pipeline will also be operated in conjunction with the St. Clair Pipelines interconnection, both the interconnection and its operation alone do not bring the proposed pipeline into a federal sphere. Further,

3. It has no direct effect on the operating ability of the interprovincial work.

3.8.33

He admitted that this ratio creates an issue with which the Board must deal. Further,

4. Its purpose is entirely to serve an Ontario user.

3.8.34

He held that the proposed pipeline is meant to serve Ontario users alone. And lastly,

5. It is not vital, essential or integral to the interprovincial work.

3.8.35

He admitted that the proposed pipeline does not entirely meet this ratio which, by itself, does not satisfy the issue. Rather, he suggested that one must look to history.

3.8.36

In turning to the Reasons for Decisions of the Federal Court of Appeal (in the bypass case), Counsel to Board Staff observed that its ratio is not directly applicable to the facts of the present case because there is a much closer nexus between Union's proposed pipeline and the international pipeline.

3.8.37

He pointed out that the practicalities and history indicate that the intra-provincial line owned by Union is regulated by the OEB, and the change in jurisdiction is at the interconnection with the international line. He argued that Union has recognized the federal jurisdiction over the international line in that a proposed condition of approval by the OEB is that both the NEB and FERC grant their approvals.

TCPL's Reply

3.8.38

Counsel for TCPL asserted that the Dome Petroleum Case, regarding storage caverns being integral to a pipeline, is relevant to the issue of whether a pipeline which is designed, among other things, to link storage pools in Michigan with storage pools in southern Ontario, so as to create what Union's witness described as "a big pool of storage" in this area of North America, is an undertaking which extends beyond Ontario.

3.8.39

The evidence was absolutely clear, according to TCPL's Counsel, that from an operational standpoint, the subject pipelines of Union, St. Clair Pipelines and MichCon will all be controlled by MichCon when the gas is flowing west, at which time Union will not be operating the pipeline.

3.8.40

Regarding Union's position that the proposed line is not a "pipeline" under Section 2 of the NEB Act, he responded that the statute was intended to deal with pipelines which go to the border and beyond, and the fact that legal title at the border becomes that of an American corporation does not preclude the NEB from having jurisdiction over the pipeline to the border.

3.8.41

Union's assertion that the proposed pipeline travels through industrial land within Union's franchise area was considered by Counsel for TCPL to be irrelevant. He argued that the existing TCPL line from Courtright to Dawn also passes through Union's franchise area but no one would suggest that this gives the OEB jurisdiction over the line.

3.8.42

In response to Union's allegation that OEB jurisdiction ends wherever Union's system stops, Counsel for TCPL considered that the Dome Petroleum Case answers that contention, since corporate ownership is irrelevant, particularly when the corporations are related. The fact is, according to Counsel for TCPL, the pipeline from the international border to the Bickford Pool Station is an integrated line and any segregation is artificial.

3.8.43

Further, he contended that the St. Clair Valve Site is not literally at the shore and it is truly arbitrary that the division be at the valve.

3.8.44

Regarding Union's argument that Union is not a "company" within the NEB Act, he referred to overlooked Section 25(3) of the NEB Act which states:

For the purpose of this Act, ...

(c) a person, other than a company,

(i) operating a pipeline constructed before the 1st day of October, 1953 ... is deemed to be a company.

3.8.45

He concluded that, in order for Union to operate the pipeline lawfully to the international border at Detroit for connection with the Panhandle Eastern, Union must be a "company" under the NEB Act.

3.8.46

He referred to the Agreement for Firm Transportation Services between MichCon and Union (Exhibit 9.4) and pointed out that under Article 5.2, delivery, and therefore title, to the gas will pass from MichCon to Union one foot on the United States side of the interconnection between the Belle River and St. Clair Pipelines. Therefore, he contended that Union is acquiring title to the gas and taking delivery in the United States of America, for transmission through a section of the MichCon pipeline under the St. Clair River and ultimately to the Bickford Storage Pool. Union's undertaking, he submitted, must extend at least that far into the United States of America, even if Union is not the owner of all the pipe through which its gas is transmitted.

3.8.47

In response to Counsel to Board Staff, he contended that the "proposed pipeline operated in Ontario" has no special constitutional significance. However, he noted that from an operational standpoint, the pipeline from MichCon's Belle River Mills facilities to the Bickford Pool will, according to Union's witness, be operated as a single system and, when the gas is flowing west, the pipeline will be controlled by MichCon. Therefore, he contended it is wrong to base any jurisdictional argument on the assumption that Union will at all times control the operation of the proposed pipeline.

3.8.48

In response to Board Staff's position that the division of jurisdiction between the NEB and the OEB is based on history, Counsel for TCPL argued that the proposed St. Clair valve and the proposed Sarnia Industrial Line Station do not exist and therefore have no history. He argued that there is no evidence to justify the exact location of the St. Clair valve and, therefore, to base regulatory jurisdiction on the location of the valve alone appears to be arbitrary.

3.8.49

Further, Counsel for TCPL argued that the fact that a provincial regulatory body has historically exercised jurisdiction over particular undertakings does not lead to the necessary

inference that it is properly so regulated. Reference to the AGT case (Alberta Government Telephones, supra, at 92) shows that history does not always count. A provincial regulator cannot acquire jurisdiction over a federal undertaking through squatter's rights, according to Counsel for TCPL.

3.8.50

He argued against Counsel to Board Staff's submission that the Federal Court of Appeal "rejected" the Luscar Case, Luscar Collier v. MacDonald, [1927] 4 D.L.R. 85; [1927] A.C. 925.

3.8.51

He did not agree with Counsel to Board Staff's comparison of the proposed pipeline to the characteristics of a local work, particularly the statement that "it is meant to serve Ontario users alone." He argued that the evidence is that the line will be operable in either direction in conjunction with the "large pool of storage", and will attract pipelines to this area and turn it into a trading centre. He further argued that while it would be primarily an international pipeline operating for Union's own purposes, it would also be available on a carrier basis to anyone, including non-Ontario distributors such as GMi and TCPL whose markets lie both in, and beyond, Ontario.

3.8.52

In response to arguments supporting some arbitrary point for limiting NEB jurisdiction,

Counsel for TCPL suggested that it is sufficient that the OEB decide the only relevant question, namely, jurisdiction over the proposed pipeline. A finding that the NEB has such jurisdiction does not, he contended, necessarily imply that it has jurisdiction over the remainder of Union's system, according to TCPL. He argued that the selection of an arbitrary point to separate jurisdictions would not be a rational solution to the jurisdictional problem.

Supplementary Evidence

3.8.53

On July 19, 1988, TCPL filed a Notice of Motion with the Board requesting that further evidence in the form of Transcript excerpts, dated July 8, 1988, and July 11, 1988, from the Board Hearing under Board File No. E.B.R.L.G. 32 be accepted as evidence in this hearing, (E.B.L.O. 226). The Board reopened these proceedings for the purpose of hearing TCPL's motion, and granted the motion as described herein under section 3.7 of this Decision.

3.8.54

On August 23, 1988, subsequent to the close of the Reopened Hearing TCPL filed a Notice of Motion that the Board accept for filing in these proceedings, three documents relating to Empire State's application before the NY PSC

for leave to construct the Empire Pipeline, including Empire States' application, the prefiled testimony of Mr. W.J. Cooper of Union, and a letter dated June 14, 1988 from Mr. Cooper to Empire State. The Board granted this motion by an ex parte decision as described in section 3.7 of this Decision.

3.8.55

TCPL claimed that all the evidence it proposed for post-hearing filing was relevant to the question of jurisdiction which was raised in these proceedings.

3.8.56

In reaching its decision on the question of jurisdiction, the Board has taken account of the Transcript and documents relative to the Empire Pipeline which were filed after the conclusion of the main hearing, and has given this evidence the weight which the Board deemed appropriate under the circumstances, as described in section 3.7.

Board Findings

3.8.57

As stated earlier in this Decision, the issue of the OEB's jurisdiction was raised by TCPL in a specific motion to the effect that this Board did not have the jurisdiction to decide the proposal before it. The Board, with the

consent of all parties, reserved its decision on the matter of jurisdiction until it had heard the evidence and arguments of the parties.

3.8.58

The evidence and arguments having been completed, the Board now addresses the matter of its jurisdiction to decide the Application before it.

3.8.59

Historically, the collection of gas in the resource provinces, as well as the distribution and storage of gas in the user provinces, has been directly or indirectly acknowledged by every responsible board, government, parliament or legislature in Canada to fall within the jurisdiction of the provinces.

3.8.60

Union has been under the regulatory supervision of the Province of Ontario for seventy years.

3.8.61

A specific, short, international link was built to connect Union with Panhandle Eastern to access United States gas sources in the 1950s. This link came under the jurisdiction of the NEB in 1960, the link having been constructed in 1947. There has never been any suggestion that the NEB's jurisdiction over that link should extend onward into the Union distribution system.

3.8.62

There are other well known inter-provincial and international electrical power line and gas pipeline connections which are under the jurisdiction of the NEB. None have ever been used to support an argument that the jurisdiction of the NEB should extend to include all, or any part of, the distribution systems on either side of the link. Some of these are referred to in section 2.5 of this Decision.

3.8.63

The Board finds in law that it has jurisdiction over the proposed line from the west side of the St. Clair Valve Site eastward, and that the NEB has jurisdiction over the short section of the line from the international boundary eastward up to but excluding the valve site. This decision is based on the following seven reasons:

3.8.64

1. The pipeline over which the Board finds it has jurisdiction, when built, will lie entirely within the Province of Ontario and is fundamentally designed to be, and will be, an important part of the Union distribution system in Ontario. It is an intra-provincial work.

3.8.65

It is argued that the proposed St. Clair-Bickford Line will connect to an international link and, therefore, it is under the jurisdiction of the NEB. In some

cases this might be true, but in this case it is not so. Patently, Union, Consumers' and ICG are, at many points, connected to the TCPL line which is under the jurisdiction of the NEB. There is no substantial jurisdictional difference, in this Board's experience, between an international link and an inter-provincial link. No one has ever argued that, because Union, Consumers' or ICG connect to the TCPL line, and are fed by it, the jurisdiction of the NEB extends to include those three distribution systems.

3.8.66

It has also been argued that the line to be built in Ontario goes nowhere unless it connects to the international link, and therefore the jurisdiction of the NEB extends not only to the link, but to the St. Clair-Bickford Line as well. This argument is answered on three grounds:

- (a) the St. Clair-Bickford Line before this Board has a purpose beyond connecting to the international link, namely, to become part of the distribution system of Union in local areas in which Union is the franchised gas distributor.

(b) the jurisdiction of the NEB can be protected fully, as are Canadian interests, by ending the NEB's jurisdiction somewhere. If the jurisdiction does not cease as proposed by Union, it could embrace the entire Union system. Such a result could cause serious economic, political and regulatory discord in Canada.

(c) Union is already supplied by an interconnection, the Panhandle Line which, to be effective, has not required that the NEB's jurisdiction be extended downstream. As well, Union is supplied by TCPL which has not occasioned the NEB's incursion into an historical area of provincial jurisdiction.

3.8.67

2. The Board finds as a fact that the St. Clair-Bickford Line should be accepted as a component of the distribution system of Union, with or without the international link.

3.8.68

The St. Clair-Bickford Line, if built prior to meeting the capital investment criteria of this Board (see EBO 134), might cause difficulties to Union if it later attempted to have this line accepted as part of its OEB approved rate base.

3.8.69

This Board clearly would have had the jurisdiction to consider this line as part of Union's distribution system if there were no proposal to link the St. Clair-Bickford Line to a system interconnecting into the United States.

3.8.70

As part of a local distribution system, (whose many lines serve several functions simultaneously: arterial, transmission and distribution), the St. Clair-Bickford Line traverses municipal areas for which Union possesses distribution franchises. The Board finds this as a fact, of which information it is seized as the approving authority for the terms and conditions of gas franchises in Ontario.

3.8.71

In addition, the Board finds as a fact that Union has a reasonable expectation that it will, in the foreseeable future, need to extend distribution lines into the area traversed by this line. This finding is reinforced by the evidence that the said area is zoned for industrial development, as well as its proximity to other neighbouring industrially developed areas.

3.8.72

The Board finds that it is entirely reasonable for Union to expect that it will serve this area with gas. Before that expectation can be realized, and the St. Clair-Bickford Line can be included in Union's rate base, a further hearing will be required and this, in any event, is not the subject of this hearing.

3.8.73

It is, therefore, not correct to allege that the St. Clair-Bickford Line has only one use, namely to connect with the international line. As the Board has found, the primary constitutional characteristic of the proposed line is as a part of the Union distribution system, not as an "integral" part of the short international line.

3.8.74

3. This Board has the regulatory jurisdiction over the economic viability and performance of Union. No connection to Union could become more significant to its economic viability than a line connecting the Union distribution system to the storage in Michigan, which also provides access to potentially cheaper United States gas, and thereby provides enhanced security of supply and operational flexibility.

3.8.75

In the Board's view, the St. Clair-Bickford Line is integrated with Union's Ontario system, and is of no national significance or jurisdiction, but is basic to the economic fabric of Ontario and particularly southwestern Ontario, in that it provides the means by which Union can supply local industrial, residential and commercial natural gas requirements.

3.8.76

In the Board's opinion, it would be operationally impossible to share jurisdiction of this important local function with another board which has no experience in, or mandate for, regulating Ontario gas distributors.

3.8.77

Not only is there the problem of shared control, there is, as well, the major difficulty of defining where the jurisdiction of the NEB would end should jurisdiction be shared. A Court could be in constant controversy trying to arbitrate the unarbitrable. The reason regulation has been successful within Ontario is that it has been strong, focused and undivided.

3.8.78

4. Neither the international link nor the St. Clair-Bickford Line will be operated by, or form part of, the TCPL system or a truly Canadian gas transportation system.

Therefore, this Board, by taking jurisdiction of the St. Clair-Bickford Line, causes no risk to TCPL and avoids any risky sharing of jurisdiction.

3.8.79

5. The NEB will control gas exports out of Canada and gas imports into Canada, including tolls and service, totally, whether the link is 100 feet or 100 miles in length. The jurisdiction of the NEB is served and reserved by limiting its jurisdiction between two points: the international border near the centre of the St. Clair River, and the St. Clair Valve Site as proposed by Union.

3.8.80

In the Board's opinion, control of the movement of gas in and out of Canada, and between Canadian provinces, is what the Constitution sought to reserve to the federal government. History has confirmed that concept and the allocation of jurisdiction and control that flows from it.

3.8.81

6. As already discussed above in reason 1, the proposed St. Clair-Bickford Line is part of a distribution system long recognized as being within the jurisdiction of Ontario. The fact that the St. Clair-Bickford Line's financial viability

may be presently dependent on an international connection does not, in this Board's opinion, justify removing the OEB's jurisdiction over a local system, its storage, its supply and its distribution, as long as the NEB has control over the short international connecting link.

3.8.82

7. If the NEB were to have jurisdiction easterly beyond the short, river crossing link, where would its jurisdiction end, and for what reason? If not at the proposed valve site, then where? How far east into the bowels of the Union system should the NEB's jurisdiction extend? CIL, unhelpfully said it did not know. TCPL on the other hand was of the view that the NEB's jurisdiction went at least as far as the Bickford Pool, but how much farther it did not know.

3.8.83

In the Board's view, any attempt to extend the jurisdiction of the NEB east of the proposed valve site will cause serious and unnecessary economic, legal, political and jurisdictional problems. Clearly the NEB's jurisdiction must have a beginning and an ending:

- (a) The beginning must be no further west than the centre of the St. Clair River, lest it encroach on the jurisdiction of a sovereign nation.
- (b) The ending in the Board's opinion should be at the St. Clair Valve Site, lest it encroach on the established right of provincial jurisdiction over local distribution systems.
- (c) The ending could be proposed to be Hamilton or Trafalgar including Union's storage facilities. This proposition would suggest that the NEB should also have jurisdiction over NOVA in Alberta, and all distribution companies connected to the TCPL system in all the provinces. In fact, this hearing tests the very foundation of that hypothesis.

3.8.84

If the St. Clair Valve Site is not to be the end of the NEB's jurisdiction, except for arbitrariness, where would the termination be?

3.8.85

The St. Clair Valve Site is a control mechanism to separate the under-river pipeline and, as such, it can be placed almost anywhere east of the St. Clair

River bank. However, if the valve is to fulfill its intended purpose it can not be located such that the separated river crossing section also includes current or anticipated local distribution lines. The Board considers the proposed valve site location to be appropriate for the purpose to which it is intended, and that its selection was not on an arbitrary basis.

3.8.86

In reaching its decision the Board is aware of, and has reviewed, a long inventory of cases decided in Canada which deal with jurisdiction under the Constitution. These are listed in Appendix 4.15.

3.8.87

The Board does not feel that any of these cases deal specifically with the real historical and operational merits of the jurisdictional matter before it.

3.8.88

The Board finds that the St. Clair-Bickford Line, as proposed by Union, falls within the jurisdiction of the OEB, while the international link falls within the jurisdiction of the NEB.

3.8.89

The Board, therefore, dismisses TCPL's motion.

3.9 COSTS AND COMPLETION OF THE PROCEEDINGS

Costs

3.9.1

None of the parties appearing in these proceedings has asked for costs. It is unnecessary, therefore, for the Board to deal with any party and party costs other than the costs of the Board. Under subsection 28(4) of the Act the Board has the authority and discretion to fix its costs, "... regard being had to the time and expenses of the Board".

3.9.2

The Application before the Board has caused the Board to incur certain costs related to its time and expenses which would normally be borne in total by the Applicant.

3.9.3

As a result of TCPL's unsuccessful motion challenging the Board's jurisdiction, TCPL's filings of post-hearing evidence relative to

the Empire State application to the NY PSC, the reopening of this hearing to hear TCPL's July 19, 1988, Notice of Motion and TCPL's August 23, 1988 Notice of Motion for the further filing of post-hearing evidence, the Board has incurred additional and unusual costs.

Board Findings

3.9.4

The Board finds that the Applicant shall pay the Board's costs incurred as a result of the main portion of this hearing but excluding those costs incurred by the Board as a result of TCPL's unsuccessful motion regarding the Board's jurisdiction, TCPL's post-hearing filings of evidence relative to the Empire State Application to the NY PSC and the costs of the Reopened Hearing.

3.9.5

The Board further finds that those of its costs determined to have been incurred as a result of TCPL's unsuccessful motion on jurisdiction, TCPL's post-hearing filings of evidence relative to the Empire State Application to the NY PSC and the costs of the Reopened Hearing shall be paid by TCPL.

3.9.6

Because the jurisdictional issue impacted to some degree on all aspects of this hearing, it is impossible to make a precise division of the Board's costs as described above. As a result,

the Board has had to rely on its experience and judgement in arriving at a fair allocation. The Board finds that 50 percent of its total costs fixed in these proceedings shall be paid by Union, with the balance to be paid by TCPL.

3.9.7

The Board will, in due course, issue orders requiring the payment of its costs in keeping with the above findings.

Completion of the Proceedings

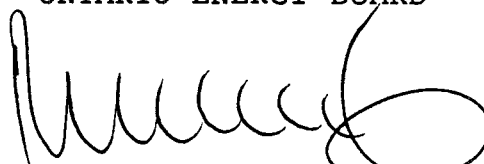
3.9.8

The Board grants the Applicant leave to construct the proposed facilities, conditioned as described in Appendices 4.11 as amended by the Board, 4.12 and 4.13 attached hereto, and will issue the necessary Order in due course.


DECISION WITH REASONS

Dated at Toronto this *1st* day of September, 1988.

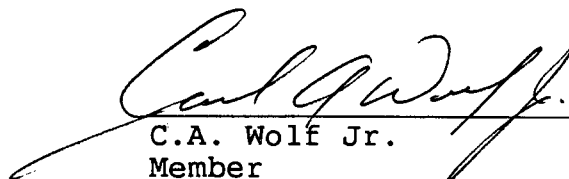
ONTARIO ENERGY BOARD



R.W. Macaulay, Q.C.
Presiding Member



O.J. Cook
Member



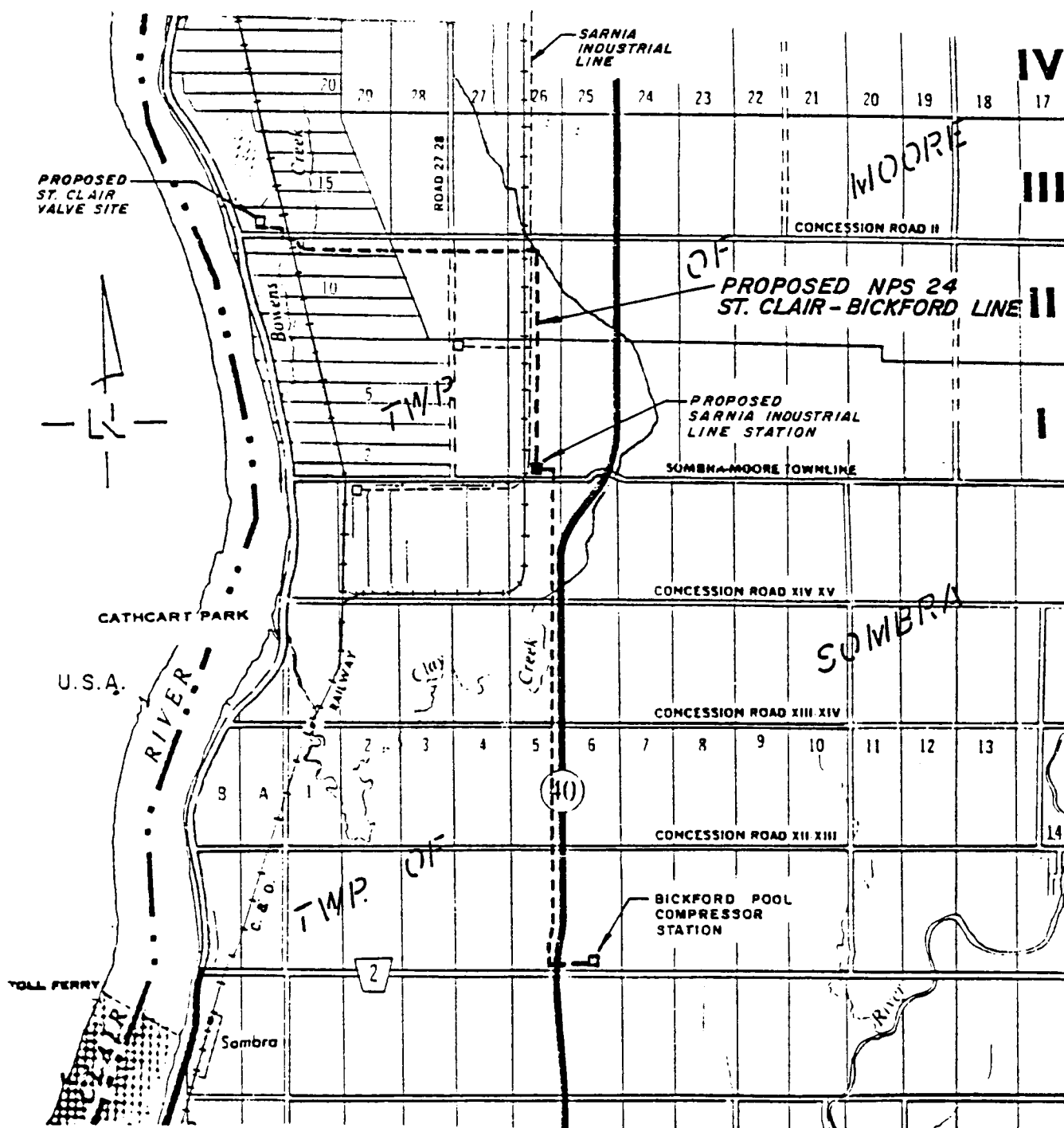
C.A. Wolf Jr.
Member

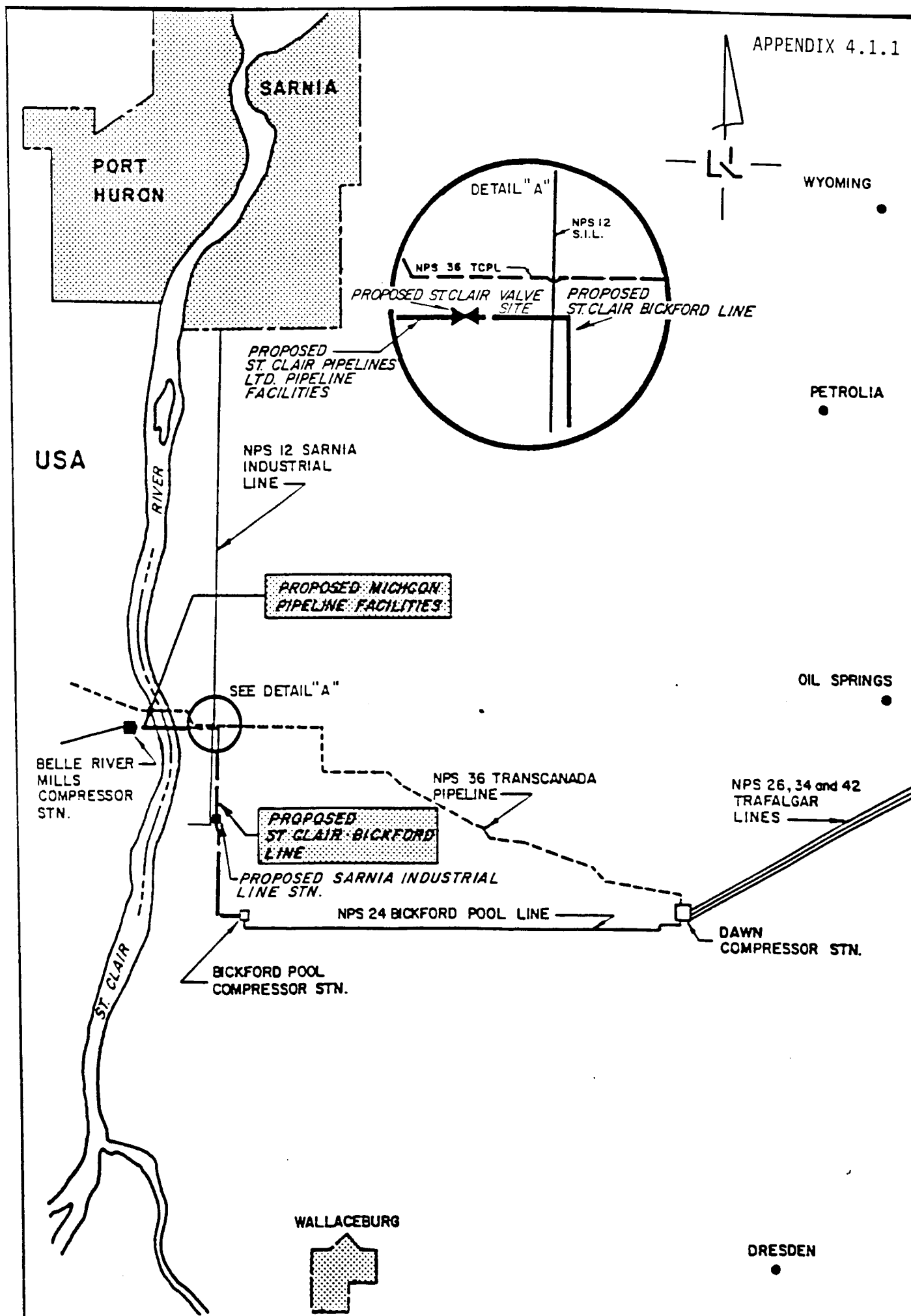
DECISION WITH REASONS

4. APPENDICES

Union GAS

NPS 24 ST. CLAIR - BICKFORD LINE





DECISION WITH REASONS

APPENDIX 4.2

TRANSCANADA PIPELINES AND CONNECTING SYSTEMS MAP



TransCanada PipeLines and Connecting Systems

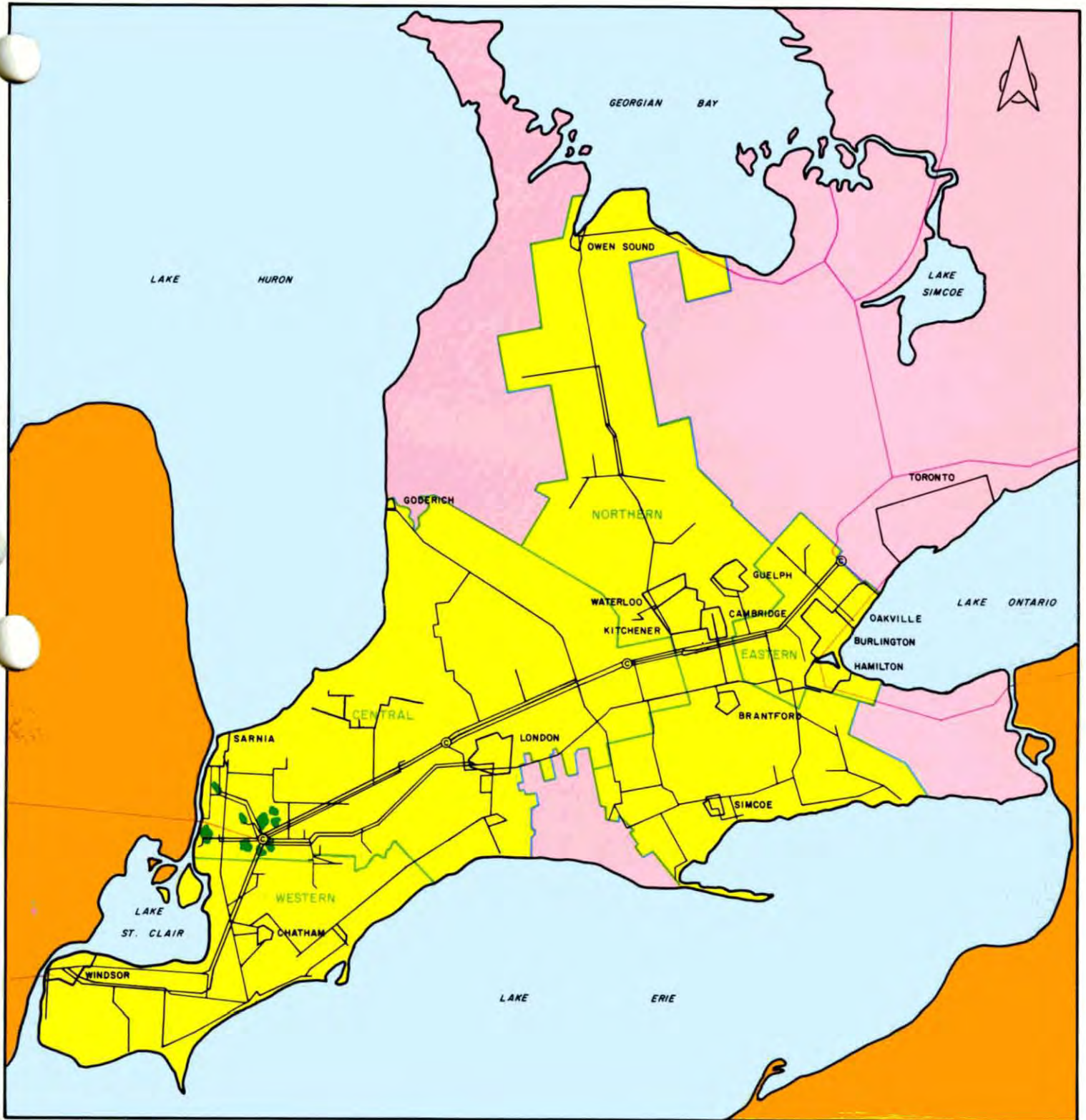


DECISION WITH REASONS

APPENDIX 4.3

UNION GAS PIPELINE SYSTEMS MAP

UNION GAS LIMITED PIPELINE SYSTEMS MAP



LEGEND

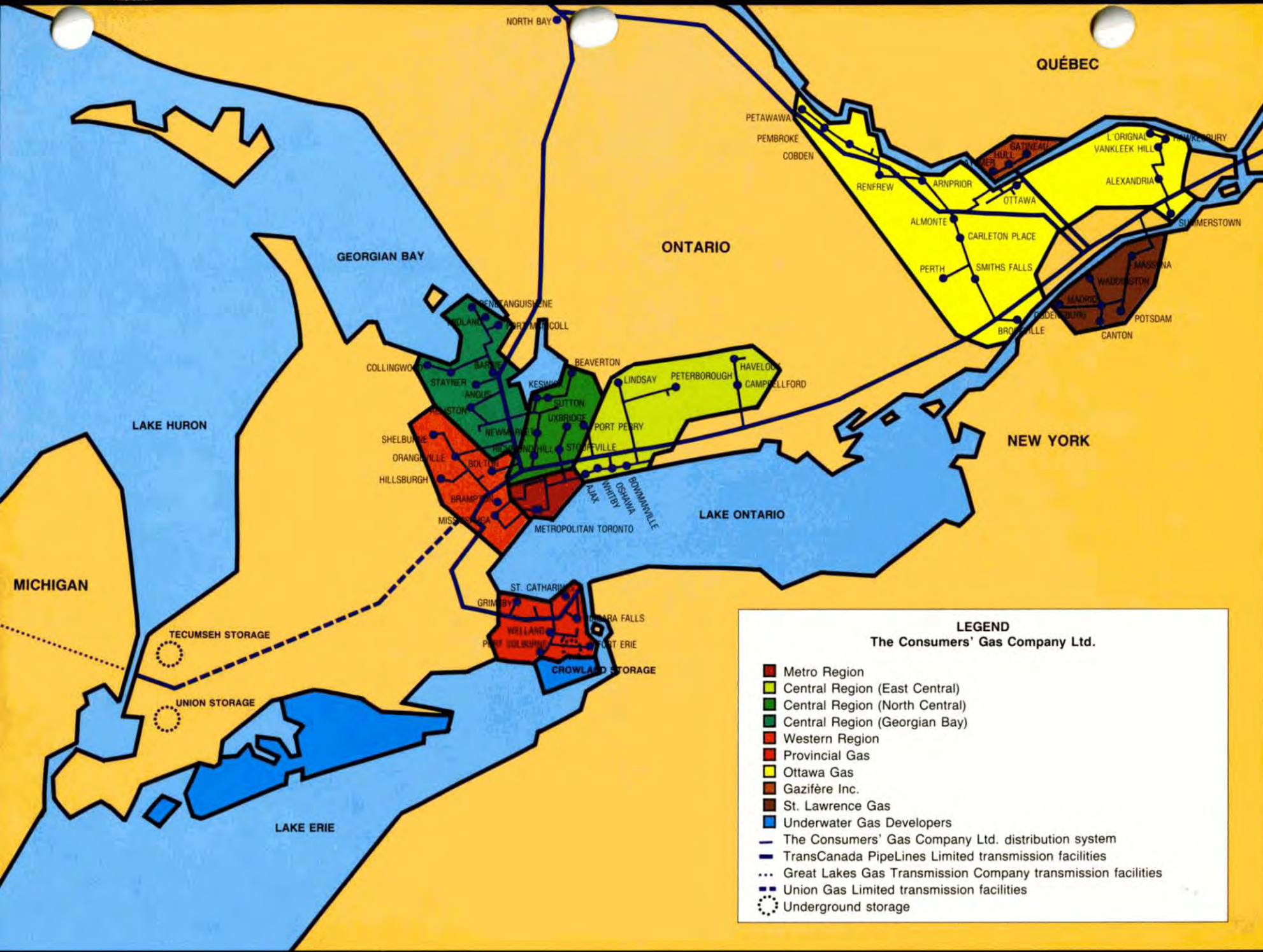
TIVE STORAGE POOLS



DECISION WITH REASONS

APPENDIX 4.4

CONSUMERS' GAS SYSTEM MAP



LEGEND
The Consumers' Gas Company Ltd.

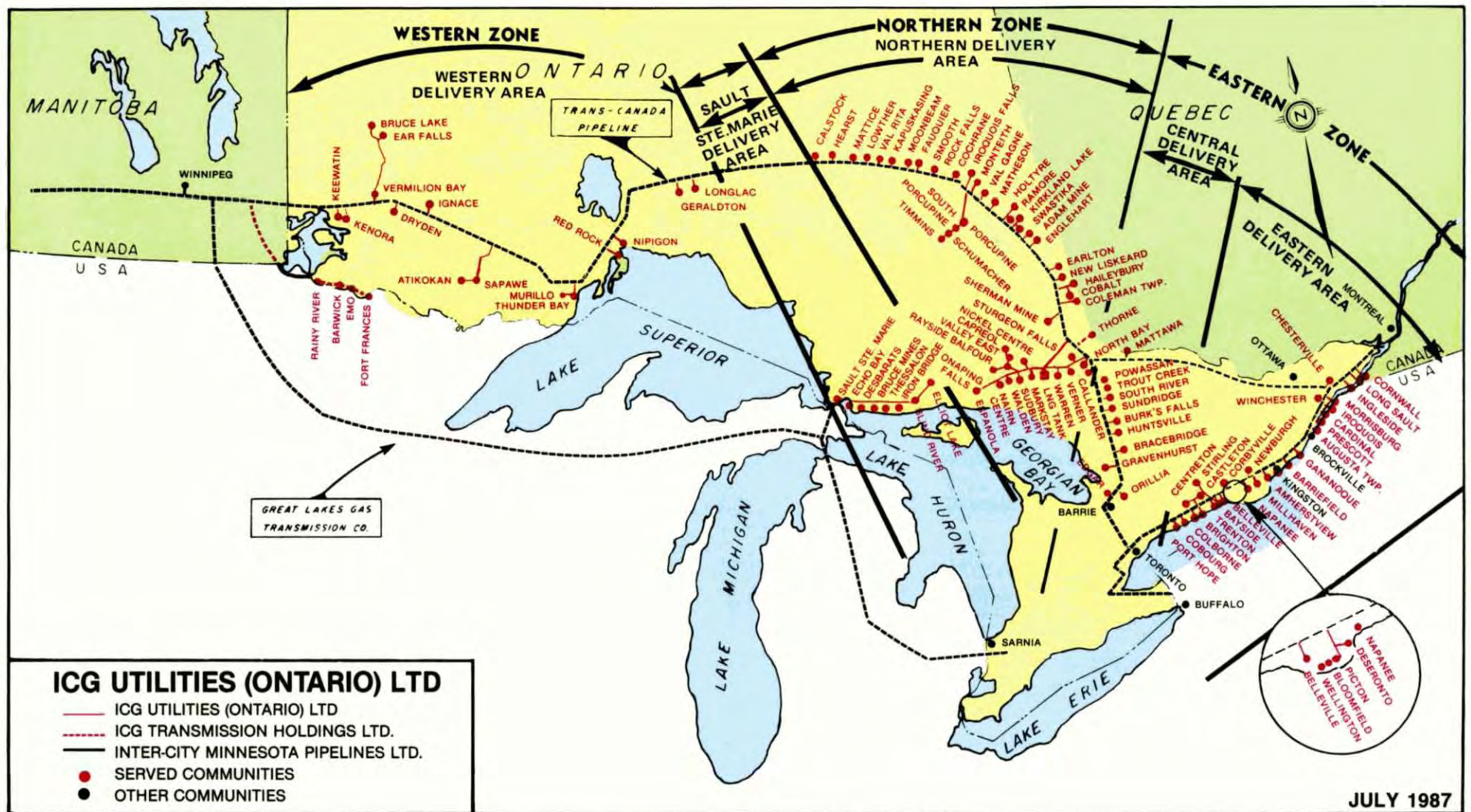
- Metro Region
- Central Region (East Central)
- Central Region (North Central)
- Central Region (Georgian Bay)
- Western Region
- Provincial Gas
- Ottawa Gas
- Gazifère Inc.
- St. Lawrence Gas
- Underwater Gas Developers
- The Consumers' Gas Company Ltd. distribution system
- TransCanada PipeLines Limited transmission facilities
- ... Great Lakes Gas Transmission Company transmission facilities
- Union Gas Limited transmission facilities
- Underground storage

DECISION WITH REASONS

APPENDIX 4.5

ICG UTILITIES (ONTARIO) DISTRIBUTION NETWORK MAP

DISTRIBUTION NETWORK



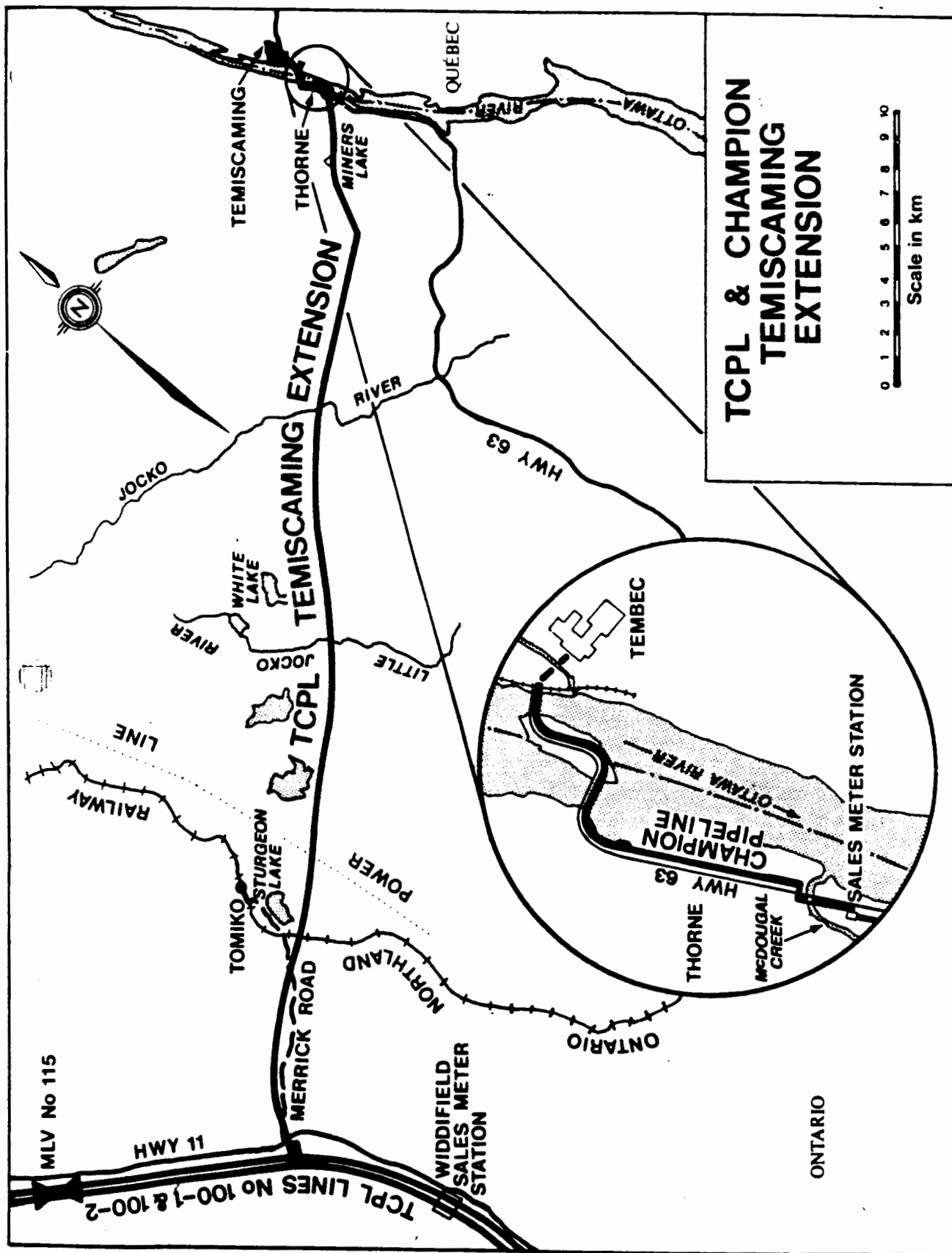
Energy Working For You

Figure 18

Gas Pipeline Companies Regulated by the National Energy Board



(From NEB Annual Report 1987)



06/30/88

14:46

☎495 5802

GAS SUPPLY

--- AIRD & BERLIS

005

FILE NO.

982

TRANS-CANADA PIPE LINE
EXISTING

**NIAGARA GAS TRANSMISSION
PROPOSED CORNWALL EXPORT PIPE LINE.**

SCALE 1:50000

NATIONAL ENERGY BOARD

MARCH 1960

APPENDIX A

TO

CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY

NO.

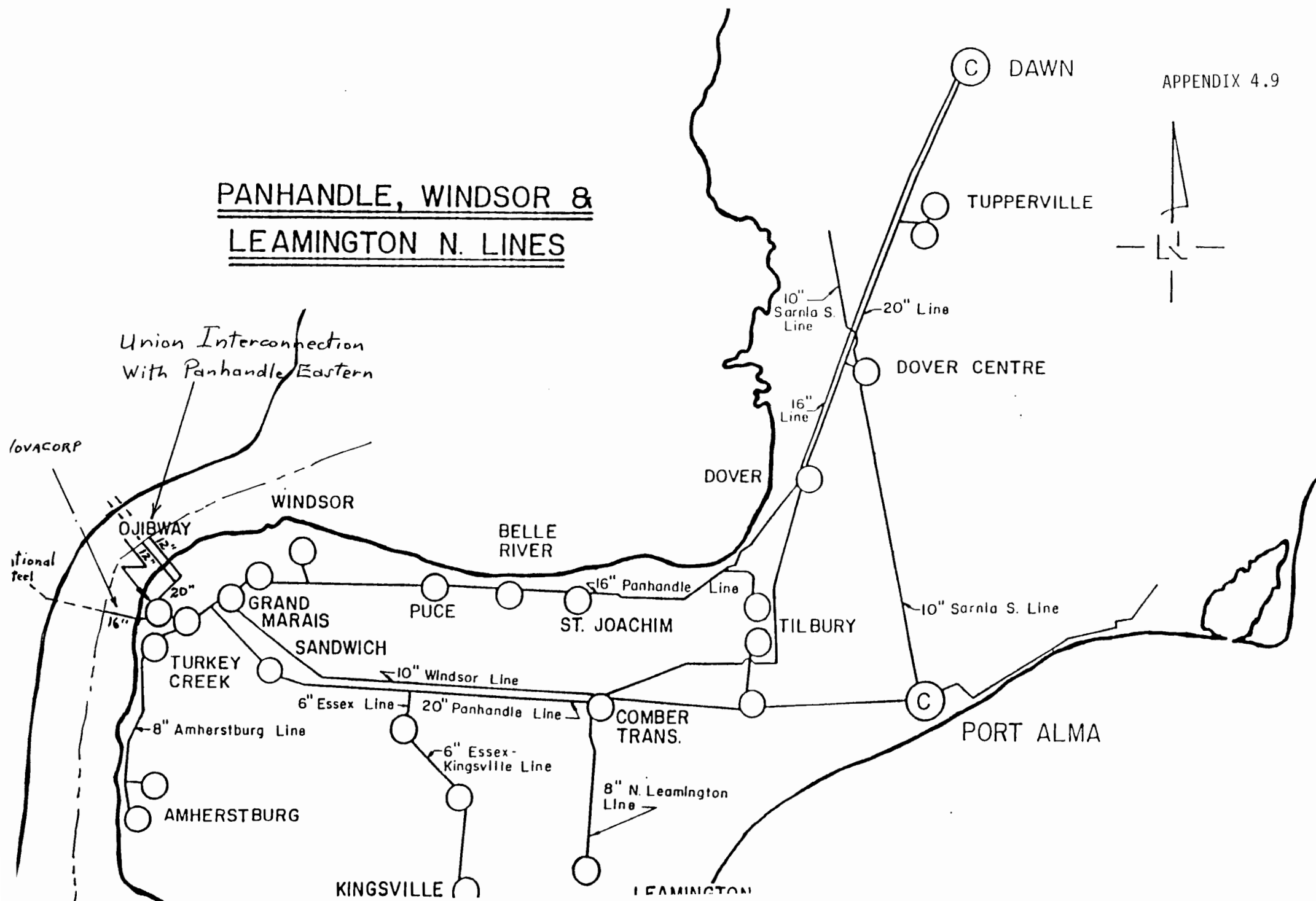
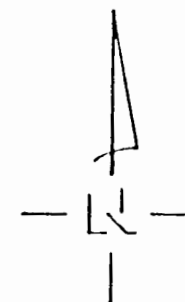
NATIONAL ENERGY BOARD

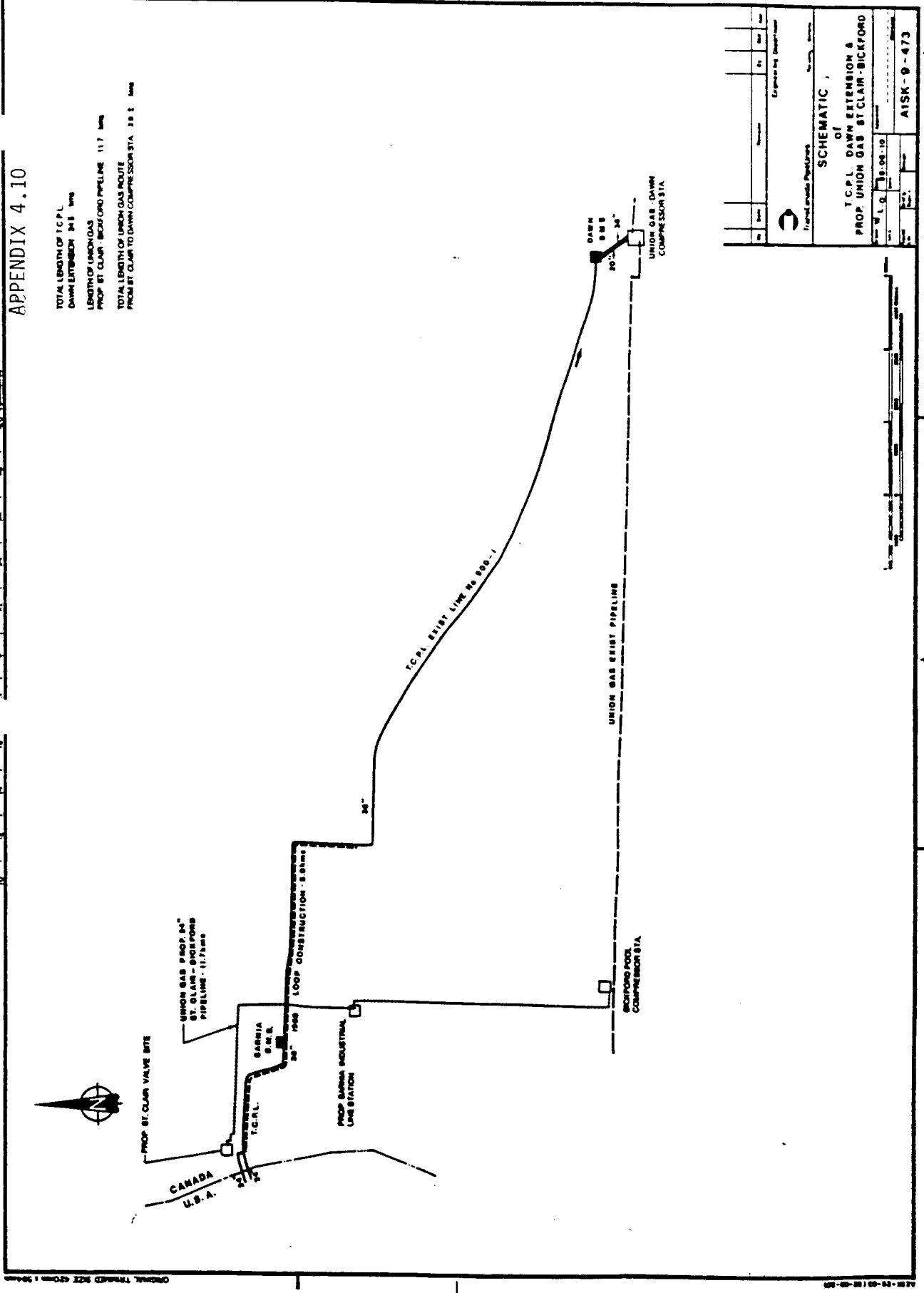
SECRETARY.

The map illustrates the proposed gas pipeline route from the St. Lawrence River area, passing through Barnhart Island and Cornwall, and extending towards the Massena area. Key features include the St. Lawrence River, Barnhart Island, and the Cornwall area. The map also shows the Canadian National Railways and the proposed gas pipeline route. The map is divided into sections by dashed lines, likely representing county or municipal boundaries. The text 'ST. LAWRENCE RIVER' is written across the top, and 'BARNHART ISLAND' is written on the left. The word 'CORNWALL' appears twice, once near the river and once near the bottom right. The text 'CANADIAN NATIONAL RAILWAYS' is at the top. The text 'PROPOSED ST. LAWRENCE GAS CO. INC. 12 IN. PIPE LINE' is at the bottom. The map also shows the 'ST. LAWRENCE' and 'MASSENA' areas, and the 'STORMONT CO' and 'ST. LAWRENCE CO' boundaries. The text 'ONTARIO' and 'NEW YORK' are also present. The map includes a compass rose and a scale bar.

PANHANDLE, WINDSOR & LEAMINGTON N. LINES

APPENDIX 4.9





TOTAL LENGTH OF TCPL
 DAWN EXTENSION 34.5 kms
 LENGTH OF UNION GAS
 PROP ST. CLAIR - BICKFORD PIPELINE 11.7 kms
 TOTAL LENGTH OF UNION GAS ROUTE
 FROM ST. CLAIR TO DAWN COMPRESSION STA. 22.8 kms

APPENDIX 4.10

Prepared by: TCPL Checked by: TCPL Date: 10-06-10		Engineering Department Project No.: AISK-9-473	
SCHEMATIC of TCPL DAWN EXTENSION & PROP UNION GAS ST. CLAIR-BICKFORD			

Appendix 4.11

ST. CLAIR-BICKFORD LINE

Conditions of Approval E.B.L.O. 226

(Exhibit 10.2 except for amended Condition 1)

- a) Subject to Condition (b), Union shall comply with all undertakings made by its counsel and witnesses, and shall construct the pipeline and restore the land according to the evidence of its witnesses at the hearing.
 - b) Union shall advise the Board's designated representative of any proposed change in construction or restoration procedures and, except in an emergency, Union shall not make any such change without prior approval of the Board or its designated representative. In the event of an emergency, the Board or its designated representative shall be informed forthwith after the fact.
-

DECISION WITH REASONS

- c) Union shall furnish the Board's designated representative with every reasonable facility for ascertaining whether the work has been and is being performed according to the Board's Order.
 - d) Union shall give the Board and the Chairman of the OPCC 10 days written notice of the commencement of construction of the pipeline.
 - e) Union shall designate one of its employees as project engineer who will be responsible for the fulfillment of conditions and undertakings on the construction site. Union shall provide the name of the project engineer to the Board. Union shall prepare a list of the undertakings given by its witnesses during the hearing and will provide it to the Board for verification and to the project engineer for compliance during construction.
 - f) Union shall file with the Board Secretary notice of the date on which the installed pipeline is tested within one month after the test date.
 - g) Both during and after the construction, Union shall monitor the effects upon the land and the environment, and shall file ten copies of both an interim and a final monitoring report in writing with the Board.
-

DECISION WITH REASONS

The interim monitoring report shall be filed within three months of the in-service date and the final monitoring report within 15 months of the in-service date.

- h) The interim report shall describe the implementation of Conditions (a) and (b), if any, and shall include a description of the effects noted during construction and the actions taken or to be taken to prevent or mitigate the long-term effects of the construction upon the land and the environment. This report shall describe any outstanding concerns of landowners.
 - i) The final monitoring report shall describe the condition of the rehabilitated right-of-way and actions taken subsequent to the interim report. The results of the monitoring programs and analysis shall be included and recommendations made as appropriate. Further, the final report shall include a breakdown of external costs incurred to date for the authorized project with items of cost associated with particular environmental measures delineated and identified as pre-construction related, construction related and restoration related. Any deficiency in compliance with undertakings shall be explained.
-

DECISION WITH REASONS

- j) Union shall file "as-built" drawings of the pipeline; such drawings shall indicate any changes in route alignment.
 - k) Within 12 months of the in-service date, Union shall file with the Board a written Post Construction Financial Report. The Report shall indicate the actual capital costs of the project and shall explain all significant variances from the estimates adduced in the hearing.
 - l) The Leave to Construct granted herein terminates December 31, 1989.
-

Appendix 4.12

Additional Condition of Approval

The Board's approval for the construction of the St. Clair to Bickford transmission line proposed by Union Gas Limited is contingent upon St. Clair Pipelines Limited and Michigan Consolidated Gas Company receiving all the regulatory approvals necessary to construct the pipelines from the St. Clair Valve Station to MichCon's Compressor Station at Belle River Mills, Michigan, in order to complete the connection to the storage facilities situated in the State of Michigan, one of the United States of America.

Copies of the approvals issued by or through FERC, the Michigan Public Service Commission and the National Energy Board shall be filed with the Board prior to the commencement of construction of the St. Clair - Bickford transmission line.



Ontario

Ministry of
Consumer and
Commercial
Relations

Ministère de la
Consommation
et du
Commerce

Technical Division
Standards des normes
Division techniques
Fuels Safety Branch

DEPT. (TX) : 0004

3000 Yonge Street West

Shipp Centre - West Tower

4th Floor

Toronto, Ont. M8X 2X4

(416) 234-6022

APPENDIX 4.13

June 10, 1988

File: # 5170

9011

Mr. Neil McKay
Chairman
Ontario Pipeline Coordination Committee
Ontario Energy Board
P.O. Box 2319
2300 Yonge Street
26th Floor
Toronto, Ontario
M4P 1E4

Dear Mr. McKay:

RE: Revised Route - NPS 24 St. Clair Line

This is in response to Union Gas letter of June 7, 1988 and further to our letter of February 26, 1988 regarding the proposed St. Clair Line.

The location of the pipeline adjacent to the Moore Road N.2 in a 18m. easement appears adequate after considering other alternatives, although two houses will be close to the pipeline easement.

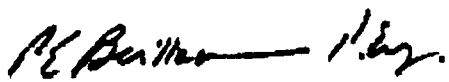
Because of this, the following recommendation should be taken into account:

- a) The pipeline shall be located in the northerly portion of the easement so that the distance of the closest house to the pipeline is 18m. as a minimum as shown on Union's drawing No. 15524.
- b) Require Union Gas to have a written acknowledge from the house occupants that they have no objection to the construction of the pipeline in their front yard as per drawing No. 15524.
- c) Require Union Gas to implement special mitigatory measures in order to minimize disruption during construction, ensure safe access to and out of the houses, prevent the possibility of children falling into the trench and restoring the right of way and working space to its original conditions.

Mr. Neil McKay
June 10, 1988
Page 2.

Should you have any questions, please call us at your convenience.

Yours truly,


H E.K. Taylor, P. Eng.
Chief Engineer

cc: R. Chan, Union Gas

E.B.L.O. 226

ONTARIO ENERGY BOARD

Application by Union Gas Limited for
Leave to Construct a Natural Gas
Pipeline and Ancillary Facilities in
The Townships of Moore and Sombra,
Both in The County of Lambton.

NOTICE OF MOTION

TAKE NOTICE THAT the Intervenor TransCanada
PipeLines Limited will make a motion to the Ontario
Energy Board at the commencement of Hearing of the within
Application, on Thursday, 16 June 1988, or so soon after
that time as the motion can be heard.

THE MOTION IS FOR the following relief:

- (a) an Order declaring that the subject matter of
the within Application by Union Gas Limited is
not within the jurisdiction of the Ontario
Energy Board;
- (b) an Order that the subject matter of the within
Application by Union Gas Limited is within the
exclusive jurisdiction of the National Energy

Board pursuant to the National Energy Board Act, R.S.C. N-6, as amended:

- (c) alternatively, pursuant to the Ontario Energy Board's draft Rules of Practice and Procedure, Rule 13(b), that the Board state a case to the Divisional Court respecting the jurisdiction of the Board and, further, that the Board order that the hearing of the within Application be stayed pending the decision of the Divisional Court on this issue.

THE GROUNDS FOR THE MOTION ARE:

- (a) that the proposed pipeline falls within Federal and not Provincial jurisdiction;
- (b) that the proposed pipeline is a "pipeline" within the definition set out in Section 2 of the National Energy Board Act R.S.C. N-6, as amended.

DATED at Toronto this day of June, 1988.

TRANSCANADA PIPELINES LIMITED

per: 
Jill C. Schatz
Solicitor

TO: Ontario Energy Board
2300 Yonge Street
26th Floor
Toronto, Ontario
M4P 1E4

AND TO:

Blake, Cassels & Graydon
P.O. Box 25
Commerce Court West
Toronto, Ontario
Attention: Burton H. Kellock, Q.C.

Solicitors for Union Gas Limited

AND TO:

All Intervenors

E.B.L.O. 226

ONTARIO ENERGY BOARD

Application by Union Gas Limited for
Leave to Construct a Natural Gas
Pipeline and Ancillary Facilities in
The Townships of Moore and Sombra,
Both in The County of Lambton.

NOTICE OF MOTION

TransCanada PipeLines Limited
P.O. Box 54
Commerce Court West
Toronto, Ontario
M5L 1C2

Appendix 4.15

LIST OF CASE CITATIONS

Capital Cities Communications Inc. et al. v. Canadian Radio-Television Commission et al. (1977), 81 D.L.R. (3d) 609; [1978] 2 S.C.R. 141.

Re Ontario Energy Board and Consumers' Gas Co. et al. (1987), 59 O.R. (2d) 766 (Div. Ct.).

Re Public Service Board et al, Dionne et al and A.G. of Canada et al. (1977), 83 D.L.R. (3d) 178 (S.C.C.).

Luscar Collier v. MacDonald, [1927] 4 D.L.R. 85; [1927] A.C. 925.

Alberta Government Telephones v. C.R.T.C. et al;. (1985), 15 D.L.R. (4th) 515 [1985]; 2 F.C. 472 17 Admin. L.R. 149; (F.C.T.D.); (1985) 24 D.L.R. (4th) 608; [1986] 2 F.C. 179; 17 Admin. L.R. 190 (F.C.A.)

Re Westspur Pipeline Co. Gathering System (1958), C.R.T.C. 158 (Bd. of Transport Commissioners)

In the Matter of a reference by the National Energy Board pursuant to subsection 28(4) of the Federal Court Act, [1987] F.C.J. NO. 1060, Ct. File No. A-472-87, November, 1987 (F.C.A.).

Reference re: Legislative Authority in Relation to Bypass Pipelines, [1988] O.J. NO. 176, February, 1988 (C.A.).

Dome Petroleum v. National Energy Board (1987), 73 N.R. 137 (FCA)

Northern Telecom and Canadian Union of Communication Works v. Communication Workers of Canada and A.G. Canada, [1983] 1 S.C.R. 733

DECISION WITH REASONS

City of Montreal v. Montreal Street Railway, [1912] A.C. 333.

Re: Regulation and Control of Radio Communication in Canada, [1932] A.C. 305.

Canadian Pacific Railway v. A.G. B.C., [1950] A.C. 122.

Re Inter-provincial Paving Co (1962), C.C.H. Lab. Law Cases, 1188 (Ontario Labour Relations Board)

Canadian National Railway v. Nor-Min Supplies Ltd., [1977] 1 S.C.R. 322.

B.C. Electric Railway v. Canadian National Railway, [1932] S.C.R. 161.

Re: Industrial Relations and Disputes Investigation Act (The Stevedoring Reference), [1955] S.C.R. 529.

In the matter of a Public Hearing Into Certain Facilities Owned or Leased and Operated by Dome Petroleum Ltd., National Energy Board, January 1986.

R. v. Board of Transport Commissioners, (Go Train Case), [1968] S.C.R. 118.

Re Henuset Ltd. et al. (1981), 1 D.L.R. (3d) 639

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DECISION WITH REASONS

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R. v. Man. Lab. Bd. ex parte Invictus (1968), 65 D.L.R. (2d) 517

Re: A.-G. Que. and Baillargeon (1978), 97 D.L.R. (3d) 447

Re: Colonial Coach Lines, [1967] 2 O.R. 25

Re: Windsor Airline Limousine Service, (1980) 30 O.R. (2d) 732

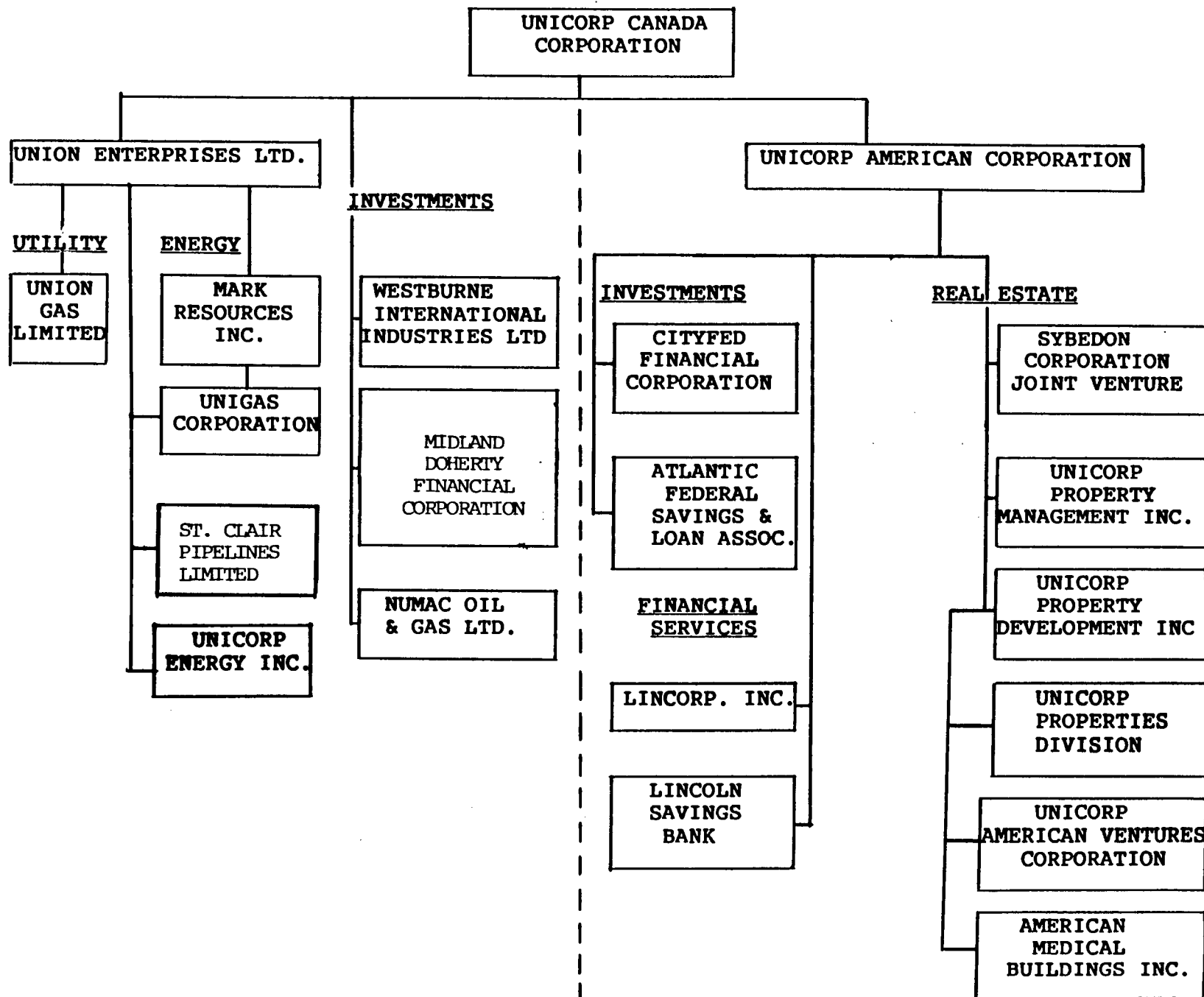
Campbell-Bennett v. Comstock Midwestern, [1954] S.C.R. 207

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Kootenay & Elk R. Co. et al v. CPR Co. et al (1972), 28 D.L.R. (3d) 385 (1974) S.C.R. 955

The Minister of Employment and Immigration and the A.-G. Canada v. Harvinder Singh Sethi (Unreported) June 20, 1988, Ct. File No. A-493-88 (F.C.A.)

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CANADA

(1988)

U.S.

5. GLOSSARY OF TERMS

ANNUAL
CONTRACT
QUANTITY
(ACQ) GAS

An annual quantity of gas sold by TCPL under a contract to a customer under a delivery schedule largely at the discretion of TCPL. Forty percent is deliverable in the winter period and sixty percent in the summer. The charge for such is on a volumetric basis with a provision for a supplemental charge for volumes offered and not taken.

ANNUAL LOAD
FACTOR

A mathematical indicator of the way in which a customer consumes gas over the year. It can be calculated in more than one way. A common approach is to express the average daily volume of gas consumed by a customer over the year as a percentage of the customer's peak day consumption.

DECISION WITH REASONS

Bcf	An abbreviation for a billion cubic feet of gas which is equivalent to $28.328 \times 10^6 \text{ m}^3$.
BUY-SELL	In this arrangement, the end-user purchases its own supply of gas and arranges for transportation, generally to the distributor's receipt point. The distributor purchases the gas and commingles it with the balance of its supplies, and then sells to the end-user as a sales customer under the appropriate rate schedule.
BYPASS	Bypass involves the total avoidance of the LDC's system for the transportation of gas.
CLASS LOCATION	A classification of a geographic area according to its approximate current and future population density and other characteristics considered when prescribing the design and methods of pressure testing for pipelines to be located in the area.
CLASS 1 & 2 LOCATION	A Class 2 location has higher population density than a Class 1 location. Therefore a pipeline designed originally for Class 1 location would be subject to a reduction in pipeline operating

DECISION WITH REASONS

pressure, and hence lower throughput, in the event that the area was later reclassified as Class 2. The original pipe would have to be replaced with heavier pipe to maintain the same maximum operating pressure.

**COMPETITIVE
MARKETING
PROGRAM
(CMP)**

A mechanism by which "system producers" (i.e. those who sell gas to TCPL) provide specific discounts to individual end-users of gas. The distributor sells to the end-user under the approved sales rate schedule; the distributor advises TCPL of volumes sold each month. TCPL rebates to the distributor the agreed upon discount for the preceding month's volumes and the distributor flows the rebate through to the end-user.

**CONTRACT
CARRIAGE**

A transportation service provided under contract for the transport of gas not owned by the transporter.

**CONTRACT
DEMAND GAS
(CD GAS)**

Gas which the utility or a customer has the contractual right to demand on a daily basis from the supplier of the gas. For the transportation of the gas the customer must pay a fixed monthly demand charge regardless of volumes

DECISION WITH REASONS

actually taken. A commodity charge related to the volume taken is also paid.

DEMAND CHARGE

A monthly charge which covers the fixed costs of a pipeline. The demand charge is based on the daily contracted or operating demand volumes and is payable regardless of volumes taken.

**DESIGN MINIMUM
INLET PRESSURE**

The minimum acceptable delivery pressure at the downstream end of a pipeline.

**DIRECT
PURCHASE**

Natural gas supply purchase arrangements transacted directly between producers, brokers, or agents and end-users at negotiated prices.

DIRECT SALES

Natural gas sales by producers or agents, (as opposed to sales by an LDC), directly to end-users.

**DISCRETIONARY
PURCHASE**

The gas utility volumes purchased over and above those under contract with TCPL and which are usually associated with the availability of excess capacity in the TCPL system.

DECISION WITH REASONS

**DISPLACEMENT
VOLUME**

According to the TCPL definition approved by the NEB, (which is currently under review), the volume of gas contracted under a direct purchase, firm transportation contract with TCPL is considered a displacement volume if, assuming the absence of such direct purchase, the LDC could supply the account on a firm contract basis without itself contracting for additional firm volumes to accommodate that demand.

**DOUBLE
DEMAND CHARGE**

A double demand charge occurs when a direct purchase sale displaces a distributor's sale, and the space reserved by that distributor on the TCPL system is paid for twice: first by the utility and second, by the direct purchaser.

FEEDSTOCK

Natural gas used as a raw material for its chemical components and not as a source of energy.

**FIELD GATHERING
SYSTEMS**

Systems of pipelines that convey gas from gas wellhead assemblies to treatment plants, transmission lines, distribution lines or service lines.

DECISION WITH REASONS

FIRM SERVICE	A relatively higher priced service for a continuous supply of gas without curtailment, except under extraordinary circumstances.
HYDROCARBON	Any compound of hydrogen and carbon. Fuel oil and natural gas are referred to as hydrocarbon fuels.
INTERRUPTIBLE CUSTOMERS	Customers whose gas service is subject to curtailment at the discretion of the utility. The duration of continuous and cumulative interruptions as well as required notice periods are usually specified in the service contract.
INTERRUPTIBLE SERVICE (IS)	Transportation service or sales service provided on a best-efforts basis depending upon the availability of spare capacity on a pipeline. The shipper or buyer must pay a commodity charge related to the volume taken.
LINE-PACK GAS	The inventory of gas in the pipeline system to which gas is continually being added at the upstream end and withdrawn at the downstream end.
LOAD-BALANCING	The efforts of a utility or of a direct purchaser to meet its gas requirements in the most economic manner. It

involves balancing the gas supply to meet demand by using storage and other measures.

LOAD FACTOR A mathematical indicator of the way in which a gas utility system, or end use customer draws on its supply of gas over a period of time. The annual load factor can be expressed as the average daily volume of gas demanded over the year expressed as a percentage of the peak day demand.

LOOP Additional pipeline which is located parallel to an existing pipeline over the latter's entire length, or any part of it, and is added to increase the capacity of the transmission system.

**MANUFACTURED
GAS** A combustible gas artificially produced from coal, coke, or oil, or by reforming liquefied petroleum gases.

**MARKET
RESPONSIVE
PROGRAM (MRP)** This program permits a local distribution company to offer customers discounts from the price normally paid under the sales tariff. The funds for these discounts are provided by system gas producers through Western Gas Marketing Limited. MRPs are similar to CMPs in that they assist system gas to compete with direct purchase supply.

DECISION WITH REASONS

**MAXIMUM
COMPRESSION
AVAILABLE** The maximum compression currently available at the upstream end of a pipeline which limits the transportation capability of the pipeline to a level below the pipeline's potential capability.

METHANE Methane, a colourless hydrocarbon gas, is the chief component of natural gas. Its chemical formula is CH₄.

NPS NPS means nominal pipe size and is used in conjunction with a non-dimensional number to designate the nominal size of valves, fittings and flanges. More specifically the following nominal pipe sizes appear in this document:

	<u>Outside Diameter in Millimetres</u>	<u>Equivalent Imperial Size in Inches</u>
NPS 12	323.9	12
NPS 20	508	20
NPS 24	610	24
NPS 36	914	36

**OFF-PEAK
PERIOD** A period during which the amount of gas required by a customer or local distribution company is less than its maximum requirement.

DECISION WITH REASONS

ONTARIO PIPELINE COORDINATION COMMITTEE (OPCC)	An interministerial committee, chaired by a member of the OEB staff and including designates from those ministries of the Ontario Government which collectively have a responsibility to ensure that pipeline construction and operation have minimum undesirable impacts on the environment. The environment, perceived in a broad sense, covers agriculture, parklands, forests, wildlife, water resources, social and cultural resources, public safety and landowner rights.
OPERATING DEMAND VOLUMES	Volumes specified in the distributor's CD contracts with TCPL, less the volumes deemed to have been displaced by direct sales, as determined under the NEB's rules.
PEAK DAY	A peak period of 24 hours duration.
PEAK DEMAND	The maximum amount of gas required over a given, usually short, period of time.
PEAK PERIOD	A period, usually of short duration, during which the maximum amount of gas is required by a customer or local distribution company.

DECISION WITH REASONS

PEAKING SERVICE (PS)	A discretionary purchase for the delivery of gas during the winter season. The service is not subject to interruption and includes a take-or-pay provision.
PROFITABILITY INDEX	A measure of whether there is a net cost to a utility's customers as a result of undertaking a proposed project. A profitability index of 1.0 would mean that the net present value of the cash inflows is equal to the net present value of the cash outflows over the period selected for the analysis, based on the utility's incremental cost of capital.
"PURE" UTILITY	A local distribution company which is not engaged in any other unrelated business activities.
RATE BASE	The amount the utility has invested in assets such as pipes, meters, compressors and regulator stations, etc., minus accumulated depreciation, plus an allowance for working capital and other amounts that may be allowed by the Board.

DECISION WITH REASONS

RAW NATURAL GAS	A naturally occurring unprocessed mixture of hydrocarbon and non-hydrocarbon gases of low molecular weight.
REMOVAL PERMITS	A permit granted by the Alberta Energy Resources Conservation Board that authorizes the export of gas from the Province of Alberta.
ROAD ALLOWANCE	A right-of-way reserved for a highway which includes the travelled portions of the highway and its perimeter.
SECTIONALIZING BLOCK VALVE	A valve used to interrupt the flow of gas and isolate a section or sections of a pipeline for maintenance, repair, safety or other purposes.
SELF- DISPLACEMENT	The purchase of gas by an LDC from sources other than TCPL to displace gas it would otherwise obtain from TCPL.
SPOT GAS	Gas available in the market place through short-term, fixed price contracts generally lasting less than twelve months.

DECISION WITH REASONS

- STAGE 1** The Board requires each gas utility to use a three-stage process to evaluate the economic feasibility of system expansion. Stage 1 is a profitability test based on a discounted cash-flow (DCF) analysis.
- STAGE 2** Stage 2 is designed to quantify other public interest factors not considered in a Stage 1 analysis of the costs and benefits when testing the economic feasibility of a utility system expansion project.
- STAGE 3** Stage 3 takes into account all other relevant public interest factors that cannot be readily quantified in a cost/benefit analysis when testing the economic feasibility of a utility system expansion project.
- SUMMER
INCENTIVE CMP** A price discount feature of the Competitive Marketing Program to encourage individual end-users to purchase system gas during the summer season when both producers and TCPL have excess capacity.
- SYSTEM GAS** Gas supplied under contract to TCPL by gas producers.

DECISION WITH REASONS

SYSTEM PRODUCERS	Gas producers that have contracts to supply TCPL with gas.
TCPL DEMAND CHARGE	A component of TCPL's CD rate designed to recover all or most of the fixed costs of transmission. Demand charges are payable by the shipper whether or not gas is taken.
TEMPORARY WINTER SERVICE (TWS)	A discretionary purchase for the delivery of gas during the winter season. The service is subject to limited interruption and includes a take-or-pay provision.
TOPGAS & TOPGAS II	Two banking consortiums formed in 1982 and 1983 respectively which have made an aggregate of approximately \$2.65 billion of take-or-pay payments to Alberta gas producers for gas contracted for but not taken by TCPL. These payments were made on a project financing basis and are referred to as the TOPGAS and TOPGAS II loans.
UNBUNDLED RATE	A rate for an individual, separate service offered by a distributor as opposed to a rate which combines the costs of a variety of component services.

DECISION WITH REASONS

UNABSORBED
DEMAND
CHARGE

Charges which occur when a distributor purchases its gas or receives its gas at less than the forecasted load factor used in setting rates.

WINTER
PEAKING

The higher gas requirement of a customer or local distribution company in response to higher demand in the winter season.

DECISION WITH REASONS

E.B.L.O. 244
E.B.R.M. 104

IN THE MATTER OF the Ontario Energy Board Act,
R.S.O. 1990, c. O.13 and in particular Sections 46(1), 48
and 23(1) thereof;

AND IN THE MATTER OF an Application by Union
Gas Limited for an Order granting leave to construct
natural gas pipelines in the Townships of Sombra and
Dawn, both in the County of Lambton;

AND IN THE MATTER OF an Application by Union
Gas Limited to the Minister of Natural Resources for
permits to drill wells in a designated storage area in the
Township of Sombra, in the County of Lambton.

BEFORE: Pamela Chapple
Presiding Member

C.W.W. Darling
Member

E.J. Robertson
Member

DECISION WITH REASONS

April 5, 1993

TABLE OF CONTENTS

1.	<u>INTRODUCTION</u>	1
	1.1 APPEARANCES	3
	1.2 WITNESSES	3
2.	<u>NEED FOR THE PROJECT</u>	7
	2.1 POSITIONS OF THE PARTIES	7
	2.2 THE BOARD'S FINDINGS	12
3.	<u>ECONOMIC JUSTIFICATION</u>	17
	3.1 POSITIONS OF THE PARTIES	17
	3.2 THE BOARD'S FINDINGS	22
4.	<u>LAND AND ENVIRONMENTAL ISSUES</u>	25
	4.1 POSITIONS OF THE PARTIES	25
	4.2 THE BOARD'S FINDINGS	30
5.	<u>COMPLETION OF THE PROCEEDINGS</u>	33
	5.1 COMPLETION OF THE PROCEEDINGS	33
	5.2 COST AWARDS	34

APPENDIX A Bickford Dawn Group Recommendations
APPENDIX B Board Staff Proposed Conditions - Pipelines
APPENDIX C Board Staff Proposed Conditions - Drilling Permits

1. INTRODUCTION

1.0.1 On June 11, 1992 Union Gas Limited ("Union", "the Company" or "the Applicant") applied to the Ontario Energy Board pursuant to Sections 46(1) and 48 of the Ontario Energy Board Act ("the Act") for an order or orders granting leave to construct 11.033 km of NPS 30 pipeline from the Bickford Compressor Station in Lot 6, Concession XII, Township of Sombra, to the junction of the Terminus Pool Line in Lot 23, Concession XI, Township of Sombra; and 5.688 km of NPS 36 pipeline from the Terminus Pool Line to the Dawn Valve Site ("Dawn") in Lot 25, Concession I, Township of Dawn; together with ancillary facilities, all located in the County of Lambton ("the Bickford Dawn Line").

1.0.2 Under the same sections of the Act, Union also applied for an order or orders granting leave to construct 0.217 km of NPS 12; 0.220 km of NPS 16; and 0.052 km of NPS 20 storage gathering pipeline in the designated storage area of the Bickford Storage Pool in Lot 6, Concession XII, Township of Sombra, in the County of Lambton. The leave to construct applications were given Board File No. E.B.L.O. 244.

1.0.3 Further, Union sought from the Board pursuant to Section 23(1) of the Act a favourable report to the Minister of Natural Resources for permits to drill wells within the designated area of the Bickford Storage Pool. This application was given Board File No. E.B.R.M. 104.

- 1.0.4 The entire proposal is referred to as the Bickford Dawn project. Figure 1 is a schematic drawing showing the general location of the gas transmission facilities.
- 1.0.5 A Notice of Hearing dated November 2, 1992 set Sarnia as the location and December 1 as the date for the commencement of the hearing of the applications. It also gave notice that the Board would be touring the site of the proposed facilities on November 30 and invited all interested parties to accompany the Board.
- 1.0.6 On November 16, 1992 a motion was filed on behalf of the Bickford Dawn Group, ("the Group") a group of landowners which would be affected by the construction of the proposed facilities. The Motion was for an order adjourning the hearing in order to provide the Group with additional time to prepare materials for their intervention.
- 1.0.7 The Board heard the Motion on November 26 and rendered an oral decision ordering that the hearing be delayed for three to four weeks in order to give the Group time to prepare additional evidence on Union's greenbelting proposal.
- 1.0.8 However, the Board toured the site of the proposed facilities as scheduled in the November 2 Notice of Hearing.
- 1.0.9 The rescheduled hearing commenced in London, the nearest available centre to the proposed facilities, on January 11 and concluded on January 14, 1993. Union's reply argument was received on February 1, 1993.

1.1 APPEARANCES

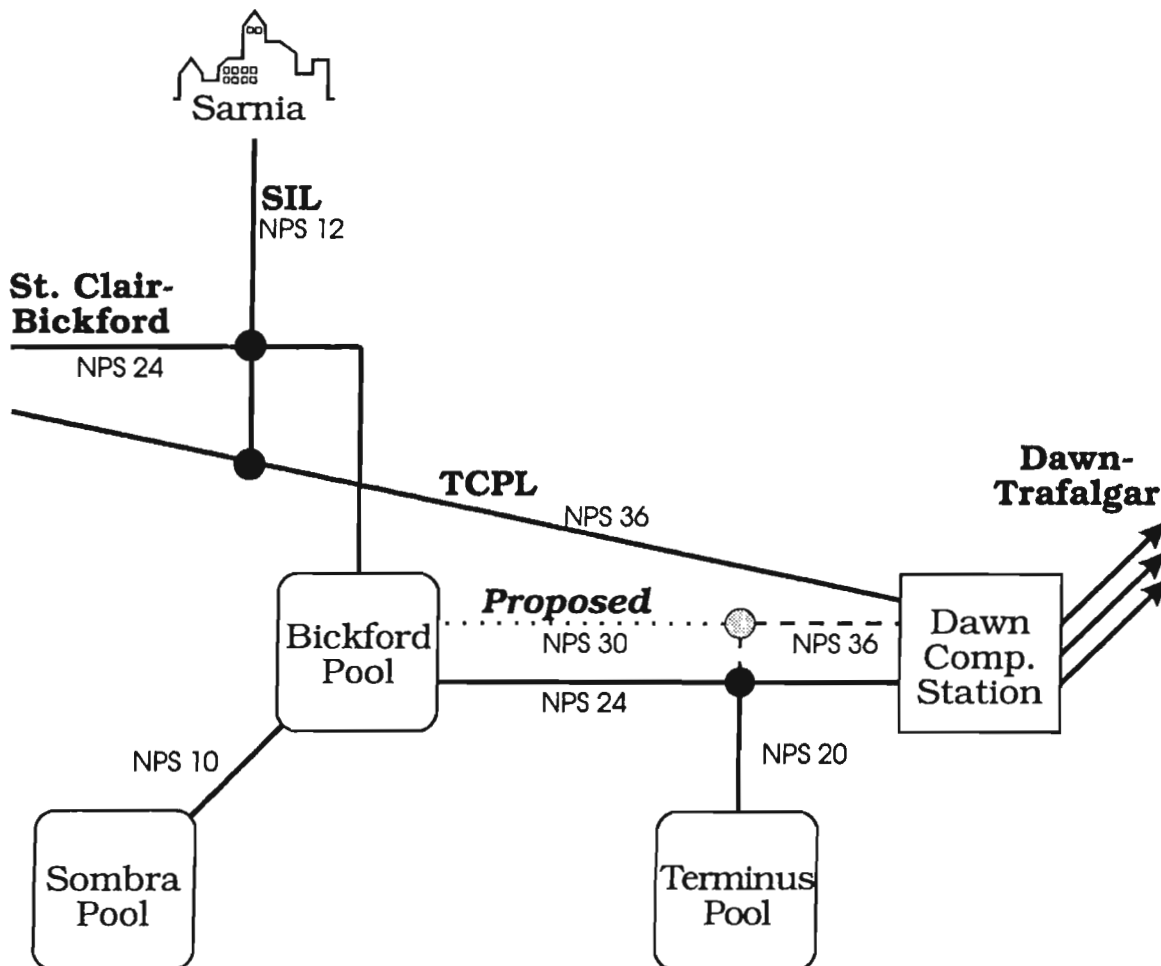
Douglas Sulman, Q.C.	Union
Jennifer Lea	Board Staff
Fred Cass	The Consumers' Gas Company Ltd. ("Consumers Gas")
Emery Varga	TransCanada PipeLines Limited ("TCPL")
Paul Scargall	Bickford Dawn Group

1.2 WITNESSES

1.2.1 The following employees testified on behalf of the Applicant:

William Killeen	Manager, Gas Supply Planning
William Fay	Manager, Storage Planning
Larry Hyatt	Manager, Transmission Planning
Ian Malpass	Supervisor, Financial Studies
Byron Haley	Supervisor, Lands Department
William Wachsmuth	Environmental Planner, Pipeline Engineering
Geoff Connors	Project Manager, Pipeline Engineering
Robert Bryant	Manager, Pipeline Engineering, Gas Supply Engineering
John Hayes	Manager, Reservoir Services
James Egden	Manager, Geology

Figure 1
Bickford Dawn Project and Related Facilities



DECISION WITH REASONS

1.2.2 Lloyd Torrens, Senior Project Director, MacLaren Plansearch, also testified on behalf of the Company.

1.2.3 Paul Graham testified on behalf of the Bickford Dawn Group.

The Proposed Wells

1.2.4 At the present time, there are five injection/withdrawal wells in the Bickford Storage Pool. Union proposed drilling six more wells to increase the deliverability of the pool.

1.2.5 The increased deliverability would enable Union to lower the inventory of gas that is required on the system design day, March 1st, to provide sufficient pressure in the pool to meet the maximum forecast demand requirements.

The Proposed Transmission Facilities

1.2.6 At the present time the Bickford NPS 24 pipeline ("the Bickford Line" or "the NPS 24") is used to transport gas to and from three storage pools - Bickford, Sombra and Terminus. Gas is also received at Dawn from a TCPL pipeline which interconnects with the Sarnia Industrial Line ("the SIL") from whence the Sarnia market can be supplied.

1.2.7 The Bickford Storage Pool can also be supplied from the St. Clair - Bickford Line which crosses the St. Clair River and interconnects with facilities owned by two American companies. Gas from this line can be utilized to serve the Sarnia market via the SIL or be delivered to Dawn via the Bickford Line.

1.2.8 During the injection period, April to October, gas flows from Dawn into the pools and during the withdrawal period, November to March, the flow

is reversed. During shoulder periods, injection can occur during the day and withdrawal at night.

- 1.2.9 During the periods when the Bickford Line is utilized for injection or withdrawal, gas from the St. Clair - Bickford Line cannot be transported to Dawn and these volumes are directed to the Sarnia market which requires $2830 \times 10^3 \text{ m}^3/\text{d}$. The St. Clair - Bickford Line was designed to carry $5660 \times 10^3 \text{ m}^3/\text{d}$, but because of the restrictions on the use of the line during injection and withdrawal and the size of the Sarnia market, its capacity is limited to $2830 \times 10^3 \text{ m}^3/\text{d}$.
- 1.2.10 During the periods when the Sarnia market is being supplied from the St. Clair - Bickford Line, gas is delivered to Dawn from the TCPL Line rather than to Sarnia via the SIL.
- 1.2.11 Union proposed to construct the Bickford Dawn Line which would parallel the Bickford Line and would be used exclusively to inject and withdraw gas from the three pools. The existing Bickford Line would then be used to provide firm transportation between the St. Clair - Bickford Line and Dawn.
- 1.2.12 The Applicant proposed to have the new facilities in place and operational by October 31, 1993, in the 1994 fiscal year. The estimated total cost of the project is \$27.46 million.

2. NEED FOR THE PROJECT

2.1 POSITIONS OF THE PARTIES

2.1.1 Union sought to justify the construction of the proposed facilities on the basis that they would permit a reduction of Union's March 1st design day inventory. As a result Union would experience reduced inventory carrying costs over the summer thereby providing savings to its customers. The forecast reduction in design day inventory for fiscal 1994 was $69.5 \times 10^6 \text{m}^3$.

2.1.2 Union testified that the project's increase in deliverability from the Bickford Storage Pool would enable it to maintain the required design day deliverability at a reduced pressure level in its storage system. Since gas in storage provides the pressure, the project would permit a reduction in the inventory needed to meet the March 1 design day deliverability requirement.

2.1.3 In addition, Union based the need for the project in part on an increase in the number of its heat sensitive customers and therefore in its heat sensitive load. The higher load, particularly in winter, gives rise to a need for increased deliverability on design day, March 1, and more total deliveries over the period November 1st to March 31st each year. Union stated that additional storage capacity was required to provide a match

between its receipts and deliveries of additional gas to meet the increased demand.

- 2.1.4 The Company stated that it would supply the increased winter demand in fiscal 1994 by delivering the $69.5 \times 10^6 \text{ m}^3$ no longer required for design day inventory to customers. In subsequent years, the increased working storage capacity would be filled with gas purchased in the summer to be delivered to customers in the following winter.
- 2.1.5 With regard to the need for the project in fiscal 1994, Union stated that, in the orderly development of its complex storage facilities, its ability to achieve savings by reducing the inventory of gas coincided with a need for the increased winter deliverability provided by the project.
- 2.1.6 Union also stated that the increased transportation between Bickford and Dawn would permit the utilization of the St. Clair-Bickford Line at higher capacity. That would satisfy a need for increased access by eastern Canadian utilities to U.S. delivery and storage facilities, and to potentially advantageous sources of gas supply.
- 2.1.7 Consumers Gas submitted that Union did not provide sufficient compelling evidence to prove the need for the Bickford Dawn project. It based this submission on arguments in three specific areas:
- evidence as to forecasts of growth in Union's market
 - the timing of this project
 - access to other supplies of gas and security of supply
- 2.1.8 Consumers Gas contended that the evidence supplied by Union demonstrated a decline rather than a growth in Union's markets from fiscal 1993 to fiscal 1994. It also noted that these markets would not recover to their previous levels until fiscal 1996. Since Union offered no evidence showing that it planned to reduce or eliminate its other supply

arrangements so as to accommodate the incremental volume available from the Bickford Dawn project, Consumers Gas concluded that Union had not demonstrated that there was a clear need for this development.

2.1.9 Consumers Gas argued that this project had been under consideration by Union since 1986 and that Union offered no specific reasons as to why it should proceed at this time; Union's testimony was that this project was proceeding now because of changes in Union's markets, facilities and supplies. Consumers Gas observed that these answers were insufficiently detailed for purposes of these applications.

2.1.10 Finally in regard to need, Consumers Gas argued that Union had presented no specific evidence of lack of security of supply. It pointed to the fact that the current firm capacity of the St. Clair-Bickford Line is uncommitted to the extent of $582 \text{ } 10^3 \text{ m}^3/\text{d}$, out of a present capacity of $2830 \text{ } 10^3 \text{ m}^3/\text{d}$. The proposed facilities would increase the St. Clair to Dawn capability to $5660 \text{ } 10^3 \text{ m}^3/\text{d}$ of which only $3412 \text{ } 10^3 \text{ m}^3/\text{d}$ would be committed.

2.1.11 Consumers Gas conceded that Union had a desire to protect the security of supply of its in-franchise customers. Consumers Gas, however, was sceptical of this as a reason for the St. Clair to Dawn transmission enhancement. Union had indicated in testimony that it would be prepared to offer the entire increased transportation capacity to potential ex-franchise customers under the cross-franchise C1 transmission rate and that this enhancement would benefit other eastern Canadian LDCs' security of supply. Consumers Gas stated that it had not requested additional St. Clair facilities nor did Union produce evidence to show that any other eastern LDC had made such a request of Union.

2.1.12 Board Staff also noted that total demand on the Union system is projected to decline in fiscal 1994 and they agreed with Consumers Gas that only in fiscal 1996 did Union expect its total demand to exceed the fiscal 1993

levels. Board Staff concluded that, based on an overall market growth, there did not appear to be any immediate need for the proposed facilities.

- 2.1.13 Board Staff also agreed with Consumers Gas that, given the evidence of no new firm transportation contracts on the St. Clair to Dawn facilities, this ancillary feature of the project could not, in its view, offset the doubt cast upon the project by Union's demand forecasts.
- 2.1.14 The Bickford Dawn Group argued that the benefits to Union's customers were based on questionable assumptions with respect to long-term demands. The Group also argued that Union had admitted that there was no need to proceed with the proposed line at this time, that the benefits to the utility were that it would be a revenue source at some future time and that there were other options giving security of supply.
- 2.1.15 In reply to both Consumers Gas' and Board Staff's arguments that they could see no market growth to utilize the additional storage volumes resulting from the reduction of design day inventory requirements, Union pointed to its testimony that this reduction would make for greater access to the existing storage space. Further, this storage capacity would be required to meet the increasing demand of Union's heat sensitive markets. Union took exception to the Consumers Gas argument which asserted that Union had, on its own evidence, sufficient storage. Union submitted that, without the Bickford Dawn project, there would be a shortfall in storage space of 24 10⁶m³ in fiscal 1994.
- 2.1.16 Union maintained that it had demonstrated that the proposed pipeline facilities would benefit Union's customers and the general public in eastern Canada. The Applicant cited its testimony that the current gas supply portfolio and market demands would allow the benefits of the proposed facilities to be passed on to Union's customers through the dampening of future rate increases. It stated that future costs to the customer would be

reduced through the reduction in inventory carrying costs and lower gas supply costs.

- 2.1.17 In the matter of access to other suppliers and increased security of supply, Union stated that the enhanced transmission embodied in the proposed project would increase Union's access to cheaper supplies of U.S. gas. In addition, Union argued that this improved U.S. access would give it an advantage when negotiating for additional Canadian supplies; it emphasized that the existing line had already had a beneficial effect in this regard.
- 2.1.18 As far as the timing of the project was concerned, Union stated that its sensitivity analysis on the cost of building the Bickford Dawn line showed that it would be more economical to build it now.
- 2.1.19 Union asserted that fiscal 1994, contrary to the arguments of Board Staff, was indeed a pivotal year inasmuch as it would be the first year that the combination of Union's market requirements and gas supply portfolio would permit Union to reduce its design day inventory levels by the development of the Bickford Dawn project. Thus Union argued, the Bickford Dawn project has priority over any other alternatives.
- 2.1.20 In response to arguments that the Bickford Dawn project added transmission capacity for which there was no immediate use, Union replied:
- (a) It had established that the pipeline facilities will be used and useful in serving the public.
 - (b) Prior to 1996 when the line will be fully used, Union would have the ability to access competitively priced gas from the U.S. and use that to negotiate better prices for Canadian supplies.

- (c) It expected an additional $850 \times 10^3 \text{m}^3/\text{d}$ of C1 transportation demand by fiscal 1994. That addition, plus the existing firm requirements of $2249 \times 10^3 \text{m}^3/\text{d}$, would exceed the existing transmission capacity of the St. Clair-Bickford line.
- (d) It expected additional C1 contracts to raise the $850 \times 10^3 \text{m}^3/\text{d}$ to $1416 \times 10^3 \text{m}^3/\text{d}$ during fiscal 1995 and 1996 so as to use approximately 50 percent of the available new capacity.
- (e) The project would provide enhanced access to underground storage in Michigan.

2.2 THE BOARD'S FINDINGS

- 2.2.1 The Board notes that the Company's forecast of reductions in design day inventory of $69.5 \times 10^6 \text{m}^3$ appears reasonable and was not challenged by intervenors.
- 2.2.2 Union further sought to justify the need for the projects in part, on the basis that as of October 31, 1993, it required an additional $24 \times 10^6 \text{m}^3$ of storage space as the result of forecast increased requirements for storage and contingency space.
- 2.2.3 Union also justified approval of the project on the basis that increased contingency storage space would allow it to avoid UDC by using storage to take firm deliveries that exceed end-use consumption. Union also uses spot gas purchases to manage variations from its forecast.
- 2.2.4 Table 1 sets out Union's actual and forecast contingency and spot gas requirements for the fiscal years 1992 to 1996.

Table 1: Contingency Space and Spot Gas Requirements

Volumes (10^6m^3)	F92	F93	F94	F95	F96
Contingency	80	50	179	142	142
Spot Gas Purchases	38	49	0	199	651
Source: Ex. 12.2 Ques. 13.2					

2.2.5 Union stated that it was uncomfortable with the low contingency volumes in fiscal 1992 and 1993 and that it generally would prefer $142 \times 10^6\text{m}^3$ of contingency space. The Board finds that it has insufficient evidence to assess the reasonableness of the $142 \times 10^6\text{m}^3$ contingency storage volume. Union's forecast of an even higher contingency level for fiscal 1994 suffers from the same lack of evidence. As well, the Board did not have any evidence as to the use that would be made of the contingency space in the event that it was not required for the purpose set out above.

2.2.6 On the basis of its forecast contingency and storage space requirements, Union forecast a storage volume shortfall in fiscal 1994 of $24 \times 10^6\text{m}^3$. Union stated that this shortfall would be met by the Bickford Dawn project in 1994. The Board notes that, if the contingency volume for fiscal 1994 were forecast at Union's "comfortable" level of $142 \times 10^6\text{m}^3$, the forecast storage shortfall would become a surplus of $13 \times 10^6\text{m}^3$, as shown in Table 2. Accordingly, the Board finds the evidence of a storage shortfall of $24 \times 10^6\text{m}^3$ in fiscal 1994 to be unconvincing.

Table 2: Storage Requirements (10⁶m³)			
	Fiscal 1993	Fiscal 1994	1994 (Adjusted)
Union Requirement	1896	1992	1992
Contingency	50	179	142
Total Storage Space Requirements	1946	2171	2134
Cumulative Incremental Storage Requirement	64	289	252
Additional Capacity (Edys Mills, Dow 'A', Dow Moore)	N/A	265	265
Shortfall (Surplus)	N/A	24	(13)
Source: Union's Reply Argument, Table 1.			

2.2.7 Union additionally justified this project by pointing to its forecast of an increase in winter sales in the heat sensitive market of approximately 82 10⁶m³ for fiscal 1994. Union's evidence was that the additional volumes of gas, 69.5 10⁶m³, that could be withdrawn from storage over the winter as a result of the reduction in design day inventory would be used to meet part of this increased demand.

2.2.8 Union testified that it required additional storage capacity of 28 10⁶m³ for every 85 10⁶m³ in winter demand by heat sensitive consumers. For fiscal 1994 it forecast an increase of 82 10⁶m³ of such winter load. The Board notes that in this application the Company is seeking an increase in storage capacity of more than twice the storage volume required to meet its increased winter load in fiscal 1994. The Board finds that the increase in storage space of 69.5 10⁶m³ for fiscal 1994 is clearly in excess of the requirements to service the forecast increase of 82 10⁶m³.

DECISION WITH REASONS

- 2.2.9 In addition, Union in its reply argument stated "None of the gas supply or facilities alternatives could provide the 24 10⁶m³ of firm supply required." (underlining added). The Board is not persuaded by the evidence in this proceeding that Union will be required to go out and purchase gas supply for the winter of fiscal 1994 reflecting the amount of 69.5 10⁶m³, if the project does not proceed in that year.
- 2.2.10 The Board does not consider that the need for or the amount of additional gas purchases, arising from a lack of approval of the proposed facilities in fiscal 1994, has been tested sufficiently in these proceedings.
- 2.2.11 The Board notes that the Company's gas supply planning has been based on obtaining approval for construction of the Bickford Dawn project in fiscal 1994. Union argued that significant volumes of more expensive gas deliveries would be required in the winter of fiscal 1994 if the Board did not approve the proposed facilities. The Board points out that obtaining approval is an element of regulatory risk for which the Company is compensated in its overall allowed rate of return. The Board expects that any additional winter gas purchases in the absence of the proposed project would be made with demonstrated prudence, and that the Board, in an appropriate rate case, would determine whether the interests of the ratepayers had been prejudiced by such purchases.
- 2.2.12 The Board finds that Union has not established a need for the Bickford Dawn project to be approved for construction in fiscal 1994.

DECISION WITH REASONS

3. ECONOMIC JUSTIFICATION

3.1 POSITIONS OF THE PARTIES

3.1.1 In support of economic justification of the project, Union indicated three areas in which cost savings would benefit customers:

- reduced gas storage inventory carrying costs;
- lower gas costs through off-peak gas purchases; and
- avoided unabsorbed demand charges ("UDC") on TCPL, which would occur under Union's selected alternative to the project.

3.1.2 Union stated that the project provided a secure, firm, long-term source of gas deliverability of $69.5 \times 10^6 \text{m}^3$ in the period between November 1st and March 31st each winter. It took the position that a long-term contract for TCPL space providing the same winter delivery would be the most suitable alternative to the project for the purpose of economic comparison. Since such a firm TCPL contract would have to be for year-round service, to satisfy a winter only demand, there would be significant UDC costs arising from underutilized capacity in the non-winter period.

3.1.3 Union calculated that the net present value ("NPV") of the Bickford Dawn project was \$24.8 million, and that the profitability index ("PI") was 2.03.

- 3.1.4 Consumers Gas approached the issue of economic justification by first agreeing that TCPL Firm Service ("TCPL FS") was a valid alternative two years ago when Union had to decide whether or not to request additional transportation from TCPL, presumably as an alternative to planning to go ahead with the Bickford Dawn project.
- 3.1.5 Consumers Gas, however, stated that other alternatives appeared to have been ignored by Union, namely the expansion of the Dawn 156 and Payne pools as well as storage in Michigan. Consumers Gas argued that Union had failed to provide a proper presentation of these alternatives which, in consequence, had shifted the burden of proof from Union to other parties.
- 3.1.6 Consumers Gas argued that there was no evidence as to how cost savings derived from the Bickford Dawn project would show a positive effect on in-franchise customers' bills. To support its contention, Consumers Gas made reference to testimony from a Union witness which indicated that an analysis of customer cost savings had not been done and that he was not sure when the rate reductions would occur.
- 3.1.7 Consumers Gas calculated that using Union's own figures, only $27 \times 10^6 \text{m}^3$ of storage would be required in fiscal 1994 to meet Union's estimate of growth in its heat sensitive market as opposed to the $69.5 \times 10^6 \text{m}^3$ available, on the basis of Union's evidence, from the proposed project.
- 3.1.8 Board Staff also questioned whether the economic benefits identified by Union were a fair representation of the benefits flowing to Union's customers in the light of the viable and less costly alternatives available to Union.
- 3.1.9 Board Staff noted that a major justification for this project was to reduce the gas costs for its customers by lowering the design day inventory by some $69.5 \times 10^6 \text{m}^3$. Staff argued that the project, however, would not

provide new or additional service to Union's customers and that Union had agreed that it was capable of continuing its business without the project.

3.1.10 Board Staff submitted that Union had overstated the economic benefits of the proposed development by using TCPL FS as the best comparable alternative to the proposed project. Staff agreed that if Union actually contracted for TCPL FS instead of the proposed project then Union would run some risk of incurring substantial unabsorbed demand charges. Staff noted Union's evidence that without the avoided UDC costs the PI of the project would fall from 2.03 to only 0.68.

3.1.11 Board Staff also was of the opinion that the UDC costs would not materialize to the degree which Union forecast if this project is not approved. Staff's further view was, in the circumstances of this project not being approved, that Union would not purchase incremental TCPL FS but would utilize some other services or combination of services for which the Board had no comparative economic evaluation. Staff based this opinion on its conviction that Union would manage its gas supply mix as it has done in the past and avoid expensive UDC.

3.1.12 In regard to alternatives, Board Staff submitted that:

- (a) Winter firm service, if available, would be a lower cost option with the same security as TCPL FS; this service, however, would only be available if Union first put in a bid for it.
- (b) Winter peaking service would be another viable alternative. No information on this service, Staff contended, was provided by Union leading to the conclusion that Union did not show that TCPL FS was a better choice than winter peaking service.
- (c) Michigan storage was also seen by Staff as a better comparator than TCPL FS in assessing the benefits of the Bickford Dawn

project. Staff noted that it was conceded by Union that it was indeed a preferred alternative to TCPL FS. It pointed out that the evidence showed that the NPV of Michigan storage was \$9.2 million versus \$24.8 million for the Bickford Dawn project and that the PI for Michigan storage was not available in these proceedings.

- (d) Union had stated that it was not disposed to use additional American supply contracts as a comparator in evaluating the proposed project because of its limited experience of only two years with U.S. pipeline sources. Staff noted that the St. Clair-Bickford Line was approved by the Board and constructed by Union specifically to access U.S. gas supplies and utilize Michigan storage. Board Staff was in consequence at a loss to understand why Union should not have considered this alternative to the project.
- (e) Although Union did not offer any prefiled evidence on the extended development of the Dawn 156 storage pool as an alternative to the proposed project, cross-examination by Consumers Gas revealed that Dawn 156 offered many of the same advantages as the Bickford Dawn project.

3.1.13 The Bickford Dawn Group agreed that the economic feasibility of the proposal as shown through cross-examination was tenuous and that in any event, economic feasibility or justification was not the sole criterion for approval of a project such as this. The Group concluded that the public interest would not be served by approval of the project.

3.1.14 Union pointed out that its approach to justification for the Bickford Dawn project included the calculation of an NPV of some \$25 million, which did not include any potential benefits arising from the increased transportation capacity made available by the project.

- 3.1.15 It stated that Board Staff was mistaken in contending that Union had not provided an accurate picture of the comparable merits of alternative projects. Union argued that an NPV calculation provided an estimate of the quantitative impact upon rates and that thus, for example, a saving of \$24.8 million as delivered by the Bickford Dawn project would benefit customers more than a project, such as Michigan storage, saving less than \$10 million. Union conceded that it had not provided a PI for each alternative project but stated that these figures could have been easily provided had they been requested by the Board or by intervenors.
- 3.1.16 Union further argued that TCPL FS was the logical choice as a comparative long-term alternative to this project. Union added that simply because TCPL FS is not available to it at this time, it is illogical to say that it is not appropriate to use it as a comparator for the Bickford Dawn project. TCPL FS was available to Union at the time it made a business decision to go ahead with the proposed project.
- 3.1.17 Union argued that the benefits provided by the Bickford Dawn project were unique and that no other gas supply or alternative facilities offered the same benefits. While it conceded that the expansion of the Dawn 156 Pool was the best comparator within the Company's integrated system, Union stated that there were practical difficulties in choosing Dawn 156 at this time as an alternative to Bickford Dawn. The major difficulty cited by Union was its inability to obtain additional seismic information because it could not get access to Dawn 156 lands.
- 3.1.18 In regard to the arguments of both Board Staff and Consumers Gas on the lack of evidence as to cost savings from this proposal showing up on customers' bills, Union drew attention to Mr. Malpass' statement that the gas cost would translate into lower rates to Union's customers. Union expressed the view that considerations of this type would normally be reserved for rates cases, and re-emphasized Mr. Hassan's statement that

one of the reasons for the reduced cost of gas, as evidenced in Union's main rates case, was the Bickford Dawn project.

- 3.1.19 Union contended that in order to avoid risking UDC on its main supplies, it reduced its forecast winter spot purchases to zero in fiscal 1994, which fact alone shows the Company's potential exposure to UDC. In the light of these circumstances, Union argued that the space provided by the Bickford Dawn project would thus reduce even its present exposure to UDC.

3.2 THE BOARD'S FINDINGS

- 3.2.1 Union based its economic justification on avoided incremental costs, assuming that the alternative to the project was to contract for firm service on TCPL equal to the project's additional winter delivery. Avoided UDC on TCPL would represent about 75 percent of the claimed benefits of the project, with cost savings in summer gas purchases and reduced inventory carrying costs providing the remainder. On the evidence, the Board is not convinced that UDC is the best measure of avoided incremental costs.
- 3.2.2 The Board agrees with Union that any alternative for economic comparison to the project must be capable of firm deliveries of the gas volumes, between November 1 and March 1 each year, on a long-term basis. While Winter Firm Service and Winter Peaking Service may provide short-term gas supplies, those options are not considered by the Board to be appropriate alternatives for economic comparison to the Bickford Dawn project.
- 3.2.3 The Board does not accept that the Michigan storage option is invalid for comparison purposes because it is not available until 1995, and can only deliver about 93 percent of the required volume to Union through existing facilities. The Board expects a more thorough evaluation of the Michigan

DECISION WITH REASONS

storage option in any future proposal for storage development of the nature applied for in this application.

- 3.2.4 The Board expects Union to provide additional evidence on the Dawn 156 Pool, the Payne Pool and the American pipeline supply options in any resubmission of this application or in any future proposal.
- 3.2.5 When comparisons are being made between the economic benefits of programs, such as in the present case, the Board finds the profitability index as well as the net present value of projects to be useful. Union is encouraged to provide P1 figures in cases such as this, where alternatives are likely to be compared.
- 3.2.6 Further, in seeking to support its application Union argued that the reduction in design day inventory would provide savings to its customers. However, Union did not quantify these savings in its evidence and Union testified that it had not done an analysis of when Union's customers would actually experience the savings. The Board expects such an analysis to be presented in any application which includes projected savings to customers in the justification for the application.
- 3.2.7 On the basis of the evidence on economic justification, the Board does not find that the Applicant has satisfied the burden of proof that the Bickford Dawn project should be approved for construction in fiscal 1994.

DECISION WITH REASONS

4. LAND AND ENVIRONMENTAL ISSUES

4.1 POSITIONS OF THE PARTIES

Land Matters

- 4.1.1 The Bickford-Dawn Group made seven recommendations (which are shown as Appendix A) on land issues and asked the Board to incorporate these recommendations in its decision if Union is granted leave to construct the Bickford Dawn Line. These Recommendations were aimed at mitigating concerns evinced by the landowners who would be affected by construction. They covered the extension of easements during construction, changes in the scale of compensation as associated with Union's greenbelting proposals, the measurement of damage to agricultural soils and the monitoring thereof, renegotiation of formerly permanent easement agreements to 15 or 30 years and proposals for wet weather construction policy alternatives.
- 4.1.2 In final argument the Group proposed that the Board should order that construction be controlled and supervised by a "Selection Committee" which would be made up of representatives of the Group, Union and Board Staff. This Committee, the Group argued, should:

- (a) Select an independent auditor, paid by Union, who would monitor and report on events, problems and alleged non-compliance by the Company with Board conditions, statutory requirements and agreements made between Union and individual landowners of the Group. The independent auditor would also be required to have sufficient crop expertise to operate as a consultant on the operation of Union's optional greenbelting program.
- (b) Select an inspection team comprised of representatives from the Group, Union and Board Staff. This team would have the power to determine, on a majority vote, whether Union could continue construction in wet soil conditions. Failing adoption of this procedure, the Group suggested an alternative in which a sliding scale of compensation per acre per day be paid to landowners in respect of Union working in wet soil conditions.
- (c) Select an independent expert(s) to conduct studies and file reports with the Board on conditions experienced by landowners in the years following construction.

4.1.3 The Group also argued that the Board should require Union to adopt a compensation formula for crop damage based on test data that the Group experts engaged for this hearing had derived from a previous Union construction referred to as Dawn-Kerwood. In addition, the Group wished to see permanent easements changed to terms of 15 or 30 years, which periods might represent the limits of the Company's ability to accurately predict crop damage.

4.1.4 The Group also asked the Board to approve, as a condition of leave to construct, the form of a draft letter of understanding; this document was proposed by the Group to formalize a Union commitment to minimize soil damage and crop loss or be obliged to restore affected land and/or pay damages to landowners. The Group argued that pursuant to Section 48(9)

of the Act, the Board cannot grant leave to construct until the Company satisfies the Board that it has offered or will offer to each landowner an agreement in a form approved by the Board. The Group proposed that the Board agree that the letter of understanding be the approved form of agreement referred to in the Act.

4.1.5 Board Staff stated that three of the Group's recommendations addressed compensation issues which were not within the Board's jurisdiction. Board Staff submitted that the remainder of the Group's recommendations should not be imposed by the Board as conditions for leave to construct, but should be dealt with in further negotiations between the Group and Union.

4.1.6 On the matter of the Group's Recommendations regarding restrictions on Union's existing wet soil policy, Board Staff argued that Condition "k" of Staff's own proposed Conditions of Approval, attached as Appendix B, was in accordance with the Board's findings in E.B.L.O. 234, Phase II.

4.1.7 Board Staff did not support the Group's proposed changes to Union's existing wet soil shut down policy. They noted Union's testimony that it had waived its policy, then gone ahead with construction on wet soil on only one line, namely St.Clair-Bickford in 1989. Staff were of the view that given Union's proposed timetable and typical weather conditions that the Company was unlikely to have to waive its wet soil shutdown policy for this project.

4.1.8 On the matter of the need for an independent auditor to be present during construction of the pipeline and to report on non-compliance by the Company, Board Staff noted Union's testimony that the Board had placed a similar condition on Union in the Lobo-St. Mary's pipeline project in 1991. Staff also noted that a Union witness had stated that the process had produced no significant advantage on the basis of comparisons with two other pipeline constructions not required to have independent inspection.

Staff also cited the same Union witness who testified that the cost of the third party auditor ordered by the Board was \$186,000 to date, and that his view was that the Company did not get good value from the presence of auditors of this type.

4.1.9 Finally, Board Staff requested that the Board impose Staff's proposed Conditions of Approval (Appendix B) should it grant leave to construct.

4.1.10 Union took note of the recommendations of the Group which essentially dealt with compensation and, like Board Staff, took the view that for the Board to decide on these issues would entail it acting as arbitrator which Union saw as inappropriate and undesirable.

4.1.11 Union took exception to the Group's proposal for an inspection team to be formed to determine wet soil shutdown. It argued that such a procedure could lead to its representative being outvoted, with the result that parties other than the Company could stop work on a development which had been, by reason of the Board's granting of leave to construct, determined to be in the public interest. Union also cited the Board's decision in E.B.L.O. 230 and 234 that it would be inappropriate for the independent environmental inspector(s) to have the unilateral right to halt construction.

4.1.12 Union disagreed with the selection by the Group's experts of the Dawn-Kerwood line as a representative example to demonstrate the expected loss of agricultural productivity on the Bickford Dawn easement. Union asserted that the Board was well aware of the unusual problems which arose in the construction of the Dawn-Kerwood line which problems were, in Union's view, highly unlikely to be repeated.

4.1.13 On the matter of the Group's recommendation that easements be limited to 15 or 30 years, Union argued that this would introduce an unworkable condition into the granting of leave to construct. The Company further contended that such a recommendation would affect the value of easement

rights which have been negotiated up to this time on a basis of permanency. Union concluded that if the Group was successful on this recommendation it would, in effect, lead once more into the compensation area, which it had already argued, was not the purpose of this hearing.

Environmental Matters

4.1.14 The Group argued that there was a cheaper and shorter alternative route to the one proposed by Union, and that a number of properties on the chosen route, which would have reflected negatively on Union's selection, were mistakenly overlooked.

4.1.15 The Group further contended that the route selection relied primarily upon the overlap of the proposed line with the existing line. The Group drew the conclusion that this overlap would produce soil mixing additional to that which had occurred when the original line was built. It noted that the possibility of such additional mixing was not referred to in the Environmental Reports prepared for Union. In addition, the Group stated that the Company could not demonstrate to the Board that it had obtained approval for the route from the St. Clair Region Conservation Authority. The Group's conclusion that the route chosen by Union was inappropriate and represented yet another reason why the Board should not grant leave to construct.

4.1.16 The Group requested that Union be directed by the Board to abide by the tree policy of the County of Lambton, and follow any requirements of that County in replacing trees. It further submitted that Union should engage the services of an independent arborist to value trees prior to cutting and pay that value to the landowner as well as replacing two saplings for each tree removed.

4.1.17 In defense of its route selection, Union pointed to the Preferred Route Analysis prepared by its consultants. That document listed 10 conditions

which were satisfied, Union argued, by the chosen route. Further, the route accommodated a difficult river crossing satisfactorily as well as avoided an identified archeological site.

4.1.18 Union disputed the Group's contention that the selection of an overlap route would lead to cumulative soil mixing and reminded the Board that, though the Group were given an opportunity to present direct evidence on soils, it chose not so to do.

4.1.19 Union pointed out that it had presented three documents in evidence related to environmental matters. It stated that this documentation gave rise to extensive consultation and review by the Ontario Pipeline Coordinating Committee, affected municipalities, conservation authorities, landowners and the public. Union stressed that the outcome of this public participation was a route selection for the NPS 30/36 pipeline and the gathering pipelines which remained unchallenged until the hearing.

4.1.20 Union did not agree with the Group proposal to include a requirement to obtain a tree permit from the County of Lambton, on the grounds that the Board, as a provincial body, would thus be delegating its authority to a municipality. Union was confident that it could identify specimen trees and work around them. Union noted that if it was necessary to cut trees in a woodlot, then it had a tree program which provided for replanting twice the area of trees cut.

4.2 THE BOARD'S FINDINGS

4.2.1 The Board does not accept that the Dawn-Kerwood line represents a suitable comparator for forecasting possible land damage and crop losses which could be occasioned by the Bickford Dawn project.

DECISION WITH REASONS

- 4.2.2 This finding is based on the Board's agreement with Union's evidence that the Dawn-Kerwood line was constructed under highly unusual circumstances which are not likely to be repeated.
- 4.2.3 Further, the Board does not consider that the Group's proposal to vary Union's wet weather construction policy offers significant advantages over the present policy. The Board accepts Union's argument that it could lose control of wet weather shutdown as a result of the Group's proposal, and finds that the present wet weather policy should not be changed.
- 4.2.4 In respect of the Group's proposal for an independent auditor, the Board finds that actual experience with such a process does not indicate that it is justified on a cost-value basis.
- 4.2.5 The remaining recommendations of the Group deal with compensation matters, which are not within the jurisdiction of the Board.
- 4.2.6 In consequence, the Board is not persuaded by the evidence of the Bickford Dawn Group that it should not accept Board Staff's Conditions of Approval as appropriate conditions for this project. These conditions are attached as Appendix B and are accepted by the Board for this project.
- 4.2.7 Generally, the Board accepts that overlapping easements are preferable to two separate easements when an existing pipeline is twinned. In the absence of compelling evidence, the Board is not prepared to accept that the cumulative affect of soil mixing on overlapping easement outweighs the benefits of the use of overlapping easements.
- 4.2.8 The Board has been asked by the Group to direct Union to offer the landowners an agreement, pursuant to section 48(a) of the Act, in the form of the Group's draft of a Letter of Understanding. The Board notes that sections 6 and 8 of that letter address compensation matters which are outside the jurisdiction of the Board. Thus the Board declines to accept

DECISION WITH REASONS

the Group's draft Letter of Understanding for the purpose requested by the Group.

4.2.9 The Group's objections to Union's preferred route were based on length, cost and the effects of soil mixing. The Board is not persuaded that the arguments used by the Group are sufficient to throw substantial doubt on the suitability of Union's proposed route. The Board thus approves Union's route for the Bickford Dawn line.

4.2.10 Union is directed to consult with the County of Lambton so as to reach agreement on the compatibility of its tree policies with those of the County. Lack of such agreement should be communicated to the Board.

the

5. COMPLETION OF THE PROCEEDINGS

5.1 COMPLETION OF THE PROCEEDINGS

- 5.1.1 The Board finds that the Applicant has failed to sufficiently establish the need for the Bickford Dawn project. The Board, therefore, will not grant the Applicant leave to construct the project nor will it issue at this time a favourable recommendation to the Minister of Natural Resources for permits to drill additional wells within the Bickford Storage Pool.
- 5.1.2 However, the Board denies the applications without prejudice to Union's right to bring a motion requesting that the Board re-open the hearing at any time prior to December 31, 1993, upon the filing of additional evidence on the need, economic justification and timing of the project.
- 5.1.3 Parties should note that if Union applies to re-open this hearing by December 31, 1993, with an application that incorporates unchanged land and environmental proposals, the Board will regard the public record, as it deals with the land and environmental issues dealt within this hearing, as complete.
- 5.1.4 The Board is prepared, in the event of subsequent approval of this application, to make a favourable recommendation, on the present evidence, to the Minister of Natural Resources with regard to the drilling

of the additional six wells in the designated storage area of the Bickford Pool. The Board has noted that these proposals were unchallenged during the hearing and it accepts the Board Staff Conditions of Approval for drilling which are attached as Appendix C to this Decision.

- 5.1.5 The Board requests that Union consider arranging a detailed briefing, say at a technical conference with Board Staff and Board Advisors, on its five year plans for the further development of its complex storage and transmission facilities. Should Union feel that planning information of this type would be best dealt with on a confidential basis, by reason of its competitive significance, the Board would be willing to consider such a request.

5.2 COST AWARDS

- 5.2.1 The Bickford Dawn Group requested full recovery of any and all costs, including honoraria as the Board saw fit, on the basis of the Group's substantial interest in the proceedings and its responsible participation. The Group submitted that it contributed to a better understanding by the Board, particularly with respect to soil and crop damage concerns.

- 5.2.2 Union submitted a lengthy argument challenging the Group's request for full cost recovery, and suggesting that the Group's retention of its full intervenor funding award should be reviewed. The Applicant was critical of the Group's participation in several areas citing the following:

- The Group did not act upon the mandate and intended actions it expressed in the hearings for intervenor funding and the motion to adjourn.
- The Board's indicated issues of concern as stated in the Intervenor Funding Decision and at the time of the delay in the proceedings, such as greenbelting matters and further negotiations, were not developed

and raised in the hearing of the applications with respect to the Bickford Dawn project.

- Crop loss data was based on the Dawn-Kerwood pipeline, rather than the existing Bickford Line.
- No witnesses were called in support of the prefiled evidence.

5.2.3 Union argued that the Bickford Dawn Group's intervention was largely directed at compensation matters in preparation for a potential expropriation situation, and that a primary purpose for the intervention was to delay the project.

5.2.4 While the Board does not draw any conclusions with regard to the motives of the Group in its intervention, the Board does share some of the concerns expressed by Union about the conduct of the intervention.

5.2.5 The Board was disappointed that the Group did not respond effectively to the reasons the Board gave for granting a delay in the proceedings. The Board notes, as well, that the value of the evidence filed by consultants to the Group was diminished by the lack of testing through cross-examination.

5.2.6 The Board notes that much of the Group's evidence and cross-examination was directed at compensation matters not within the jurisdiction of the Board. Counsel for the Group also used the cross-examination of Union's witnesses as an opportunity for negotiations which should more appropriately have taken place outside of the hearing.

5.2.7 The Board therefore awards the Bickford Dawn Group only 75 percent of its reasonably incurred costs in these proceedings.

- 5.2.8 The above cost award includes the disbursements incurred by Mr. Paul Graham, acting as case coordinator for the Group. This award is net of any sums received by Mr. Graham pursuant to the summons to him to attend at the hearing. The Board also awards Mr. Graham an honorarium of \$600 for his participation in the hearing and his work as the Group's case co-ordinator.
- 5.2.9 The Board appreciates that in addition to Mr. Graham, other members of the Bickford Dawn Group who attended the hearing were inconvenienced by the relocation of the sittings from Sarnia to London. Accordingly, the Board awards those members of the Group reimbursement for their mileage and meal costs for those days on which they attended the hearing in London in the amount of \$75 per member for each day of attendance.
- 5.2.10 Within 15 days after the issuance of this Decision with Reasons, the Board directs the Bickford Dawn Group to submit its statement of reasonably incurred costs related to these proceedings including Mr. Graham's disbursement costs.
- 5.2.11 Within 30 days of the issuance of this Decision with Reasons, the Board directs the Bickford Dawn Group to submit a joint claim, on behalf of those Group members who attended on one or more of the hearing days in London, setting out the number of days attended, verified by affidavits sworn by each member of the Group claiming costs.
- 5.2.12 The above mentioned statement of costs and joint claim are to be submitted in triplicate on the Board's prescribed forms to the Board Secretary.
- 5.2.13 The Board directs Union to pay forthwith the honorarium awarded to Mr. Paul Graham in the amount of \$600 and, following assessment by the Board's Assessment Officer, 75% of the Bickford Dawn Group's

DECISION WITH REASONS

reasonably incurred costs, and 100% of the other Group members' joint claim.

- 5.2.14 The Board directs Union to pay the Board's cost of, and incidental to the E.B.L.O. 244 and E.B.R.M. 104 proceedings upon receipt of the Board's cost order and invoice.


DATED AT TORONTO, April 5, 1993



Pamela Chapple
Presiding Member



C.W.W. Darling
Member



E.J. Robertson
Member

APPENDIX A

BICKFORD DAWN GROUP

RECOMMENDATIONS

The following recommendations to the Ontario Energy Board are the result of considerable effort encouraged by a real concern about the potential impact on the residents, landowners and foodlands in the agricultural community known as the Bickford Dawn Group. These recommendations are designed to mitigate the concerns expressed by the Group and assist Union Gas in establishing a higher level of trust, and responsibility as well as a productive working relationship with its neighbours, the Bickford Dawn Group. The recommendations are as follows:

Recommendation #1

That the Ontario Energy Board and Union Gas recognize that the physical impact on soils and crops caused by the construction of the proposed pipeline is the same on the "extra working room" and necessary trespass off easement as it is on the permanent easement. Thus all damage compensation rates for permanent easements referred to in Draft #9 of the Letter of Understanding should be applied to the extra working room temporary easement and necessary trespass. Unauthorized trespass by the contractor would be the responsibility of Union Gas and have to be settled under a separate agreement that may include punitive damage compensation to the landowner.

Recommendation #2

Union Gas in an effort to minimize wet weather construction damage in the fall period of the year should discuss further the wet weather construction policy alternatives discussed in Section 4.5 Option III, IV or V. These alternative actions will allow Union more flexibility in the construction timetable and compensate the landowners directly for wet weather construction to enable the foodlands to be maintained.

Recommendation #3

The calculations for compensation for implementing the "Green Belt" plan should equal the total dollar value of the one time full and final damage compensation payment offer in Draft #9 of the Letter of Understanding. Currently a difference of over 25 percent exists between the two methods.

Recommendation #4

Since Union Gas has only one crop reduction monitoring report for pipelines constructed on Brookston Clay and subsequent crop monitoring by the Bickford Dawn Group verified its results, it is recommended that these values be used to determine the project's crop damage value over the life of the pipeline or the life of the easement: 15 years (see appendix2).

Recommendation #5

The Bickford Dawn Group should be allowed to have a soils and crop specialist present during the construction of the pipeline. The specialist will report to the Bickford Dawn Group and the Ontario Energy Board on all events and noncompliance that may interest the Group and the Board. The cost of such expertise will be renumerated by Union Gas.

Recommendation #6

That the Ontario Energy Board order Union Gas to renegotiate the permanent easement agreements and compensation for residual crop damages in 15 years thereby reflecting the true value of the facility and its benefits to the public interest of Ontario as well as the loss of income and potential profit to the landowner due to a loss in crop productivity.

Recommendation #7

Union Gas should carry out independent crop monitoring studies in years 1 to 5, in the 10th year and in the 15th year in order to determine actual crop damage for calculation of the 15 year lease and damage compensation revisited.

Crop monitoring shall include suitable techniques to adequately assess crop yields, eg. harvesting of the crop within 1 meter X2 meter plots for corn (cobs only), soybean and small grains, and 0.25 meters square plots for forages.

Proposed Conditions of Approval

**Leave to Construct NPS 36 and NPS 30 Bickford to Dawn Line and
NPS 20, NPS 16 and NPS 12 Lines - Bickford Pool Gathering System -
E.B.L.O. 244**

- a) Subject to Condition (b), Union shall comply with all undertakings made by its counsel and witnesses, and shall construct the facilities and shall restore the land according to the evidence of its witnesses at this hearing.
- b) Union shall advise the Board's designated representative of any proposed material change in construction or restoration procedures and, except in an emergency, Union shall not make such change without prior approval of the Board or its designated representative. In the event of an emergency, the Board shall be informed forthwith after the fact.
- c) Union shall furnish the Board's designated representative with every reasonable facility for ascertaining whether the work has been, and is being, performed in accordance with the Board's Order.
- d) Union shall file with the Board's designated representative, notice of the date on which the installed transmission line is pressure tested within one month after the test date.
- e) Both during and after the construction, Union shall monitor the effects upon the land and the environment, and shall file ten copies of both an interim and final monitoring report in writing with the Board, and simultaneously provide a copy of each report to every landowner and tenant on the pipeline routes. The interim monitoring report shall be filed within six months of the in-service date and the final monitoring report shall be filed within 15 months of the in-service date.
- f) The interim monitoring report shall confirm Union's adherence to Conditions (a) and (b) and shall include a description of the effects noted

during construction and the actions taken or to be taken to prevent or mitigate the long-term effects of the construction upon the land and the environment. This report shall describe any outstanding concerns of landowners or tenants.

- g) The final monitoring report shall describe the condition of the rehabilitated right-of-way. The results of the monitoring programs and analysis shall be included and recommendations made as appropriate. Further, the final report shall include a breakdown of external costs incurred to date for the authorized project, with items of cost associated with particular environmental measures delineated and identified as pre-construction related, construction related and restoration related. Any deficiency in compliance with undertakings shall be explained.
- h) Union shall give the Board's designated representative and the Chairman of the Ontario Pipeline Coordinating Committee ("OPCC") 10 days written notice, in advance of the commencement of the construction of the Bickford to Dawn transmission line, and of the Bickford Pool gathering lines.
- i) Union shall file with the Board's designated representative "as-built" drawings of the lines; such drawings shall indicate any changes in route alignment.
- j) Within 12 months of the in-service date, Union shall file with the Board a written Post Construction Financial Report. The Report shall indicate the actual capital costs of the project and shall explain all significant variances from the estimates adduced in the hearing.
- k) Construction shall be undertaken and completed between the months of April through October 1993 inclusive. Authorization for Leave to Construct shall terminate October 31, 1993, unless otherwise ordered by the Board.

- l) Union shall designate one of its employees as project manager who will be responsible for the fulfilment of undertakings on the construction site and shall provide the name of the project manager to the Board's designated representative. Union shall prepare a list of the undertakings given by its counsel and witnesses during the hearing and will provide it to the Board's designated representative for verification and to the project engineer for compliance during construction.
- m) There shall be no blasting along the proposed pipeline routes.
- n) Union shall guarantee that landowners and tenants will have rapid access to a senior manager at all times when there is a dispute over the construction decisions of Union's field representatives. A clear written description of the procedure, including contact names and the steps to be taken shall be approved by the Board's designated representative and provided to all affected landowners and tenants prior to commencing construction of the pipelines.
- o) Union shall attach to its interim and final monitoring reports a log of all landowner and tenant complaints that have been received during construction. Such logs shall record the times of all complaints received, the substance of each complaint; the actions taken in response; and the reasons underlying such actions.
- p) The Board's designated representative for the purpose of these Conditions of Approval shall be the Board's Project Manager, Environmental, or in his absence the Board's Project Manager, Engineering.

Proposed Conditions of Approval
Drilling Permits - Bickford Pool - E.B.R.M. 104

1. The cost of each well shall be reported to the Board Secretary within six months of the completion of all wells, showing a breakdown of the costs similar to that presented in the pre-filed material. A cost variance analysis shall be submitted.
2. Authorization for the issuance of the well permits is limited to twelve months from the date of the Board's Report to the Minister of Natural Resources.
3. Union shall pay to the landowners or tenant farmers fair, just and equitable compensation for any damages, including present and future crop damage, arising from the well drilling.
4. Union shall ensure that drilling and the movement of drilling equipment are carried out in compliance with all procedures, specifications and plans submitted to the Board in the proceeding, and as follows;
 - i) Union shall make reasonable efforts to keep the landowners and tenant farmers, or their designated representatives, fully informed of its drilling operations and minimize inconvenience to them.
 - ii) Drilling of the wells and construction of the gathering lines shall be coordinated so as to minimize disruption of agricultural land.
 - iii) Union shall make reasonable efforts to contact and discuss the stripping of top-soil with the landowners and tenant farmers before any site preparation work is undertaken, prior to moving equipment onto the property.

- iv) Holding tanks shall be removed and the well site shall be cleared of drilling debris and gravel as soon as practicable after well drilling, casing, cementing and testing have been completed.
 - v) Care shall be taken to ensure that no drilling debris, gravel or drilling fluids mix with topsoil or subsoil during pipeline construction activity.
 - vi) The entire wellhead working areas shall be constructed of a granular pad with an underlying geotextile carpet.
5. Union shall designate one of its employees as project manager who will be responsible for the fulfilment of these conditions, and shall provide the employee's name to the Board Secretary and to all appropriate landowners. At least one week prior to construction the Board shall be informed of the date that construction is to commence.
7. An environmental post drilling report, shall be filed with the Board Secretary within fifteen months of the date on which all the proposed wells were put into service.
8. The Board's designated representative for the purpose of these conditions shall be the Board's Project Manager, Engineering, or in his absence the Board's Project Manager, Environmental.

EXECUTIVE SUMMARY
DECISION WITH REASONS

In its April 5, 1993 Decisions, the Board denied Union Gas Limited's applications to construct the Bickford Dawn project which was designed to increase the deliverability capability of an existing storage facility. On June 16, 1993, the Board granted Union's request, under the terms of the April 5 Decision, to re-open this hearing at which Union's additional evidence on the need, economic jurisdiction and timing of this project would be the subject of a further hearing. The hearing was held from June 16 - 18, 1993 and on June 28, 1993. On that latter date the Board issued an oral decision in which it declined to vary its April 5 Decision.

In the Decision with Reasons, the Board found Union had failed to sustain the burden of proof in regard to the need for this project. The Board also found that Union had not provided a complete and sufficient economic justification for the construction of this project in the 1994 fiscal year. The Board however noted that despite its refusal to approve this project for fiscal 1994, an improvement in the Company's markets might make it a viable project.

The Board also took note that Union had contracted for additional transportation on the Northern Border route from June 1 to November 1, 1993. Spot gas had started flowing on that route on June 1, 1993; these arrangements had an option to extend for one further year.

The Board indicated that new applications by Union for facilities approvals should include evidence on future supply plans covering a period of at least 2 years. The Board noted that capital expenditure forecasts in general rate applications would cover much of this period in public information and that the Board would consider confidentiality rules to hear evidence on data extending beyond publicly available information.

Finally, the Board asked Union to take note that in its future general rate hearings that the Board will expect to receive evidence of actual versus forecast results from previously approved facilities; this evidence should be supported by an appropriate witness or witnesses.

SEP 08 1993

DECISION WITH REASONS

E.B.L.O. 244 Reopened
E.B.R.M. 104 Reopened

IN THE MATTER OF the Ontario Energy Board Act,
R.S.O. 1990, c. O.13 and in particular ss. 46(1), 48 and
23(1) thereof;

AND IN THE MATTER OF an Application by Union
Gas Limited for an order granting leave to construct
natural gas pipelines in the Townships of Sombra and
Dawn, both in the County of Lambton;

AND IN THE MATTER OF an Application by Union
Gas Limited to the Minister of Natural Resources for
permits to drill wells in a designated storage area in the
Township of Sombra, in the County of Lambton.

BEFORE: Pamela Chapple
Presiding Member

C.W.W. Darling
Member

E.J. Robertson
Member

REASONS FOR DECISION

September 03, 1993

DECISION WITH REASONS

TABLE OF CONTENTS

1.	<u>INTRODUCTION</u>	1
	1.1 BACKGROUND	1
	1.2 APPEARANCES	2
	1.3 WITNESSES	2
2.	<u>EVIDENCE AND FINDINGS</u>	5
	2.1 NEED	5
	2.2 ECONOMIC JUSTIFICATION	8
3.	<u>BOARD OBSERVATIONS AND COMPLETION OF THE PROCEEDINGS</u>	13

APPENDIX A - Oral Decision

APPENDIX B - 814014 Ontario Limited Letter

1. INTRODUCTION

1.1 BACKGROUND

1.1.1 On April 5, 1993 the Ontario Energy Board ("the Board") issued its E.B.L.O. 244/ E.B.R.M. 104 Decision ("the April 5th Decision") on Union Gas Limited's ("Union" or "the Company") applications for the necessary approvals to construct the Bickford Dawn project. The Board denied the applications without prejudice to Union's right to bring a motion requesting that the Board reopen the hearing at any time prior to December 31, 1993 upon the filing of additional evidence on the need, economic justification and timing of the project.

1.1.2 On June 2, 1993 Union filed a Notice of Motion ("the Motion") requesting that the Board reopen the hearing and accept additional evidence.

1.1.3 The Motion was heard on June 16, 1993 and the Board granted Union's request to reopen the hearing which continued on June 16, 17 and 18. On June 28, 1993 the Board reconvened the hearing in order to give parties an opportunity to cross-examine Union's witnesses on its answer to Undertaking 3.1 which was filed at the conclusion of the evidentiary portion of the reopened hearing. Undertaking 3.1 described Union's arrangements to transport western Canadian gas through U.S. pipeline systems.

DECISION WITH REASONS

1.1.4 At the reconvened hearing on June 28, 1993 Union testified that, in view of time limitations on ordering pipe required to meet 1993 construction deadlines, it required a decision from the Board on the applications by four o'clock that afternoon. The Board issued an oral decision at the conclusion of the proceeding in which it declined to vary the April 5th Decision. The verbatim transcript of the oral Decision is attached as Appendix A.

1.2 APPEARANCES

1.2.1 The following appearances were made at the hearing of the Motion and the reopening of the hearing:

K.T. Rosenberg	For Board Staff
D.A. Sulman, Q.C.	For Union
F.D. Cass	For The Consumers' Gas Company Ltd. ("Consumers Gas")
D. Ian McKenzie	For 814014 Ontario Limited ("814014")
T. Haynal	For TransCanada PipeLines Limited ("TCPL")

1.3 WITNESSES

1.3.1 Union called the following employees as witnesses:

D.D. Bailey	Manager, Financial Studies
W.R. Killeen	Manager, Supply Planning
A.F. Hassan	Manager, Gas Logistics

DECISION WITH REASONS

W.C. Fay	Manager, Storage Planning
W.G. James	Manager, Storage Development
R.R. Bryant	Manager, Pipeline Engineering

1.3.2 Copies of all the evidence and exhibits in the proceedings, together with a verbatim transcript of the hearing of the Motion and the reopened hearing, are available for public review at the Board's office.

1.3.3 The Board has reviewed all of the evidence and submissions presented in the reopened hearing but it has only summarized the evidence and the positions of the parties to the extent necessary to explain the significant issues.

1.4 INTERVENTION OF 814014 ONTARIO LIMITED

1.4.1 Mr. McKenzie of 814014 represented, according to Union, the only landowner on the Bickford Dawn pipeline who had not signed an easement agreement. He had sent a letter to the Board describing the concerns of 814014 ("the 814014 letter"), and requested late intervenor status.

1.4.2 Union opposed granting intervenor status to 814014 on the grounds that its concerns related to land matters, and were more properly the subject of expropriation proceedings. Board Staff supported 814014's right to intervene.

1.4.3 The Board denied 814014's request for intervenor status on the basis that its concerns were not relevant to the reconvened hearing. The 814014 letter was filed as a Letter of Concern in the proceedings and is attached as Appendix B. Mr. McKenzie made an oral presentation for the record.

DECISION WITH REASONS

DECISION WITH REASONS

2. EVIDENCE AND FINDINGS

2.0.1 In the April 5th Decision which denied approval of the Bickford Dawn project, the Board found that Union had failed to establish the need for the project and had not satisfied the burden of proof on economic justification. The present Decision accordingly examines the evidence on these two key issues of need and economic justification as presented by Union in the reopened hearing.

2.1 NEED

Positions of the Parties

2.1.1 In the reopened hearing Union reiterated the following evidence from the first hearing:

- its forecast of an increase of winter sales in the heat sensitive market of $82 \times 10^6 \text{ m}^3$ for fiscal 1994;
- its proposal to partially meet this increased demand with the extra volumes of $69.5 \times 10^6 \text{ m}^3$ that would be available from storage if the Bickford Dawn project were constructed;
- that it would require additional summer and winter spot purchases if Bickford Dawn is not built, and;

DECISION WITH REASONS

- that, while its annual requirements are down, its peak day requirements have increased.

2.1.2 In the reopened hearing and reconvening of that hearing Union's position was that either the Bickford Dawn project would have to proceed or Union would be required to purchase additional gas supplies for delivery in the winter of fiscal 1994 and for each winter thereafter. In effect Union asserted that the "do-nothing" option was not viable.

2.1.3 Union also testified that it had contracted for additional transportation on the Northern Border Pipeline Company route ("the Northern Border route") from June 1 to November 1, 1993 with an option to extend the agreement for up to a year. It had also purchased spot gas which had started flowing on that route on June 1.

2.1.4 It was Union's position that the acquisition of transportation on the Northern Border route was an element of a long-term strategy to develop a competitive alternative to the TCPL delivery system.

2.1.5 Union testified that this spot gas should be characterized as short-term firm gas since it was associated with firm transportation. Union also testified that, if Bickford Dawn is not approved and it is required to purchase additional supplies to be transported via the Northern Border route, it had other short-term firm supplies which it could shed if necessary to maintain the required storage gas balance.

2.1.6 Consumers Gas argued that Union had made no effort to reconcile its evidence from the first hearing, that the need for the project was based on cost savings to customers, with its evidence in the reopened hearing, that the need for the project was based on increased demands.

2.1.7 In reply, Union argued that the project was needed and if the Board did not approve the construction of the facilities, Union would be required to

DECISION WITH REASONS

purchase incremental gas supplies and plan for unabsorbed demand charges ("UDC"). Union stated that there was no inconsistency between its evidence in the original hearing and the reopened hearing.

Board Findings

- 2.1.8 In the April 5th Decision the Board concluded that the need for additional gas purchases for fiscal 1994 had not been sufficiently tested in the proceedings. The Board noted that Union's reply argument stated that none of the alternatives to the project could supply the extra $24 \times 10^6 \text{m}^3$ of firm supply that Union required. The Board was not persuaded at that time, that if the Bickford Dawn project was not constructed, Union would be required to purchase the $69.5 \times 10^6 \text{m}^3$ of gas that the project would provide.
- 2.1.9 The Board continues to have difficulty reconciling the evidence on the need for or the amount of additional gas purchases. It is not clear whether the additional purchases are required to meet overall winter demand or peak day deliverability. It is equally not clear what the requisite volumes might be.
- 2.1.10 The Board accepts Union's evidence that, while its overall demand is declining in fiscal 1994, the demand in the heat sensitive market is increasing. The Board would have been assisted by an analysis of Union's gas supply plan that clearly indicates the adjustments made in the gas supply to accommodate these changes in demand and the resultant need, if any, for additional purchases.
- 2.1.11 The Board also notes Union's new evidence in the reopened hearing that its preliminary results from the fiscal 1993 winter heating season show that peak day demand is declining while peak hour demand is rising. In any future application for Bickford Dawn, the Board will expect further

DECISION WITH REASONS

evidence as to whether this ratio indicates a trend; if it does, the Board will expect evidence as to its effects upon Union's gas supply plan.

2.1.12 The Board on the matter of demand analysis alone, concludes that Union has failed to satisfy the considerable burden of proof which rests upon it in an application that involves, as pointed out by Union's counsel in seeking more time for oral reply argument, "... a \$28 million project, a very complicated project ...". In the Board's view, a substantial addition to the rate base of this order must be based on a clearer and more robust forecast of demand than appears to be the case based the forecast for fiscal 1994.

2.1.13 The Board has also noted Union's arrangements, as detailed in its reply to Undertaking 3.1, to transport additional spot gas on the Northern Border route. Union has indicated that these arrangements were originally devised as a result of the uncertainty associated with the Bickford Dawn project and can be extended in the event that this project is finally not approved for fiscal 1994. The Board agrees that these arrangements are confirmation of Union's argument that the "do nothing" option is not appropriate.

2.1.14 The Board notes that Union agreed, in the reconvening of the reopened hearing on June 28th, that the above arrangements formed part of its long-term strategy to obtain a supply delivery alternative to TCPL.

2.2 ECONOMIC JUSTIFICATION

2.2.1 Union continued to take the position in the reopened hearing that TCPL FS transportation was the appropriate economic comparator to the Bickford Dawn project and stated that if the project were not approved it would contract for additional TCPL FS transportation commencing in fiscal 1996. Union then would have to plan for UDC from that year onwards.

DECISION WITH REASONS

- 2.2.2 However, Union did change its evidence on economic justification somewhat by eliminating UDC costs for fiscal 1994 and 1995 and substituting the costs of incremental summer and winter spot purchases to meet increased demand in those years.
- 2.2.3 Union testified it expected to be able to mitigate only five percent of the UDC costs, which was reflected in the economic analysis. Union argued that even if Union were able to mitigate 75 percent of the UDC the profitability index ("PI") of the project would not be less than one.
- 2.2.4 Union also submitted that its sensitivity analysis demonstrated that the long-term spot gas option results in a higher avoided cost than the TCPL FS option.
- 2.2.5 Board Staff argued that Union's entire portfolio of gas supply, not just TCPL FS, should be used to measure avoided cost. They further argued that the avoided cost was hypothetical in that the cost would only be experienced under certain conditions, which were not known, and that it was contingent on other mitigation measures.
- 2.2.6 Board Staff also questioned why Union had not reduced its TCPL FS if it was anticipating UDC. In addition, they submitted that the level of UDC that Union was forecasting, if it was required to purchase additional TCPL FS, was excessive given its past history of avoiding UDC.
- 2.2.7 In reply, Union submitted the last time that it incurred UDC was in 1983; when it was not planned and that Union was able to mitigate only ten percent of the charges. In addition, Union argued that the Company had been able to avoid UDC for the last ten years because it had increased its storage capacity and that the Bickford Dawn project represented more of the same planning.

- 2.2.8 Union argued that it would be unable to mitigate UDC in the summer. It further argued that it was unable to reduce its TCPL FS because that gas was under long-term contracts and the Company was forecasting that it would require additional TCPL FS by fiscal 1996.

Board Findings

- 2.2.9 The Board notes that the savings in reduced inventory carrying costs as a result of the proposed project remain unchallenged. The Board finds the inventory carrying cost savings projected by Union to be acceptable, and notes that the PI of the project on the basis of those savings alone is approximately 0.7.
- 2.2.10 The Company maintained that the basis for evaluating the economic benefits of the proposed project is the cost of contracting for TCPL FS for the entire gas volume that would have been available for winter deliveries as a result of the project. A change in the evidence in the reopened hearing is the use of a gas supply option for fiscal 1994 and fiscal 1995 until TCPL FS would be available to Union. The evidence indicates that the gas supply option results in costs for fiscal 1995 that are \$5.49 million less than the costs for the firm service option with its associated UDC in that year. The Board finds that the revised analysis using the gas supply option in fiscal 1994 and fiscal 1995 is more appropriate than the use of TCPL FS in those years.
- 2.2.11 The Board recognizes that the economic justification of a proposal that is based on avoided marginal costs to a significant extent, as is the Bickford Dawn project, is less straightforward than that for proposals based on incremental revenues. The evidence indicates that the economics of the present project are very sensitive to the assumptions used in the comparative analysis; this is particularly true in the early years of the project.

DECISION WITH REASONS

- 2.2.12 As stated in the April 5th Decision, the Board agrees with Union that alternatives for economic comparison must be capable of providing firm supplies of winter gas on a long-term basis. In the view of the Board such supplies appear to be available only through contracts for firm winter deliveries by TCPL or by U.S. pipelines, or from other storage capacity within or outside Union's system. Gas delivered through U.S. pipelines could be sourced either in Canada or the U.S.
- 2.2.13 The Board is not persuaded that a long-term and expensive project to satisfy the need as identified is justified at this time without a thorough examination of the short and long-term options available to the Company.
- 2.2.14 The Board has an increasing interest in alternatives to the development by Union of its storage facilities in light of what appears to be the higher marginal cost of the development of such facilities. A more thorough examination of the Michigan storage option would have been of assistance to the Board. It is clear to the Board as well that regulatory developments in the U.S. may make U.S. pipelines a more credible means of delivering long-term firm supplies of gas from U.S. or Canadian sources.
- 2.2.15 With regard to the TCPL FS alternative for economic comparison, the Board finds that the assumptions made in this case are inappropriate. The recovery of only five percent of UDC in a long-term, planned situation lacks credibility in the face of evidence that Union was able to recover ten percent of such costs in an unplanned UDC occurrence years ago. The use of what the Board considers to be a severe, worst-case assumption was not helpful, particularly in the assessment of the economics of alternatives other than TCPL FS.
- 2.2.16 The Board finds that Union has not provided a complete and sufficient economic justification for the Bickford Dawn project. The Board will not approve the construction of the project in the 1994 fiscal year.

DECISION WITH REASONS

DECISION WITH REASONS

3. BOARD OBSERVATIONS AND COMPLETION OF THE PROCEEDINGS

3.0.1 In final argument, the Company stated that "Union's evidence in January and now in June is that Union needs this project to efficiently and cost effectively utilize its assets". In the April 5th Decision, the Board requested that Union consider arranging a detailed briefing on its five year plans for further development of its complex storage and transmission facilities. This request resulted from the Board's impression after the first hearing that it might have gained a more useful assessment of alternatives to Bickford Dawn had it, and those alternatives, been presented in the context of Union's mid to long term strategies for the development of its transmission and storage assets.

3.0.2 That initial impression was strengthened by Union's evidence in the reopened hearing. In the Board's view the examination of alternatives in these hearings suffered from the following:

- a) Union's evidence at the original hearing on alternative supply options to the Bickford Dawn project was deficient in that such information that was gained by the Board on both external and internal alternatives was extracted only by cross-examination at the hearing;

DECISION WITH REASONS

- b) such comparisons as could be made suffered from Union's insistence on using TCPL FS transportation as the sole economic comparator in the initial hearing;
- c) the regrettable lack of examination of Michigan storage in the reopened hearing; and
- d) all the alternatives were examined in comparison to Bickford Dawn and were not put in the context of Union's longer-term supply planning strategies.

3.0.3 Union should take note that the Board will withdraw its request in the April 5 Decision that Union arrange a "detailed briefing" on its relevant five year plans for the development of its storage and transmission facilities. The Board's decision in this regard results primarily from the fact that information obtained by such a briefing, while it could provide a valuable overview to the Board, could not be incorporated as evidence in the hearing as such and hence could not be tested.

3.0.4 The Board however confirms that it would be helpful to it if applications by Union for facilities approvals included evidence on future supply plans as well as full and complete evidence on both internal and external alternatives to the proposed project.

3.0.5 Such evidence on future supply plans should cover a period of at least two years. The Board is not unappreciative of possible difficulties in regard to confidentiality. However capital expenditure forecasts in general rate applications can capture up to eighteen months of this public information; evidence extending beyond that available publicly can be made available by the applicant under the existing rules on confidentiality.

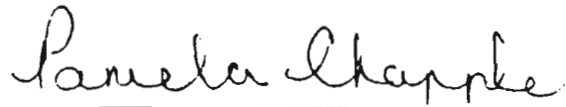
3.0.6 Union should also be aware that in future general rate hearings, the Board will expect to receive evidence of actual versus forecast results from

DECISION WITH REASONS

previously approved facilities; this evidence should be supported by an appropriate witness or witnesses.

- 3.0.7 The Board orders that Union shall pay the Board's costs upon receipt of the Board's order and cost invoice.

DATED AT TORONTO September 3, 1993.



Pamela Chapple
Presiding Member



C.W.W. Darling
Member



E.J. Robertson
Member

UNION GAS LIMITED
BICKFORD-DAWN PROJECT

TABLE OF CONTENTS

CONTENTS -----	SECTION -----
APPLICATION	Application
PROJECT SUMMARY	1
ST. CLAIR-DAWN TRANSMISSION SYSTEM	2
NEED FOR ADDITIONAL FACILITIES	3
PROPOSED FACILITIES	4
PROJECT COSTS AND ECONOMICS	5
CONSTRUCTION PROCEDURES, SCHEDULE & ADMINISTRATION	6
ENVIRONMENTAL MATTERS	7
LAND MATTERS	8



UNION GAS LIMITED

BICKFORD-DAWN PROJECT

LIST OF SCHEDULES

SCHEDULE DESCRIPTION	SECTION	SCHEDULE
Schematic of St. Clair-Dawn Transmission System	2	1
Pipeline Facilities	3	1
Bickford to Dawn Project Maximum Capacity	4	1
Total Projected Capital Costs	5	1
Estimated Pipeline Costs & Estimated Environmental Costs	5	2
Estimated Station Tie-In Costs	5	3
DCF Analysis	5	4
Calculation of Incremental Revenues	5	5
Summary of Input Parameters	5	6
Sensitivity Analysis	5	7
Construction Procedures	6	1
Proposed Construction Schedule	6	2
Design and Pipe Specifications	6	3
OPCC Comments from EA & Addendum	7	1
OPCC Comments from Update		
General Location Map	8	1
Landowner List	8	2
Grant of Easement Form	8	3
Summary of Union's Landowner Contacts	8	4
Complaint Resolution System	8	5

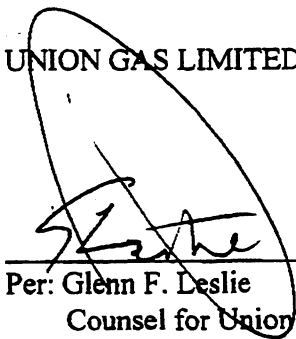


APPLICATION

7. The Applicant now therefore applies to the Board for an Order or Orders granting leave to construct the pipeline described above during 2000.

DATED at Municipality of Chatham-Kent this 16th day of April 1999.

UNION GAS LIMITED



Per: Glenn F. Leslie
Counsel for Union Gas Limited

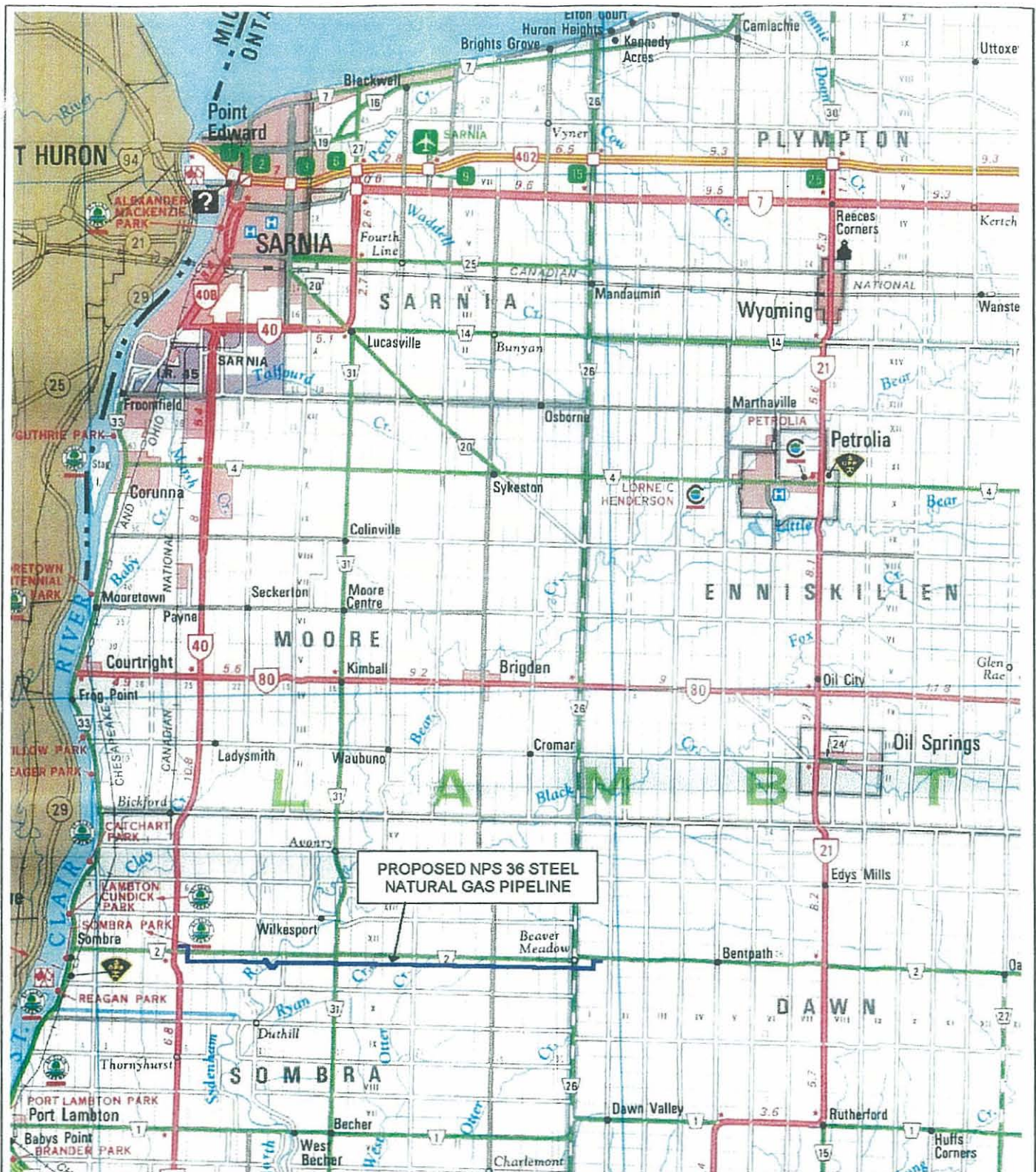
Comments respecting this Application should be directed to:

Jo-Ann Patterson, P.Eng.
Manager, Regulatory Projects
Union Gas Limited
50 Keil Drive North
CHATHAM, Ontario
N7M 5M1

Telephone: (519) 436-5420
Telecopier: (519) 436-5259

Glenn F. Leslie
Blake, Cassels & Graydon
Barristers & Solicitors
28th Floor, Commerce Court West
199 Bay Street (at King)
TORONTO, Ontario
M5L 1A9
Telephone: (416) 863-2672
Telecopier: (416) 863-2653





REVISIONS

NO.	DATE	BY	APP'D	REMARKS



uniongas

BICKFORD - DAWN LINE

NPS 36

- KEY PLAN -

DRAWN BY:	B. ROBINSON	DATE	1999-03-25	SCALE	PLOT SPEC.
CHECKED BY:	B. ROBINSON	DATE	1999-03-25	AC/DRAW CODE	
APPROVED BY:	G. T. HUBBERS	DATE	1999-03-25	JOB NO.	
SIZE	DRAWER	SHEET	DRAWING NO.	KEY	
A	N/A	1 OF 1			

BICKFORD-DAWN PROJECT

LIST OF INTERESTED PARTIES

Township of Sombra
P. O. Box 40
Sombra, Ontario
N0P 2H0

Township of Dawn-Euphemia
4591 Lambton Line
R. R. #4
Dresden, Ontario
N0P 1M0

County of Lambton
P. O. Box 3000
789 Broadway Street
Wyoming, Ontario
N0N 1T0

B. & A. Langstaff Farms Ltd.
c/o Brian Langstaff
R. R. #2
Tupperville, Ontario
N0P 2M0

Larry Unsworth
R. R. #2
Tupperville, Ontario
N0P 2M0

Olive Maxine Howes
Earl Hillier Howes
1387 Mandaumin Road
R. R. #2
Tupperville, Ontario
N0P 2M0

Lloyd Russell Annett
Esther Mary Lewis
c/o Wayne Annett
R. R. #1
Wilkesport, Ontario N0P 2R0

Esther Mary Lewis
c/o Wayne Annett
R. R. #1
Wilkesport, Ontario N0P 2R0

Lyle Thomas Krohn
Winnifred Evelyn Krohn
Melvin Lyle Krohn
R. R. #3
Sombra, Ontario
N0P 2H0

Owen Harris
P. O. Box 429
Port Lambton, Ontario
N0P 2B0

Wayne Peter Van Damme
Marie Rosalie Van Damme
R. R. #6
Wallaceburg, Ontario
N8A 4L3

Wayne Sheldon Annett
Ruth Ann Patricia Annett
R.R. #1
Wilkesport, Ontario
N0P 2R0

Frederick Junior Jennings
R. R. #1
Wilkesport, Ontario
N0P 2R0

Basswood Farms Inc.
c/o Ronald Lawrence Kerr
R. R. #3
Sombra, Ontario
N0P 2H0

William James Eugene Duffy
Vera Anne Duffy
R. R. #3
Sombra, Ontario
N0P 2H0

James Arthur Aarssen
Debra Lynn Aarssen
R. R. #3
Sombra, Ontario
N0P 2H0

Terry Francis Harris
Mari Lynn Harris
R. R. #3
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Catherine Ann Vandevenne
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N0P 2B0

Patrick Murphy
R. R. #3
Sombra, Ontario
N0P 2H0



John Elliott Langstaff
Helen Anita Langstaff
R.R.#2
Tupperville, Ontario
N0P 2M0

Alice Laura Bastow
Marvin James Bastow
Beverly Jean Bastow
R. R. #3
Sombra, Ontario
N0P 2H0

Enbridge Consumers Gas
2225 Sheppard Avenue East
North York, Ontario
M2J 5C2

Farm Credit Corporation
Property Division/Agri-Land
P. O. Box 4320
900 - 1801 Hamilton Street
Regina, Saskatchewan
N4P 4L3

Virginia Crowe
R. R. #6
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N8A 4L3

Richard George Fish
R. R. #3
Sombra, Ontario
N0P 2H0

Joe Fournie
R. R. #1
Sombra, Ontario
N0P 2H0

Mary Sauve
R. R. #3
Sombra, Ontario
N0P 2H0

Cornelius J. Bruin
Triny S. A. Bruin
R. R. #3
Sombra, Ontario
N0P 2H0

Bernard Kraayenbruink
R. R. #1
Port Lambton, Ontario
N0P 2B0

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Lisa Anne Vanderveeken
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N0P 2H0

Dennis Moynahan
Mary Moynahan
R. R. #3
Sombra, Ontario
N0P 2H0

Doreen Gertrude Hinnegan
R. R. #3
Sombra, Ontario
N0P 2H0

Bernard Joseph Lajoie
Barry Joseph Lajoie
Brian Joseph Lajoie
Allan Joseph Lajoie
R. R. #3
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Ron Van Damme
R. R. #4
Wallaceburg, Ontario
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Farm Credit Corporation
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E1E 4E1

Att: Sharon Zimmer

Ontario Hydro
Suite 300, 7676 Woodbine Ave.
Markham, Ontario
L3R 2N2

Att: Cathy Hunt

Ram Petroleums Limited
435 Exeter Rod
London, Ontario
N6E 2Z3

Elliott's Land Services Ltd.
(in trust)
P. O. Box 969
72 Ontario Street South
Grand Bend, Ontario
N0M 1T0

Cameron Petroleums Limited
P. O. Box 20109
431 Boler Road
London, Ontario
N6K 4G6
**Att: Madeline Brett,
President**

Elexco Ltd., Trustee
555 Southdale Road East
London, Ontario
N6E 1A2

Midway Petroleum Company
P. O. Box 36
31 South Main Street
Clarkston, Michigan 48347

The Bank of Nova Scotia
4184 Petrolia Street
P. O. Box 370
Petrolia, Ontario
N0N 1R0

Lambton Credit Union Limited
1557 Main Street
Brigden, Ontario N0N 1B0

Royal Bank of Canada
Royfarm Mortgage Centre
226 Main Street South
Exeter, Ontario
N0M 1S7

The Toronto-Dominion Bank
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827 Dufferin Avenue
Wallaceburg, Ontario
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Scotia Mortgage Corporation
213 King Street West
P. O. Box 518
Chatham, Ontario
N7M 5K6



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St. Willibrord Community
Credit Union Limited
151 Albert Street
London, Ontario
N6A 4W1

CanEnerco Limited
480 - 200 Queens Avenue
London, Ontario
N6A 1J3

Dome NGL Pipeline Ltd.
Cochin Pipeline Ltd. Ontario
c/o Amoco Canada
240 4th Avenue
Calgary, Alberta
T2P 0Y2

Cochin Pipeline Ltd.
P. O. Box 200, Station M
Calgary, Alberta
T2P 2H8

St. Clair Region Conservation
Authority
205 Mill Pond Crescent
Strathroy, Ontario
N7G 3P9

Dinard Resources Ltd.
#1170 - 840 7th Avenue S.W.
Calgary, Alberta
T2P 3G2

The Co-Operative Trust
Company of Canada
Unit 2, 332 Wellington Rd
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N6C 4P6

Royal Bank of Canada
552 James Street
Wallaceburg, Ontario
N8A 2N9

Canadian Imperial Bank of
Commerce
1552 St. Clair Parkway
Box 190
Courtright, Ontario
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Black Gold Land & Exploration
Ltd. (in trust)
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London, Ontario
N6G 2E6

Canadian Imperial Bank of
Commerce
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Sombra, Ontario
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Gaz Metropolitain, inc.
1717, du Havre
Montreal, Quebec
H2K 2X3
Att: Lyne Mercier

Engage Energy
Suite 2800
3000 Town Center
Southfield, Michigan 48075
Att: Dave Slater

TriState Canada
c/o John Wolnik
St. Clair Pipelines
50 Keil Drive
Chatham, Ontario
N7M 5M1

Lakeville Holdings Inc,
601 - 195 Dufferin Avenue
London, Ontario
N6A 1K7

Enbridge Consumers Gas
c/o Tecumseh Gas Storage
P. O. Box 520
Corunna, Ontario
N0N 1G0

TransCanada PipeLines Limited
P. O. Box 1000, Station "M"
TransCanada PipeLines Tower
111 - 5th Avenue S.W.
Calgary, Alberta
T2P 4K5
Att: Kelly Sheret

Walpole Island First Nation
Walpole Island Heritage Centre
R. R. #3
Wallaceburg, Ontario
N8K 4K9

Att: Dean M. Jacobs
Executive Director



uniongas

SECTION 1
PROJECT SUMMARY

UNION GAS LIMITED

BICKFORD-DAWN PROJECT

SECTION 1 PROJECT SUMMARY

1. Union Gas Limited ["Union"] requests an Order from the Ontario Energy Board [the "Board"] granting leave to construct 16.9 kilometres of NPS 36 natural gas pipeline and related facilities ["proposed facilities"] from Union's Bickford Compressor Station ["Bickford Station"], in the Township of Sombra, to Union's Dawn Compressor Station facilities ["Dawn"], in the Township of Dawn-Euphemia, all in the County of Lambton.
2. The proposed facilities will remove the existing transportation capacity constraint on Union's St. Clair to Dawn system and enable Union to:
 - a) provide increased firm transportation capacity to meet the forecasted increases in the demand for transportation service to Dawn;
 - b) increase the security and diversity of supply to Ontario;
 - c) provide Ontario consumers with the ability to access competitively-priced U.S. firm and spot gas supplies;
 - d) enhance storage, transmission and distribution services to both current and future in-franchise and ex-franchise customers; and
 - e) meet the transportation requirements of TriState Canada.
3. Union and TriState Canada have negotiated an agreement whereby TriState Canada will pay a \$19 million capital contribution to Union in return for Union providing TriState Canada firm transportation capacity from Bickford to Dawn.



4. Union plans to construct the proposed facilities during the 2000 summer construction season at a total estimated cost of \$35 million, less the TriState Canada contribution, to be in-service November 1, 2000.
5. An economic analysis has been completed in accordance with the Board's EBO 134 *Report on System Expansion*. This analysis shows that the proposed facilities are in the public interest as the project has a profitability index ["PI"] of 1.5 and a positive net present value ["NPV"] of \$7.7 million.
6. A Route Selection/Environmental Impact Assessment ["EA"] report for the proposed Bickford-Dawn Line was prepared by the independent consulting firm of MacLaren Plansearch and was submitted to the Ontario Pipeline Coordination Committee ["OPCC"] in October 1989 for review. An Addendum to the EA was submitted to the OPCC in June 1991 for review. Both the EA and the Addendum were reviewed by the Board in 1993 during the EBLO 244/EBRM 104 proceeding where the Board in its *Decision With Reasons* approved the proposed route for the Bickford-Dawn Line. A December 1997 Environmental Report Update for the Bickford-Dawn Line was submitted in April 1999 to the OPCC, municipalities, and the St. Clair Region Conservation Authority.
7. Union's standard pipeline construction techniques, combined with supplemental mitigation measures recommended in the EA, the Addendum, and the Update ["environmental reports"] will be employed to address any environmental or landowner concerns that may arise.
8. The environmental reports identify and assess the significance and likelihood of environmental and socio-economic effects including cumulative environmental impacts. The EA and the addendum reports conclude that construction and operation of the proposed facilities will have no significant long-term environmental impacts.
9. All permanent easement lands necessary for construction of the pipeline have been acquired. Union will need to obtain land for temporary land use.



10. The project is conditional on National Energy Board ["NEB"] and U.S. Federal Energy Regulatory Commission ["FERC"] approval of the TriState Pipeline Project. Subject to this condition, Union is seeking a decision in the July/August 1999 timeframe granting Union leave to construct in order to:

- enable Union to market firm C1 St. Clair to Dawn transportation service; and
- enable TriState Canada's U.S. Affiliate [TriState Pipeline LLC] sufficient time to order compression equipment.



UNION GAS LIMITED

BICKFORD-DAWN PROJECT

SECTION 2

ST. CLAIR-DAWN TRANSMISSION SYSTEM

EXISTING ST. CLAIR-DAWN FACILITIES

1. Union's existing St. Clair-Dawn Transmission System consists of the St. Clair-Bickford pipeline ["St. Clair Line"], the Sarnia Industrial Line ["SIL"], and the Bickford Storage Pool Line. The St. Clair-Dawn Transmission System is currently constrained because the pipeline connection to Dawn includes the Bickford Storage Pool Line which is used almost solely for storage injection or withdrawal purposes. Schedule 1 is a schematic of the St. Clair-Dawn Transmission System.

CURRENT OPERATION OF ST. CLAIR-DAWN FACILITIES

2. Currently, the only pipeline between Union's Bickford Station and Dawn is the NPS 24 Bickford Storage Pool Line. The pipeline is used primarily to inject and withdraw gas from storage. This pipeline can be used for the transportation of gas from the St. Clair Line to Dawn, however, this pipeline is available for transportation purposes for only 4-6 weeks in both the spring and fall. Due to these restrictions, the Bickford Storage Pool Line can only be used to provide interruptible transportation service.
3. Given that a dedicated transportation pipeline does not exist between Union's Bickford Station and Dawn, Union currently provides firm transportation from St. Clair to Dawn by means of an exchange. Volumes entering Union's system at the St. Clair Line are transported to the Sarnia market and replaced with other volumes arriving at Dawn. This reduces the volumes delivered from TCPL at the Courtright Station for the Sarnia market. These volumes will be delivered by TCPL to Dawn. Union's ability to rely on this exchange mechanism as an



alternative to additional pipeline capacity is limited to the level of firm demands in the Sarnia market that can be relied on to facilitate the exchange.

4. The Sarnia market consists of general service and the larger industrial customers. The large industrial group is a combination of firm and interruptible customers. The size of the market in the Sarnia area is dependent on the daily demand of the customers and status of interruptible customers.
5. Based on history, the current market demand in the Sarnia market is illustrated below:

Absolute Minimum to Date	1,983 10 ³ m ³ /d [70 MMcfd]
Minimum Market on Year-to-Year Basis	3,116 10 ³ m ³ /d [110 MMcfd]
Maximum to Date	4,957-5,666 10 ³ m ³ /d [175-200 MMcfd]

8. Based on the Sarnia market demand, the available transportation services from St. Clair to Dawn are:

Long-Term Firm Transportation	1,983 10 ³ m ³ /d [70 MMcfd]
Short-Term Firm Transportation	1,133 10 ³ m ³ /d [40 MMcfd]
Interruptible Transportation	1,841-2,550 10 ³ m ³ /d [65-90 MMcfd]

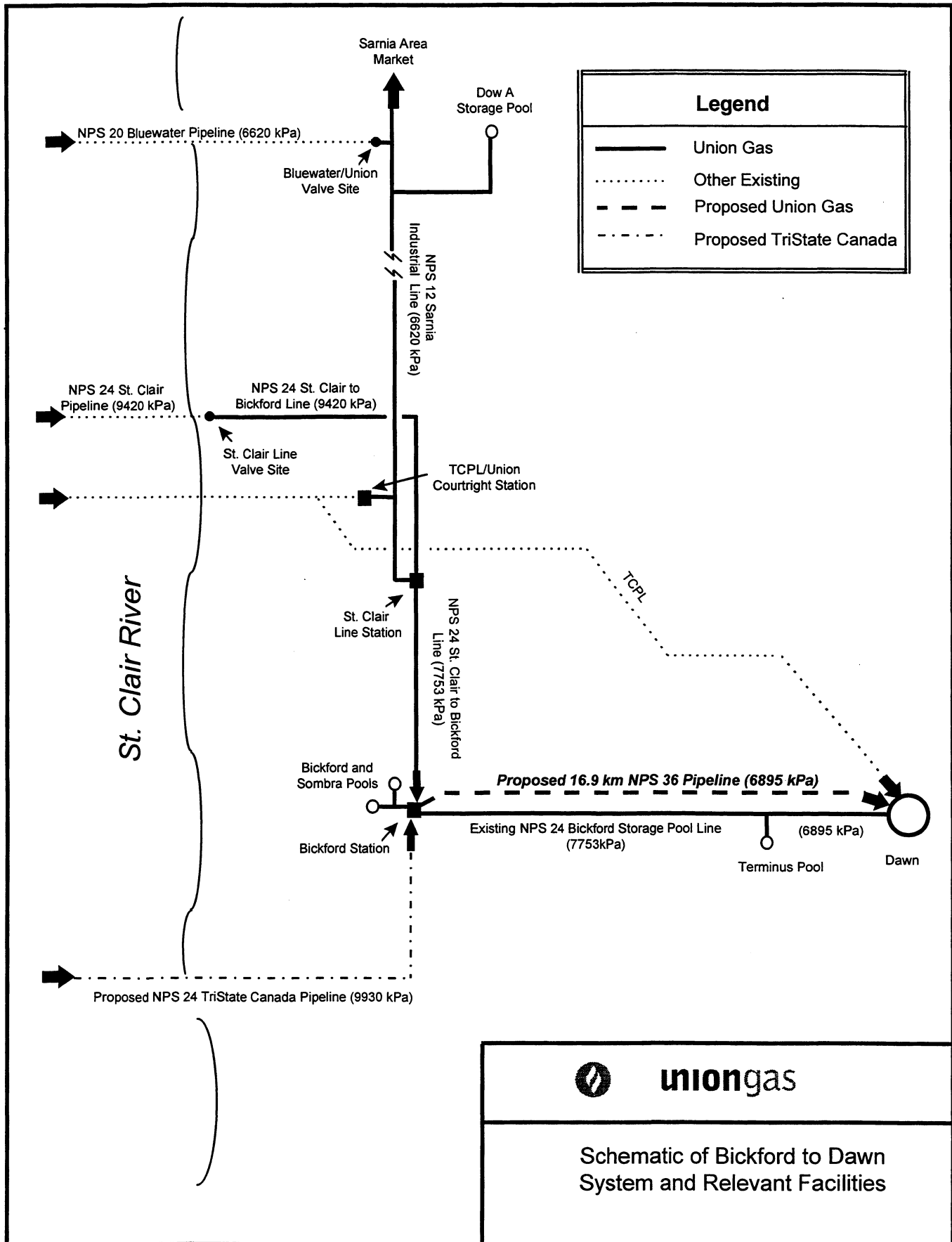
9. As shown above, Union is currently limited in the amount of long-term firm St. Clair to Dawn transportation service it can provide to 1,983 10³m³/d [70 MMcfd]. The volumes in excess of this long-term firm level are used to provide short-term firm or interruptible St. Clair to Dawn service by way of the exchange outlined above.
10. Union currently has long-term firm contracts for transportation from St Clair to Dawn for 1,399.4 10³m³/d (49.4 MMcfd). These contracts are with Enbridge Consumers, GMi, and Engage Energy and are renewable on October 31, 2005, October 31, 2005, and September 30, 2006, respectively. The difference between available long-term firm capacity and the foregoing contracted demand will continue to be used to meet Union system supply needs.



11. Relying on the Sarnia market to provide firm St. Clair to Dawn transportation service poses both a short-term and long-term risk to Union. In the short term, labour disputes, maintenance shutdowns or mild weather could reduce the demand in the Sarnia area and put Union's ability to provide firm St. Clair to Dawn service at risk. In the longer-term, if an industrial customer decides to use a competing fuel, or to reduce their production level, or to close their plant, the demand in the Sarnia market will decline under current conditions, and change in the Sarnia market demand can directly limit Union's ability to actually provide St. Clair to Dawn transportation.



SECTION 2
Schedule 1



**SECTION 3
FOR FACILITIES**

UNION GAS LIMITED

BICKFORD-DAWN PROJECT

SECTION 3 NEED FOR ADDITIONAL FACILITIES

MARKET DEMAND

1. As explained in Section 2, Union provides firm St. Clair to Dawn transportation service by an exchange mechanism which relies on the firm demand of the Sarnia market. Union cannot increase firm long-term transportation commitments beyond the current levels. The construction of the proposed facilities will provide additional transportation capacity directly to Dawn.
2. Significant increases in natural gas demand in Ontario and the U.S. Northeast are forecasted as a result of new and growing demands in those areas including significant expansion in the gas-fired power generation industry. Much of the gas is expected to go through Dawn. Schedule 1 illustrates the extensive amount of existing and proposed pipeline facilities east [downstream] of Dawn. Increases in pipeline capacities upstream of Dawn are illustrated in Table 1 below.

Table 1

Incremental Flows Arriving in Chicago				
Pipeline	1998	1999	2000	Ultimate Incremental
Northern Border	19,829 $10^3\text{m}^3/\text{d}$ [700 MMcfd]		15,439 $10^3\text{m}^3/\text{d}$ [545 MMcfd]	35,268 $10^3\text{m}^3/\text{d}$ [1,245 MMcfd]
Alliance			36,826 $10^3\text{m}^3/\text{d}$ [1,300 MMcfd]	56,656 $10^3\text{m}^3/\text{d}$ [2,000 MMcfd]

UNION/TRISTATE CANADA AGREEMENT

4. TriState Canada and Union have entered into a 40-year agreement whereby Union will provide transportation service between Bickford and Dawn. Equivalent volumes to those delivered by TriState Canada to Union at Bickford would be redelivered for TriState Canada at Dawn.



Union will use its integrated system in the area to provide this service. In return for this service, TriState Canada will pay Union the sum of \$19 million, plus monthly payments equal to two-thirds of the operating and maintenance and municipal taxes for Union's proposed Bickford-Dawn pipeline. Union will account for the \$19 million payment as a capital contribution.

5. TriState Canada's requirement for transportation has provided Union with the opportunity to build a pipeline large enough to meet TriState Canada's and other forecasted demand for transportation on Union's system. The proposed NPS 36 Bickford-Dawn Line will be integrated into Union's storage, transmission and distribution system and will provide Union incremental capacity of $6,175 \text{ } 10^3 \text{ m}^3/\text{d}$ [218 MMcfd] to meet forecast firm transportation demands at a significantly lower cost.
6. To satisfy only the latter demand, Union would have built a NPS 24 pipeline at a cost of \$24.7 million. This project would have a PI of 0.96 and a negative NPV of \$1.0 million. On comparison, Union's projected cost to build the proposed NPS 36 pipeline [net of the \$19 million capital contribution] is \$16.0 million. The project has a PI of 1.5 and a NPV of \$7.7 million. In essence, Union is acquiring the $6,175 \text{ } 10^3 \text{ m}^3/\text{d}$ [218 MMcfd] of capacity at a cost of \$16 million, which is \$8.7 million less than Union's stand-alone option noted above.
7. Given that the volumes underpinning the Bickford-Dawn Line consist of firm contracted demand [ie; TriState Canada] for $12,748 \text{ } 10^3 \text{ m}^3/\text{d}$ [450 MMcfd] and projected demand to satisfy the remaining $6,175 \text{ } 10^3 \text{ m}^3/\text{d}$ [218 MMcfd] of capacity, a portion of the pipeline is "at risk". However, given the number of proposed pipeline projects that exist to move gas to and from Dawn, it is not feasible to obtain firm contractual commitments from shippers prior to regulatory approvals for construction. Union will be at risk for any unused capacity, but fully expects that there is, or will be, sufficient demand to support this project.

ST. CLAIR-DAWN FORECAST

8. Union is currently forecasting the incremental St. Clair to Dawn transportation requirements set out in Table 2 below. The proposed Bickford-Dawn Line will provide Union with the ability to meet these demands.



Table 2

Union's Forecast of St. Clair to Dawn Incremental Transportation		
Year	Annual	Cumulative
November 1, 2000	1,416 10 ³ m ³ /d [50 MMcfd]	1,416 10 ³ m ³ /d [50 MMcfd]
November 1, 2001	1,416 10 ³ m ³ /d [50 MMcfd]	2,833 10 ³ m ³ /d [100 MMcfd]
November 1, 2002	1,416 10 ³ m ³ /d [50 MMcfd]	4,249 10 ³ m ³ /d [150 MMcfd]
November 1, 2003	283 10 ³ m ³ /d [10 MMcfd]	4,532 10 ³ m ³ /d [160 MMcfd]
November 1, 2004	283 10 ³ m ³ /d [10 MMcfd]	4,816 10 ³ m ³ /d [170 MMcfd]
November 1, 2005	283 10 ³ m ³ /d [10 MMcfd]	5,099 10 ³ m ³ /d [180 MMcfd]
November 1, 2006	283 10 ³ m ³ /d [10 MMcfd]	5,382 10 ³ m ³ /d [190 MMcfd]
November 1, 2007	283 10 ³ m ³ /d [10 MMcfd]	5,666 10 ³ m ³ /d [200 MMcfd]
November 1, 2008	283 10 ³ m ³ /d [10 MMcfd]	5,949 10 ³ m ³ /d [210 MMcfd]
November 1, 2009	227 10 ³ m ³ /d [8 MMcfd]	6,175 10 ³ m ³ /d [218 MMcfd]

BENEFITS

10. The proposed facilities will provide Union and its customers with another option to bring gas into Ontario which will temper the volatility of gas prices and the premiums that can and have been paid when gas is available in Michigan, but cannot be moved to Dawn. The historical price differential for gas at Dawn has been as high as \$3.15 [Cdn.] per MMBtu more than in Michigan. During the winters of 1995-1996 and 1996-1997, transportation constraints resulted in volatile delivered spot gas prices at Dawn which increased Union's gas purchase cost by \$9.7 million [Cdn.] and \$1.4 million [Cdn.], respectively. Other distributors, customers and marketers also faced significant gas cost increases during these periods due to these transportation constraints.

11. Dawn is continuing to develop as a major North American trading and routing hub. The growth and activity at Dawn is expected to continue in the foreseeable future. Increased access for natural gas into and out of Dawn will provide more opportunities for trading activity and price transparency. Price transparency and liquidity are the cornerstones of a fully competitive market.

12. The role of Dawn as a major North American hub will help facilitate both in-franchise and ex-franchise growth. Growth is expected because Union is physically located in the middle of vast supplies from the west which will flow through Union's system to meet significant market demands in the east.



13. The completion of the proposed Bickford-Dawn Line represents an important component of Union's integrated system. The proposed facilities would provide additional benefits such as increased security and diversity of supply, increased level of price transparency in Ontario, and improved efficiency of the integrated system to Union and its customers.



ONTARIO ENERGY BOARD

IN THE MATTER OF The Ontario Energy Board Act, 1998,
S.O.1998, c.15, Schedule B, and in particular, s.90 thereof;

AND IN THE MATTER OF an Application by Union Gas Limited
for an Order granting leave to construct a natural gas pipeline and
ancillary facilities in the Townships of Sombra and Dawn-Euphemia,
both in the County of Lambton.

APPLICATION

1. Union Gas Limited [the "Applicant"] hereby applies to the Ontario Energy Board [the "Board"], pursuant to Section 90 of The Ontario Energy Board Act [the "Act"], for an Order or Orders granting leave to construct 16.9 kilometres of NPS 36 pressure natural gas transmission pipeline commencing from Union's Bickford Station at Lot 6, Concession XII, Township of Sombra and travel easterly to Union's Dawn Compressor Station, in the Township of Dawn-Euphemia, all in the County of Lambton.
2. The Applicant, a regulated public utility, is a corporation incorporated under the laws of the Province of Ontario with its corporate head office in the municipality of Chatham-Kent.
3. Attached hereto as Schedule "A" is a map showing the general location of the proposed pipeline and the municipalities, highways, railways, and navigable waters through, under, over, upon or across which the pipeline will pass.
4. The construction of the proposed facilities will allow the Applicant to meet increased demands for firm transportation services on its system, including the requirements of TriState Canada.
5. The parties affected by this Application are the owners of lands over which the pipeline will be constructed.
6. A list of parties who, to the best of the Applicant's knowledge, are affected by this Application are found in Schedule "B" attached hereto.

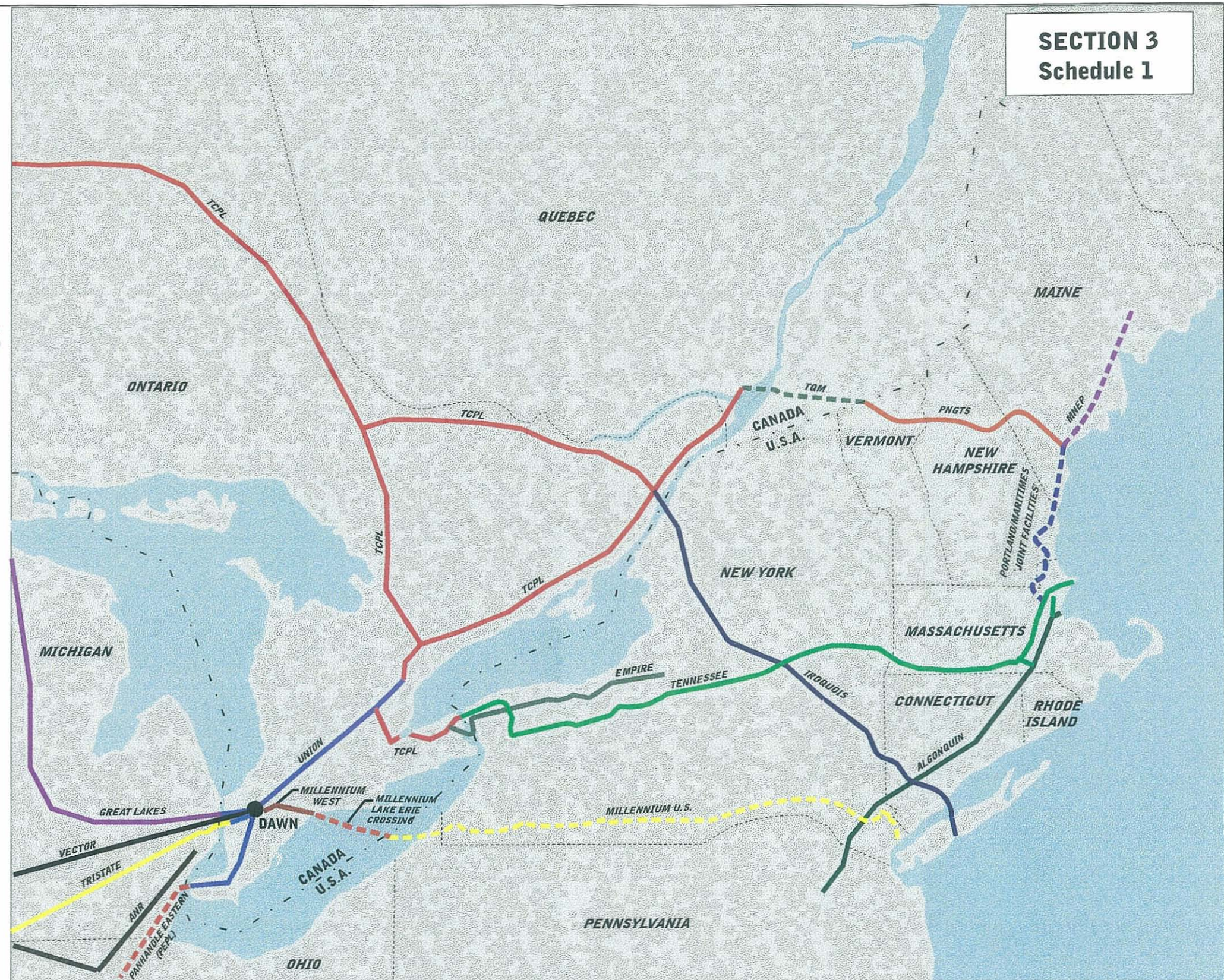




uniongas
A Westcoast Energy Company

PIPELINE FACILITIES

SECTION 3
Schedule 1



SECTION 4
PROPOSED FACILITIES

UNION GAS LIMITED

BICKFORD-DAWN PROJECT

SECTION 4 PROPOSED FACILITIES

DESCRIPTION OF PROPOSED FACILITIES

1. Union is seeking leave to construct 16.9 kilometres of NPS 36 natural gas transmission pipeline commencing at Union's Bickford Station at Lot 6 Concession XII, Township of Sombra and travelling in an easterly direction to Union's Dawn Compressor Station. The proposed pipeline will generally parallel Union's existing NPS 24 Bickford Storage Pool Line. The proposed facilities will provide a direct connection to Dawn for the volumes described in Section 3.
2. Modifications are required at the Bickford Station and at Dawn to provide the tie-ins of the proposed Bickford-Dawn pipeline. At the Bickford Station, Union is proposing to install connections to Union's existing facilities and to TriState Canada. The connection to TriState Canada includes separation equipment, check measurement, and pressure control. Union is proposing to make connections to the existing piping within the Dawn Compressor Station. Pig launching and receiving facilities are also proposed for the new pipeline.

OPERATION OF PROPOSED FACILITIES

3. On design day, volumes delivered from Union's St. Clair Line and TriState Canada will move to Dawn on the proposed NPS 36 pipeline. The volumes on the St. Clair Line will move to the St. Clair Line Station where a portion will flow into the SIL and onwards to the Sarnia market. The balance will move to the Bickford Station and then easterly to Dawn. The TriState Canada volume received at Bickford will join the St. Clair volumes and also move to Dawn.

4. The proposed Bickford-Dawn Line will provide a direct physical link between St. Clair and Dawn. Schedule 1 is a schematic of the proposed facilities showing the maximum capacity of the system. Specifically, there is actual system capability of 18,923 $10^3\text{m}^3/\text{d}$ [668 MMcfd] to Dawn, 8,158 $10^3\text{m}^3/\text{d}$ [288 MMcfd] of capacity on the St. Clair Line, 12,747 $10^3\text{m}^3/\text{d}$ [450 MMcfd] on TriState Canada, and a long-term market in Sarnia of 1,983 $10^3\text{m}^3/\text{d}$ [70 MMcfd].
5. On a day-to-day basis, volumes delivered from the St. Clair Line and TriState Canada will move to the Sarnia market area, or to storage in the Bickford, Sombra or Terminus Pools, or directly to Dawn or some combination.

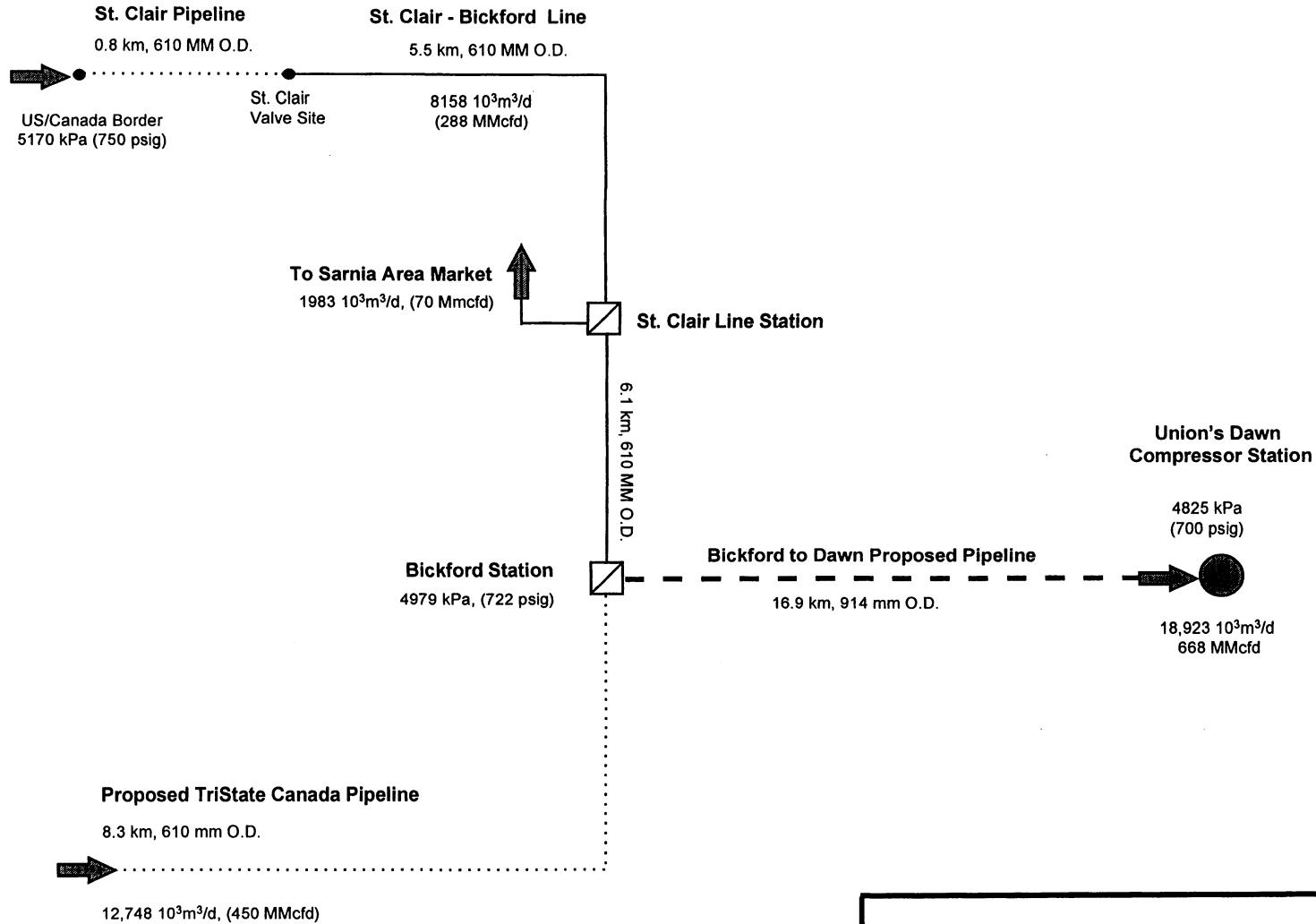
ALTERNATIVES

6. To deliver the forecasted volumes from St. Clair to Dawn, Union requires a NPS 24 pipeline from Bickford to Dawn. With the additional volume delivered by TriState Canada, the Bickford-Dawn Line must be increased to NPS 36.
7. The proposed NPS 36 pipeline has capacity more than double that of a single NPS 24 pipeline. The benefit to Union of constructing the NPS 36 pipeline results because the Bickford-Dawn transmission pipeline can be built and integrated into Union's storage, transmission and distribution system at a net cost lower than Union would otherwise incur to build a stand-alone NPS 24 pipeline.
8. Union investigated various pipeline sizing alternatives. In order to accommodate the forecasted volumes for firm transportation for Union and TriState Canada, compression would be required for pipeline sizes smaller than the proposed NPS 36. Smaller pipeline sizes would also limit Union's ability to expand in the most economic way in the future.
9. Pipeline sizes larger than NPS 36 were rejected because they were not economical for the forecasted transportation requirements.
10. Other alternatives involving looping and compression combinations were investigated and

rejected as they were not as attractive economically, did not provide similar benefits and/or would require the addition of more facilities in the near future.

11. Union is currently using the market in the Sarnia area to the maximum extent possible, therefore, all existing non-facility opportunities have been fully utilized.
12. For these reasons, the proposed Bickford-Dawn Line presents the most viable alternative for transportation of gas from the Bickford Station to Dawn.
13. Under the TriState Pipeline Project's regulatory applications, service is scheduled to commence on November 1, 2000. Union's Bickford-Dawn Line must be in-service by November 1, 2000 in order to provide service to TriState Canada. Union is seeking a Board decision within the July/August 1999 timeframe to allow TriState Canada's U.S. Affiliate [TriState Pipeline LLC] sufficient time to order materials.





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Bickford to Dawn Project
Maximum Capacity

SECTION 4
Schedule 1

UNION GAS LIMITED

BICKFORD-DAWN PROJECT

SECTION 5 PROJECT COSTS AND ECONOMICS

PROJECT COSTS

1. The total estimated cost of the project, including the pipeline facilities and station modifications is \$35 million. With the TriState Canada capital contribution, Union's projected capital cost is \$16.0 million as outlined in Schedule 1. The total project costs cover all materials, labour, lands, environmental, station modifications and interest during construction ["IDC"].
2. The total estimated pipeline cost is \$28.0 million excluding IDC as outlined in Schedule 2. The total estimated pipeline material cost of \$8.9 million covers the cost of all pipe, valves, fittings, coatings, miscellaneous items, and stores overheads. The material costs are based on quotes and estimates from the various manufacturers and recent purchases of similar materials.
3. The total estimated cost of construction and labour of \$16.2 million covers the costs of all labour associated with the installation of the pipeline. The construction cost estimates are based on recent detailed estimates prepared by a pipeline contractor for this project.
4. The total cost of land is \$1.5 million and includes easements, purchases and crop damage payments. The estimated easement costs are based on appraised values of land in the vicinity of the pipeline construction.
5. The projected environmental costs associated with construction of the proposed Bickford-Dawn Line are identified in Schedule 2. These costs are identified as pre-construction related, construction-related and post construction-related. The projected environmental costs of \$1.9 million have been included in the estimated pipeline costs.



6. The Dawn Compressor Station tie-in facilities and the Bickford Station tie-in facilities will have costs of \$2.2 million and \$3.1 million, respectively, as outlined in Schedule 3.

PROJECT ECONOMICS

7. The economics of this project were evaluated using a discounted cashflow ["DCF"] methodology in accordance with the Board's EBO 134 *Report on the Expansion of the Natural Gas System in Ontario*. This methodology is consistent with that employed by Union in previous facilities applications.
8. All incremental cash inflows and outflows resulting from the project are identified. The net present value ["NPV"] of the cash inflows is divided by the NPV of the capital cash outflows to arrive at a profitability index ["PI"]. If the NPV of the cash inflow exceeds the NPV of the cash outflows, or the PI is greater than one, the project is considered to be economic based on current approved rates.
9. Other quantifiable benefits and costs related to the project that are not included in the DCF analysis and other non-quantifiable public interest considerations are also identified.

Stage 1 - Discounted Cashflow Analysis

10. The results of the DCF analysis summarised in Schedule 4 indicates a project PI of 1.5 and an NPV of \$7.7 million with a break-even point for recovery of all project-related costs in year 17.
11. Incremental cash inflows include the estimated revenues from the forecasted sale of incremental long-term transportation service between Union's St. Clair Line and Dawn that is made possible as a result of the additional facilities. In addition, incremental revenues include the ongoing payments from TriState Canada to recover two-thirds of the operating and maintenance costs and municipal taxes as described in Section 3. The calculation of incremental revenues is provided in Schedule 5 and is based on Union's C1 Rate Schedule approved per EBRO 499. The incremental revenues are reduced by operating and maintenance

expenses and taxes to arrive at the net incremental cash inflows.

12. The capital outlays are reduced by the \$19 million received under the firm transportation agreement with TriState Canada described in Section 3. For purposes of the economic analysis, the capital costs exclude general overheads which would be incurred whether or not the project proceeds. Interest during construction is included for the capital costs incurred, net of capital contributions, prior to the in-service date of November 1, 2000.
13. All cashflows are discounted using Union's incremental after-tax weighted average cost of capital ["WACC"]. The WACC is calculated by weighting the expected incremental cost of the components of the capital structure in the same proportions as approved in the EBRO 499 Decision.
14. The project economics have been evaluated over a 40-year period commencing on the in-service date of the proposed facilities of November 1, 2000. The project time horizon coincides with the term of the long-term contract with TriState Canada. Given that the economic life of the pipeline is over 50 years, the economic benefits from the project are considered to be conservative.
15. A summary of the input parameters used in the economic analysis are shown in Schedule 6. A sensitivity analysis was conducted to assess the economic impact of variations in revenues and capital costs. The results of the sensitivity analysis are shown on Schedule 7.

Other Public Interest Considerations

16. Construction of the proposed facilities will result in a number of other public interest considerations which are not quantified in the DCF economic analysis. Additional public interest factors include the following.
 - a) **Access to Firm Gas Supply**
17. The construction of the proposed facilities increases the number of competitive options and routes available to move gas to Dawn. Increased accessibility to competitively-priced firm and



interruptible Canadian and U.S. gas supply and transportation capacity will benefit Union's in-franchise and ex-franchise customers.

b) Enhanced Security and Diversity of Supply

18. The proposed facilities will result in an improvement to the overall security and diversity of supply through access to alternative sources of gas supply in the event of insufficient capacity or disruptions to the pipeline systems which deliver gas.

c) Environmental Benefits

19. The clean-burning properties of natural gas have an increasingly important role to play in reducing the environmental impacts of energy use in North America. The use of natural gas in residential, commercial, industrial and transportation applications, either with or in place of fossil fuels, reduces environmental impacts in two key ways. First of all, the process is frequently more efficient, reducing total energy use. Secondly, natural gas pollutant release per unit of energy is less than other fossil fuels, thereby complying with provincial and national objectives to reduce these emissions.
20. Some of the inherent environmental advantages of natural gas are as follows. Unlike the combustion of both coal for electrical power generation and cheaper grades of fuel oil, natural gas combustion produces virtually no sulphur dioxide - the most significant component of acid rain formation. Natural gas vehicles emit up to 90% less exhaust carbon monoxide than gasoline-powered vehicles. Natural gas combustion also emits significantly lower amounts of reactive hydrocarbons and nitrogen oxides - the key photochemical agents in the formation of urban smog. For stationary power generation, natural gas can reduce carbon dioxide emissions by approximately 50% per unit of energy compared to coal and by 35% over fuel oil.

d) Additional Employment

21. Construction of the Bickford-Dawn project will benefit the Ontario economy as a result of direct and indirect employment. There will be additional employment of persons directly



involved in the construction of the project as well as indirect employment as a result of the trickle-down effect. Union has approximated that 70% of the capital spending will remain in Ontario. According to DRI McGraw Hill, every one million dollars of investment in projects of this nature results in 21.36 person years of employment with an average salary level of \$50,000. The total monetized value of direct and indirect employment generated as a result of the Bickford-Dawn project is \$26.0 million in the first year of the project. The additional employment will result in an increase in personal income taxes paid, a reduction in unemployment insurance benefits, and additional employer health tax payments to aid in covering the cost of providing health services in Ontario. The employment estimates do not include the indirect benefits or multiplier effects of increases in disposable income related to these activities. Therefore, as a result of the construction of the proposed facilities, the Ontario economy would receive significant employment benefits.

e) Additional Taxes

22. A decision to proceed with this project will result in Union paying taxes directly to various levels of government. These taxes include municipal taxes, provincial income and capital taxes, federal income and large corporation taxes.

BICKFORD-DAWN PROJECT

TOTAL PROJECTED CAPITAL COSTS [\$000's]

Pipeline Costs	\$27,974
Dawn Station Costs	\$ 2,255
Bickford Station Costs	\$ 3,059
	<hr/>
Total Estimated Capital Costs Before Contribution	\$33,288
Less TriState Canada Contribution	(19,000)
Plus IDC	<hr/> 1,717
Estimated Net Capital Costs	<u>\$16,005</u>

BICKFORD-DAWN PROJECT

ESTIMATED PIPELINE COSTS

[\$000's]

MATERIALS:

Pipe	\$ 5,808	
Valves, Fittings	1,339	
Miscellaneous Materials	546	
Stores Overhead	<u>178</u>	
Total Materials		\$ 8,871

CONSTRUCTION & LABOUR:

Prime Contract	\$13,561	
Ancillary Contracts	1,873	
Company Labour	<u>780</u>	
Total Construction & Labour		\$ 16,214
Land Rights		<u>1,504</u>
Sub-Total		\$ 25,589
Contingencies		<u>2,385</u>
TOTAL CAPITAL COSTS		<u><u>\$ 27,974</u></u>

BICKFORD-DAWN PROJECT

ESTIMATED ENVIRONMENTAL COSTS [\$000's]

PRE-CONSTRUCTION:

Environmental Study	\$ 70	
Archaeological Assessment	20	
Hearing Costs for Environmental Consultants	<u>15</u>	
Total Pre-Construction		\$ 105

CONSTRUCTION:

Topsoil Stripping and Replacement	\$ 561	
Wet Soils Shutdown	397	
Dust Control	5	
Stream Crossings	250	
Environmental Inspection, Monitoring & Analysis	123	
Site Restoration	<u>320</u>	
Total Construction		\$ 1,495

POST CONSTRUCTION:

Reforestation	\$ 45	
Cover Crop Program	10	
Wet Soils Shutdown	25	
Environmental Inspection, Monitoring & Analysis	120	
Site Restoration	<u>83</u>	
Total Post Construction		\$ <u>283</u>
TOTAL CAPITAL COSTS		<u>\$ 1,883</u>

BICKFORD-DAWN PROJECT

ESTIMATED STATION TIE-IN COSTS **[\$000's]**

DAWN STATION TIE-IN

Total Material	\$ 836	
Total Company Labour	85	
Total Contract Labour	<u>1,129</u>	
Sub-Total		\$ 2,050
Contingencies		<u>205</u>
Total Cost of Dawn Station Tie-In		<u>\$ 2,255</u>

BICKFORD STATION TIE-IN

Total Material	\$ 1,288	
Total Company Labour	100	
Total Contract Labour	<u>1,393</u>	
Sub-Total		\$ 2,781
Contingencies		<u>278</u>
Total Cost of Bickford Station Tie-In		<u>\$ 3,059</u>

**UNION GAS LIMITED
BICFORD-DAWN PROJECT
DCF Analysis**

(Project Years Commencing November 1) <u>Particulars</u> (\$000's)	2000 <u>1</u>	2001 <u>2</u>	2002 <u>3</u>	2003 <u>4</u>	2004 <u>5</u>	2005 <u>6</u>	2006 <u>7</u>	2007 <u>8</u>	2008 <u>9</u>	2009 <u>10</u>
DCF Analysis										
Cash Inflow:										
Revenue	878	1,517	2,156	2,284	2,412	2,540	2,668	2,796	2,924	3,026
Expenses:										
O&M Expense	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)
Municipal Tax	(349)	(349)	(349)	(349)	(349)	(349)	(349)	(349)	(349)	(349)
Capital Tax	(41)	(37)	(33)	(31)	(28)	(26)	(24)	(23)	(21)	(20)
Income Tax	853	82	(287)	(416)	(532)	(637)	(733)	(822)	(905)	(972)
Large Corporation Tax	(36)	(35)	(34)	(33)	(32)	(31)	(30)	(29)	(28)	(27)
Net Cash Inflow	<u>1,297</u>	<u>1,170</u>	<u>1,444</u>	<u>1,446</u>	<u>1,462</u>	<u>1,488</u>	<u>1,523</u>	<u>1,564</u>	<u>1,611</u>	<u>1,649</u>
Cash Outflow:										
Incremental Capital	16,005	-	-	-	-	-	-	-	-	-
Change in Working Capital	0	-	-	-	-	-	-	-	-	-
Total Cash Outflow	<u>16,005</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
Cumulative Net Present Value:										
Net Cash Inflow	1,260	2,334	3,586	4,771	5,901	6,988	8,038	9,057	10,048	11,006
Cash Outflow	16,005	16,005	16,005	16,005	16,005	16,005	16,005	16,005	16,005	16,005
Net Present Value (NPV)	<u>(14,745)</u>	<u>(13,671)</u>	<u>(12,419)</u>	<u>(11,235)</u>	<u>(10,104)</u>	<u>(9,018)</u>	<u>(7,967)</u>	<u>(6,948)</u>	<u>(5,957)</u>	<u>(4,999)</u>
Project NPV	<u>7,719</u>									
Profitability Index:										
By Year PI	0.0787	0.1458	0.2241	0.2981	0.3687	0.4366	0.5022	0.5659	0.6278	0.6877
Project PI	<u>1.4823</u>									

**UNION GAS LIMITED
BICFORD-DAWN PROJECT
DCF Analysis**

(Project Years Commencing November 1) <u>Particulars</u> (\$000's)	2010 <u>11</u>	2011 <u>12</u>	2012 <u>13</u>	2013 <u>14</u>	2014 <u>15</u>	2015 <u>16</u>	2016 <u>17</u>	2017 <u>18</u>	2018 <u>19</u>	2019 <u>20</u>
DCF Analysis										
Cash Inflow:										
Revenue	3,026	3,026	3,026	3,026	3,026	3,026	3,026	3,026	3,026	3,026
Expenses:										
O&M Expense	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)
Municipal Tax	(349)	(349)	(349)	(349)	(349)	(349)	(349)	(349)	(349)	(349)
Capital Tax	(19)	(18)	(17)	(16)	(15)	(15)	(14)	(13)	(13)	(12)
Income Tax	(991)	(1,007)	(1,020)	(1,032)	(1,042)	(1,050)	(1,058)	(1,064)	(1,070)	(1,075)
Large Corporation Tax	(26)	(25)	(24)	(24)	(23)	(22)	(21)	(20)	(19)	(18)
Net Cash Inflow	<u>1,632</u>	<u>1,618</u>	<u>1,606</u>	<u>1,596</u>	<u>1,588</u>	<u>1,581</u>	<u>1,575</u>	<u>1,570</u>	<u>1,566</u>	<u>1,562</u>
Cash Outflow:										
Incremental Capital	-	-	-	-	-	-	-	-	-	-
Change in Working Capital	-	-	-	-	-	-	-	-	-	-
Total Cash Outflow	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
Cumulative Net Present Value:										
Net Cash Inflow	11,902	12,740	13,527	14,265	14,958	15,610	16,224	16,802	17,346	17,859
Cash Outflow	<u>16,005</u>	<u>16,005</u>	<u>16,005</u>	<u>16,005</u>	<u>16,005</u>	<u>16,005</u>	<u>16,005</u>	<u>16,005</u>	<u>16,005</u>	<u>16,005</u>
Net Present Value (NPV)	<u>(4,103)</u>	<u>(3,265)</u>	<u>(2,479)</u>	<u>(1,741)</u>	<u>(1,047)</u>	<u>(395)</u>	<u>219</u>	<u>796</u>	<u>1,341</u>	<u>1,853</u>
Project NPV										
Profitability Index:										
By Year PI	0.7436	0.7960	0.8451	0.8913	0.9346	0.9753	1.0137	1.0498	1.0838	1.1158
Project PI										

**UNION GAS LIMITED
BICFORD-DAWN PROJECT
DCF Analysis**

(Project Years Commencing November 1) <u>Particulars</u> (\$000's)	2020 <u>21</u>	2021 <u>22</u>	2022 <u>23</u>	2023 <u>24</u>	2024 <u>25</u>	2025 <u>26</u>	2026 <u>27</u>	2027 <u>28</u>	2028 <u>29</u>	2029 <u>30</u>
DCF Analysis										
Cash Inflow:										
Revenue	3,026	3,026	3,026	3,026	3,026	3,026	3,026	3,026	3,026	3,026
Expenses:										
O&M Expense	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)
Municipal Tax	(349)	(349)	(349)	(349)	(349)	(349)	(349)	(349)	(349)	(349)
Capital Tax	(12)	(11)	(11)	(10)	(10)	(10)	(9)	(9)	(9)	(8)
Income Tax	(1,080)	(1,084)	(1,088)	(1,092)	(1,095)	(1,098)	(1,101)	(1,104)	(1,106)	(1,108)
Large Corporation Tax	(17)	(16)	(15)	(15)	(14)	(14)	(14)	(13)	(13)	(12)
Net Cash Inflow	<u>1,559</u>	<u>1,556</u>	<u>1,554</u>	<u>1,551</u>	<u>1,549</u>	<u>1,546</u>	<u>1,544</u>	<u>1,542</u>	<u>1,540</u>	<u>1,539</u>
Cash Outflow:										
Incremental Capital	-	-	-	-	-	-	-	-	-	-
Change in Working Capital	-	-	-	-	-	-	-	-	-	-
Total Cash Outflow	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
Cumulative Net Present Value:										
Net Cash Inflow	18,342	18,797	19,227	19,632	20,014	20,374	20,714	21,034	21,336	21,622
Cash Outflow	<u>16,005</u>	<u>16,005</u>	<u>16,005</u>	<u>16,005</u>	<u>16,005</u>	<u>16,005</u>	<u>16,005</u>	<u>16,005</u>	<u>16,005</u>	<u>16,005</u>
Net Present Value (NPV)	<u>2,336</u>	<u>2,792</u>	<u>3,222</u>	<u>3,627</u>	<u>4,008</u>	<u>4,369</u>	<u>4,708</u>	<u>5,029</u>	<u>5,331</u>	<u>5,616</u>
Project NPV										
Profitability Index:										
By Year PI	1.1460	1.1744	1.2013	1.2266	1.2504	1.2729	1.2942	1.3142	1.3331	1.3509
Project PI										

**UNION GAS LIMITED
BICFORD-DAWN PROJECT
DCF Analysis**

(Project Years Commencing November 1) <u>Particulars</u> (\$000's)	<u>2030</u> <u>31</u>	<u>2031</u> <u>32</u>	<u>2032</u> <u>33</u>	<u>2033</u> <u>34</u>	<u>2034</u> <u>35</u>	<u>2035</u> <u>36</u>	<u>2036</u> <u>37</u>	<u>2037</u> <u>38</u>	<u>2038</u> <u>39</u>	<u>2039</u> <u>40</u>
DCF Analysis										
Cash Inflow:										
Revenue	3,026	3,026	3,026	3,026	3,026	3,026	3,026	3,026	3,026	3,026
Expenses:										
O&M Expense	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(9)
Municipal Tax	(349)	(349)	(349)	(349)	(349)	(349)	(349)	(349)	(349)	(349)
Capital Tax	(8)	(8)	(7)	(7)	(7)	(6)	(6)	(6)	(6)	(6)
Income Tax	(1,111)	(1,113)	(1,115)	(1,117)	(1,119)	(1,120)	(1,122)	(1,124)	(1,125)	(1,127)
Large Corporation Tax	(12)	(12)	(11)	(11)	(10)	(10)	(10)	(9)	(9)	(9)
Net Cash Inflow	<u>1,537</u>	<u>1,536</u>	<u>1,535</u>	<u>1,533</u>	<u>1,532</u>	<u>1,531</u>	<u>1,530</u>	<u>1,529</u>	<u>1,528</u>	<u>1,527</u>
Cash Outflow:										
Incremental Capital	-	-	-	-	-	-	-	-	-	-
Change in Working Capital	-	-	-	-	-	-	-	-	-	-
Total Cash Outflow	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
Cumulative Net Present Value:										
Net Cash Inflow	21,891	22,145	22,384	22,610	22,824	23,025	23,215	23,395	23,564	23,724
Cash Outflow	<u>16,005</u>	<u>16,005</u>	<u>16,005</u>	<u>16,005</u>	<u>16,005</u>	<u>16,005</u>	<u>16,005</u>	<u>16,005</u>	<u>16,005</u>	<u>16,005</u>
Net Present Value (NPV)	<u>5,885</u>	<u>6,139</u>	<u>6,379</u>	<u>6,605</u>	<u>6,819</u>	<u>7,020</u>	<u>7,210</u>	<u>7,389</u>	<u>7,559</u>	<u>7,719</u>
Project NPV										
Profitability Index:										
By Year PI	1.3677	1.3836	1.3986	1.4127	1.4260	1.4386	1.4505	1.4617	1.4723	1.4823
Project PI										

**UNION GAS LIMITED
BICKFORD-DAWN PROJECT
Calculation of Incremental Revenues**

		Project Years Commencing November 1									
<u>Particulars</u>	<u>Units</u>	<u>1</u> <u>2000</u>	<u>2</u> <u>2001</u>	<u>3</u> <u>2002</u>	<u>4</u> <u>2003</u>	<u>5</u> <u>2004</u>	<u>6</u> <u>2005</u>	<u>7</u> <u>2006</u>	<u>8</u> <u>2007</u>	<u>9</u> <u>2008</u>	<u>10 +</u> <u>2009</u>
<u>INCREMENTAL RATE C1 REVENUES</u>											
Transportation Revenue under Rate C1:											
Forecast Incremental Firm Transportation Service between St. Clair-Dawn (Section 3, Table 2)											
Daily contract demand volume	10 ³ m ³ /d	<u>1,416</u>	<u>2,833</u>	<u>4,249</u>	<u>4,532</u>	<u>4,816</u>	<u>5,099</u>	<u>5,382</u>	<u>5,666</u>	<u>5,949</u>	<u>6,175</u>
Unit Rate under Rate C1 Schedule											
Approved per EBRO 499											
Daily demand rate per month	\$/10 ³ m ³ /d/mo.	<u>37.611</u>	<u>37.611</u>	<u>37.611</u>	<u>37.611</u>	<u>37.611</u>	<u>37.611</u>	<u>37.611</u>	<u>37.611</u>	<u>37.611</u>	<u>37.611</u>
Annual Revenue under Rate C1	(\$000's)	639	1,279	1,918	2,046	2,173	2,301	2,429	2,557	2,685	2,787
<u>PAYMENTS FROM TRISTATE (Section 3, Para. 4)</u>											
TriState payment covering two-thirds of O&M expenses and municipal taxes											
		<u>239</u>	<u>239</u>	<u>239</u>	<u>239</u>	<u>239</u>	<u>239</u>	<u>239</u>	<u>239</u>	<u>239</u>	<u>239</u>
TOTAL INCREMENTAL REVENUES		<u>878</u>	<u>1,517</u>	<u>2,156</u>	<u>2,284</u>	<u>2,412</u>	<u>2,540</u>	<u>2,668</u>	<u>2,796</u>	<u>2,924</u>	<u>3,026</u>

BICKFORD-DAWN PROJECT

**STAGE 1 DCF PROJECT SPECIFIC VARIABLES,
PARAMETERS AND KEY ASSUMPTIONS**

DISCOUNTING ASSUMPTIONS

Project Time Horizon	40 years commencing November 1, 2000
Discount Rate	incremental after-tax weighted average cost of capital of 5.88% approved per EBRO 499 Decision

KEY INPUT PARAMETERS AND ASSUMPTIONS

Net Cash Inflows: Incremental Revenue under Rate C1: Forecast incremental firm transportation demands between St. Clair - Dawn Revenue under Rate Schedule C1 approved per EBRO 499 Payments from TriState Canada Operating and Maintenance Expenses Incremental Tax Expenses: Municipal Tax Capital Tax Rate Income Tax Rate Large Corporation Tax Rate	Refer to Section 3, Table 2 Refer to Section 5, Schedule 5 C1 Transportation Demand Rate of \$37.611/10 ³ m ³ /d/mo. Two-thirds of Union's operating and maintenance expenses and municipal taxes (Section 3, Para. 4) estimated incremental cost estimated incremental cost 0.3% 43.50% 0.225%
Cash Outflows: Capital Costs Capital Contributions: TriState Canada Limited Partnership - Contribution in Aid of Construction Change in Working Capital	Refer to Section 5, Schedule 1 Negotiated payment of \$19 million under Union/TriState Canada Agreement (Section 3, Para. 4) 4.0244% of net O&M Expenses

BICKFORD-DAWN PROJECT STAGE 1 SENSITIVITY ANALYSIS		
	PROFITABILITY INDEX	CUMULATIVE NET PRESENT VALUE (\$Millions)
BASE CASE	1.48	7.7
INCREASE CAPITAL BY 10%	1.25	4.8
DECREASE REVENUES BY 10%	1.35	5.6

UNION GAS LIMITED

BICKFORD-DAWN PROJECT

SECTION 6

CONSTRUCTION PROCEDURES, SCHEDULE & ADMINISTRATION

1. Schedule 1 describes the general techniques and methods of construction that Union will employ for the construction of the proposed pipeline. It details such activities as clearing, grading, stringing of pipe, trenching, welding, backfill, tile repair, and clean-up.
2. Schedule 2 indicates the proposed construction schedule. It is anticipated that the construction of the pipeline will commence in June 2000 and will be completed in November 2000. The June to September construction period takes advantage of the drier summer months and minimizes the impact of construction on agricultural lands and environmentally-sensitive areas.
3. Material will be available for the project, but must be ordered by the end of 1999 in order to receive the required materials in time for construction.
4. Union foresees no problem in obtaining a contractor to complete the proposed construction. The EA has been filed and will be included as part of the bid documents for the NPS 36 pipeline. Bid documents will be prepared at a later date.
5. Union seeks an Order from the Board granting leave to construct the proposed pipeline in a timely manner in order to purchase the required materials and acquire the necessary temporary easements and meet the planned construction schedule.
6. Union will construct the proposed facilities in accordance with the construction procedures and in compliance with the environmental mitigation measures identified in the environmental reports.



DESIGN SPECIFICATIONS

7. The design specifications for the proposed pipeline are outlined in Schedule 3. All of these design specifications are in accordance with the *Ontario Regulation No. 157/97* under the *Energy Act*. This regulation governs the installation of pipelines in the Province of Ontario.
8. The *Ontario Regulation 157/97* includes a classification system based on land use and population density to determine the appropriate safety factors. A class location unit is defined as an area that extends 200 metres on either side of the centreline of any continuous 1.6 kilometre length of pipeline.
9. A Class 1 location contains 10 or fewer dwellings intended for human occupancy within the class location unit. The Bickford-Dawn Line is in a Class 1 location from the Bickford Station to the Dawn Compressor Station. A location factor of 0.9 was used in the design of the proposed pipeline facilities.
10. A location factor of 0.625 was used for all Class 1 locations in the following situations: when crossing the right-of-way of roads, highways or public streets; for fabrication at valve sites; and in the vicinity of a compressor station. These location factors meet the requirements for Class 2 locations.

PIPE SPECIFICATIONS

11. Pipe specifications are provided in Schedule 3.
12. The NPS 36 pipe has an outside diameter of 914 mm and has a wall thickness of 9.1 mm and 13.1 mm corresponding to the location factors of 0.9 and 0.625, respectively.
13. The NPS 36 pipe will have a specified minimum yield strength of 483 MPa. The operating stress, expressed as a percentage of the specified minimum yield strength ["SMYS"], is 71.7% for the 9.1 mm wall thickness pipe and 49.8% for the 13.1 mm wall thickness pipe. All pipe will be manufactured to the Canadian Standards Association Z245.1-M98 *Steel Line Pipe*

Standard for Pipeline Systems and Materials. The pipe specifications are designed to provide the maximum operating pressure ["MOP"] using the various location factors.

14. The MOP for the proposed Bickford-Dawn Line is 6895 kPag. The pipeline will be tested with water for 24 hours at a minimum of 8619 kPa. This meets the requirements of the *Ontario Regulation*.
15. The Bickford-Dawn Line valves and flanges will have a pressure rating of PN100 which are approved for use up to 9930 kPa.
16. The minimum depth of cover specified is 1.0 metre to the top of the pipe and appurtenances. Additional depth will be provided to accommodate existing or planned underground facilities, such as drainage tile.
17. All pipelines will be installed in accordance with Union's standard pipeline construction procedures as well as the Technical Standards and Safety Authority ["TSSA"] guidelines.



CONSTRUCTION PROCEDURES

1. The construction of the pipeline is divided amongst several crews; each crew performing a separate function as it travels along the pipeline and each crew being supervised by a Company Inspector.
2. Prior to the entry of any of the contractor's work forces on the property, the Company Land Relations Agent will contact each landowner where possible to discuss the issues that could arise from the construction of the line. The Land Relations Agent confirms the location of existing and proposed field tile systems on the property; confirms the presence and location of water wells; establishes if the landowner has livestock that must be restrained during construction; whether access is required across the trench; what width of topsoil is required to be stripped; what depth of cover over the pipe is required; where excess subsoil shall be placed; and answers any questions the landowner may have regarding the construction and the proposed construction schedule.
3. The first crew to enter the property is the pipeline contractor's clearing crew which braces and cuts all fences crossing the easement and installs any required temporary gates. This crew clears sufficient brush, trees and crops on the easement to permit construction of the pipeline.
4. The grading crew constructs approaches through road, highway and railway ditches to allow equipment onto the working side of the easement. This crew also builds roads through wet areas to allow heavy equipment operation. The grading crew strips a certain width of topsoil with bulldozers and graders so that it would not be mixed with the subsoil later removed from the trench.
5. Pipe is then laid on wooden skids on the working side of the easement adjacent to the proposed trench area by the stringing crew. Wherever possible, the stringing trucks

hauling the pipe travel down the centre of the proposed trench to minimize compaction effects.

6. The contractor, by use of a trenching machine or hoe excavator, will excavate a trench approximately 1.7 metre in width for the pipeline, depending on ground conditions at the time. It is at this time that plugs, accesses, laneways and driveways are left in the trench, where requested by the landowner. All tile cut during trench excavation is flagged at the trench and easement limits to signify to the tile repair crew that a repair is required. All tile is measured and recorded as to size, location, depth, type and quality. This information is kept on file with the Company. If a repair is necessary in the future, Union has an accurate method of locating the tile. All utilities that will be crossed or paralleled closely by the pipeline will be located prior to trenching.
7. The general construction specifications instruct the Contractor to erect safety barricades, fences, signs or flashers or to use flagmen around any excavation, across or along a road allowance which will be left overnight or for an extended period of time.
8. Concurrent to trenching, the contractor may have a boring crew install the pipe at road and railway crossings. This operation involves a large excavation on both sides of the proposed crossing to allow room for the boring equipment to be operated and the pipe to be installed at the proper elevation. Augers placed in a bore pipe are used to bore beneath the proposed crossing thereby not disrupting the surface features at the crossing site. When the bore pipe exits on the far side of the crossing, the augers are removed, the carrier pipe or casing pipe is attached to the bore pipe, and the bore pipe is pulled back, drawing the carrier pipe or casing pipe into place.
9. Next, the pipe between roads, accesses, laneways and streams is welded into one continuous length. The welded joints are all radiographically inspected and then coated and lowered into the trench. After sections of pipe are lowered into the trench, subsoil is backfilled by a mormon board, dozer or hoe.

10. The tie-in crew is responsible for the installation of pipe across accesses, laneways, plugs and driveways to minimize the length of time that these accesses are out of service to the landowner. The tie-in crew is also responsible for the pipeline installation at most river and stream crossings.
11. After the trench is backfilled, the tile is repaired. Unless otherwise specified by the landowner or municipality, tile repairs are made by excavating back into the bank along the tile run a minimum distance of 1.2 metres and placing clear stone as a foundation for a perforated steel drainage pipe. The new drainage pipe is cut to the appropriate length and installed between the two exposed tile ends. A Company Inspector supervises the tile repair and acts as a liaison between the Contractor and the landowner or municipality. The Inspector checks the records of tile cut during trenching to ensure that all necessary tile repairs are completed.
12. Prior to actual setting of the support pipe, the existing tile run is checked to ensure that it is clear and undamaged within the limits of the easement. If it is not, further tile is excavated and the damaged tile is replaced to the edge of the easement. The area is then backfilled to the degree necessary to hold the tile and secure the support pipe. The landowner or municipal representative is asked to inspect each tile repair prior to backfill completion. Union undertakes that it is responsible for the tile repair resulting from construction and will stand good for the tile repairs at any future date after construction of the pipeline. Union retains the services of a tile consultant to determine the necessity of repairing individual tile systems by the installation of header tile. Where recommended by the consultant, the header tile will be installed during the final clean-up of the easement.
13. The clean-up crew is the final crew on the property. On farmland, it prepares the subsoil on the stripped portion of the easement by subsoiling or deep chisel ploughing to break up compaction and picking all stones down to 100 millimetres in diameter. The trench

line is crowned with enough subsoil to allow for trench settlement. Excess subsoil is removed to an acceptable location on the landowner's property or hauled to a disposal site. Topsoil is then replaced using a mormon board and small dozers to minimize compaction. The working side of the easement is then chisel-ploughed and stone picked. The entire easement may be cultivated and stone picked again if requested by the landowner. The clean-up crew will also repair fences, pick up debris, replace sod in landscaped areas and reseed sensitive areas such as woodlots, ditch banks and stream crossings.

14. When the clean-up is completed, the landowner is asked by a Company representative to sign a clean-up acknowledgement form if satisfied with the clean-up. This form, when signed, releases the Contractor allowing payment for the clean-up on the property. This form in no way releases the Company from its obligation for tile repairs, compensation for damages and/or further clean-up as required due to erosion or subsidence directly related to pipeline construction.
15. Union will provide its own inspection staff to enforce Union's construction specifications and the *Ontario Regulation No. 157/97* under the *Energy Act for Gas Pipeline Systems*.

Bickford-Dawn Pipeline Project

Pipeline Construction Schedule

ID	Task Name	Duration	1998												1999												2000												
			J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N		
1	Environmental Assessment and Routing	130d																																					
2	Engineering	415d																																					
3	Obtain Land Rights	80d																																					
4	Legal Survey	55d																																					
5	Materials Acquisition	270d																																					
6	Contract Tender and Award	60d																																					
7	Construction Survey	135d																																					
8	Clearing	20d																																					
9	Construction and Testing	105d																																					
10	Clean-Up	60d																																					
11	In Service (Nov 1, 2000)	0d																																				◆	

Note: Clean-Up activities will continue in the spring and summer of 2001.

BICKFORD-DAWN PROJECT

DESIGN AND PIPE SPECIFICATIONS

Design Specifications

Class Location	- Class 1
Design Factor	- 0.80
Location Factor	- 0.90, 0.625
Maximum Operating Pressure	- 6895 kPa
Test Medium	- Water
Minimum Test Pressure	- 8619 kPa
Design Temperature	- M5C, M30C
Valves and Flanges	- PN100
Minimum Depth of Cover	- 1.0

Pipe Specifications

Size	- 914 mm O.D.
Wall Thickness	- 9.1 mm, 13.1 mm
Type	- Submerged Arc Weld
Description	- C.S.A. Standard Z245.1-98
Grade	- 483 MPa
Category	- II
Coating	- Fusion Bonded Epoxy

SECTION 7
ENVIRONMENTAL

UNION GAS LIMITED

BICKFORD-DAWN PROJECT

SECTION 7 ENVIRONMENTAL MATTERS

1. A Route Selection/Environmental Impact Assessment ["EA"] report for the proposed transmission pipeline was prepared by the independent consulting firm of MacLaren Plansearch. The initial EA was prepared in September 1989, an Addendum to the EA ["Addendum"] was prepared in May 1991, and an Environmental Report Update ["Update"] was prepared in December 1997. Copies of these environmental reports can be found under Tabs 1, 2 and 3, respectively, of Volume 2.
2. The EA and Addendum were prepared in accordance with the Board's document *"Environmental Guidelines for Locating, Constructing and Operating Hydrocarbon Pipelines in Ontario [1989]"*. The Update was prepared to meet the intent of the Board's document *"Environmental Guidelines for Locating, Constructing and Operating Hydrocarbon Pipelines in Ontario [1995]"*.
3. The EA and Addendum were submitted to the Ontario Pipeline Coordination Committee ["OPCC"]. Copies were also provided to local municipalities, the St. Clair Region Conservation Authority, and directly-affected landowners. The response from the Chair of the OPCC regarding the EA and Addendum can be found in Schedule 1.
4. The Update was sent to the OPCC in April 1999. A copy of the Update was also provided to local municipalities, the St. Clair Region Conservation Authority. Comments received regarding the December 1997 Update and Union's response to concerns from government agencies will be summarized and filed, when received, as Schedule 2.



5. During the EBLO 244/EBRM 104 proceeding held in 1993, the proposed Bickford-Dawn Line was reviewed in great detail. The Board's findings regarding the transmission pipeline are stated at paragraph 4.2.9 of the EBLO 244/EBRM 104 *Decision With Reasons*: "*the Board thus approves Union's route for the Bickford Dawn Line*". The Decision also states at paragraph 5.1.3: "*parties should note that if Union applies to re-open this hearing by December 31, 1993 with an application that incorporates unchanged land and environmental proposals, the Board will regard the public record as it deals with the land and environmental issues dealt within this hearing as complete*". While Union accepts that the December 31, 1993 date has passed, Union believes that the environmental issues arising from this project have not changed since 1993 and that the decision made in the 1993 hearing is appropriate today.
6. To solicit input from landowners, tenants, and the general public with respect to the EA, and the project in general, two public information sessions were held. The first session was held on October 18, 1989 and the second session was held March 7, 1991. Landowners along the pipeline were sent letters in April 1999 informing them that the project had been reactivated.
7. Directly-affected landowners were interviewed by MacLaren Plansearch as part of the original EA to confirm the existence of environmental features along the preferred route. A directly-affected landowner is a landowner over whose property it is necessary for Union to obtain authorization to use land for construction of the pipeline. MacLaren Plansearch has proposed mitigation measures for all site-specific concerns.
8. Union will comply with all measures in the EA, the Addendum, and the Update.
9. All pipelines will be constructed in the manner recommended and described in the Board document "*Environmental Guidelines for Locating, Constructing and Operating Hydrocarbon Pipelines in Ontario [1995]*".
10. The costs of environmental protection measures to be undertaken by Union are detailed in Section 5, Schedule 2.



11. When the project is constructed, the most up-to-date construction specifications will be followed.
12. Union is not required to obtain the following municipal permits for this project, for the reasons listed below:

Description of By-Law	Reasons for Non-Compliance
Severance [Consent under Planning Act]	For purposes of a transmission line or appurtenances thereto, then exempt under s.50(3)(d) and s.50(5) of the Planning Act,
Tree Cutting Permit	In accordance with the principles outlined in <u>Union Gas Limited v. Township of Dawn</u> (1977), 15 OR(2d) 722(HCJ), Union is exempt from local municipal by-laws relating to, or incidental to, the production, distribution, transmission or storage of natural gas.
Building Permit	In accordance with the principles outlined in <u>Union Gas Limited v. Township of Dawn</u> (1977) 15 OR(2d), 722(HCJ), Union is exempt from local municipal by-laws relating to, or incidental to, the production, distribution, transmission or storage of natural gas. Union complies with the provisions of the Building Code for all structures erected.
Zoning By-Law	In accordance with the principles outlined in <u>Union Gas Limited v. Township of Dawn</u> (1977), 15 OR(2d) 722(HCJ), Union is exempt from local municipal by-laws relating to, or incidental to, the production, distribution, transmission or storage of natural gas.
Note: In all cases, Union complies with the intent of the applicable by-law and permit, to the extent possible, and works closely with each individual municipality so as to keep them apprised of all work that will be going on in the geographical area.	

13. Union will implement a program dealing with environmental inspection. This program will ensure that the recommendations in the EA, the Addendum, and the Update, as well as commitments and the conditions of approval, are followed. An environmental inspector will monitor construction activities and ensure that all activities comply with all conditions of approval.
14. Post-construction reviews will be undertaken after construction. An interim report will be prepared six months after the in-service date which will report on the measures implemented during construction to protect the environment. A final monitoring report will be completed

18 months after construction which will report on the effectiveness of the mitigation measures implemented during construction. A log of landowner complaints will be attached to the monitoring report.

15. Union will obtain permits from the Ministry of Natural Resources, St. Clair Region Conservation Authority, and the Ministry of the Environment and authorization from the Federal Department of Fisheries and Oceans. Approvals will be obtained prior to construction. Union has had conversations with these agencies and sees no difficulty in obtaining these approvals.
16. As part of this project, it will be necessary to cross eight agricultural drains and two natural watercourses. Union is proposing to dam and pump all crossings with the exception of two. One drain is located beside a paved road and, as such, Union will employ the mechanical bore method for this crossing. As well, the North Sydenham River will be a wet crossing.
17. The results of the EA, the Addendum, and the Update indicate that the environmental and socio-economic effects associated with construction of this project are generally short-term in nature and minimal. There are no significant cumulative effects as a result of this pipeline construction.





Ontario
Energy
Board

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de l'Ontario

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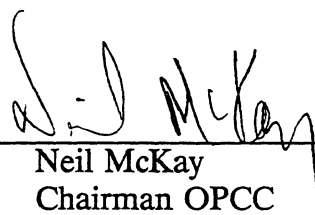
August 23, 1991

Mr. W. Wachsmith
Union Gas Limited
50 Keil Drive North
Chatham, Ontario
N7M 5M1

Dear Mr. Wachsmith:

Re: Bickford-Dawn Pipeline

Enclosed are the responses I have received on the Bickford to Dawn Pipeline. There are no outstanding concerns. The OPCC accepts the report.



Neil McKay
Chairman OPCC

NJM/nw
Encl.



SECTION 7 RECEIVED

Schedule 1

Page 2 of 2

APR 06 1990

GAS SUPPLY ENG.

Ontario
Energy
Board

Commission
de l'Énergie
de l'Ontario

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March 30, 1990

Mr. Kendaris
Union Gas Limited
P.O. Box 2001, 50 Keil Drive North
Chatham, Ontario
N7M 5M1

Dear Mr. Kendaris:

Enclosed are the comments received from government ministries following their review of the Bickford-Dawn Line environmental report.

The ministries of Agriculture and Food, Environment and Culture and Communications have raised concerns. Subject to the resolution of the issues raised by these ministries, the OPCC accepts the environmental report.


Neil McKay
OPCC Chairman

Encl.

BICKFORD-DAWN PROJECT

OPCC REVIEW COMMENTS
1997 ENVIRONMENTAL UPDATE

UNION GAS LIMITED

BICKFORD-DAWN PROJECT

SECTION 8 LAND MATTERS

1. The proposed NPS 36 pipeline will commence at the Bickford Station located in Lot 6, Concession XII, Township of Sombra, in the County of Lambton. The proposed pipeline will run for 342 metres in an easterly direction, then turn southerly for 256 metres crossing Lambton County Road #2 into Concession XI. The pipeline then runs in an easterly direction for 14,811 metres to County Road #26 [now known as Mandaumin Road] in Lot 30, Concession XI Township of Sombra. It then crosses easterly into Lot 25, Concession 1, Township of Dawn-Euphemia, County of Lambton. The pipeline runs easterly, northerly, then easterly again within Lot 25, Concession 1, Township of Dawn-Euphemia to Union's Dawn Compressor Station.
2. A detailed drawing showing the proposed pipeline location is provided in Schedule 1. The names of the landowners along the route and the temporary easements required and the permanent easements that have been acquired from each landowner are set out on this drawing.

PIPELINE-RELATED EASEMENT REQUIREMENTS

3. Union has acquired permanent easements for the proposed NPS 36 pipeline. The permanent easements total 34.7 hectares. Union will also require 3.9 hectares of temporary easement. These temporary rights were obtained in 1993, but have now expired. Union will be approaching the affected landowners to renew these temporary agreements. A parcel of 0.33 hectares was purchased in fee simple.
4. Schedule 2 lists the names and addresses of all property owners and the dimensions of permanent easements obtained along with the temporary easements required for this project.



5. The temporary easements will be renewed with the Temporary Land Use Agreement form previously approved by the Board and used by Union in the past on similar pipeline projects. These agreements are usually for a period of two years beginning in the year of the construction. This allows Union an opportunity to return in the year following construction to perform further clean-up work as required.
6. When the cleanup is completed, the landowner is asked by a Company representative to sign a clean-up acknowledgement form if satisfied with the clean-up. This form, when signed, releases the Contractor allowing payment for the clean-up on the property. This form in no way releases the Company from its obligation for tile repairs, compensation for damages and/or further clean-up as required due to erosion or subsidence directly related to pipeline construction.
7. Union's grant of easement form is attached as Schedule 3. This easement form was reviewed in the EBLO 244/EBRM 104 proceeding when the easements were acquired and remains unchanged from that previously approved by the Board. This agreement covers the installation, operation and maintenance of one pipeline. The major restrictions imposed on the landowner by the agreement are that the landowner cannot erect buildings or privacy fencing in the easement. In addition, the landowner cannot excavate on the easement or install field tile without prior notification to Union. The landowner is free to farm the easement, or turn the easement into a laneway.

LANDOWNER ISSUES

8. Union has implemented a comprehensive program to provide landowners, tenants and other interested parties with information regarding the proposed Bickford-Dawn Line. Project information was distributed through correspondence and meetings with the public. Union has, prior to the filing of this evidence, advised all affected landowners of the new timing for the proposed pipeline.
9. A table which describes this process and the nature of the various landowner contacts made and proposed is attached as Schedule 4. Where formal public meetings were held,



directly-affected landowners and agencies were invited by letter while notification to the general public was made through newspaper advertisements.

NEGOTIATION OF LAND RIGHTS

10. Union employs a “two-phased” approach to acquiring the necessary land rights. The first phase normally involves the formation of a landowner committee(s) to develop and resolve the terms of a letter of understanding [“LOU”] between Union and the landowners for the project. The LOU typically outlines compensation, damage mitigation, clean-up and restoration policies to be implemented for the project. It also constitutes a framework within which individual landowner negotiations take place. The LOU is structured so that common concerns of the landowner groups can be addressed in a consistent and mutually acceptable fashion. In conjunction with these discussions, Union arranges for the preparation of a report by an independent qualified real estate appraiser who suggests baseline values for land along the route of the pipeline.
11. The second phase of the process involves individual negotiations with affected landowners. These discussions will finalize property-specific matters of compensation for land rights and anticipated damages as well as site-specific mitigation measures.
12. Both phases have been completed and resulted in the granting of easements by all affected landowners and a LOU dealing with the construction of the proposed pipeline.
13. The LOU and the appraisal report described above provide a benchmark for individual negotiations for land rights. Had they been necessary, updates or site-specific reports by mutually-acceptable appraisers would have been paid for by Union to resolve questions of land values.

CONSTRUCTION MONITORING AND COMMITMENT FOLLOW-UP

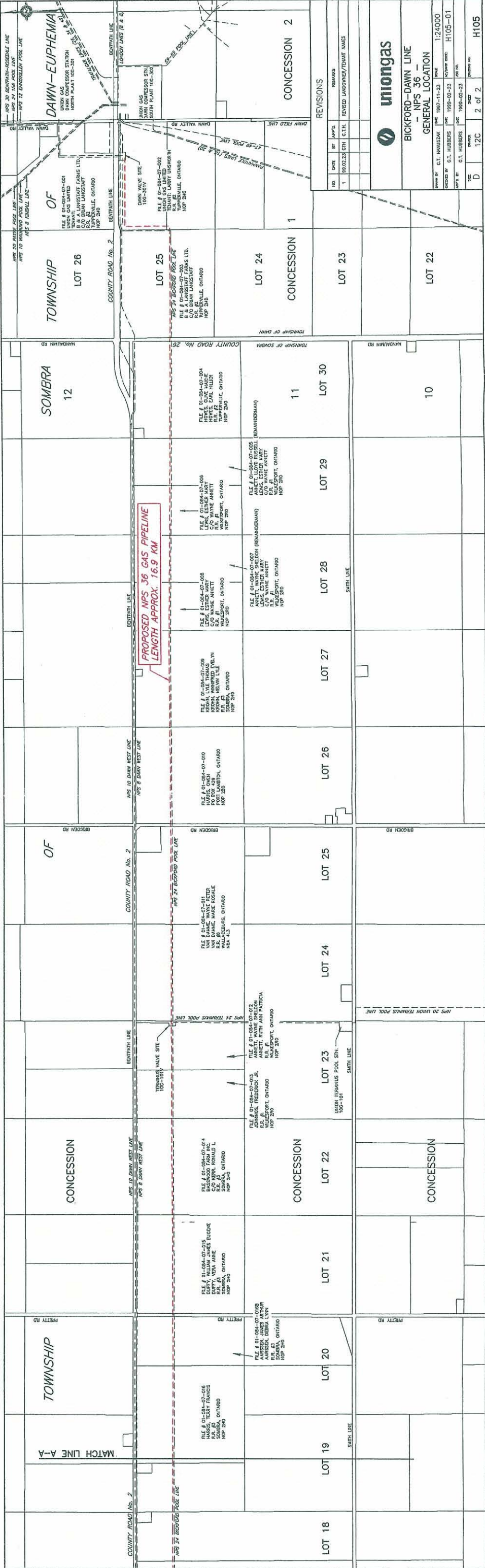
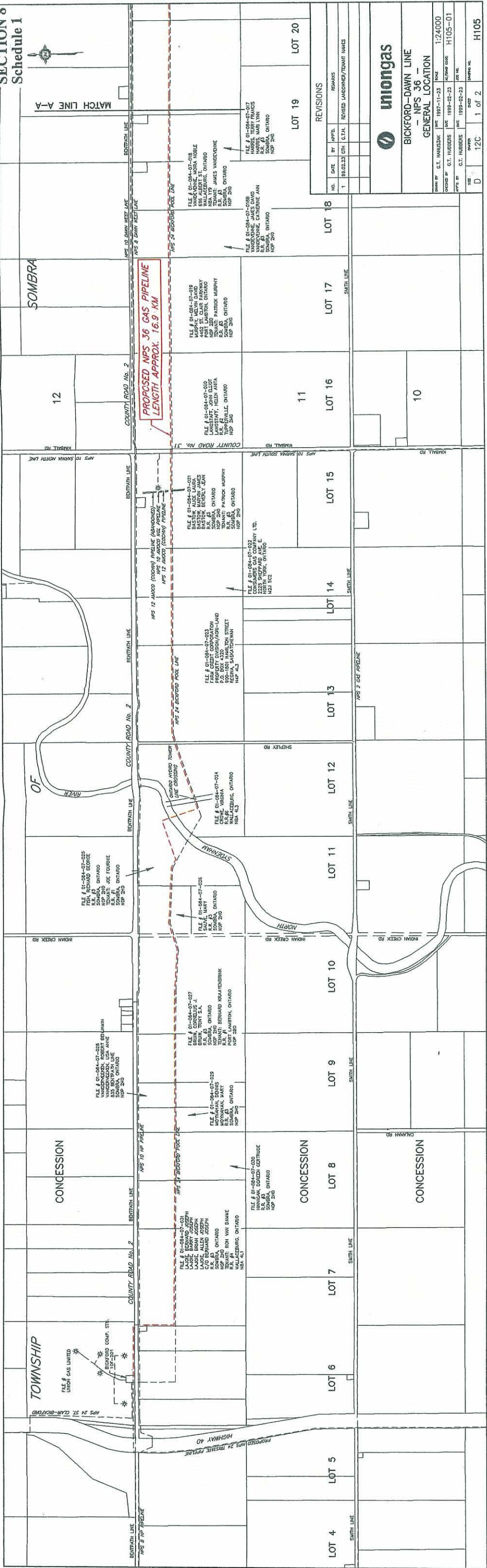
14. During the construction phase, Union will arrange for a Landowner Relations Agent to be in attendance on a full-time basis to ensure that commitments made to landowners are fulfilled

and to address questions or concerns of the landowners. In addition, Union's "Complaint Resolution System" will be used to record, monitor and ensure follow-up on any complaint received by Union related to the construction. This process assists in resolving complaints and fulfilling commitments. A process chart which describes the Complaint Resolution System is found in Schedule 5.

15. After construction, negotiations will continue where necessary to settle any damages which were not foreseen or compensated for prior to construction.



SECTION 8
Schedule 1



NAME & ADDRESS	PROPERTY DESCRIPTION	PERMANENT EASEMENT Dimensions (Metres) Area Length Width (Hectares)	TEMPORARY EASEMENT Dimensions (Metres) Area Length Width (Hectares)
UNION GAS LIMITED Att'n: Lands Department 50 Keil Drive North CHATHAM, Ontario N7M 5M1 Ten.: B. & A. Langstaff Farms Ltd. c/o Brian Langstaff R. R. # 2 TUPPERVILLE, Ontario N0P 2M0	PT. E 1/2 LOT 26, CON. 1 TWP. OF DAWN COUNTY OF LAMBTON		
UNION GAS LIMITED Att'n: Lands Department 50 Keil Drive North CHATHAM, Ontario N7M 5M1 Ten.: Larry Unsworth R. R. #2 Tupperville, Ontario N0P 2M0	PT. E 1/2 LOT 25, CON. 1 TWP. OF DAWN COUNTY OF LAMBTON		
B. & A. LANGSTAFF FARMS LTD. c/o Brian Langstaff R. R. # 2 TUPPERVILLE, Ontario N0P 2M0	PT. W 1/2 LOT 25, CON. 1 TWP. OF DAWN COUNTY OF LAMBTON 3007 Bentpath Line	683.3 x 22 1.503	60 x 12 .072 60 x 12 .072 60 x 12 .072 60 x 12 .072

NAME & ADDRESS	PROPERTY DESCRIPTION	PERMANENT EASEMENT Dimensions (Metres) Area Length Width (Hectares)	TEMPORARY EASEMENT Dimensions (Metres) Area Length Width (Hectares)
HOWES, Olive Maxine HOWES, Earl Hillier 1387 Mandaumin Road R. R. # 2 TUPPERVILLE, Ontario N0P 2M0	PT. N 1/2 LOT 30, CON. 11 TWP. OF SOMBRA COUNTY OF LAMBTON 1387 Mandaumin Rd	603.9 x 22 1.329	60 x 12 .072 60 x 12 .072
ANNETT, Lloyd Russell (remainderman) LEWIS, Esther Mary (life Estate) (formerly Esther Mary Annett) c/o Wayne Annett R. R. # 1 WILKESPORT, Ontario N0P 2R0 Ten.: Wayne Annett R. R. # 1 WILKESPORT, Ontario N0P 2R0	PT. NE 1/4 LOT 29, CON. 11 TWP. OF SOMBRA COUNTY OF LAMBTON No 911 Address Available	302.0 x 22 .664	120 x 12 .144 98.1 x 12 .118
LEWIS, Esther Mary (formerly Esther Mary Annett) c/o Wayne Annett R. R. # 1 WILKESPORT, Ontario N0P 2R0 Ten.: Wayne Annett R. R. # 1 WILKESPORT, Ontario N0P 2R0	PT. NW 1/4 LOT 29, CON. 11 TWP. OF SOMBRA COUNTY OF LAMBTON No 911 Address Available	302.7 x 22 .666	21.9 X 12 .026

NAME & ADDRESS	PROPERTY DESCRIPTION	PERMANENT EASEMENT Dimensions (Metres) Area Length Width (Hectares)	TEMPORARY EASEMENT Dimensions (Metres) Area Length Width (Hectares)
ANNETT, Wayne Sheldon (remainderman) LEWIS, Esther Mary (life estate) (formerly Esther Mary Annett) R. R. # 1 WILKESPORT, Ontario N0P 2R0 Ten.: Wayne Annett R. R. # 1 WILKESPORT, Ontario N0P 2R0	PT. NE 1/4 LOT 28, CON. 11 TWP. OF SOMBRA COUNTY OF LAMBTON 2773 Bentpath Line	303.5 x 22 .668	
LEWIS, Esther Mary (formerly Esther Mary Annett) c/o Wayne Annett R. R. # 1 WILKESPORT, Ontario N0P 2R0 Ten.: Wayne Annett R. R. # 1 WILKESPORT, Ontario N0P 2R0	PT. NW 1/4 LOT 28, CON. 11 TWP. OF SOMBRA COUNTY OF LAMBTON 2773 Bentpath Line	303.4 X 22 .667	
Krohn, Lyle Thomas Krohn, Winnifred Evelyn Krohn, Melvin Lyle R. R. # 3 SOMBRA, Ontario N0P 2H0	PT. N 1/2 LOT 27, CON. 11 TWP. OF SOMBRA COUNTY OF LAMBTON 2637 Bentpath Line	604.2 X 22 1.329	

NAME & ADDRESS	PROPERTY DESCRIPTION	PERMANENT EASEMENT Dimensions (Metres) Area Length Width (Hectares)	TEMPORARY EASEMENT Dimensions (Metres) Area Length Width (Hectares)
HARRIS, Owen PO Box 429 Port Lambton, Ontario N0P 2B0	PT. N 1/2 LOT 26, CON. 11 TWP. OF SOMBRA COUNTY OF LAMBTON No 911 Address	605.5 X 22 1.332	60 X 12 .072 60 X 12 .072
VAN DAMME, Wayne Peter VAN DAMME, Marie Rosalie R. R. # 6 WALLACEBURG, Ontario N8A 4L3	PT. N 1/2 LOTS 24 & 25, CON. 11 TWP. OF SOMBRA COUNTY OF LAMBTON 2377 Bentpath Line (Lot 24) No 911 Address Available (Lot 25)	1209.7 X 22 2.661	40 X 20 .080 42 X 40 .168 120 X 12 .144 120 X 12 .144 60 X 12 .072 60 X 12 .072
Annett, Wayne Sheldon Annett, Ruth Ann Patricia R. R. #1 Wilkesport, Ontario N0P 2R0	PT. NE 1/4 LOT 23, CON. 11 TWP. OF SOMBRA COUNTY OF LAMBTON No 911 Address Available	272.6 X 22 .600	60 X 20 .120 IRR .228
JENNINGS, Frederick Junior R. R. # 1 WILKESPORT, Ontario N0P 2R0	NW 1/4 LOT 23, CON. 11 TWP. OF SOMBRA COUNTY OF LAMBTON No 911 Address Available	302.5 X 22 .666	

NAME & ADDRESS	PROPERTY DESCRIPTION	PERMANENT EASEMENT Dimensions (Metres) Area Length Width (Hectares)	TEMPORARY EASEMENT Dimensions (Metres) Area Length Width (Hectares)
BASSWOOD FARMS INC. c/o Ronald Lawrence Kerr R. R. #3 Sombra, Ontario N0P 2H0	N 1/2 LOT 22, CON. 11 TWP. OF SOMBRA COUNTY OF LAMBTON No 911 Address Available	604.5 X 22 1.330	
DUFFY, William James Eugene DUFFY, Vera Anne R. R. #3 SOMBRA, ONTARIO N0P 2H0	N 1/2 LOT 21, CON. 11 TWP. OF SOMBRA COUNTY OF LAMBTON 1336 Pretty Road	605.6 X 22 1.332	60 X 12 .072 60 X 12 .072 120 X 12 .144 120 X 12 .144
HARRIS, Terry Francis R. R. #3 Sombra, Ontario N0P 2H0	NW 1/4 LOT 20 & NE 1/4 LOT 19 CON. 11, TWP. OF SOMBRA COUNTY OF LAMBTON Bentpath Line	615.8 x 22 1.355	
AARSSSEN, James Arthur AARSSSEN, Debra Lynn R. R. #3 SOMBRA, ONTARIO N0P 2H0	NE 1/4 LOT 20, CON. 11 TWP. OF SOMBRA COUNTY OF LAMBTON 1953 Bentpath Line	293.7 X 22 0.646	60 X 12 .072 60 X 12 .072

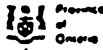
NAME & ADDRESS	PROPERTY DESCRIPTION	PERMANENT EASEMENT Dimensions (Metres) Area Length Width (Hectares)	TEMPORARY EASEMENT Dimensions (Metres) Area Length Width (Hectares)
HARRIS, Terry Francis HARRIS, Mari Lynn RR #3 SOMBRA, ONTARIO N0P 2H0	PT. NW 1/4 LOT 19, CON. 11 TWP. OF SOMBRA COUNTY OF LAMBTON 1835 Bentpath Line	303.7 X 22 .668	
VANDEVENNE, Moira Noble 696 Albert Street WALLACEBURG, Ontario N8A 4L1 Tenant: James Vandevenne RR #3 Sombra, Ontario N0P 2H0	PT. E 1/2 N 1/2 LOT 18, CON. 11 TWP. OF SOMBRA COUNTY OF LAMBTON No 911 Address Available	297.4 X 22 .654	60 X 12 .072 60 X 12 .072
VANDEVENNE, James David VANDEVENNE, Catherine Ann R. R. # 3 SOMBRA, Ontario N0P 2H0	W 1/2 N 1/2 LOT 18, CON. 11 TWP OF SOMBRA COUNTY OF LAMBTON No 911 Address Available	305.5 X 22 .672	60 X 12 .072 60 X 12 .072
MURPHY, Melvin David 4452 St. Clair Parkway PORT LAMBTON, Ontario N0P 2B0 Ten.: Patrick Murphy R. R. # 3 SOMBRA, Ontario N0P 2H0	N 1/2 LOT 17, CON. 11 TWP. OF SOMBRA COUNTY OF LAMBTON 1621 Bentpath Line	606.1 X 22 1.333	

NAME & ADDRESS	PROPERTY DESCRIPTION	PERMANENT EASEMENT Dimensions (Metres) Area Length Width (Hectares)	TEMPORARY EASEMENT Dimensions (Metres) Area Length Width (Hectares)
LANGSTAFF, John Elliott LANGSTAFF, Helen Anita R. R. # 2 TUPPERVILLE, Ontario N0P 2M0	N 1/2 LOT 16, CON. 11 TWP. OF SOMBRA COUNTY OF LAMBTON 1503 Bentpath Line	605.9 X 22 1.333	60 X 12 .072 60 X 12 .072
BASTOW, Alice Laura BASTOW, Marvin James BASTOW, Beverly Jean R. R. # 3 SOMBRA, Ontario N0P 2H0 Ten.: Patrick Murphy RR #3 Sombra, Ontario N0P 2H0	PT N 1/2 LOT 15, CON. 11 TWP. OF SOMBRA COUNTY OF LAMBTON 1461 Bentpath Line	599.9 X 22 1.320	60 X 12 .072 60 X 12 .072 60 X 12 .072 60 X 12 .072
Consumers Gas Company Ltd. 2225 Sheppard Ave E North York, Ontario M2J 5C2	PT. NE 1/4 LOT 14, CON. 11 TWP. OF SOMBRA COUNTY OF LAMBTON No 911 Address Available	301.2 X 22 .663	
FARM CREDIT CORPORATION Property Division/Agri-Land PO Box 4320 900-1801 Hamilton Street Regina, Saskatchewan S4P 4L3	PT. NW 1/4 LOT 14, N 1/2 LOT 13 CON. 11, TWP. OF SOMBRA COUNTY OF LAMBTON No 911 Address Available	901.4 X 22 1.983	60.1 X 12 .072 60.4 X 12 .072

NAME & ADDRESS	PROPERTY DESCRIPTION	PERMANENT EASEMENT Dimensions (Metres) Area Length Width (Hectares)	TEMPORARY EASEMENT Dimensions (Metres) Area Length Width (Hectares)
CROWE, Virginia R. R. # 6 WALLACEBURG, Ontario N8A 4L3	N 1/2 LOT 12, CON. 11 East of River TWP. OF SOMBRA COUNTY OF LAMBTON No 911 Address Available	586 X 22 1.289	145 X 30 .435 157.7 X 30 .473 60 X 12 .072 60 X 12 .072
FISH, Richard George R. R. # 3 SOMBRA, Ontario N0P 2H0 Ten.: Joe Fournie R. R. # 1 SOMBRA, Ontario N0P 2H0	PT. N 1/2 LOTS 11 & 12, NW of River CON. 11, TWP. OF SOMBRA COUNTY OF LAMBTON 1073 Bentpath Line	473.8 X 22 1.042	71.4 X 5 .036 42.5 X 30 .128 IRR 2.153
SAUVE, Mary R. R. # 3 SOMBRA, Ontario N0P 2H0	PT. NW 1.4 N 1/2 LOT 11, CON. 11 TWP. OF SOMBRA COUNTY OF LAMBTON 1073 Bentpath Line	306.3 X 22 .674	80.3 X 15.6 .125 76.1 X 15.6 .119
BRUIN, Cornelius J. BRUIN, Triny S.A. R. R. # 3 SOMBRA, Ontario N0P 2H0 Tenant: Bernard Kraayenbrink RR 1 Port Lambton, Ontario N0P 2B0	PT. N 1/2 LOT 10 & NE 1/4 LOT 9 CON. 11, TWP. OF SOMBRA COUNTY OF LAMBTON 947 Bentpath Line	918.1 x 22 2.020	121.6 X 12 .146 119.2 X 12 .143 IRR .501

NAME & ADDRESS	PROPERTY DESCRIPTION	PERMANENT EASEMENT Dimensions (Metres) Area Length Width (Hectares)	TEMPORARY EASEMENT Dimensions (Metres) Area Length Width (Hectares)
Vanderveeken, Robert Benjamin Vanderveeken, Lisa Anne 835 Bentpath Line Sombra, Ontario N0P 2H0	PT. E 1/2 NW 1/4 LOT 9, CON. 11 TWP. OF SOMBRA COUNTY OF LAMBTON 835 Bentpath Line	152.3 X 22 .335	
MOYNAHAN, Dennis MOYNAHAN, Mary R. R. # 3 SOMBRA, Ontario N0P 2H0	PT. W 1/2 NW 1/4 LOT 9, CON. 11 TWP. OF SOMBRA COUNTY OF LAMBTON 817 Bentpath Line	151.8 X 22 .334	
HINNEGAN, Doreen Gertrude R. R. # 3 SOMBRA, Ontario N0P 2H0	PT. NE 1/4 LOT 8, CON. 11 TWP. OF SOMBRA COUNTY OF LAMBTON 736 Smith Line	313 X 22 .689	60 X 12 .072 60 X 12 .072
LAJOIE, Bernard Joseph, LAJOIE, Barry Joseph LAJOIE, Brian Joseph, LAJOIE, Allan Joseph c/o Bernard Lajoie R. R. # 3 SOMBRA, Ontario N0P 2H0 Ten.: Ron Van Damme R. R. # 4 WALLACEBURG, Ontario N8A 4L1	NW 1/4 LOT 8 & N 1/2 LOT 7, CON. 11 TWP. OF SOMBRA COUNTY OF LAMBTON 639 Bentpath Line	904.8 X 22 1.991 211.7 X 22 0.466	60 X 12 .072 60 X 12 .072 60 X 20 .120

MINORS
2042 1995 05



Transfer/Deed of Land

Form 1 — Land Registration Reform Act, 1984

A

FOR OFFICE USE ONLY	<p>(1) Registry <input type="checkbox"/> Land Titles <input type="checkbox"/></p> <p>(2) Page 1 of _____ pages</p> <p>(3) Property Identifier(s) _____ Block _____ Property _____</p> <p>(4) Consideration ONE _____ Dollars \$ 1.00</p> <p>(5) Description This is a Property Division <input type="checkbox"/> Property Consolidation <input type="checkbox"/></p>	<p>Additional See Schedule <input type="checkbox"/></p> <p>Additional See Schedule <input type="checkbox"/></p>
	<p>(6) This Document Contains (a) Redescription New Easement Plan/Sketch <input checked="" type="checkbox"/> (b) Schedule for Description <input checked="" type="checkbox"/> Additional Parties <input type="checkbox"/> Other <input checked="" type="checkbox"/> (7) Interest/Estate Transferred "Fee-Simple" EASEMENT</p>	
	<p>(8) Transferor(s) The transferor hereby transfers the land to the transferee and certifies that the transferor is at least eighteen years old and that</p> <p>Name(s) _____ Signature(s) _____ Date of Signature Y M D</p>	
	<p>(9) Spouse(s) of Transferor(s) I hereby consent to this transaction</p> <p>Name(s) _____ Signature(s) _____ Date of Signature Y M D</p>	
	<p>(10) Transferor(s) Address for Service</p>	
<p>(11) Transferee(s)</p> <p>UNION GAS LIMITED</p> <p>Vice-President _____</p> <p>Assistant Secretary _____</p> <p>Date of Signature Y M D</p>		
<p>(12) Transferee(s) Address for Service Box 2001, 50 Keil Drive North, Chatham, Ontario N7M 5M1</p>		
<p>(13) Transferor(s) The transferor verifies that to the best of the transferor's knowledge and belief, this transfer does not contravene section 49 of the Planning Act, 1983.</p> <p>Signature _____ Date of Signature Y M D</p> <p>Solicitor for Transferor(s) I have explained the effect of section 49 of the Planning Act, 1983 to the transferor and I have made inquiries of the transferor to determine that this transfer does not contravene that section and based on the information supplied by the transferor, to the best of my knowledge and belief, this transfer does not contravene that section. I am an Ontario solicitor in good standing.</p> <p>Name and Address of Solicitor _____ Signature _____ Date of Signature Y M D</p>		
<p>(14) Solicitor for Transferee(s) I have investigated the title to this land and to abutting land where relevant and I am satisfied that the title records reveal no contravention as set out in subclause 49 (21a) (c) (i) of the Planning Act, 1983 and that to the best of my knowledge and belief this transfer does not contravene section 49 of the Planning Act 1983. I act independently of the solicitor for the transferor(s) and I am an Ontario solicitor in good standing.</p> <p>Name and Address of Solicitor _____ Signature _____ Date of Signature Y M D</p>		
<p>(15) Assessment Roll Number of Property _____ City _____ Municipality _____ Map _____ Sub _____ Par. _____ Not assigned</p>		
<p>(16) Municipal Address of Property Not assigned</p>		
<p>(17) Document Prepared by: UNION GAS LIMITED Box 2001 50 Keil Dr. N. Chatham, Ontario N7M 5M1</p>		
FOR OFFICE USE ONLY		<p>Fees and Tax</p> <p>Registration Fee _____</p> <p>Land Transfer Tax _____</p> <p>Total _____</p>



Schedule

Form 5 — Land Registration Reform Act, 1984

S

Page 2

Additional Property Identifier(s) and/or Other Information

WHEREAS the Transferor is the owner in fee simple of those lands and premises more particularly described on page _____ of this Schedule (hereinafter called the "Transferor's lands").

WHEREAS the Transferee is the owner in fee simple of those lands and premises (hereinafter called the "Transferee's lands") situate, lying and being in the Township of Dawn, in the County of Lambton and Province of Ontario and being composed of the west half (w 1/2) of Lot Number 25 in the 2nd Concession of the said Township.

The Transferor (and the Mortgagee) do hereby GRANT, CONVEY, TRANSFER AND CONFIRM unto the Transferee, its successors and assigns, to be used and enjoyed as appurtenant to all or any part of the lands of the Transferee's lands the right, liberty, privilege and easement on, over, in, under and/or through a strip of the Transferor's lands more particularly described in box 5 of page one of this Schedule (hereinafter referred to as "the said lands") to survey, lay, construct, maintain, inspect, patrol, alter, remove, replace, reconstruct, repair, move, keep, use, and/or operate one pipe line for the transmission of gas (hereinafter referred to as "the said pipe line") including therewith all such buried attachments, equipment and appliances for cathodic protection which the Transferee may deem necessary or convenient thereto, together with the right of ingress and egress at any and all times over and upon the said lands for its servants, agents, employees, those engaged in its business, contractors and subcontractors on foot and/or with vehicles, supplies, machinery and equipment for all purposes necessary or incidental to the exercise and enjoyment of the rights, privileges and easement hereby granted. The Parties hereto mutually covenant and agree each with the other as follows:

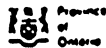
1. In consideration of the sum of ONE DOLLAR (\$1.00) of lawful money of Canada now paid by the Transferee to the Transferor, the receipt of which is hereby acknowledged, and the additional sum of _____ DOLLARS (\$ _____) of lawful money of Canada (hereinafter called "the consideration", which sum is payment in full for the rights and interest hereby granted and for the rights and interest, if any, acquired by the Transferee by expropriation, including in either or both cases payment in full for all such matters as severance, injurious affection to remaining lands and the effect, if any, of registration on title of this document and where applicable, of the expropriation documents) subject to Clause 11 hereof to be paid by the Transferee to the Transferor within 90 days from the date of these presents or prior to the exercise by the Transferee of any of its rights hereunder other than the right to survey (whichever may be the earlier date), the rights, privileges and easement hereby granted shall continue in perpetuity or until the Transferee shall execute and deliver a surrender thereof.

2. The Transferee shall make to the Transferor (or the person or persons entitled thereto) due compensation for any physical damages resulting from the exercise of any of the rights herein granted, and, if the compensation is not agreed upon by the Transferee and the Transferor, it shall be determined by arbitration in the manner prescribed by the Expropriations Act, R.S.O. 1980, Chapter 148 or any Act passed in amendment thereof or substitution therefor. Any gates, fences and tile drains interfered with by the Transferee shall be restored by the Transferee at its expense as closely as reasonably practicable to the condition in which they existed immediately prior to such interference by the Transferee and in the case of tile drains, such restoration shall be performed in accordance with good drainage practice.

3. The said pipe line (including attachments, equipment and appliances for cathodic protection but excluding valves, take-offs and fencing installed under Clause 8 hereof) shall be laid to such a depth that upon completion of installation it will not obstruct the natural surface run-off from the said lands nor ordinary cultivation of the said lands nor any tile drainage system existing in the said lands at the time of installation of the said pipe line nor any planned tile drainage system to be laid in the said lands in accordance with standard drainage practice, if the Transferee is given notice of such planned system prior to the installation of the said pipe line; provided that the Transferee may leave the said pipe line exposed in crossing a ditch, stream, gorge or similar object, where approval has been obtained from the Ontario Energy Board or other Provincial Board or authority having jurisdiction in the premises.

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ONLY

UNION GAS
(LIMITED)
2040 1089 07



Schedule

Form 5 — Land Registration Reform Act, 1984

Page 3

S

Additional Property Identifier(s) and/or Other Information

4. As soon as reasonably practicable after the construction of the said pipe line, the Transferee shall level the said lands and unless otherwise agreed to by the Transferor, shall remove all debris therefrom and in all respects restore the said lands to their former state so far as is practical, save and except for items in respect of which compensation is due under Clause 2 hereof.

5. In the event that the Transferee fails to comply with any of the requirements set out in Clause 2, 3, or 4 hereof within a reasonable time of the receipt of notice in writing from the Transferor setting forth the failure complained of, the Transferee shall compensate the Transferor (or the person or persons entitled thereto) for any damage, if any, necessarily resulting from such failure.

6. Except in case of emergency, the Transferee shall not enter upon any lands of the Transferor, other than the said lands, without the consent of the Transferor. In case of emergency the right of entry upon the Transferor's lands for ingress and egress to and from the said lands is hereby granted.

7. The Transferor shall have the right to fully use and enjoy the said lands except for planting trees over a six (6) metre strip centred over the said pipe line, and except as may be necessary for any of the purposes hereby granted to the Transferee, provided that without the prior written consent of the Transferee, the Transferor shall not excavate, drill, install, erect or permit to be excavated, drilled, installed or erected in, on, over or through the said lands any pit, well, foundation, pavement, building, mobile homes or other structure or installation. Notwithstanding the foregoing, the Transferee upon request shall consent to the Transferor erecting or repairing farm fences, constructing or repairing his tile drains and domestic sewer pipes, water pipes and utility pipes and constructing or repairing his lanes, roads, driveways, pathways, and walks across, on and in the said lands or any portion or portions thereof, provided that before commencing any of the work referred to in this sentence the Transferor shall (a) give the Transferee at least five (5) clear days notice in writing pointing out the work desired so as to enable the Transferee to have a representative inspect the site and/or be present at any time or times during the performance of the work, (b) shall follow the instructions of such representative as to the performance of such work without damage to the said pipe line, (c) shall exercise a high degree of care in carrying out any such work and, (d) shall perform any such work in such a manner as not to endanger or damage the said pipe line.

8. The rights, privileges and easement herein granted shall include the right to install, keep, use, operate, service, maintain, repair, remove and/or replace in, on and above the said lands any valves and/or take-offs subject to additional agreements and to fence in such valves and/or take-offs and to keep same fenced in, but for this right the Transferee shall pay to the Transferor (or the person or persons entitled thereto) such additional compensation as may be agreed upon and in default of agreement as may be settled by arbitration under the provisions of the Ontario Energy Board Act, R.S.O. 1980, Chapter 332, or any Act passed in amendment thereof or substitution thereof. The Transferee shall keep down weeds on any lands removed from cultivation by reason of locating any valves and/or take-offs in the said lands.

9. Notwithstanding any rule of law or equity and even though the said pipe line and its appurtenances may become annexed or affixed to the realty, title thereto shall nevertheless remain in the Transferee.

10. Neither this Agreement nor anything herein contained nor anything done hereunder shall affect or prejudice the Transferee's rights to acquire the said lands or any other portion or portions of the Transferor's lands under the provisions of The Ontario Energy Board Act, R.S.O. 1980, Chapter 332, or any other laws, which rights the Transferee may exercise at its discretion in the event of the Transferor being unable or unwilling for any reason to perform this Agreement or give to the Transferee a clear and unencumbered title to the easement herein granted.

11. The Transferor covenants that he has the right to convey this easement notwithstanding any act on his part, that he will execute such further assurances of this easement as may be requisite and which the Transferee may at its expense prepare and that the Transferee, performing and observing the covenants and conditions on its part to be performed, shall have quiet possession and enjoyment of the rights, privileges and easement hereby granted. If it shall appear that at the date hereof the Transferor is not the sole owner of the said lands, this Indenture shall nevertheless bind the Transferor to the full extent of his interest therein and shall also extend to any after-acquired interest, but all monies payable hereunder shall be paid to the Transferor only in the proportion that his interest in the said lands bears to the entire interest therein.

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Form 5 — Land Registration Reform Act, 1984Page 4

Additional Property Identifier(s) and/or Other Information

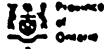
15. The Mortgagee in Mortgage/Charge Number _____, in consideration of the sum of TWO DOLLARS (\$2.00) the receipt whereof is hereby acknowledged, joins herein for the purpose of consenting hereto and agrees to the easement hereby granted and covenants that the Transferee shall have quiet possession of the rights, privileges and easements hereby granted. The Mortgagee certifies that the Mortgagee is at least eighteen years old.

PER: _____ (Date of Signature)

Approved for Testation

**FOR
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USE
ONLY**

UNION GAS
LIMITED
2000 1989-91



Schedule

Form 5 — Land Registration Reform Act, 1984

SECTION 8
Schedule 3
Page 5 of 8

S

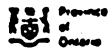
Page 5

Additional Property Identifier(s) and/or Other Information

Description of the "Transferor's lands" referred to in this Schedule:

FOR
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ONLY

MINISTERS
OF
2000 1000/07



Schedule

Form 5 — Land Registration Reform Act, 1984

Page 6

S

Additional Property Identifier(s) and/or Other Information

DESCRIPTION of "the said lands" referred to in this Schedule:

ALL AND SINGULAR that certain parcel or tract of land and premises situate, lying and
being in the

in the County/Region of

and Province of Ontario, and being

of that part of Lot(s)

Concession

in the said

, shown within the

heavy outline and designated PART(S)

on a plan of survey prepared by

Ontario Land Surveyor, dated the

day of

, 19

Plan Deposited as No.

FOR
OFFICE
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ONLY

Schedule

Form 8 — Land Registration Reform Act, 1984

S

Page _____

Additional Property Identifier(s) and/or Other Information

PROVINCE OF ONTARIO

COUNTY OF KENT

DECLARATION REQUIRED UNDER PARAGRAPH
(d) OF SUBSECTION (3) OF SECTION 49
AND UNDER PARAGRAPH (c) OF SUBSECTION
(5) OF SECTION 49 OF THE PLANNING ACT,
S.O. 1983, CHAPTER I
.....

I, _____, of the City of Chatham,
in the County of Kent,

DO SOLEMNLY DECLARE THAT

1. I am _____ of Union Gas Limited,
Transferee in the attached Grant of Easement and as such have knowledge of the matters
herein deposed to.

2. The use of or right in the land described in the said Grant of Easement is
being acquired by Union Gas Limited for the construction of a transmission line as defined
in The Ontario Energy Board Act, R.S.O. 1980, Chapter 332.

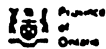
AND I make this solemn declaration conscientiously believing it to be true
and knowing that it is of the same force and effect as if made under oath, and by virtue
of The Canada Evidence Act.

DECLARED before me at the)
City of Chatham, in the)
County of Kent, this)
day of , 19)

A Commissioner, etc.

FOR
OFFICE
USE
ONLY

UNION GAS
LIMITED
2020 1004 00



Form 1 - Land Transfer Tax Act
Affidavit of Residence and Value of the Consideration
Refer to all instructions on reverse side

Page
(Amended Aug 1, 1999)

IN THE MATTER OF THE CONVEYANCE OF Insert brief description of land

BY Insert names of all conveyors in full

TO Insert instruction 1 and print names of all transferees in full **UNION GAS LIMITED**

Insert instruction 2 and print name(s) in full **of the City of Chatham, in the County of Kent,**

MAKE OATH AND SAY THAT.

1 I am giving a true and correct statement that one of the following paragraphs that describes the capacity of the declarant(s) Insert instruction 2

- ☐ (a) A person in trust for whom the land conveyed in the above-described conveyance is being conveyed
☐ (b) A trustee named in the above-described conveyance to whom the land is being conveyed.
☐ (c) A transferee named in the above-described conveyance
☒ (d) The authorized agent or solicitor acting in this transaction for Insert name(s) of principal(s) **Union Gas Limited**

Insert instruction 3 and print name(s) of principal(s) **described in paragraph(s) ~~XXXX~~ (c) above. Delete out references to applicable paragraph(s)**

☐ (e) The President, Vice-President, Manager, Secretary, Director or Treasurer authorized to act for Insert name(s) of corporation(s)

Insert instruction 3 and print name(s) of principal(s) **described in paragraph(s) (a), (b), (c) above. Delete out references to applicable paragraph(s)**

☐ (f) A transferee described in paragraph () Insert only one of paragraph (a), (b) or (c) above, as applicable and am making this affidavit on my own behalf and on behalf of Insert name of spouse who is my spouse described in paragraph () Insert only one of paragraph (a), (b) or (c) above, as applicable and as such, I have personal knowledge of the facts herein depicted to.

2. (To be completed where the value of the consideration for the conveyance exceeds \$250,000.)

I have read and considered the definition of "single family residence" set out in clause 1(1)(a) of the Act. The land conveyed in the above-described conveyance

- ☐ contains at least one and not more than two single family residences.
☐ does not contain a single family residence
☐ contains more than two single family residences Insert instruction 3

Note: Clause 2(1)(a) imposes an additional tax at the rate of one-half of one per cent upon the value of consideration in excess of \$250,000 where the conveyance contains at least one and not more than two single family residences.

3 I have read and considered the definitions of "non-resident corporation" and "non-resident person" set out respectively in clauses 1(1)(f) and (g) of the Act and each of the following persons to whom or in trust for whom the land is being conveyed in the above-described conveyance is a "non-resident corporation" or a "non-resident person" as set out in the Act. Insert instruction 4 and 5 **NONE**

4 THE TOTAL CONSIDERATION FOR THIS TRANSACTION IS ALLOCATED AS FOLLOWS:

(a) Monies paid or to be paid in cash	\$	1.00	
(b) Mortgages (i) Assumed (show principal and interest to be created against purchase price)	\$	NIL	
(ii) Given back to vendor	\$	NIL	
(c) Property transferred in exchange (show below)	\$	NIL	
(d) Securities transferred to the value of (show below)	\$	NIL	
(e) Loans, legacies, annuities and maintenance charges to which transfer is subject	\$	NIL	
(f) Other valuable consideration subject to land transfer tax (show below)	\$	NIL	
(g) VALUE OF LAND, BUILDING, FIXTURES AND GOODWILL SUBJECT TO LAND TRANSFER TAX (Total of (a) to (f))	\$	1.00	
(h) VALUE OF ALL CHATTELS - items of tangible personal property (show below) The value of all chattels subject to the provisions of the "Real Estate Tax Act", R.S.O. 1990, c. 454, is shown as	\$	1.00	
(i) Other consideration for transaction not included in (g) or (h) above	\$	NIL	
(j) TOTAL CONSIDERATION	\$	1.00	

5 If consideration is nominal, describe relationship between transferor and transferee and state purpose of conveyance. Insert instruction 6

Pipeline for the transmission of natural gas

6 If the consideration is nominal, is the land subject to any encumbrance?

7 Other remarks and explanations, if necessary. **Exempt from land transfer tax pursuant to Ontario Revised Regulation 560/80 - easement for the purpose of a pipeline.**

Sworn before me at the **City of Chatham**
in the **County of Kent**
this day of 19

A Commissioner for taking Affidavits, etc.

Property Information Record

A. Describe nature of instrument: **Easement for Pipeline**

B. (a) Address of property being conveyed (if available)

(b) Assessment Roll No. (if available) **NOT AVAILABLE**

C. Mailing address(es) for future Notices of Assessment under the Assessment Act for property being conveyed (see instruction 2)

D. (a) Registration number for last conveyance of property being conveyed (if available)

(b) Legal description of property conveyed: Same as in D.2 above. Yes ☐ No ☒ Not known ☐

E. Name(s) and address(es) of each transferee's solicitor

**Union Gas Limited
50 Keil Drive North
Chatham, Ontario
N7M 5M1**

For Land Registry Office use only	
REGISTRATION NO.	
Land Registry Office No.	
Registration Date	

SUMMARY OF UNION'S LANDOWNER CONTACTS

BICKFORD-DAWN PROJECT

PRELIMINARY:

1. A letter was sent from Union on July 27, 1988 informing the landowners of the planned work and introducing the environmental consultant. A Landowner Handbook, identifying a Union contact in case of any concerns on the part of the landowner, was included.
2. The original contact and interview by the environmental consultant was conducted in 1989 to determine concerns and details regarding property. Contacts and interviews were conducted again in February, 1991 to update the Environmental Assessment.
3. Two public meetings were held with landowners to discuss the project in detail and initiate the formation of landowner negotiating committee(s). The dates of the meetings were October 18, 1989 and March 7, 1991.
4. An interview was held with individual landowners either in person or by telephone in the fall of 1991 to obtain permission to survey and to do archaeological testing as well as to discuss pre-construction concerns.

PRE-CONSTRUCTION

5. Prior to the 1992 Ontario Energy Board (" OEB ") filing, Union began negotiations with the landowner committee to discuss the project in detail (construction technique, damages, easements etc.). These negotiations continued up to and after the 1993 hearing. A General Letter of Understanding was formulated.
6. The Ontario Energy Board decision in the spring of 1993 indicated that the Lands and Environmental matters had been dealt with adequately. As part of the prior filing, negotiations with the landowner committee and individual landowners were completed.
7. In the intervening years, various letters have been sent to the affected landowners to keep them informed of the status of the project.
8. Prior to the filing of the 1999 application, Union notified the affected landowners of the new timing of the proposed pipeline. Included in this letter was an offer of another information session to discuss the EA.

9. Union will be approaching the affected landowners to renew the temporary agreements negotiated in 1993 which have now expired. During these contacts, discussions will be conducted concerning any site specific concerns documented in the 1993 individual Letters of Understanding, and any new concerns the affected landowners may have.
10. A Notice of Application from the OEB will be sent to affected landowners.
11. Notice of the OEB Hearing will be sent to landowners who intervene.
12. Following a favourable OEB decision, Union representatives will conduct pre-construction interviews to determine any landowner specific concerns not addressed in the General Letter of Understanding or previous individual Letters of Understanding.

CONSTRUCTION:

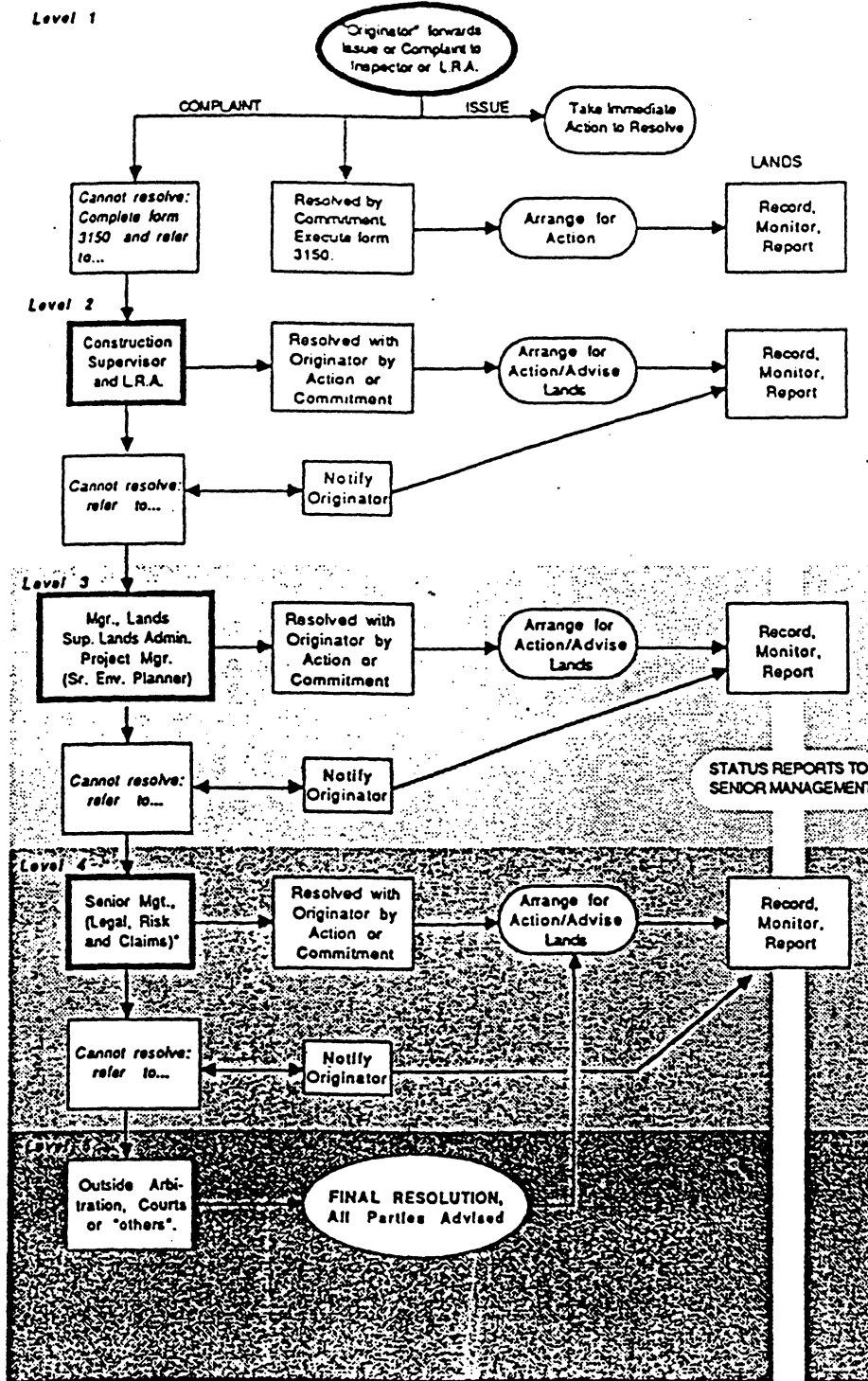
13. A Union representative will interview each property owner prior to construction to review construction timing and to verify individual concerns as may be detailed in the General Letter of Undertaking, individual Letters of Understanding and Land Agent Contact Sheet(s).
14. Contacts during construction by Union's Landowner Relations Agent, Inspectors, and Contractor (i.e. crops, tile and fence repair, dust, etc.) will occur. Name(s) and phone number(s) of field contact personnel will be made available should concerns arise.
15. The Clean-up Inspector will request each landowner to review and sign a Clean-up Acknowledgment form which releases the Contractor and allows him/her to be paid for the work on the property. Union will maintain responsibility for any future damages arising from construction.

POST-CONSTRUCTION:

16. Union's Lands Department will settle any crop damages caused by construction, not already covered by " One Time " payments previously made.
17. Union's Engineering staff will review each property the spring after construction and perform required repairs to the easement.
18. Union will initiate soil and crop monitoring to study the effects of construction.

19. When the landowner has not selected the “ One Time ” Full and Final Crop Damage Settlement prior to construction, he/she may choose this option following construction, or Union’s Lands Department will visit each property owner to settle crop damages in the year of construction and continue to settle annual crop loss damages for up to five years after construction.
20. Where the annual crop damages programme has been chosen, a Full and Final Release of Damages will be signed by the landowner on completion of the Monitoring Programme.
21. Contact with Union’s Operations personnel will be ongoing through line surveys and regular maintenance activities.

PROCESS CHART: LANDOWNER COMPLAINT RESOLUTION SYSTEM



NOTES:

1. "Originator" of complaint or issue may be landowner or company representative.
2. Parties indicated in heavy outlined boxes shall assume responsibility for actions subsequently required in the resolution process. Parties identified in brackets may only be required for resolution of specific technical concerns.
3. "L.R.A." refers to Land Relations Agent.
4. "Outside Arbitration" includes the Board of Negotiation, O.M.B. and O.E.B. "Others" refers to other regulatory bodies and tribunals.