Appendix A

Exhibit B, Tab 2, pp. 34-88, RP-1999-0017 – Filed as referenced in Union's Prefiled Evidence

Appendices

Schedules

PERFORMANCE BASED REGULATION (PBR) PROPOSAL

INTRODUCTION

Union is proposing to implement a five year price cap regulatory framework that will take effect January 1, 2000. This framework will apply to Union's regulated rates for the storage, transportation and distribution of natural gas.

This evidence is divided into the following sections:

- Background
- Union's Objectives for the PBR Framework
- Summary of Union's Proposal
- Impact on PBR Proposal of Unbundling Storage and Transportation
- Union's PBR Proposal – A Five Year Price Cap
- The Utility Risk Profile For The Price Cap Proposal
- Customer Reporting and Review Process
- Monitoring and Reporting
- Implementation and Timing of Rate Change
- Criteria for Resetting Prices

The evidence of Laurits R. Christensen Associates, Inc. supporting Union's proposed approach is found at Exhibit B, Tab 3.

BACKGROUND

Performance-based regulation has been implemented by many North American utilities. Other regulated industries, including telecommunications and railroads, have adopted different regulatory schemes, some of which have led to complete deregulation. In the natural gas industry, many LDC's and pipelines have recognized the benefits of regulatory reform and pursued alternate forms of regulation. The incentive arrangements negotiated by Westcoast Pipeline, TransCanada Pipeline, Enbridge (IPL), BC Gas, and Northwestern Utilities are Canadian examples of utilities attempting to meet the objectives of regulation while avoiding the costs, administrative burden for the Company and the Regulator, and distorted incentives that can be associated with traditional cost of service regulation.

In Ontario, little regulatory reform has occurred since the passage of the Ontario Energy Board Act in 1962. Certain procedural refinements, such as settlement negotiations, have marginally improved the efficiency of the process, but have not altered the fundamental requirements or incentives. However, with the passage of Bill 35 (the Energy Competition Act) last year, the Ontario Energy Board (OEB) is now able to use whatever means it deems appropriate to set just and reasonable rates. Consequently, the OEB, Union and its customers now have the opportunity to pursue regulatory reform with full legislative support.

UNION'S OBJECTIVES FOR THE PBR FRAMEWORK

In order to set the context for assessing a new regulatory framework, Union established the following objectives that the new framework should satisfy:

- Fairness for all stakeholders - there is an appropriate balance between risks and opportunities. The benefit of improving productivity is shared between the company and its customers.
- Simplicity - the framework and its results are easily understood and administered.
- Comprehensive - the framework allows the utility to manage its business in total, and not focus on individual aspects that can create distorted incentives. It should reduce the cost of regulation by providing a framework that achieves the objectives of regulation without a heavy imposition on customers' and the utility's resources.
- Predictable and stable rates - so that the utility and its customers generally know what rates can be charged over a reasonable period of time. In addition, price volatility should be minimized as customers and the utility find it difficult to manage. Finally, the framework should minimize retroactivity, in response to past customer complaints.
- Sustainable - the new framework should stand the test of time and not require significant amendment in the near future.
- Promote efficiency - to motivate fair and economic decision-making by the utility, ensuring that any biases (such as capital spending vs. O&M spending) are minimized.

- Provide greater management flexibility and accountability - greater competition means that utility management must be given the freedom to make certain pricing and service decisions without regulatory intervention. Along with this freedom comes greater accountability, where utility management will be accountable for both the positive and negative results of that freedom.
- Provide appropriate earnings opportunities - the framework must allow for an opportunity to earn a reasonable return, and for an opportunity to earn a superior return with superior performance. Otherwise, the ability to attract and maintain capital will deteriorate, with resulting cost and operational implications for the utility and its customers.
- Provide for the alignment of interests between utility shareholders, customers and the regulator. The alignment of interests that causes the utilities to continually seek greater efficiency allows for a more light-handed regulatory approach.

In summary, the objectives can only be met by a comprehensive framework that focuses on the two items that are most important to customers (price and service quality), and gives the utility the latitude and incentive to deliver on those items.

Union is proposing a price cap regulatory model to satisfy these objectives. This model is intended to create a utility business environment that is a closer surrogate for the competitive market model while maintaining the benefits of regulation. The new model will better align the

utility's decision-making and operating incentives with those of its customers. It will also result in greater earnings variability from year to year compared to a cost of service model; for this reason, it is important to have the new framework in place for a reasonable period of time to allow for the longer term impacts of market variations, management initiatives, and results measurement.

SUMMARY OF UNION'S PROPOSAL

The key features of Union's PBR proposal are summarized below. A complete description of the proposal is found at section 0 (page 16).

- The starting point for the price cap framework is the 1999 rates approved by the Board in E.B.R.O. 499.
- Base Rate Adjustments – The 1999 Board-approved rates have been adjusted for the items as listed in section 2.5.1.
- Price Cap - The maximum annual percentage increase in posted rates will be established at the time of the plan's introduction.
    - Term - The term of the initial agreement will be five years.
    - Rates may be negotiated that are different from posted prices.
    - Pass Through and Non-Routine Adjustments - The framework allows for adjustments to rates for certain recurring and non-recurring items as described in sections 0 and 0, respectively.

- Pricing Flexibility - The framework defines average pricing parameters for all customer classes, in-franchise and exfranchise customers, small and large in-franchise customers, individual customer classes, and individual services.

- Service Quality Indicators - The framework defines initial standards for service quality to ensure that the incentive for productivity improvement does not detrimentally affect the quality of service.

Table 1 - Summary of Proposal Benefits and Risks

	Beneficiary	
The main benefits of Union's proposal are:	Customers	Company
Known pricing parameters	✓	
Timely rate changes, with no retroactivity	✓	
Ability to contract for longer-term fixed prices	✓	
Sharing in future productivity gains	✓	
Removal of declining use and asset utilization risk	✓	
Guarantee of storage at posted rates for new and existing customers in Union's franchise area	✓	
Pricing flexibility to meet competition		✓
Direct financial incentive to increase productivity		✓
Revenue from new service offerings, including market priced storage for customers outside Union's franchise area		✓

The main risks of Union's proposal are:	Customers	Company
Appropriateness of price cap parameters, to ensure sharing of efficiency gains	✓	
Appropriateness of price cap parameters, to ensure balance of risks and rewards		✓
Asset utilization and declining use risks		✓
The development of additional storage for customers in Union's franchise area at posted rates		✓

IMPACT ON PBR PROPOSAL OF UNBUNDLING STORAGE AND TRANSPORTATION

Union is introducing its price cap proposal concurrent with the Company's proposal to provide additional unbundled storage and upstream transportation services.

As described at Exhibit B, Tab 1, Union is proposing to offer additional unbundled storage and upstream transportation services as a result of requests from its customers. Marketers are looking for additional ways to manage their commodity business and provide increased value to end use consumers. Large industrial customers are looking for additional ways to manage their energy costs. The unbundled services are an option for customers, providing an opportunity to reduce delivered natural gas costs based on the acceptance of additional obligations to manage the unbundled services. Through consultation during 1998 and 1999, Union and its customers agreed that upstream transportation and storage should be the next items to be offered on an unbundled basis. This would be followed by the development of a wholesale billing service that would be made available as an option for marketers.

Offering additional unbundled services has several key implications for Union:

1. Risk increases for the utility, primarily due to lower asset utilization. Unbundled service offerings effectively transfer most of the asset capability currently used by Union to those customers contracting for the unbundled services. This reduces Union's opportunity to generate transactional business using its storage and transmission assets, which manifests

in reduced revenues. While no specific adjustment has been made to Union's PBR proposal to account for this risk, Union recognizes that a large portion of the $5 million of annual transactional revenue currently reflected in rates will be at risk.

2. The increased requirement for new services to be developed and offered by the utility. This includes different contracting provisions, including the ability to enter into multi-year contracts to effectively fix all or most of the delivery cost that would underlie a burner tip price. Unbundled service offerings also provide the opportunity for the utility and others to provide new discrete services, such as load balancing, demand and supply nomination, load profiling and informational services that are not currently offered. The development of new services will help replace the revenue lost in Union’s transactional business and mitigate the financial impact that will occur as customers choose unbundled services.

3. The increased competition in the wholesale market, where Union conducts most of its business. Large industrial customers will look to the utility or marketers to provide them with the best quality service at the lowest cost. Marketers will look to the utility or other marketers for the best priced services which they may not want to manage themselves. This situation translates into much more competitive pricing in the wholesale market and increasingly smaller margins for those wholesale services.

These implications indicate greater gas-on-gas competition in the wholesale market. Union intends to meet this competition and continue to be a successful, growing company. However, it must have the latitude to operate in this more competitive environment and develop some of the same behavioral and financial incentives that competitive entities have. Simply offering unbundled services without any substantial change in the regulatory framework will result in lower revenues through price competition and displacement by other service providers and a declining market share for Union in the gas-to-gas wholesale business.

Hence the need for performance-based regulation and specifically, for price cap regulation. Union's price cap proposal is a better fit than cost of service regulation for the unbundled, more competitive energy world and provides the flexibility and incentives necessary to promote competition and protect end-use consumers.

The benefits of Union's price cap proposal were summarized on page 7 and are described below.

1. Flexibility for Customers

Customers can choose bundled or unbundled services from the utility or from others, ensuring they receive the best combination of services for their needs, and avoid a "one size fits all" approach that may not address their energy requirements. Customers can also obtain greater price certainty by contracting for fixed prices over a multi-year period and matching that period to other energy-related contracts such as upstream transportation and commodity contracts, effectively locking in their costs and/or margins.

2. Financial Benefits for Customers

The proposed price cap limits average annual rate increases to 2%. This limit is well below the increase that could be reasonably expected under a cost of service framework (see pages 65 to 81 for additional discussion on this item). In addition, recent pressure on inflation, and recent CAW wage settlements, add to the possible differential and resulting rate payer benefits between cost of service and price cap regulation.

3. Flexibility for Union

Union's price cap proposal provides choice to customers through the offering of bundled and unbundled services and through contract term and the related pricing flexibility. Improved time to market and competitive pricing for new services are also more readily available under the price cap framework. The price cap proposal provides Union the opportunity to respond to the implications that arise from its unbundled service offerings and to respond to a more competitive energy marketplace, while maintaining the benefits of regulation over its monopoly services.

4. A Different Utility Corporate Culture

Creating a more competitive mindset for utility personnel will be greatly advanced by a significant change in the regulatory framework. This change will arise as the price cap proposal provides greater rewards for being efficient, which will benefit both the company and its customers. It is also expected to provide more business opportunities for partnering

between Union and its customers, as the partners will have more common incentives. These opportunities will help strengthen the natural gas market and provide better choices to customers.

5. Regulatory Symmetry

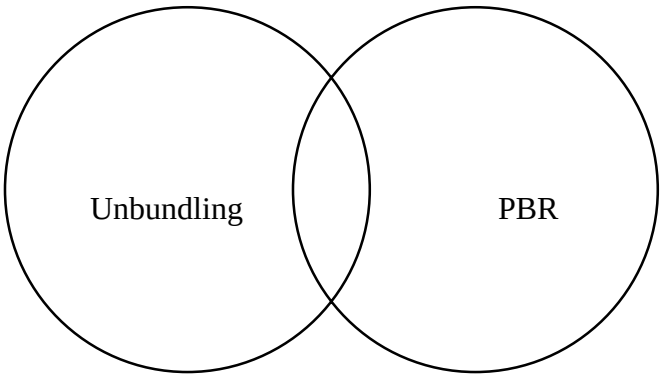
The provincial government and the OEB are committed to restructuring the electricity industry, and introducing performance-based regulation. Union and its customers would be placed at a competitive disadvantage if the gas utility was not also under lighter-handed regulation. As it appears that most utilities will be under a form of price cap regulation, Union's proposal is therefore entirely consistent with the regulatory approach and the approximate timing for the change being advocated for electricity.

The business environment for regulated and unregulated entities in the Ontario energy marketplace is changing and will change quite substantially over the next year. Union is proposing to assist with the further development of a competitive market through its unbundling and price cap proposals while ensuring benefits for customers, adequate protection for end use consumers, and risk-adjusted opportunities for the utility. Despite the above rationale, some parties have expressed a preference to have all unbundling initiatives completed before the introduction of the price cap proposal. Union believes that the energy marketplace will become more dynamic in the next 24 months, not less, such that waiting for a more stable period to introduce a new regulatory framework is impractical.

In addition, Union wishes to implement the PBR and unbundling proposals as early as possible to address the impact they will have on the utility and manage the corresponding impact on employees. These impacts may consist of organization changes, skills training, and new technology applications. The company and its staff will have more options to address the impacts of competition on the utility if the new proposals are introduced in 2000.

Union believes that unbundled services and price cap regulation will help to maintain gas demand and attract new business on Union's system and for Ontario. Unbundled services provide more choices to customers without removing existing services. Price cap regulation provides flexibility and greater certainty around the pricing of utility services for the company and it's customers.

Pictorially, the relationship between PBR and unbundling can be summarized as shown below:



Where the overlap represents:

- Support for a more competitive energy market
- Flexibility and choice for customers

- Cost-effectiveness; unbundling may be more economic than bundled services for some customers; PBR is a more cost-effective way of regulating
- Avoidance of rate increases caused by unbundling because of PBR
- Establishes a process for further unbundling under lighter handed regulation

UNION'S PBR PROPOSAL – A FIVE YEAR PRICE CAP

Union's price cap proposal starts with the rates and other charges for 1999 as approved by the OEB in the most recent rates application (E.B.R.O. 499). The proposed price cap plan will apply for five years (2000-2004). The maximum average increase in price and the conditions that apply to the price for each service for each of the five years will be determined in advance and is proposed to consist of the following 9 elements.

1. Adjustments to the 1999 base rates.
2. The price cap formula, defined by an escalator, and reduced by productivity offset.
3. Non-routine adjustments to rates in certain pre-defined circumstances.
4. Pass-through items, defined as items that are to be passed on to customers directly, outside the pricing formula.
5. Off-ramps, defined as circumstances that would cause the price cap proposal to undergo some form of regulatory review during the initial five year term of the plan.
6. Service quality indicators.
7. A customer review process to replace periodic rates hearings.

8. OEB monitoring and reporting requirements.

9. Criteria to be applied when resetting the price cap formula (i.e. after 2004).

The proposed changes to Union's rates are summarized on Schedule 1, and each of the adjustments is discussed below.

1..1. Adjustments to the 1999 base rates

Union's rates are generally set to recover an annual cost of service with future changes to that cost of service being addressed in future rates applications. As the price cap proposal sets rates for five years, certain adjustments must be made to the base 1999 rates to accommodate the longer forecast period.

In order to meet the objective of predictable and stable rates, Union is proposing the following adjustments to the rates approved by the OEB in E.B.R.O. 499.

- The recovery of unaccounted for gas variances from prior periods
- Changes to the method of accounting for pension and post employment benefits
- Amortization of the accumulated deferred tax balance
- The recovery and subsequent rate reduction for Y2K remediation costs
- Regulatory cost savings

An explanation of each of these adjustments follows.

Cumulative Deficiency of Unaccounted for Gas (UFG)

Union currently recovers an estimate of the cost of unaccounted for gas from customers in rates. The amount recovered in rates in any year is determined by the following formulas as approved by the OEB.

The volume of UFG is calculated as:

$$U_t = [(3 \times U_{t-2}) + (2 \times U_{t-3}) + (1 \times U_{t-4})]/6$$

Where U is the volume of unaccounted for gas and t is the test year for which rates are being set. Normally, given the timing of rate hearings and the resulting changes to rates, the volume of unaccounted for gas for the year immediately proceeding the test year is not available to be incorporated into the formula. Consequently, the most recent year used in the formula is two years prior to the test year. The amount to be recovered in the test year is a weighted average of the most recent three years actual unaccounted for gas volumes and the forecast weighted average cost of gas (WACOG) for the test year.

The cost of the UFG volume is calculated as:

$$UFG = U_t \times WACOG_t$$

The use of these formulas to recover unaccounted for gas in rates assumes that the actual unaccounted for gas for the test year will approximate the average for the most recent three years. Union's actual unaccounted for gas volume has consistently exceeded the amount included in rates. The result is an accumulated deficiency between the actual cost of UFG and the recovery of UFG.

The cumulative deficiency from 1996, 1997 and 1998 that has not been recovered from customers is $22.6 million as shown at Schedule 2. Union proposes to increase base rates by $4.0 million to recover most of this accumulated deficiency over the term of the initial PBR agreement. The recovery of this adjustment will be consistent with the existing cost allocation methodology.

In comparing Union's UFG volumes to other utilities, Union refers to the evidence filed by Harrington and Hrehor Energy Consulting Group, LP in E.B.R.O. 499 at Exhibit G2, Tab 1 pages, 30-32. Comparing Union's performance to a peer group of 17 Canadian and US local distribution companies, whose UFG ratio ranges from 0.44% to 3.96%, shows that Union's UFG ratio of .22% for years 1993 to 1995 is at the low end of the range. This evidence has been provided at Appendix A for ease of reference. Updating Union's UFG ratio for the years 1996 to 1998 to .553% continues to support the findings in E.B.R.O 499 that Union's UFG ratio is at the low end of the range.

Change in Accounting for Pension and Other Post Employment Benefits

Union is proposing an adjustment to base rates to recover the impact of a change in Generally Accepted Accounting Principles (GAAP) for pension and other post employment benefits. In March 1999, the Canadian Institute of Chartered Accountants (CICA) released a comprehensive new standard on accounting for employee future benefits. The new rules are effective for years commencing on or after January 1, 2000 and conforms the Canadian accounting principles to those of the United States.

The new recommendations provide a consistent accounting framework for all of the following employee future benefits:

- Pension plans
- Other retirement benefits, such as life insurance and supplemental health care
- Post-employment benefits, such as severance payments, long-and short-term disability benefits, supplementary unemployment benefits, job training and counseling
- Compensated absences, such as parental or disability leaves, sabbaticals and accumulating sick days that vest or are paid without illness-related absence
- Termination benefits

The general principle is that an employer must account for future benefits owed to employees on the accrual basis. Under that principle, the cost of providing future benefits that vest or accumulate is accrued as an expense in the periods in which they are earned. While companies in Canada have historically accounted for pension benefits on this basis, the same is not true for the other kinds of future benefits listed above. Typically, Canadian companies including Union Gas have been accounting for these additional benefits on the cash basis. In addition to requiring the accrual basis of accounting for all future employee benefits, the new standard makes extensive changes to the pension accounting rules, as follows:

- Under the old rules, the interest rate used to discount an employer's pension liability did not have to be adjusted to reflect changes in market rates of interest. Under the new rules, the discount rate prescribed must be a current market rate (effectively, the prevailing rate for high quality bonds with cash flows that match the timing of the

expected benefits). This will increase the volatility of reported pension expense.

- Under the old rules, actuarial gains and losses were amortized over the expected remaining service life of employees. Under the new rules, amortization is required only if the amount to be amortized exceeds 10% of the greater of the pension liability or the value of plan assets.

Union is proposing that base rates be adjusted for the impact of this change in GAAP as summarized on Schedule 3.

Deferred tax amortization

During E.B.R.O. 499, all parties accepted the drawdown of the accumulated deferred tax balance proposed by Union (Exhibit D1, Tab 4, Appendix A, and EBRO 499 Decision with Reasons, Appendix B, page 58; copies of these are attached at Appendix B of this evidence). That drawdown approach resulted in $9.412 million being used to reduce Union's 1999 cost of service and is therefore currently reflected in rates. The approach also creates higher levels of drawdown during the price cap period, compared to the drawdown level currently in rates. Accordingly, Union is proposing an initial reduction to rates of $10.263 million to account for the higher drawdown amounts, and to levelize the drawdown amount during the price cap period to eliminate any associated rate volatility. The calculation of the drawdown impact is found at Schedule 4.

Y2K costs

Union's 1999 Board approved rates include recovery of $7.6 million of the total costs required to remediate all systems for Y2K deficiencies. Union also has a Board-approved deferral account 179-61 to capture the total actual costs incurred net of the amount recovered in rates and through the partial disposition of the December 31, 1998 balance.

Union proposes to maintain the current recovery of $7.6 million of Y2K costs and the existing deferral through the year 2000. The remaining balance in deferral account 179-61 will be refunded or recovered from customers at the time of disposition of the deferral account balances for the year ended December 31, 2000. This will be included in the customer review package for the rates to be effective January 1, 2001.

Regulatory cost savings

Union's current rates include the recovery of the variable costs associated with the existing rate setting process. With a price cap model in place, general rate applications will no longer be required. Union is proposing a reduction in rates of $0.8 million effective January 1, 2002 to reflect the savings associated with the change in regulatory framework. The delay in the rate reduction provides for the recovery of the costs associated with the development of the price cap framework, including the costs for the customer consultation process, as well as the 2000 hearing process.

Union's rate hearing costs for the last three hearings are as follows:

Table 2 - Union's Rate Hearing Costs

$millions	Union	Intervenors	OEB
EBRO 486	1.134	.899	2.613
EBRO 493/494	1.497	1.425	4.835
EBRO 499	1.555	1.529	4.493
Total	4.183	3.853	11.941

The OEB costs are an allocation of the regulator's fixed costs, and will therefore continue regardless of the form of regulation in place for Union. The costs for Union and Intervenors totals $8.0 million ($4.183 million + 3.853 million), or an average of $2.7 million per hearing. These costs are recovered in rates over a two year period, approximately $1.4 million per year.

Under a five year price cap, intervenor funding should decrease since the lengthy regulatory process supporting a cost of service regulatory model will be replaced with an annual customer review process. Union will continue to offer intervenor funding to eligible parties who attend the customer review meetings. Therefore, only a portion of the intervenor costs currently built into rates is avoidable. While the rate setting process will be much more efficient and cost-effective under the price cap model, Union will still incur some external costs to support the customer review process. Union has estimated a reduction of approximately 60% in intervenor and utility costs, or $0.8 million from current average recovery level, beginning in 2001 for a total of $3.2 million over the remaining four year term of the price cap plan.

Union notes that the regulatory cost savings are a form of productivity gain associated with moving to a new regulatory model. This adjustment must therefore be considered as an addition to the productivity factor included in the price cap formula.

1..2. Price Cap Plan

Union is proposing to implement a price cap framework for changing rates and other charges for the storage, transportation, and distribution of gas effective January 1, 2000.

The price cap plan has been discussed with individual industrial customers, energy marketers, representatives from consumer advocate groups, as well as representatives from environmental groups and other special interest groups.

Summary of Proposal

Union is seeking the approval of the OEB for the following:

1. The term of the price cap framework will be for five years beginning January 1, 2000. The implementation details are discussed later in this document.
2. The maximum annual increase for regulated rates for storage, transportation and distribution will average 1.9% per year for each year of the term.
3. The rates established under this price cap mechanism will be subject to adjustments for further unbundling (e.g. from the unbundling of customer billing, and for other

services). New unbundled rates as they are developed will be examined and discussed through the customer review process and submitted for approval by the OEB.

4. Union will have the ability, through the customer review process, to propose rates for the approval of the OEB beyond the 1.9% average price cap for items described as non-routine adjustments.

5. Changes to storage, transportation and delivery rates for the impact of changes in Union's WACOG approved by the OEB. The cost of gas supply, upstream transportation and gas supply related balancing will continue to be passed through to customers through the Quarterly Rate Adjustment Mechanism ("QRAM"), including the disposition of deferral accounts, until such time as a replacement mechanism is approved by the OEB.

6. Union will adjust rates annually to reflect changes in the Board approved return on common equity.

7. Union will pass through adjustments to rates annually for the variance between the unaccounted for gas ratio recovered in rates and the weighted average ratio of unaccounted for gas for the preceding three years.

8. Union's ability to change rates and other charges including rate structure changes under the price cap will be restricted by the conditions placed on the service baskets as defined section 0.

9. Union will file annually new rate schedules and calculations supporting compliance with the terms of the agreement in accordance with the customer review process, and ultimately for OEB approval.

10. Union will have the ability to negotiate rates and contracting periods outside of the annual rate schedules. Customers can choose to negotiate a rate and contracting term, or elect service under the approved rate schedules.

11. Union has requested that its current rates should be set as interim, effective January 1, 2000.

Each of these items is addressed below.

Effective Date and Term

Union has proposed that the price cap framework be effective January 1, 2000 for a period of five years ending December 31, 2004.

The proposed term of five years will allow Union time to implement the changes necessary to manage the Company under performance based regulation. For instance, to manage the business under a 1.9% annual price cap Union will be required to increase productivity. To achieve this, Union will incur costs to change its business processes and develop new skills in its employees. The five-year period allows Union sufficient time to do this and measure the net results.

Applicability

The proposed price cap is to be applied to Union's rates and other charges for storage, transportation and distribution of gas approved by the Board in E.B.R.O. 499 adjusted for those items discussed in section 1..1 (page 17). Union's price cap proposal does not include managing the variation in the cost of gas supply commodity, upstream transportation, or gas supply related load balancing costs under the price cap. Appendix C illustrates the proposed approach to be followed for each component of cost within the various bundled and unbundled service options provided.

Fixed Price Cap

Union is proposing to cap the annual increase on the average rate for service at one point nine percent (1.9%) per annum, subject to the pass-through items discussed above and the non-routine adjustments discussed in section 0 below. Fixing the results of the price cap formula in advance gives customers assurance about the maximum level of rate changes over the term of the price cap plan.

The proposed cap amount of an average 1.9% per year was determined based on the following price cap formula,

$$\mathbf{PCI = I - X \pm Z \pm Pass\ through\ items}$$

where the price cap index (PCI) is determined by adjusting prices for the forecast growth in inflation (I), offset by a productivity factor (X), adjusted as required for the impact of external factors on Union's costs that are outside management's control referred to as non-routine

adjustments (Z), and adjusted regularly for certain predefined items referred to as pass through items.

Union consulted with Laurits R. Christensen Associates, Inc. (Christensen) regarding the proposed approach, the construction of the price cap index, and the pricing flexibility. Christensen's evidence at Exhibit B, Tab 3, Section 2, pp. 2 - 23 describes the concepts on which Union's proposed price cap approach is based.

Union's price cap proposal is an automatic process for adjusting rates, subject to a review of the proposed amount of any non-routine adjustments or pass through items. As such, the components of the price cap must be established in advance. The following is a discussion of the components of Union's price cap proposal. Union is proposing to fix the amount of the price cap for each year of the five year plan. Agreement on the formula is a critical component of Union's proposal for the second generation PBR.

Inflation Factor (I)

The appropriate measure of the average rate of inflation is chosen because it represents an economy wide index that is representative of the trend in input costs external to the company in that it is not influenced by the company's actions, is stable, readily available and understood by customers, and is widely accepted in other jurisdictions for PBR.

Union is proposing to use the forecast of the Canadian Gross Domestic Product Price Index (GDP PI) over the term of the agreement (2000 to 2004) as the measure of inflation as shown at Table 3.

Table 3 - Inflation Forecast (GDP-PI)

% p.a.	2000	2001	2002	2003	2004	Average for term
GDP PI – Canada (Sept)	1.3	2.0	1.5	1.5	1.5	1.6

The Canadian GDP PI presents a forecast of inflation for the Canadian economy that is external to Union from the Canadian Forecast Summary issued by Standard and Poor's DRI, a copy of which is attached as Appendix D.

I = 1.6%

Union is proposing the use of GDP PI for it's price cap formula as it better reflects the mix of goods and services used by a utility than does the mix of consumer products represented by the Consumer Price Index (CPI).

The CPI for Canada from the same source is

% p.a.	2000	2001	2002	2003	2004	Average for term
CPI – Canada (Sept)	2.1	1.7	1.8	1.8	2.0	1.9

The actual GDP PI and CPI for the last ten years are as follows:

%. p.a.	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	Average
CPI	5.0	4.8	5.6	1.5	1.9	0.2	2.2	1.6	1.6	1.0	2.5
GDP PI*	4.6	3.1	2.7	1.3	1.5	1.1	2.4	1.5	0.7	(0.4)	1.9

Source:
Standard and Poor's DRI Canadian forecast Economic Service
Canadian Market Outlook Long Range Focus Spring/Summer 1999

Union is proposing to fix the amount of the annual price cap over the term of the agreement and not vary the amount of the annual maximum change for the actual rate of inflation. This is intended to provide greater predictability in annual price changes. The choice of GDP PI as the appropriate measure of inflation is discussed in the evidence of Christensen at Exhibit B, Tab 3, pp. 11-13.

Total Factor Productivity (X factor)

The choice of the appropriate X factor is critical for the success of the price cap framework. An X factor that is too small will not provide sufficient sharing of productivity gains with customers. An X factor that is too large will threaten Union's financial integrity and will disadvantage the utility against other regulated and unregulated service providers. The X factor should provide a benefit to customers relative to the existing cost of service framework, as well as providing an incentive for Union to improve productivity.

The X factor in the price cap formula adjusts the escalation rate for Union's total factor productivity ("TFP") growth. The estimate of this adjustment factor is determined based on a study of Union's historical rate of total factor productivity growth. Christensen was retained by Union to provide guidance and support for the derivation of the appropriate X factor. The results of that study are found at Exhibit B, Tab 3, Section 3 and summarized below.

Historical Productivity

The TFP growth rate is the difference between the total output growth rate and the total input growth rate. The input growth rate is the rate of growth in labor, capital and materials. The measure of Union's total output growth was completed two ways. Union's initial determination of the output growth rate measured distribution growth using the number of distribution customers. Union's total output growth was based on the weighted average growth in distribution customers, storage demand, transmission demand, and the sales program, financing program, and rental program, where these items are weighted by revenue.

A second measure of total output growth using distribution volume rather than distribution customers was completed to calculate the total output growth based on the weighted average growth in distribution volumes, storage demand, transmission demand, the merchandise sales program, financing program, and rental program, where these items are weighted by revenue. Using distribution volume as a measure of output growth will capture the impact of weather and declining use per customer.

The calculation of Union's historical rate of TFP growth has been completed using data for Union's Southern Operations Area ("South") for the ten-year period ended in 1996. The information needed to include Union Northern and Eastern Operations Area ("North") in the analysis is not available. Based on the geographic differences between the North and South, the availability of this data would likely increase the total input growth rate or reduce the total output growth rate, thereby, reducing the resulting TFP growth rate.

As shown at Table 4, for the period 1986 to 1996 Union's total output measured using distribution customers grew at an average annual rate of 3.8%. The total input grew at an average annual rate of 3.7% for the same period. Over this period of time Union's TFP grew at an average annual rate of 0.1%.

Table 4 - Union's Historical TFP Growth Rate

% p.a.	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	Average Growth Rate
Total Output Growth Rate	6.5	5.7	3.9	3.2	2.5	3.0	3.7	2.8	4.4	2.7	3.8
Total Input Growth Rate	2.1	1.0	5.4	3.3	5.9	5.8	5.0	3.4	1.9	3.4	3.7
TFP Growth Rate	4.4	4.8	(1.5)	(0.1)	(3.4)	(2.8)	(1.2)	(0.6)	2.5	(0.8)	0.1

As shown at Table 5, for the period 1987 to 1996, Union's total output using distribution volumes grew at an average annual rate of 2.9% per annum. The total input grew at an average annual rate of 3.7% for the same period. Over this period of time Union's TFP measured this way grew at an average annual rate of (0.8)%.

Table 5 – Historical TFP Calculation Based on Volume

%p.a.	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	Average Growth Rate
Total Output Growth Rate	5.9	6.7	3.6	(1.8)	0.2	3.5	2.8	(0.7)	6.4	2.7	**2.9**
Total Input Growth Rate	2.1	1.0	5.4	3.3	5.9	5.8	5.0	3.4	1.9	3.4	**3.7**
TFP Growth Rate	3.8	5.7	(1.9)	(5.1)	(5.7)	(2.3)	(2.2)	(4.1)	4.5	(0.8)	**(0.8)**

Union's historical total factor productivity growth rate for the period 1987 to 1996 ranges from 0.1% per annum to (0.8)% per annum. Union recovers approximately 60% of its distribution revenues through volumetric charges. Developing a total factor productivity growth rate that reflects the weighting of revenue (40% customer, 60% volume) to recognize the impact declining use per customer has had on historic productivity results in TFP growth rate of (0.4)%.

Setting the X Factor

Union's proposed X factor is the difference between its rate of total factor productivity growth ("TFP") and the economy-wide rate of TFP growth. Information obtained from Statistics Canada

indicates that the Canadian economy TFP grew at an annual average of 0.3% during the period 1986 to 1996 as shown at Table 6.

Table 6 - Canadian Economy Productivity Growth

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	Average
Canadian productivity index	142.7	143.0	145.2	145.3	144.5	142.8	141.9	143.6	144.9	148.6	149.8	147.6	
Growth rate		0.2%	1.5%	0.1%	-0.6%	-1.2%	-0.6%	1.2%	0.9%	2.5%	0.8%	-1.5%	0.3%

Based on the differential between Union's historical rate of total factor productivity growth of (0.4)% and the economy-wide rate of productivity growth of 0.3%, Union's X-factor is (0.7)%.

One of the benefits of performance-based regulation is an expectation by customers and the utility of a higher level of productivity compared to past performance. Adjusting Union's historic TFP of (0.7%). Increasing the X-factor of (0.7%) by 0.4% to estimate future productivity growth produces a net X factor of (0.7)% + 0.4% = (0.3)%.

X = (0.3)

The stretch factor of 0.4% applied to $790.0 million of revenue under Union's proposed price cap is approximately equal to $3.0 million of productivity. This result is similar to the result produced by a stretch factor of 1.2% targeted to O&M only.

To support the objective of stable and predictable annual rate changes that are easy to understand and simple to administer, Union is proposing to fix the annual price cap based on the above at 1.9%, adjusted for non-routine adjustments (Z factors) and pass through items.

PCI = 1.6 – -0.3 ± Z ± Pass through items

= 1.9 % ± Z ± Pass through items

The proposed price cap will provide Union the flexibility to manage the risks under PBR identified at Section 0. These risks include but are not limited to the ongoing decline in customer use, the capital and operating expenses related to growth, the replacement and maintenance of existing assets, the impact of inflation on costs, the impact of labour settlements, reductions in revenues from increased competition including alternate fuels and increased storage activity resulting from unbundling, and the impact of increased interest rates on the cost of debt.

Non-routine adjustments (Z Factors)

"Non-routine adjustments" are adjustments to prices over and above the application of the price cap index that will be made as a result of circumstances currently unforeseen and therefore not contemplated within the proposed price cap. Should such a circumstance occur, it would require some form of regulatory process to address the financial impacts of the occurrence. Union believes it is unlikely that customers would be willing to pay a risk premium within the price cap to compensate Union for managing these unpredictable circumstances.

Union has attempted to minimize the number of possible non-routine adjustments to preserve the character and ratepayer benefits of the price cap proposal. Because non-routine adjustments will

result in rate changes for customers beyond those bounded by the parameters of the price cap formula (inflation offset by productivity), these adjustments can compromise the stability and predictability of rates during the price cap period, even for customers who have contracted for a multi-year fixed rate. It is therefore in the best interest of all parties to minimize the number and frequency of non-routine adjustments, and to make such adjustments only when a material impact occurs.

Should a circumstance arise that meets the definition of a non-routine adjustment, Union will request a deferral account from the OEB and record the financial impacts therein. Union will then prepare a report for the next customer review process meeting, and circulate it to all parties. The discussion and disposition of the non-routine adjustment would be addressed through the customer review process. If the process resulted in a consensus, Union would dispose of the balance in the agreed manner after receiving OEB endorsement of the consensus. If a consensus was not reached through the process, an application could be made to the OEB for disposition.

Any party is able to use the customer review process to address non-routine adjustments. If a customer or other party becomes aware of a circumstance that qualifies as a non-routine adjustment, they could notify the utility to have the impact quantified. The customer review process, and subsequently the OEB regulatory process, would be available to other parties to pursue this adjustment if they judged it to be material.

It is possible to eliminate all non-routine adjustments through an initial increase in rates, or by increasing the escalator in the price cap formula, which would allow the utility to accept these risks. However, based on Union's stakeholder consultation process, it appears that customers would be unwilling to pay for this risk coverage given the highly uncertain nature of the circumstances underlying the non-routine adjustments.

The listing of proposed non-routine adjustments follows:

1. Stranded costs associated with upstream transportation capacity and stranded costs associated with customer billing and related activities, where energy marketers assume the end-use billing relationship and strand Union's corresponding capabilities. These costs would only be recoverable after reasonable attempts to mitigate them.

2. Significant cost impacts caused by changes to:

   - Generally accepted accounting principles
   - Federal or provincial income tax legislation
   - Municipal charges to capture the changes in municipal taxes and other charges resulting from the provincial government's restructuring efforts.
   - Federal or provincial regulatory legislation, rules or decisions
   - Legislation directed at environmental issues

3. Significant cost impacts caused by successful lawsuits against the utility. The lawsuits which qualify to be treated as a non-routine adjustment will be limited to:

- Any judgment against Union respecting the past assessment and collection of delayed payment revenue, and
- The cost of Y2K litigation, regardless of the judgement in that litigation. Union has received Board approval to recover $7.6 million of Y2K compliance costs and has established a deferral account to recover variances from that amount. Union expects to be Y2K compliant as a result of establishing a Y2K program to remediate its systems. However, Union also expects that there may be litigation despite its Y2K compliance and believes it should not be financially exposed despite having prudently managed its Y2K compliance.

4. The costs to provide East-end deliverability on the Dawn-Trafalgar transmission system at Parkway for customers who are returned to system gas after being served under a direct purchase contracts.

5. The costs to provide additional flexibility for customers respecting the amount of volume subject to the 22 day call at Parkway. The potential for this adjustment is contingent upon an agreed remedy to Union's existing system design constraints as is described at Section 2.8.13 of this evidence.

6. The rate decreases related to the impact of unbundling customer billing and related activities. As marketers assume the retail relationship with small end-use consumers, Union will no longer require the resources associated with this function. Accordingly, Union's costs and rates will be reduced as this function is diminished and eventually eliminated.

Pass-through Items

In the context of price cap regulation, there can be certain aspects of the utility's operations that are not subject to the pricing limitation, and are included in rates through a separate process. The items that Union proposes to treat as pass-through items on an annual basis, along with the associated regulatory approval processes, are noted below. These items generally receive the same treatment under cost of service regulation, such that no fundamental change to the utility's approach or the level of regulatory involvement is contemplated as a consequence of introducing price cap regulation. These items include gas cost related adjustments, return on equity, and unaccounted for gas changes. Each of the proposed adjustments for C2000 are discussed below.

Union is proposing that these adjustments be included in the annual customer review process to expedite the regulatory approval process.

1. Gas costs

The gas cost components of Union's rates (ie. Alberta border commodity, upstream transportation, and other supplies) and the associated deferral account reference prices are generally set based on the forecast of annual costs and average unit prices. The actual cost to purchase gas and have it delivered to Union's franchise area will continue to be subject to the existing accounting and OEB approval practices. Deferral accounts will continue to be required for gas supply related costs until such time as the methodology used to recover these costs is changed. An annual review of the balances in the gas supply deferral accounts balances will be conducted as part of the customer review process.

Gas Supply Commodity Rate Changes for C2000

Union will continue to manage the impact of changes in the cost of gas supply using the existing gas supply related deferral accounts and the Board approved QRAM to adjust rates during 2000.

Charges for Gas Supply Commodity and Upstream Transportation During the PBR Term

Union will evaluate the need to change gas supply and transportation charges annually as part of the customer review process. Union will prepare an analysis of the projected balances in the gas supply deferral accounts as at December 31 of the following year. If those balances result in a residential customer impact of less than a predefined trigger then Union will propose to continue with the rates and deferral account benchmarks for the following year. However, if those balances exceed the predefined trigger, Union will propose changes to rates to reduce the amounts that would otherwise accumulate in the deferral accounts. Union proposes that the predefined trigger be set at $20 per residential customer. This is an increase from the $15 trigger that is currently used by Union for its gas supply deferral accounts but is consistent with the trigger used by Enbridge Consumers Gas for gas supply deferral accounts.

Changes to Delivery Rates for Gas Costs

Union is proposing that rates be adjusted to recover the impact of the change in Union's weighted average cost of gas (WACOG), from $136.616 per 10^3 m^3 approved in EBRO 499 to the December 1, 1999 approved cost of $169.609 per 10^3 m^3. As a result of this change in WACOG Union's cost of unaccounted for gas will increase by $5.597 million, the annual cost of carrying gas in inventory will increase by $4.077 million, the cost of compressor fuel and

company used gas will increase by $0.829 million. These are the increases in costs on the proposed 2000 volume of unaccounted for gas (see below), the 1999 average inventory in rate base, and the volume of compressor fuel and company used gas as approved in EBRO 499.

The calculation of these cost increases is found at Schedule 5.

2. Return on equity (ROE) adjustments

Union is proposing to continue to apply the OEB-approved formula on an annual basis. The proposal and subsequent agreement by parties to use the current method does not preclude any party from pursuing changes to the OEB-approved formula during the term of the price cap agreement.

Although an interest rate forecast is used to determine the return on equity, Union will manage the impact of changes in interest rates on debt within the price cap parameters.

Union is proposing that base rates for 2000 be adjusted to reflect an allowed ROE of 9.95%. Applying the OEB's Draft Guidelines on a Formula Based Return on Equity for Regulated Utilities, dated March 1997, has derived the proposed ROE.

The formula provides for an adjustment to allowed ROE for 75% of the change in the 30 year Canada bond rate forecast. The 30 year Canada bond rate forecast for each year is determined by

taking the sum of the Consensus forecast of the 10 year Canada bond yield, as forecast in the November issue of Consensus Economics, and the average yield spreads between the 30 year and 10 year Canada bonds, as published in the Financial Post from mid-October to mid-November. This approach is consistent with that used to adjust Union's rates in accordance with the formula for 1998 and 1999 in E.B.R.O 499.

Union's 1999 allowed ROE is 9.61%. This forecast reflects a risk premium of 3.95% on a 30 year long Canada bond rate of 5.66%, or using a 3.55% risk premium on a 7.25% long Canada bond within the adjustment formula.

The current consensus forecast of the 10 year Canada bond yield from the November issue of Consensus Economics is 6.00%. The yield spreads between the 30 year and 10 year Canada bonds, as published in the mid-October through mid-November issues of the Financial Post, average 0.11%. The sum of the consensus forecast and the average yield spread results in a 30 year Canada yield forecast of 6.11%. Applying the formula the allowed ROE for 2000 is (7.25% + 3.55% + [0.75 x (6.11% - 7.25%)]), or 9.95%.

This increase requires an increase in revenues of $5.699 million. The calculation of this amount is found at Schedule 6. The excerpts from the relevant Consensus Economics and issues of the Financial Post are attached to Schedule 6.

Historically, for Union, the inputs to the OEB's formula based ROE adjustment are based on forecasts and yield spreads published in November of each year. While Union's application is consistent with this for the year 2000, once an approved PBR mechanism is in place, the use of forecasts and yield spreads published in November will not allow sufficient time for setting rates for implementation prospectively on January 1 of each year. Instead, Union proposes that the formula based adjustment use inputs published in September for 2001 and the remaining years of the PBR plan.

Union is proposing a customer review process through which customers will be able to review proposed rate changes prospectively. This process needs to allow sufficient time for Union to demonstrate to customers that its proposals are consistent with the approved PBR mechanism, to then bring forward to the OEB a consensus for proposed rates consistent with that PBR mechanism, and to allow for adjudication of items on which consensus was not achieved. There also must be sufficient time remaining for Union to receive a rate order from the Board and to implement the rate change for January first of each year.

Union submits that to provide for all of the above steps, the published inputs from September should be used in the formula. While this may place the setting of Union's allowed ROE in a different time frame from previous applications, it will not disadvantage customers or the company as a result. Instead, it will allow customers to know by the end of the third quarter of each year, what changes Union is proposing to its rates, and allow customers to better develop their own budgets.

3. Unaccounted for gas (UFG)

Union is proposing an adjustment to base rates to recover historical variances in unaccounted for gas volumes as described in section 1..1. The annual adjustment for unaccounted for gas is proposed to address the prospective recovery of unaccounted for gas volumes during the price cap period.

Each year, Union will determine a forecast level of unaccounted for gas to be recovered from customers by applying a UFG ratio to the approved 1999 throughput volume. This UFG ratio will be calculated by dividing the weighted average of the most recent three years actual UFG volume by the weighted average actual volume handled for the same period. The UFG volume forecast will be valued at Union's weighted average cost of gas.

Union will continue to be required to manage unaccounted for gas volumes during the period. The variance between forecast and actual unaccounted for gas will not be recovered unless there are offsetting variances in future years or a proposal for recovery from customers. Accordingly, Union's incentive is to ensure that unaccounted for gas variances are dealt with to reduce the utility's financial exposure and maintain the competitiveness of rates.

The increase in the cost of unaccounted for gas volume using the 1999 approved WACOG is $5.555 million. The calculation of this adjustment is found at Schedule 7.

Pricing Flexibility

Applying the 1.9% average price cap annually to the storage, transportation and distribution components of service within each rate class would meet the objectives of providing Union's customers with predictable rates that are easily understood and simple to administer. However, Union would have insufficient ability to manage the risk of reduced asset utilization from greater competition from alternate fuels, energy industry restructuring and bypass threats, to grow in-franchise storage using posted rates, and to continue the harmonization of rate schedules between the South and the North under this approach. Accordingly, Union is proposing some pricing flexibility to help it manage these risks.

Service Baskets

To balance the objectives of predictability, simplicity and allowing Union the ability to manage asset utilization risk, Union is proposing to apply the price cap to baskets of services as described and illustrated at Appendix E. The pricing flexibility provided by the following baskets of services will provide Union an opportunity to meet the challenges of competition.

Service Baskets	Rate Classifications included in each basket
1. In-franchise storage and delivery services	
a. Small in-franchise storage and delivery < 5,000,000 m*3	M2, U2, 01, 10, 16, M4, M5, M6, U5, 20, 25, M9, U9, T3, M10, 77
b. Large in-franchise storage and delivery ≥ 5,000,000 m*3	M4, M5, M6, U5, 20, 25, M7, U7, T1, 100,
2. Exfranchise storage and transportation services	M12, M13, M14, M15, C1

Union's rate classes are divided into two main baskets of services that incorporate all services; Basket 1 for all in-franchise customer services and basket 2 for all exfranchise services. Basket 1 is further divided into two sub-baskets; basket 1a) for in-franchise customers consuming less than 5,000,000 m^3 annually, and basket 1b) for in-franchise customers consuming 5,000,000 m^3 or more annually. Each basket is subject to conditions that will limit annual price increases to each of the storage, transportation and distribution services, and to each of the rate classes. These conditions will limit Union's ability to change rates to one group of customers as a result of having made changes to a different set of customers.

The price cap of 1.9% will apply to the average price of all storage, transportation and distribution services currently provided under rate schedules. The baskets and pricing conditions are described in more detail below.

Basket 1: In-franchise Storage and Delivery

The annual price cap of 1.9% will apply to the increase in the price of the total storage and delivery services provided by Union under rate schedules that apply to customers within the franchise area.

This includes the following rate schedule classifications and any future rate schedules that may replace or supplement these during the term of the price cap.

General Service rate schedules; M2, 01, 10, 16, U2

Commercial and Industrial contracts; M4, M5, M6, 20, 25, U5

Major Industrial contracts; M7, 25, 100, T1, U7

Wholesale service; M9, M10, 77, T3, U9

This proposed basket allows Union the flexibility to respond to competition from alternate forms of energy and from bypass threats.

To address any concern about small end users bearing a disproportionate share of the consequences of large users who elect to use alternate fuels, Union also proposes to sub-divide this basket into two smaller baskets with separate conditions on pricing,. These sub-baskets are

Basket 1a): Small In-franchise Storage and Delivery (< 5,000,000 m^3 annually)

An annual price cap of 4% will apply to the increase in the average price of storage and delivery services currently provided under rate schedules that apply to end use consumers within Union's franchise area consuming less than 5,000,000 m^3 annually.

All Rate M2 customers (residential, commercial and industrial) will continue to be subject to the same rate schedule, although the specific impact for an individual customer will depend on the customer's individual use. All Rate M2 customers will be subject to the same pricing constraints.

Services to Rate M9 customers are included in this basket to maintain the pricing relationship between M9 rates and Union's rates for M2 customers. The end use consumers whose demands underlie the M9 wholesale service have characteristics similar to the customers in this basket.

Within this basket, increases in the total regulated price for any customer classification (such as Rate M2) will be capped at 6.0% per year. This will allow Union to continue with the harmonization of the rate schedules for the South and the North over the term of the price cap.

Individual services provided to a customer or service class will not increase by more than 10.0% per year. This will allow for increases in prices charged for a service to recognize an increase in its value. The individual services provided to a customer or service class are storage service, transportation service, and distribution service.

The pricing flexibility and restrictions for this service basket is shown at Appendix E. More flexibility is provided for pricing individual services within a rate class. The average price increase to the rate class, which reflects a combination of individual services, is subject to a lower limit. The rate class is also subject to the conditions placed on the basket and the overall 1.9% price cap further limits the basket.

The 4.0% cap on the average rate increase for customers consuming less than 5,000,000 m^3 is required to provide Union the flexibility to manage the asset utilization risk the utility assumes under PBR. The cap of 6.0% for the average rate increase to a rate class is required to provide the flexibility to continue the harmonization of rate schedules between the South and the North.

The cap of 10.0% for the average rate increase for the storage, transportation, and distribution service components provides Union the flexibility to redistribute the recovery of revenues from individual services to reflect the value of these services.

Basket 1b): Large In-franchise Storage and Delivery (≥ 5,000,000 m^3 annually)

A price cap of 1.9% will apply to the annual increase in the average price of storage and delivery services currently provided under rate schedules that apply to customers within Union's franchise area consuming 5,000,000 m^3 or more annually.

The price cap framework provides this customer group with more stability and predictability regarding price changes than has been available in the past under cost of service regulation.

As with the limit placed on individual services for customers consuming less than 5,000,000 m^3, some of these same services are provided to this group of customers. To the extent the services are the same, the 10.0% cap on price increases for individual services is also the same.

In determining the 5,000,000 m^3 threshold Union analyzed load profile (monthly volume) information and revenue to cost comparisons. This information was provided in evidence in Union's last rate case (E.B.R.O. 499, Exhibit H1, Tab 2). Parties to the E.B.R.O. 499 Settlement Agreement (H.13) agreed to this threshold definition for large customers.

Rate schedules with customers in both baskets will continue to be handled as a single rate class (i.e. same rates) until the rate schedules are redesigned to spilt services into separate rate schedules. This will not happen before January 1, 2001 for M4 and Rate 20 customers. As long as the rate schedule continues to be applicable to customers in both baskets, the annual average rate changes will have to comply with the conditions of the price cap agreement for each basket.

Basket 2: Exfranchise Storage and Transportation

A price cap of 1.9% will apply to the annual increase in the average price of cost-based storage and transportation services currently provided under rate schedules that apply to customers outside of Union's franchise area.

As with the limit placed on individual services for customers in Union's franchise area, some of these same services are provided to this group of customers. To the extent the services are the same the 10.0% cap on price increases for individual services will also be the same.

Summary

Union requires pricing flexibility for the following reasons:

- To manage the risk of reduced asset utilization by responding to the increased competition from alternate energy service,
- To allow for the harmonization of rate schedules as a result of the merger between Union and Centra,
- To create and maintain reasonable price relationships between rate classes and equivalency among comparable service options,
- To manage the rate impact resulting from the gas cost, return on equity and unaccounted for gas pass through adjustments, and
- To continue to streamline the number of rate schedules over the price cap term to capture opportunities for administrative efficiency.

The average increase in the posted price for storage service will impact all customers in all rate classes similarly. The actual impact for any customer will vary depending on the variances in the volume and mix of services - not the price. The underlying posted price for storage service will be the same for all customers. Delivery services will continue to be priced by rate class depending on each customer's use of the service**.**

Actual increases for individual customers will depend on the mix of storage, transportation and distribution service used by the customer. For example, if Union increases the price of storage service by 7% a customer that requires less storage than the average may see their price for storage service increase by less than 7%. In combination, the changes in the price of storage and distribution services must comply with the limits on the rate class, and the changes to the average price to various rate classes must comply with the 1.9% cap.

Union's proposal prevents customers in different rate classes from paying different prices for the same storage service and/or delivery service.

The flexibility that Union has proposed under the price cap plan is similar to the flexibility that exists under cost of service regulation to price services, subject to OEB approval. Starting by applying the average price increase to all services, and rate classes, Union will examine the impact of this change on the marketplace, considering competitively priced services, and potential customer response to the price changes. Union's pricing will continue to be set to ensure, as much as possible, that prices are stable and predictable in order to retain existing load and to attract growth to Union's system.

Rate Harmonization

The goal of rate harmonization is to have the same rate structure for similar services - not to have the same rates for service in the South and the North. Some impacts on customers and rate

classes can be expected as rate structures are harmonized. Union's objective is to avoid significant customer impacts while increasing the ease of administration and the simplicity of the rate schedules. The proposed 6% maximum increase for rates to a rate class would provide sufficient flexibility to harmonize rates over the five year term of PBR.

Longer-term Fixed Prices

Union is proposing that customers be able to negotiate prices with Union that are fixed for periods longer than one year. Customers who do not want to negotiate a rate can elect service under the rate schedule. This option will be available to large industrial customers, retail energy marketers, and exfranchise S&T customers. Union's billing system does not currently have the capability of billing individual residential customers for rates other than those for the entire rate class i.e. M2. Residential customers and other general service customers looking for longer-term fixed pricing could access this through a retail energy marketer.

All volumes subject to these longer-term fixed prices will be deemed to be billed at the posted rate on the rate schedule for purposes of proving that annual rate changes comply with the price cap constraints. This is appropriate as the one-year price that is subject to the price cap is the customer's alternative to a longer-term fixed price. To the extent that the negotiated price was higher or lower than the posted rate, the variance will be attributed to the utility.

For example, if the price in year 1 of $5 per unit was increased annually at 1.9%, the annual prices for service would be $5.10, $5.20, $5.31, and $5.41 in each of years 2 through 5. If the customer and Union negotiated a five year price of $5.15 per year, Union will deem negotiated

prices to be at the average posted price for the proof of price cap compliance. The variance between the negotiated price of $5.18 and the annual posted price will be managed by the utility.

Negotiated prices will continue to be subject to pass-through items and non-routine adjustments, unless specifically excluded through the negotiated price. Union will assume the risk for that portion of the adjustments that have been negotiated under fixed prices.

Market priced storage

Union is proposing to renew its existing ex-franchise (M12) storage contracts at market prices. The rationale behind the proposal to renew these contracts at market prices is as follows:

1. To ensure consistency in the pricing of all incremental storage contracts to customers outside Union's franchise area - The OEB approved Union's proposal to price incremental storage at market prices for customers outside Union's franchise area in EBRO 494-03. Renewing existing contracts at market prices is consistent with the sale of new storage in the market place.
2. To provide Union the ability to manage the risks of the further unbundling of storage in the in-franchise market - There are financial impacts to Union associated with offering unbundled storage services to the market, as well as risks related to the proposal to allocate storage service (to incremental in-franchise customers) in the proportion included in base rates.

Once an exfranchise storage contract has been renewed at market prices, the service is no longer subject to the price cap. Union proposes that the existing deferral account that records this market differential be eliminated. Union will assume the risk when the market price sells below the cost-based price for storage.

New Services

Union is proposing to develop and offer new services to customers during the term of the PBR agreement. These services will be in addition to the storage, transportation and distribution services priced under Union's current rate schedules. The new service offerings will enhance the basic storage, transportation and delivery services and will be priced competitively in the market place. Where no competitive alternative to a service exists these services will be placed into one of the defined service baskets and will be priced subject to the price cap parameters.

Price flexibility (including the ability to negotiate long-term prices), market pricing for storage used by Union's exfranchise customers, and new services provide Union the ability to manage risks under a price cap methodology.

Off-ramps

"Off-ramps" is the term often used in a performance-based regulatory framework to refer to circumstances that would cause a regulatory review of the parameters of the framework. Typically, off-ramps are invoked because an event has occurred that indicates a serious flaw in

the framework that had not been foreseen when it was introduced. The outcome of the regulatory review can range from adjusting the framework's parameters, to terminating the framework entirely. Such an event has important consequences for all parties but this must be weighed against the consequences of continuing with a regulatory framework that is not achieving its objectives.

Given that the price cap proposal would be in place for an initial five year period, Union has identified only one off-ramp - a serious decline in Union's financial position that would prevent the utility from operating and perhaps leading to financial failure. This circumstance would be a public interest issue and an opportunity to change the regulatory framework would be required. If such a situation arose, Union would assess the changes required to improve its financial position and propose the changes through the customer review process. If a consensus was reached with customers and intervenors, an agreement would be filed with the OEB for approval and implementation. If a consensus was not reached, Union would apply to the Board for a public hearing to address the proposed amendments.

The off-ramp is intended to address the circumstance where the PBR mechanism can be demonstrated to be a significant cause of the financial decline. The off-ramp permits Union to propose changes to the parameters in this circumstance. Customers will benefit from such an off-ramp, as this component of the price cap agreement will ensure a financially capable utility.

1..3. Service Quality Indicators

A common component of price cap proposals is the adoption and reporting of service quality indicators ("SQIs"). Since a price cap proposal allows the utility to manage its operations over a longer period with less regulatory review and provides a financial incentive to reduce costs, there is typically a concern that utilities may choose to reduce customer service or other commitments for immediate financial benefit. SQIs are primarily intended to provide assurance to customers and other stakeholders that certain operating standards will remain in place during the term of the price cap.

The SQIs are established to prevent certain forms of service level deterioration from current levels or accepted standards. There are generally no incentives attached to the SQIs, as there is no indication that customers would be willing to pay for a higher level of operational service. Symmetrical with the lack of incentives is usually an absence of direct financial penalties. As well, direct financial incentives and penalties are excluded to avoid distorting the financial behaviours already implicit in the price cap parameters.

A significant aspect of setting service quality indicators is to establish the procedures to be followed if an SQI threshold is not met. In this regard, Union is proposing the following process:

a. Union will prepare a report on the reasons for the service decline and the remedial action it has taken to improve the indicator.

b. This report will be sent to all participants in the customer review process for comment.

c. Union will proceed to implement the proposed remediation, subject to final comments received as a result of the customer review process, and send a follow-up report once the remedial action is in place.

d. If parties do not agree with the remediation, the matter will be referred to the Board for disposition. At that time, parties are free to argue for other courses of action, including alternative remedies and/or financial penalties.

Union and Enbridge Consumers Gas worked jointly to identify potential SQIs and ensure some degree of consistency for all Ontario customers while allowing for some differences based on operational considerations. In addition to examining precedents for examples of other SQIs, Union selected the SQIs on the basis of their relevance to customers, simplicity, ease of administration and tracking, and availability of historical results or reasonable standards. The selected SQIs focus primarily on system integrity, safety, and reliability, as shown at Table 7.

Table 7 – Union's proposed service quality indicators

Measure	Customer Value Supported	Minimum Standard	Performance Reporting
1. Pipeline System Integrity Surveys	safety, reliability	100% completion of planned surveys	annual report indicating surveys completed
2. Telephone Response	responsiveness, safety	65% in 20 seconds	actual annual service factor
3. Emergency Response	safety, reliability	95% attendance at site within 1 hour	actual annual service factor
4. Gas Utilization Infraction	Safety	100% compliance of gas shut off for infracted appliances beyond the correction date	annual report indicating actual performance
5. DSM	quality, reliability	75% of the target volume savings identified in five year DSM Plan	annual evaluation report audited by 3rd party consultant

A description of each SQI is provided below.

Pipeline System Integrity Surveys - Union has a two-part program of surveying its pipeline system to ensure the integrity and reliability of its distribution system. The first component involves performing corrosion surveys to ensure that the steel pipeline network has sufficient cathodic protection; the second component involves completing leak surveys to detect leaks in parts of the distribution system. Results from these surveys are then used to take appropriate steps to correct potential problems before they escalate. The frequency of these surveys is based on the operating parameters and location of the pipe. Union will commit to filing a list of all surveys planned for the price cap period, and will complete all of the identified surveys and take

appropriate action within the time specified as a minimum standard for maintaining system integrity. For purposes of the 2000 - 2004 PBR term, Union will commit to the level of survey activity as outlined in Schedule 8. Failure to meet this standard will result in Union filing an exception report and any remedial action with the participants in the customer review process.

Telephone Response - This SQI measures the time between when a customer's call is first received at Union's Call Centre and when the customer talks with a customer representative. Historical performance, based upon the former Union franchise area, shows that on average approximately 67% of calls are handled within 20 seconds. For purposes of defining a minimum standard, Union will commit to a service level of 65% of the calls being addressed within 20 seconds. Failure to meet this minimum standard will result in Union filing a report on the actual performance level and a correction plan to improve the service level to meet or exceed this standard. This report will be sent to participants in the customer review process.

Emergency Response - For purposes of defining this SQI, an emergency includes situations such as an explosion, fire, gas leak, asphyxiation and other such incidents as defined in Union's Priority 1 calls. The response time is measured as the time it takes a qualified Union representative to respond on site from the time the call is received. Union has historically been able to respond to 95% of the emergency calls within 1 hour. Union will commit to maintaining this response level throughout the term of this PBR period. Failure to meet this minimum standard will result in Union conducting a safety audit and filing the findings with the participants in the customer review process.

Gas Utilization Infractions - When Union is performing a safety inspection and comes across a code infraction, it is obligated to shut off the gas supply to the appliance in a severe case, or tag the appliance with a maximum 90 day infraction remediation tag. Likewise, any service fitter employed by a company other than Union is expected to do the same, and to notify the utility. Union then takes responsibility for ensuring that the supply of gas to any such appliance is disconnected by the specified date, unless the safety concern has been fixed, at which time the tag is removed. Union will commit to manage this process and ensure that gas supply is disconnected to any tagged appliance for which the specified correction date has elapsed. In rare situations in which the customer is not able to comply and would experience undue hardship with the gas being disconnected, Union will provide an extension with prior TSSA approval. If this situation were to occur, it would be deemed to be in compliance. Failure to meet this standard will result in Union filing an exception report that identifies actual performance, reasons for failure to meet the standard, and the remedial action being taken, if necessary. This information will be filed with the participants in the customer review process.

Demand Side Management ("DSM") - Demand Side Management is an integral part of Union's overall sales support activities. Union has historically partnered with energy service companies, management firms, and end-use consumers to seek out opportunities to develop, market and implement programs and projects that promote energy efficiency. As the marketplace changes, the company's focus is shifting to working almost exclusively with channel partners. Channel partners include, but are not limited to, HVAC firms, homebuilders, architects and engineers, equipment suppliers and do-it-yourself stores.

The company has experienced success in exceeding savings targets over the last several years and continuous energy efficiency improvements are being realized in all markets. Due to the maturity of the programs and acceptance by the marketplace, the challenge to achieve similar levels of natural gas savings year by year will increase. The past level of achievement is best characterized as having been experienced in a period of program growth and enhancement. This growth has reached a plateau where the program offers are comprehensive and well constructed.

Union's ability to meet or exceed the DSM Plan natural gas savings targets over the next five years is uncertain. The uncertainty comes from economic cycles in the market place, technology evolution, competition between natural gas and electricity and the changing structure of marketing channels such as the HVAC firms and do-it-yourself stores. These last two changes have little precedent in the Ontario energy marketplace. The extent to which they will impact the company's ability to achieve the DSM Plan targets is extremely uncertain.

Union has considered the level of commitment to DSM activities along with those of other areas and finds the current level consistent with effort being applied to other business activities.

Union is proposing a Shared Savings Mechanism (SSM) to support its commitment to DSM efforts during the initial PBR term. The SSM design recognizes the uncertainty in the marketplace, the need for some amount of consistency between Union's approach and that of Enbridge Consumers Gas, the maturity of the DSM programs and the aggressive targets already

incorporated into the five year DSM Plan. The SSM incorporates a financial incentive, and a penalty mechanism, for Union starting at 75% of the targets contained in the current plan.

A summary of the mechanism and its possible results are shown in the following table:

Table 8: SSM Impacts

Percent of Five Year Target Achieved	Lifetime Net Benefits Based on TRC	Five Year SSM Penalty	Value as a Percent of Five Year DSM O&M Budget
0%	$0	-$21,656,250	-110%
10%	$19,250,000	-$18,768,750	-96%
20%	$38,500,000	-$15,881,250	-81%
30%	$57,750,000	-$12,993,750	-66%
40%	$77,000,000	-$10,106,250	-51%
50%	$96,250,000	-$7,218,750	-37%
60%	$115,500,000	-$4,331,250	-22%
70%	$134,750,000	-$1,443,750	-7%
75%	$144,375,000	$0	0%
80%	$154,000,000	$1,443,750	7%
90%	$173,250,000	$4,331,250	22%
100%	$192,500,000	$7,218,750	37%
110%	$211,750,000	$10,106,250	51%
120%	$231,000,000	$12,993,750	66%
130%	$250,250,000	$15,881,250	81%
140%	$269,500,000	$18,768,750	96%
150%	$288,750,000	$21,656,250	110%

Union also proposes the following components of the SSM:

- The Lost Revenue Adjustment Mechanism (LRAM) will be continued during the PBR period, as it is currently operating. Although the LRAM mechanism conflicts with the objectives of simplicity and predictable and stable rates, the company recognizes that including an LRAM may alleviate the concerns of some stakeholders wanting to ensure

that any perceived disincentive to achieve the DSM natural gas savings targets is removed.

- The filed five-year DSM plan will provide the basis for all performance targets for the duration of the PBR proposal. Significant effort and discussion have been focused on the construction of the 1999-2003 DSM Plan. This plan was thoroughly reviewed by a multi-stakeholder consultative group over a period of several years. The Ontario Energy Board has also reviewed several iterations of that plan. The plan identifies the target lifetime net benefit, based on a total resource cost test (TRC), of $192.5 million during the period 1999 to 2003.
- A deferral account for the operating budget for DSM activities will not be established. This issue has been discussed with interested parties and the Ontario Energy Board. A deferral account is neither warranted nor needed. The lack of a deferral account has had no impact on the company's ability to meet its DSM natural gas savings commitments over the last four years. There is no reason to assume that the same situation will not hold over the term of the PBR agreement.

An annual evaluation report will be produced documenting Union's DSM performance, continuing a process begun with the 1997 evaluation report. The report will be audited by a third party consultant and provided to the DSM consultative group for review. In addition, the terms of reference for the audit will be provided to the consultative group for review.

The proposed penalty or reward resulting from the SSM at the end of the five year DSM plan will be refunded to or recovered from customers as an adjustment in the second generation of Union's PBR proposal. This recovery mechanism must be agreed in advance, to avoid the circumstance where Union spends incremental funds on DSM activities but does not receive the

offsetting benefits. The rate adjustment information will be available for review in 2004, allowing the adjustment to be included in any rate change on the January 1, 2005.

THE UTILITY RISK PROFILE FOR THE PRICE CAP PROPOSAL

The following section reviews the additional, and substantial, risks that Union is prepared to manage and the benefits inherent in the proposed price cap proposal. This comparison is properly made against the risks that Union currently manages, and is compensated for, under cost of service regulation.

Union is prepared to manage the following risks over five years under the price cap proposal. Each is described below in more detail.

1. Pricing volatility
2. Asset utilization
3. The cost of adding new facilities and replacing and reinforcing existing facilities
4. Declining use per customer
5. Delivery/Redelivery toll risk
6. O&M expense variances
7. Changing economic conditions
8. The impact of a change in interest rates on the cost of debt.
9. Changes in depreciation, property taxes, capital taxes, and income taxes.
10. Warming trend in weather

The following utility benefits are an integral part of Union's proposal.

11. Revenue from new services

12. Market – priced storage

13. Proceeds from asset disposition

1. Pricing volatility risk

Current situation: The annual rate setting process determines just and reasonable rates, with unit price changes approved by the OEB. The amount and the direction of the annual price change is not known by the customer until the hearing process is complete, the decision of the OEB has been rendered, and the rate order has been approved. This is often after the period in which prices are in effect and has created retroactive billing adjustments.

Price Cap situation: Annual price changes by Union may still occur, however, under a price cap model the parameters of the maximum change in rates will be known (unlike the current situation). The average price cap conditions for services, and rate classes are determined in advance and applied annually. Customers who want rate certainty can contract for a fixed rate over a multiple-year period. Under negotiated prices, any pass-through items and non-routine adjustments during the term of the contract would cause variations in rates.

Ratepayer benefit: Prices for Union's services will be known within certain annual bands, or known with even more certainty through contracting. The nature of the process under

Union's price cap proposal will allow rate changes to be implemented on a timely basis eliminating retroactive adjustments.

2. Asset utilization risk

Current situation: Union forecasts the utilization of its integrated storage, transmission and distribution system annually, with any unutilized capacity recovered in rates. Union manages the risk of variances from the forecast utilization rate within the test year, and has an opportunity to reestablish the utilization level during a subsequent rates setting process. Any load loss resulting from the displacement of natural gas by other fuels, or resulting from customers leaving Union's franchise area, is reflected in the forecast used for rate setting purposes, and recovered from other customers. Should a party or customer attempt to bypass the utility's delivery system, Union is able to apply to the OEB for regulatory relief, recovering the revenue shortfall generated by the bypass (or by a bypass competitive rate) from other customers.

Price Cap situation: Union assumes the risk for the utilization of its delivery system throughout the price cap period. Given the high utilization rate (load factor) currently reflected in Union's rates, and growing competition from other parties and from the price of other fuels, the risk of lower utilization is significantly greater than any marginal improvement in utilization.

This risk is especially predominant in the following markets:

(i) Union's large industrial sales volume represents 7,788,000 10^3m^3 (275 Bcf), of which 647,000 10^3m^3 (23 Bcf) has immediate alternate fuel-burning capability. The gas delivery revenue associated with this volume is approximately $5.8 million.

(ii) Union currently sells approximately 1,375,000 10^3m^3 (49 Bcf) to independent power producers (IPPs) within its franchise area. With the deregulation of electricity in Ontario expected next year, many of the contracts between the IPPs and the Province of Ontario will be restructured. This restructuring may well reduce the economics of some of the existing IPP facilities, reducing demand on Union's system. Total gas delivery revenue associated with this activity is approximately $12.3 million.

(iii) The deregulation of electricity in Ontario will doubtless have other far-reaching impacts on gas users, including:

a. More competitively priced residential, small commercial, and small industrial offerings that will displace gas usage. The most vulnerable market segment in this respect is residential water heaters. Approximately 35,000 10^3m^3 (1.2 Bcf) is at risk for every 50,000 water-heating customers. The gas delivery revenue from this volume is estimated to be $3.5 million annually.

b. The restructuring of municipal electric utilities will result in additional competition for Union's franchise areas. The threatened expropriation by the City of Kingston, and the City of Sudbury are two examples of this type of heightened competition. This circumstance can result in gas displacement or reduced gas sales margins for Union during the price cap period. Lost gas delivery revenue for an average mix of

60,000 residential and commercial customers is approximately $30.0 million, the associated reduction in cost will depend on the specific circumstances.

(iv) Greater competition in the energy industry, along with more unbundled service offerings, will reduce Union's opportunity and ability to achieve its current storage and transmission utilization. The transactional revenue reflected in Union's approved rates will diminish as customers select unbundled service offerings and use the entire asset capability for their own purposes. The revenue at risk from further service unbundling is approximately $5.0 million.

Ratepayer benefit: Ratepayers are largely insulated from the effects of lower asset utilization under Union's price cap proposal. Union will manage this risk through pricing flexibility to avoid losing load, the creation of new service offerings, and by creating business management capability in lieu of regulatory management capability. Union's inability to meet the competition and address asset utilization threats will impact the utility's earnings, but not customers' rates, during the price cap period.

3. Addition of new facilities, replacing and reinforcing existing facilities

Current situation: Union applies an initial profitability test, on a forecast basis, to support growth on the storage, transmission, and distribution systems. The costs and revenues associated with these facilities are incorporated into rates on a forecast basis. Variances from original forecast assumptions are incorporated into future revenue and cost estimates underlying future rates applications.

Price cap situation: Union will be held accountable for the economics of all growth during the term of the price cap agreement. The incremental revenue required to support the costs associated with system expansion for growth will be managed under the price cap. Projects where incremental revenue is less than the revenue requirement, and the shortfall cannot be managed within the annual price cap will require some form of contribution from the customer to proceed.

Union's risk results from unfavourable variances in the project costs or incremental revenue after the project has been completed. These variances will be managed by Union and not visited on ratepayers during the term of the price cap agreement.

Storage expansion

Union develops storage to manage the customer's gas balance in aggregate and does not build for specific customers demands. Managing storage growth for in-franchise markets through a contribution or incremental rate mechanism is not a practical alternative. Union is proposing to maintain posted storage rates for in-franchise customers. This circumstance requires Union to manage the cost of developing new storage for in-franchise customers within the price cap parameters.

New storage pools tend to be smaller and further away from Union's existing gas infrastructure. Consequently, these pools are more expensive to develop than were existing pools, and cannot be justified using existing, cost-based rates. Accordingly, new storage has

a greater likelihood of development if market prices are used to support it (e.g. Century Pools).

To enhance the company's ability to manage the risks associated with continuing to provide existing and new in-franchise customers with storage at the same rates, Union is proposing that storage contracts with customers outside Union's franchise area be renewed at market prices. Any variance between the revenue at market and the cost of owning and operating the facilities would benefit the utility and mitigate the risk associated with storage expansion for in-franchise customers.

Distribution System Expansion

The Board's E.B.O. 188 Report established the underlying principles for distribution system expansion. The Board concluded that there should not be undue negative rate impacts to existing customers as a result of new projects. To prevent these impacts, the utilities were permitted to assess the viability of all potential customers as a group using a portfolio approach.

Under Union's PBR proposal, existing customers will not be impacted by distribution system expansion as system expansion will be managed within the price cap formula. Union will continue to engage in system expansion where it is economic to do so. Union will continue to use a discounted cash flow analysis for determining the feasibility of extending gas

service. All distribution system expansion projects will be included in the utility's portfolio such that subsidization will only occur within the portfolio of new projects.

Union will also be responsible for managing the costs related to the replacement and reinforcement of existing facilities to continue to serve existing load with no additional revenue beyond the increases provided by the price cap. This includes, for example, the costs to relocate or reinforce pipeline subject to encroachment in urban areas.

Ratepayer benefits: In-franchise customers continue to have access to storage at posted rates. Union will be responsible for managing the financial impacts of its capital investment decisions without an increase in rates beyond the annual price cap. This could mean that Union will not invest capital in the future in the same fashion as it has in the past, if such investment would cause significant near-term cost increases or is not economic on a stand-alone basis. Other tools, such as customer contributions and negotiated rates and other charges, will be used to improve the economics of such projects.

Appendix F illustrates the economics in simplified form of expanding Union's system for 30,000 residential customers.

4. Declining use per customer risk

Current situation: Union manages any variances in use per customer on a one-year basis, until the opportunity to reset the forecast amount through the annual rates application occurs.

Price Cap situation: Union will be expected to manage any variances over the five year price cap period, with some implicit allowance in the average net price cap to assist with this management. There would be no opportunity to reset the use per customer if the price cap allowance is insufficient to manage this risk.

In recent rate proceedings, Union and its stakeholders agreed to an average decline in annual use per customer of approximately 1%. Union estimates that this average decline is expected to continue over the term of the price cap agreement. The delivery revenue lost as a result of 1% decline in use per customer is approximately $5.0 million per year.

Ratepayer benefit: Ratepayers are not impacted by any decline in customer use beyond the amount provided for in the annual price cap. The risk of use per customer variances is eliminated for all markets.

5. Delivery/Redelivery Toll Risk

Current situation: Any changes in tolls or terms and conditions associated with the STS service that Union purchases from TCPL are passed on to ratepayers.

Price cap situation: Any future changes in toll or terms and conditions will be managed by Union within the price cap. Union is prepared to assume this risk to allow for the clear definition of services that are either within or outside of the price cap.

Ratepayer benefit: STS toll increases will be managed by the utility..

6. O&M expense variance risk

Current situation: Union is accountable for any O&M variances from the OEB approved level. The O&M level is reestablished during the annual rates setting process.

Price Cap situation: Union will manage all O&M expense variances during the term of the price cap, with some allowance for this within the average price cap. A key component to be managed through the period are wage and salary settlements, as 70% of Union's O&M expense is compensation related. The recent CAW collective agreements may have a significant impact on Union’s labour negotiations and on it’s corresponding ability to manage the outcome of those negotiations within the price cap.

The Company will be rewarded for any efficiency gains beyond those included in the productivity factor (also known as an X-factor) and will be penalized for not achieving efficiency gains equal to the agreed to X-factor.

Ratepayer benefit: Ratepayers receive the benefit of an upfront commitment to productivity that reduces the price cap. This commitment is realized in rates every year during the price cap period, regardless of whether Union actually achieves that level of productivity.

7. Risk of changes in economic conditions.

Current situation: Union forecasts certain economic conditions and related customer growth, which factors into the revenue and expense forecasts used to set rates. Union manages any variances within the test year and resets its forecast of economic conditions at a subsequent rates case. Ratepayers absorb the impact of changing economic conditions over the longer term.

Price Cap situation: Union assumes the risk of changing economic conditions, customer growth, and revenue increases during the price cap period. The exception to this may be a significant upheaval in financial markets that is addressed by the proposed off-ramp in section 0.

Ratepayer benefit: Ratepayers will avoid the impact of changing economic conditions during the price cap period. Given the low level of interest rates and strong economic growth reflected in Union's current rates, there appears to be greater likelihood of interest rate increases and slower growth, as opposed to lower interest rates and improved growth. Ratepayers will be sheltered from the impacts of this possibility.

8. Changes in interest rates that support changes in Union's financing costs.

Current situation: Short-term and long-term interest rates are forecast to determine Union's short-term borrowing and incremental long-term borrowing costs. These costs are recovered in rates.

Price Cap situation: Union assumes the interest rate risk related to it's short term borrowings and incremental long-term debt over the PBR period. The use of the OEB approved formula for changes in return on equity will be continued.

9. Forecast variances for depreciation, property taxes, income taxes, and capital taxes. *Current situation:* Union forecasts its costs for the above items for inclusion in its cost of service and recovery in rates. Variances from the OEB-approved levels are the company's responsibility during the test year. The forecast levels can be reset at subsequent rates cases.

Price Cap situation: Union assumes the additional risk of forecast variances from the OEB-approved 1999 levels during the price cap period. These variances must be managed within the price cap. The sole exception to this situation is a significant cost change caused by changes to income tax legislation; this item has been identified as a non-routine adjustment.

Ratepayer benefit: Ratepayers are protected from cost variances in these items.

10. Weather-related variations in use

Current situation: Union establishes "normal" weather by using a 30-year rolling average of the actual degree-days for each year. Annual variances are held to the company's account. The normal weather base is re-established at subsequent rates cases through the use of the 30-year rolling average calculation.

Price Cap situation: Union assumes the weather-related risk for the five year price cap period. This risk includes annual variations in weather, and foregoing the coverage offered by the use of the 30-year rolling average. Any warming trend that manifests itself during the five year price cap period would be held to the company's account.

Ratepayer benefit: Ratepayers are insulated from additional weather-related risks that have historically been incorporated into the test year forecast used to design rates.

11. Revenue from new services

Current situation: Where new service offerings are forecast and included in Union's cost of service, this revenue is used to reduce the rates that Union would otherwise charge for its regulated services. Where the actual revenue varies from the forecast used to set rates the variances are captured in deferral accounts for disposition. Customers may receive a retroactive refund or charge depending on the circumstances.

Price Cap situation: Union will benefit from the development and introduction of new service offerings during the term of the price cap, as one form of productivity gain, to the extent that the benefit exceeds the productivity factor, embedded into the price cap formula. This allows Union the opportunity to mitigate the risks discussed previously.

12. Market-priced storage

Current situation: Market-priced storage is currently sold to exfranchise customers using an open bid process. This revenue is included in Union's forecast cost of service and used to reduce rates.

Price Cap situation: Union is proposing that new storage and renewals of existing storage, for customers out of Union’s franchise area will be sold at market prices. The difference between the revenue generated at market prices and Union’s cost for this storage will accrue to the utility.

13. Proceeds from asset disposition

Current situation: The gains and losses from asset dispositions are determined and attributed to ratepayers or the utility by the OEB.

Price Cap situation: The utility will receive the proceeds from asset disposition. This approach is consistent with the assumption of asset utilization and stranded cost risk, where the utility is responsible for ensuring the use of its assets by customers. This relationship can be shown through an example, where an industrial customer will bypass the utility’s system. Union's choice is to reduce it's rates to meet the customer's competitive alternative and absorb the earnings reduction or, potentially, sell the distribution line to the customer and mitigate the earnings impact. Accordingly, the proceeds of disposition would be used to partially mitigate the revenue loss that arises from assuming asset utilization risk. As the

utility will have the asset utilization risk, it should also receive the proceeds from disposing of those assets.

In summary, the above discussion illustrates how Union is assuming substantially more risk during the price cap period than under cost of service regulation. Another key conclusion is that sufficient pressure exists to increase rates under cost of service regulation over the next five years. This pressure comes from:

- Lower asset utilization because of competition from other fuels, and bypass potential
- Less economic expansion as storage and distribution expansion opportunities are smaller and further away from Union's existing infrastructure
- Lower gas usage by customers, caused by increasingly efficient equipment and a possible warming trend in the weather
- Higher O&M from higher wage settlements, as unionized workforces negotiate additional benefits from the strong economy
- Higher costs for financing, property taxes and other costs, as interest rates are relatively low and the economy is strong; this circumstance is more likely to reverse than not over the next five years.

Under cost of service regulation, these revenue and cost pressures would be reflected in rates as they occur, creating volatility in the rate levels for customers. Union's price cap proposal therefore achieves two significant ends:

- Union assumes the management of most of the risks which could cause rate increases, thereby limiting the potential increases to the price cap parameters, and
- The price cap parameters are known removing the potential volatility associated with cost of service rate determinations.

In exchange for providing these benefits, Union is given a limited opportunity to increase its revenue stream in accordance with the price cap parameters, and is given an opportunity to earn financial rewards if it performs well within the bounds of the price cap proposal.

A summary of the potential financial impacts as discussed above and how those impacts might affect rates under cost of service regulation can be found at Appendix G. In that illustration, the total impact of the net risks could increase Union's revenue requirement by up to 9.6% per annum. After adjusting this estimate to recognize the probability that all of these items will not occur simultaneously, a more reasonable estimate of the increased revenue requirement on average might be 4.0% per annum. Following the current cost allocation and rate design methodology, increases to various customer categories would range from 2.1% for exfranchise customers (basket 2) to 6.9% for large in-franchise customers (basket 1b). A further description of the baskets can be found in the section on pricing flexibility.

Under Union's price cap proposal these potential increases under cost of service regulation are managed within the 2% annual price cap. The benefit to the customer is a predictable annual rate change without the variability and retroactivity present under cost of service regulation.

CUSTOMER REPORTING AND REVIEW PROCESS

Overview

The customer review process is an important component of a price cap mechanism, and provides a non-traditional forum to address new issues and other items during the price cap term. While the OEB continues to have the jurisdiction to fix just and reasonable rates, Union is of the view that a price cap mechanism will put a greater onus on all parties, through the customer review process, to operate under the price cap parameters. Parties should appeal to the Board only for those issues that fall outside the scope of the price cap mechanism and which cannot be mutually resolved through the customer review process.

While all parties will have an incentive to operate in a manner to ensure that the mutual benefits under a price cap mechanism are achieved, Union will bear a particularly large onus through this process. Union is committed to ensuring adequate information is communicated to parties to allow rates flowing out of the price cap mechanism to be understood, and to address all new material matters which fall outside of the pre-defined price cap parameters. An appropriate and successful customer review process is one which strikes a balance between the communication and resolution of issues arising during the price cap term while ensuring the realization of the projected regulatory and market efficiencies.

Objectives

The broad objective of the customer review process is to ensure ongoing and effective communication with customers and stakeholders during the price cap term. In addition, the more specific objectives are:

a. To provide a forum to review information to support and prove that Union's rates changes are within the agreed price cap parameters, including any pass through items and proposed rate structure changes.

b. To provide a forum to review non-routine adjustments and the proposed treatment of these items with recommendations to the Board for approval.

c. To provide a forum to review further unbundling of services (ie. customer billing) and any associated cost implications.

The result of addressing all of these matters would be a report or resolution that would be filed with the Board for their consideration and approval. A consensus arrived at through the customer review process should, except in unusual circumstances, require no specific or further action by the Board other than endorsement and/or approval.

Process and Timing

Union is proposing an annual customer review process as part of the PBR plan. The timing for the process described below would apply to each year of the PBR plan. However, in 2000, the

process for the 2001 rates may be impacted the timing of the Board's decision on this application and some adjustment may be necessary.

Each year, Union will distribute in late June, an information package containing proposals for non-routine adjustments, potential gas cost changes, forecast balances in the deferral accounts and any proposed dispositions, reporting of formula based pass-through items, and a report of the past year's performance against the proposed SQIs. The formula based pass-through adjustments will exclude the final ROE adjustment as this adjustment will be based on forecast long Canada bond rates and yield spreads available at a later date.

Beginning in early July, Union will work to achieve consensus on the proposed non-routine adjustments, deferral account balances and proposed dispositions. By the first week of August, Union will submit a report to the Board that details the level of consensus achieved and a request for adjudication of any non-routine adjustments for which consensus was not achieved. Given the consultation process proposed, Union submits that the outstanding matters could be most effectively adjudicated through a written process. This should allow for a decision on matters in dispute by early to mid-September.

Following the Board's decision, Union will prepare a rate package and distribute it to all parties in the first week of October. This package will incorporate the results of the consensus achieved, any Board decision on disputed matters, any formula based ROE adjustment, any proposed deferral dispositions, and a demonstration that all proposed rates fit within the total company rate increase limit, and within each of the rate limits of the pricing flexibility baskets.

In the first two weeks of October, Union will talk to all parties to ensure they accepted that the proposed rate package was consistent with the PBR plan, the consensus achieved, and any OEB decision on disputed matters. If necessary, a meeting with all parties could be scheduled for the second week of October.

By October 31, Union will submit any changes necessary to the previously distributed package and request OEB approval of the finalized package. This will allow for an approved rate order to be issued by mid-November and for the rates to be implemented January 1.

In this process, Union is not proposing a formal interrogatory process similar to that used under traditional cost of service regulation. The proposed consultation process will be effective without formal interrogatories, as Union will be talking directly with customers in an open forum to demonstrate that its rates are consistent with an already approved mechanism. Just as the OEB's formula-based ROE adjustment has reduced the effort required to obtain changes to an allowed ROE, the approved PBR formula should operate in a similar manner and result in similar efficiencies.

As experience increases with the PBR plan, Union expects the time required for the review to reduce as parties become more familiar with operating under a PBR environment.

Issues Requiring OEB Adjudication

Union expects that there would be a limited number of items that will require explicit Board adjudication. Specifically, the majority of any rate changes will result directly from the price cap mechanism and associated parameters as described above. The number of actual non-routine adjustments is expected to be limited and will be dealt with through the customer review process such that no formal adjudication by the Board should be necessary. The one area of non-routine adjustments that is likely to arise, particularly as Union continues through the unbundling transition, is the stranded cost implications of unbundling the customer billing function. For these types of adjustments, Union proposes to outline the need for any deferral accounts to record and track stranded costs as they arise, and update customers and stakeholders on a regular basis through the customer review process. This process would take place up to and including any proposals for disposition. These items would be addressed through the customer review process and the final resolution would then be provided to the Board.

In all cases, Union proposes that any questions or concerns that the Board may have be addressed through Board Staff through their participation in the customer review process.

MONITORING AND REPORTING

Union currently reports periodically to the OEB on a number of items, including financial results, projected gas costs, deferral account balances and affiliate transactions. In addition, new items such as service quality indicators will likely require ongoing reports.

Union is reviewing the reporting provided to the OEB and will deal with any changes to that reporting directly with the OEB. Union will continue to report to other parties the following:

1. Deferral Account Trigger - Union is required to submit a report to the Board once the balances in the gas supply deferral accounts exceed a $15 per residential customer threshold. This report, or trigger letter, would indicate whether the utility is applying for a change in rates or the reasons why a change in rates is not appropriate.

   Union proposes to increase this threshold to $20 per residential customer to be consistent with its proposal with respect to changes in gas costs (as described at section 2.5.2.3) and to be consistent with the threshold currently in place for Enbridge Consumers' Gas.

2. Gas Supply Pricing Information - Each month Union provides a summary of the landed costs of Union's supply in four categories (i.e. long-term fixed, long-term indexed, short-term fixed, and short-term indexed).

No further changes to these reports are being proposed until a process to replace the Quarterly Rate Adjustment Mechanism ("QRAM") and deferral accounting is developed and approved by the Board.

IMPLEMENTATION AND TIMING OF RATE CHANGE

Based on the currently expected timetable for the regulatory process, OEB Decision and rate order addressing the price cap plan, it could well be that the price cap plan is not approved for implementation until the second or third quarter of fiscal year 2000. This timing creates four significant considerations:

- Rate changes effective January 1, 2000 must be implemented after January 31 to accommodate the systems freeze instituted to manage Y2K risks.
- Rate changes in the May-June timeframe cannot be processed until Union's new customer information system, Banner II, is implemented. This timing would require a freeze to billing systems changes for approximately 60 days after implementation, creating a September 1, 2000 implementation date for rate changes.
- The new unbundled upstream transportation and storage service will be offered beginning September 1, 2000.
- New rates would be put in place effective January 1, 2001 in the normal course of applying the price cap formula.

Union is concerned with the impact of implementing retroactive rate changes on its customer relations. This result would not be consistent with the objectives of the PBR price cap proposal.

While the revised regulatory framework can come into effect during the year Union is proposing the following approach as an alternative to the implementation of retroactive rates for 2000.

- Use non-gas cost deferral account credit balances to offset the final rate increase required for 2000 to the extent possible at total company level. Any remaining increase required can then be implemented in September 2000 over the balance of the year (4 months).
- In the event that the rate adjustment created by the above calculation is greater than the proposed annual increase, the amount of the 2000 increase can be recovered with the January 1, 2001 price increase over the 16 months ending December 31, 2001 to smooth the impact on customers.
- If the final 2000 rate change and the corresponding impact on customers requires, the increase can be managed by spreading the recovery over a longer future period beginning January 1, 2001. This rate change would be set as if the first rate change was implemented at the beginning of 2000, and would also include all of the initial adjustments to rates.

CRITERIA FOR RESETTING PRICES

Once a utility uses the limited pricing flexibility available under price cap regulation, the relationship between customer-specific allocated costs and rates quickly disappears. Consequently, a return to cost of service regulation after the initial price cap term is impractical. It is also unwanted, as the market forces which influenced the movement to a price cap regime in the first place are likely to be greater at the end of the initial price cap period, supporting the continued need for more flexible pricing. For these reasons, it is important to establish how

prices will be set in the period following the initial price cap term, and to establish this at the time of the initial price cap proposal.

Union proposes the following considerations for establishing a second-generation price cap plan:

- The price cap approach should be continued after the initial five year period, subject to an assessment of the plan's operation in light of the objectives for the plan as set out at page 5 of this document. If the price cap approach is to be discontinued after the initial five years, the onus is on the party advocating discontinuation to justify this position.
- Assuming that the price cap framework continues, the parameters of the pricing formula should be established as follows:
    a. The Canadian GDP PI should remain as the escalator
    b. The productivity offset should be established using a Canadian standard for the gas distribution industry. Given that many utilities in Canada are moving to lighter-handed regulation, the data supporting the development of such a standard may be more readily available than it is today. Union will commit to preparing a study on productivity, to develop an industry standard for inclusion in the second generation price cap formula, and will submit it to the participants in the customer review process for discussion and possible adoption in the second-generation price cap plan.
    c. Pricing flexibility should be retained.

Union expects that discussion on the above items will commence near the beginning of 2004 to allow sufficient time for parties to gather all relevant data and attempt to arrive at a consensus.

Introduction

The purpose of this supplemental evidence is to update Union's proposed adjustment to 1999 approved rates for the change in Generally Accepted Accounting Principles ("GAAP") for pension and post employment benefits, and to provide an overview of Union's financial results for the year ended December 31, 1999.

2.5.1 Adjustments to the 1999 base rates (Supplemental)

Union is proposing that changes in GAAP be treated as non-routine adjustments under the price cap plan. Union will establish a deferral account to capture the impact of any non-routine adjustments. The amount of the adjustment and the proposed rate class allocation of the adjustment will be submitted for examination during the customer review process.

For rates effective January 1, 2000, Union is proposing to recover the impact on current approved rates of the change in GAAP for pension and other retirement benefits. Union's original evidence in this proceeding included an estimate of the impact of this change based on preliminary information. The purpose of this supplemental evidence is to update the amount of the adjustment.

The following table shows the updated expenses for pension and post employment benefits as calculated by the company's external actuaries, based on the current levels of employment.

These costs have been compared to the amounts calculated under the previous accounting standard. Under the previous pension accounting rules, some flexibility for the range of financial assumptions could be used to determine the annual expense.

Table 1
Union Gas Limited
Pension and Other Post Employment Benefits

	E.B.R.O. 499 Old Accounting Standards		New Accounting Standards for
	1999 Submission	1999 Actual	2000 Forecast
Expense ($ millions)			
Pension plans	5.1	(0.1)	1.3
Non-pension benefits	1.2	1.2	6.6
Total	6.3	1.1	7.9
Increase in 2000 expense over 1999 actual			6.8
Economic Assumptions (1)			
Discount rate	7.75% - 8.0	7.75%	7.00%
Return on Assets	7.75% - 8.0	7.75%	7.50%
Salary Increases	3.25%-6.50%	4.75%	3.25%

(1) Assumptions for E.B.R.O. 499 ranged over the various Union and Centra pension plans. For 1999 actual and 2000 forecast the assumptions are the same for all plans.

The assumptions for the pension expense included in the O&M submitted in E.B.R.O. 499 ranged over the various Union and Centra pension plans. Union revised the 1999 actual amount to align with the assumptions to be used under the new accounting rules. Standardizing these assumptions allowed Union to reduce the expense by $5.2 million to manage to the Board approved O&M. Accordingly, this difference has already been given to ratepayers through the approved rates.

The new accounting standard requires companies to use a current market discount rate as a prescribed discount rate. Previously, the interest rate used to discount the pension liability did not have to be adjusted to reflect changes in market rates of interest. This change results in an increase in the costs related to pension expense of $1.4 million.

The majority of the increase in cost under the change in GAAP results from the change in accounting for post employment benefits. Historically, these costs were accounted for on a cash basis. The new accounting standard requires that future non-pension benefits owed to employees are accounted for on an accrual basis. These non-pension benefits include health care, dental care and life insurance benefits for retirees. The change in accrual accounting results in a $5.4 million increase in costs in 2000 over 1999.

1999 Financial Information

Union's price cap proposal begins with the rates approved by the Board in EBRO 499 adjusted for the items listed in section 2.5.1. Union's actual financial results for the year ended December 31, 1999 normalized for weather is found at Exhibit B Tab 2 Appendix H in response to requests from Board Staff and other Intervenors in this proceeding. These weather-normalized results do not represent normal operations as these results represent short-term responses to a number of influences, including significantly warmer than normal weather. Accordingly, these results do not form the appropriate basis for rate making, and should not be used for adjusting approved rates.

Union reported actual corporate earnings applicable to common shares for the year ended December 31, 1999 of $90 million. After non-utility and weather normalization adjustments, Union's earnings to common shares were $97 million compared to Board approved earnings to common of $92 million.

Union's actual earnings for 1999 were impacted by weather that was 8% warmer than normal. The increase in utility weather normalized earnings is primarily related to Union's management of costs in response to the impact on actual earnings of the warmer than normal weather. These reductions are not sustainable and are not part of Union's weather normalization adjustment.

The package at Exhibit B Tab 2 Appendix H contains the following information for the calendar year ending December 31, 1999.

Schedule 1 Statement of Income - corporate results adjusted to weather normalized utility results.

- Column a - Unions' audited statement of income of $302 million.

- Column b - Adjustments for amounts included in the corporate financial statements and not included in utility income. These adjustments are consistent with previous presentations of utility income.

- Column c - 1999 was warmer than normal. For the purpose of comparing actual utility income to Board approved utility income, certain components of revenue and expense are adjusted to normal weather. This weather adjustment is consistent with previous years' adjustments as filed with the Board. Included in this adjustment are increases in; general service revenues for increased sales and distribution under normal weather conditions; S&T revenues for compressor fuel for normal weather conditions; cost of gas for the higher sales to general service customers; and O&M expenses for compressor fuel.

No adjustment has been made to normalize revenues in the larger commercial and industrial or S&T markets to reflect the impact of weather. For example, warmer than normal summer conditions increased the demands for electricity, resulting in higher than expected gas distribution revenues from co-generation customers and electricity generators.

No adjustment has been made to normalize Union's O&M expenses or capital budget to reflect Union's management of costs necessary to mitigate the impact the warmer than normal weather had on earnings.

- Column d - Union's 1999 utility revenues and expenses normalized for weather as indicated above. This information is carried to Schedule 2, column a, where it is compared to the 1999 Board approved operating revenues and operating expenses.

Schedule 2 Statement of Utility Income – comparison of actual weather normalized utility income to Board approved utility income.

- Column a – from Schedule 1, column d.

- Column b - Union's 1999 Board approved utility revenues and expenses. Gas sales revenues and cost of gas have been adjusted to reflect the impact of the changes to rates for changes in the cost of gas effective July 1, September 1, and December 1 1999. These changes were approved by the Board in EBRO 499-02, EB-1999-0453 and EB-1999-0490 respectively.

- Column c – the calculation of the variance by line item between the actual utility weather normalized results and the components of the Board approved utility income.

Union’s gas sales revenues were higher than expected as a result of fewer customers switching to T-service options in 1999. This increase in revenues is entirely offset by an increase in the cost of gas expense. The increase in S&T revenue is the portion of that revenue which is not deferred, and is offset by gas costs and other expenses. Actual weather normalized revenues less the cost of gas, compared to Board approved, is unfavourable by $4 million (as calculated below) primarily due to the decline in weather normalized general service use per customer and higher unaccounted for gas volumes, offset by increases in the large industrial market due to higher demands for electricity

generation, high oil prices increasing demand for natural gas, and delays in customers switching services.

	Actual	Approved	Variance
Gas sales	1,039,569	943,662	95,907
T-service revenue	295,405	352,087	(56,682)
Transportation and storage of gas	157,424	154,485	2,939
	1,492,398	1,450,234	42,164
Cost of gas	742,797	696,415	46,382
	749,601	753,819	(4,218)

The comparison of weather-normalized actuals to Board approved customers at year-end, total volume and total revenue by rate class is summarized at Schedule 3.

The unfavourable variance in net revenue from gas storage, transmission and distribution is offset by favourable variances in operating and maintenance expenses and deprecation expense, resulting in an increase in earnings compared to Board approved.

Union's actual operating and maintenance expenses by administrator compared to Board approved expenses are found at Schedule 4. In 1999, Union reduced expenses in all areas to manage the variance in non-utility allocations, adjustments from EBO 177-17, the ADR adjustments from EBRO 499, and the impact of warmer than normal weather and declining use per customer. All administrators managed these variances in 1999 by reducing expenses where short-term opportunities existed to avoid or defer costs. These

reductions were primarily managed in the following areas; pension costs, salaries and wages, benefits, employee expenses, consulting and general materials.

Schedule 5 Statement of Utility Rate Base – comparison of Union's 1999 actual rate base to Board approved.

- The increase over Board approved is primarily the result of higher levels of gas in storage resulting from higher gas sales service, offset by lower levels of ABC service and by a reduction in net plant caused by lower than expected customer attachments and the associated investment distribution capital. Note that, although the higher gas in storage is related to warmer than normal weather, Union has not included this in the weather-normalization adjustments.

The details of the 1999 actual capital expenditures vs. Board approved are summarized on Schedule 10.

Schedule 6 Calculation of Utility Income Taxes – comparison of Union's 1999 actual utility income taxes based on weather normalized utility income to Board approved income taxes.

Schedule 7 Calculation of Requested Rate of Return – comparison of Union's 1999 actual utility weather-normalized return to Board approved return based on the Board approved capital structure and cost rates.

Schedule 8 Comparison of Revenue Sufficiency – calculation of Union's 1999 actual utility weather normalized revenue sufficiency.

Schedule 9 Reconciliation of Revenue Sufficiency – summarizes the variances contributing to the 1999 actual weather normalized sufficiency.

2.5.2.4 Pricing Flexibility

The purpose of this supplemental evidence is to clarify the intent of the pricing flexibility available under Union's Performance Based Regulation (PBR) proposal in response to the views and characterizations expressed by parties in their evidence and to reflect the updated overall price cap of 1.9% as filed in June 2000.

The proposed pricing flexibility allows Union to take the following factors into consideration when setting service prices under PBR. These factors are consistent with those considered in the past when establishing prices under cost of service regulation. The factors are:

a) The relative price change of rate classes,
b) The current level of service prices and the magnitude of the proposed price change,
c) Equivalency of comparable service options,
d) Customer's expectations with respect to price stability and predictability, and
e) The impact a price change will have on the attractiveness of the service to customers.

Pricing flexibility is required in order to manage asset utilization and alternative fuel competition under PBR. The design of service prices for 2000 is illustrative of how Union plans to use the pricing flexibility available. As customers in basket 1b) are more susceptible to alternate fuel competition and more likely to be customers with by-pass alternatives, Union limited the price

increase that resulted from the combined impact of the adjustments to base rates, pass-through items and the application of the price cap escalator to 3%. As a consequence, the application of the price cap escalator in basket 1a) resulted in a 2.46% increase in the average price of services within the basket (Exhibit B, Tab 4, Schedule 1). Union anticipates that the pricing flexibility used will vary from year to year. It is not, nor has it ever been Union's intent to increase the average price of services in basket 1a) by 4% (updated to 3.8%) per year, every year, for 5 years.

Union is proposing to limit the cumulative impact of the price cap on the annual increase in the average price of services provided to customers in basket 1a) so that in no year of the 5 year PBR term, will the cumulative impact of the proposed pricing flexibility with respect to basket 1a) exceed 1.5 times the cumulative impact of the overall price cap. The cap on the annual increase in the average price of services provided to customers in basket 1a) remains at 2 times the overall price cap of 1.9% (or 3.8%), as long as the cumulative increase in the average price of services in the basket does not exceed 1.5 times the cumulative impact of the overall price cap. This effectively means that, in the first year of PBR, the cap on the average price of services provided to customers in basket 1a) is 1.5 times the overall price cap (or 2.9%), as there would be no unused pricing flexibility available from prior periods. An illustrative example follows:

	1.5 Times Overall Price Cap	Unused Pricing Flexibility	Available Pricing Flexibility	Basket 1a) Price Increase For the Period
	(a)	(b=prior year c-d)	(c=a+b)	(d)
Year 1	2.9%	n/a	2.9%	2.5%

Year 2	2.9%	0.4%	3.3%	1.9%
Year 3	2.9%	1.4%	4.3%*	3.8%
Year 4	2.9%	0.5%	3.4%	3.4%
Year 5	2.9%	0.0%	2.9%	2.0%

* Capped at 3.8%.

Union had proposed that the increase in the total price for any customer classification in basket 1a) be capped at 6% to allow for the continuation of rate schedule harmonization in the Southern Operations area and the Northern & Eastern Operations area. As such, Union is proposing to limit the proposed cap on the annual increase in the total price of any customer classification within basket 1a), other than Rate M4 and Rate 20, to 2 times the overall price cap of 1.9% (or 3.8%), making this cap consistent with the cap on the average price increase of all services within the basket. The application of the 6.0% cap would only apply to the Rate M4 and Rate 20 customer classifications in basket 1a) for the purposes of rate harmonization. The E.B.R.O. 499 Settlement Agreement agreed to by all parties and approved by the Board accepted Union's rate harmonization proposals with respect to firm services (the Rate M4 and Rate 20 rate classes). Union notes that the elimination of the Delivery Commitment Credit (DCC) will increase the gap between Rate M2 and M4 requiring a longer harmonization period than originally planned at the time of E.B.R.O. 499. Rate harmonization proposals with respect to interruptible and wholesale (LDC) services will be described to parties as part of the customer review process. In the event more pricing flexibility is required to implement interruptible or wholesale (LDC) rate harmonization proposals than provided by the 3.8% price caps discussed above, Union will seek agreement from parties before implementation.

Union had proposed that the annual increase in the price of an individual service be capped at 10% to allow for potential increases in the prices charged for a service to recognize an increase in value. Union is eliminating this aspect of its original pricing flexibility proposal and proposes that the cap on the annual increase in the price of an individual service in all baskets be limited to 2 times the overall price cap of 1.9% (or 3.8%).

An updated version of Exhibit B, Tab 2, Appendix E, page 1 has been provided which reflects the above changes.

Appendix B

Exhibit B, Tab 1, pp. 30-38, 75-87, RP-1999-0017 - Filed as referenced in Union's Prefiled Evidence

Appendices

Unbundling Overview

Introduction

The purpose of this evidence is to describe Union's proposed unbundled service offerings. Union's unbundled service proposals have been developed and discussed with numerous customers and stakeholders through an extensive consultation effort which began in October, 1998 . Customer consultations have taken place with all customer groups prior to and during the development of these proposals and have provided significant input. The Market Design Task Force ("MDTF") discussions and recommendations have also been a significant source of input. The customer consultation process has taken various forms ranging from one on one discussions, customer groups and full customer/stakeholder sessions.

Subsequent to the customer consultations in July, Union has addressed various stakeholder comments and questions and has driven out further details associated with the unbundling proposals. This more detailed assessment of the unbundling proposals included examining the operational implications of the proposed services. Union's unbundling proposals represent a contractual entitlement to the unbundled service and accordingly must be designed in a manner that allows customers to access and Union to provide the maximum contractual entitlement to the service on a daily basis. This has resulted in some changes to the unbundling proposals from those last discussed with stakeholders. The changes, as outlined in the evidence are related primarily to the unbundled storage service where the structure and parameters of the service have been adjusted to better align with the operation of Union's system and Union's other market based storage services.

Description

Unbundling is the separate offering and pricing of discrete elements of service which Union currently provides to customers on a fully packaged or bundled basis for a single price. These discrete elements include:

- the purchase of natural gas,
- the acquisition and management of upstream pipeline capacity,
- storage,
- delivery to the end use customer,
- billing.

The offering of an unbundled service will result in a contractual relationship between Union and a customer. Union will be required to perform (offer service) to the maximum service entitlement on a daily basis and the customer will have a similar obligation to operate within the defined parameters of the service on a daily basis. In contrast, under a bundled service, Union provides service on an "as required" basis to meet infranchise demand requirements.

A degree of unbundling has already occurred within Union's market area with the purchase of natural gas and some of the pipeline capacity management. The purchase and sale of natural gas in Ontario has previously been restricted by legislative barriers, which has in turn led to mechanisms such as the buy-sell and ABC service that have allowed the benefits of deregulation to flow to customers while continuing to operate within the legislative framework. However, consistent with recently enacted legislation in Ontario, and changes in market and regulatory trends throughout North America, Union and its customers see both the need and benefit to pursue further unbundling. Throughout this evidence, references to unbundled services are related to the new or future unbundled options proposed, as distinct from current services such as T-service.

The Objectives of Unbundling

Union participated in the Ontario Energy Board sponsored Market Design Task Force (MDTF) which sought and achieved industry consensus on a number of unbundling issues. Union's unbundling proposals are broadly consistent with the conclusions reached by the MDTF. Consistent with the MDTF report, Union has focused the next phase of unbundling on upstream transportation and storage, with billing to be dealt with in a separate process as described later in this evidence.

Union is pursuing unbundling because:

a. it is consistent with market changes, demands from customers for greater choice and a more competitive marketplace.

b. it is consistent with and facilitates the transfer of the retail customer relationship to other energy service providers, where appropriate.

Union is pursuing unbundling at this time in order to:

a. Respond to customer demand for further unbundled services.

b. Allow continued development of the competitive marketplace.

c. Address the implications of the new unbundled service option concurrent with the development and movement to a comprehensive Performance Based Regulation (PBR) mechanism.

Union has designed the proposed unbundled services in a way which preserves the rates and service levels of the existing bundled services. This approach was clearly supported by many customers during the consultative process. Union has attempted to minimize the ratepayer impacts related to unbundling and where costs may materialize, to address these possible costs as non-routine adjustments within its PBR proposal.

1.1 THE UNBUNDLING PROPOSAL

1.1.1 Unbundling Approvals Being Sought

Union's application found at Exhibit A, Tab 2 seeks approval for the unbundling of certain rates charged for the sale, distribution, transportation and storage of gas. Union's unbundling proposals are based on the rates approved by the Board in E.B.R.O. 499. Union notes that while the terms and conditions of the proposed unbundled services are new, the unbundled service rates are consistent with the E.B.R.O. 499 rates and generally represent a disaggregation of the bundled service rates into the unbundled service rates. The unbundled rate approvals being sought would be adjusted over the next five years on a basis consistent with Union's PBR proposal.

1.1.2 Rationale Supporting Unbundling

To date, Union's unbundling efforts have focused on unbundling upstream transportation, storage and delivery services for Union's in-franchise distribution customers.

Retail Energy Marketers ("REM's") and industrial customers continue to express interest in having unbundled services as a choice. Union has had discussions with customers to define and clarify the unbundled services, how they will operate and how they could be used by customers. In this regard, Union recognizes that REM's will require their own customer care infrastructure and a wholesale bill from Union to be able to contract for the unbundled service on behalf of customers in the small volume market as REM's currently have no way to bill for the new unbundled services. The development of a wholesale billing service will be addressed through a separate application and regulatory process, including customer consultation. In general, this has been consistent with the REM's readiness to assume the retail billing relationship and given that a wholesale billing service requires significant input and decisions from REM's and the OEB. It is

also noted that the application required to address the development of a wholesale billing service will need to address the terms and conditions under which Union would offer such a service including the customer communication program necessary to ensure small volume customers (primarily residential) are aware of their choices and industry changes related to the new unbundled service options.

The introduction of unbundled services is new for both Union and customers. It is Union's expectation that as experience is gained through operating the unbundled services, certain changes may be necessary to adjust the services based on administrative or operating considerations. In Union's view, this is not unexpected and Union is committed to continue working with customers to review the experience gained through operating the new services.

1.1.3 Unbundling Timing

Union had originally targeted April 1, 2000 as the effective date for unbundling, including the elimination of the Delivery Commitment Credit ("DCC") and the ability to facilitate retail billing by REM's. The desire by certain stakeholders to lengthen the consultative process and most recently the support by parties to move into a more formal regulatory process has resulted in a shift in the implementation timing originally contemplated. Union is now targeting September 1, 2000 as the earliest effective date for unbundling. This timing reflects the projected time to move through a more formal regulatory process for both upstream transportation and storage and wholesale billing. Union notes that some of the systems necessary to facilitate wholesale billing are also required by industrials to operate the unbundled service (ie. web communication of actual consumption, nominations, etc.). As such, the September 1, 2000 effective date applies to all unbundled services. It is noted that this timing does anticipate the successful negotiation (ADR Settlement) of most issues such that the time to address issues through the formal hearing process is minimized. Should a successful settlement of issues not be reached, the timetable may be

impacted accordingly. Please see Appendix A for a summary of the critical milestones supporting the September 1, 2000 target date.

1.1.4 Unbundling Principles

In developing the unbundling proposals, Union has relied on the following principles:

a. Customers will retain the option of electing either a bundled or unbundled service offering.

b. Union will make available in the unbundled service, the operational capability of the transportation and storage assets that are used to provide the bundled service.

c. Union will minimize stranded costs to the extent possible. To the extent that stranded costs or costs directly related to unbundling arise, those costs should be borne by all customers as a cost of creating a new choice available to all customers.

d. The unbundling proposals are based on the cost allocation methodologies underpinning rates as approved by the Board in E.B.R.O. 499. For the most part, the unbundling proposals do not create a shift in cost causality which would warrant any change to the existing cost allocation methodology. The only change considered necessary as a direct result of the unbundling proposals was the allocation of system integrity storage space and delivery/redelivery reserve costs. These changes are explained more fully in Tab 4.

e. Union's unbundling proposals will continue to be based on the rate design principles supporting Board approved E.B.R.O. 499 rates.

f. The unbundled services have been designed in a manner which in no way jeopardizes or significantly increases the costs of maintaining the integrity and reliability of Union's system.

g. Union has structured the terms and conditions of the unbundled service in a manner that places the risks and rewards of managing them with the user.

h. Union will grandfather all existing allocations/assignments of upstream transportation in Union South related to all prior direct purchase arrangements.

Union considers it essential to address the definition of the new unbundled services and the pricing of those services (ie. under PBR) concurrently. Unbundling in isolation will create financial and market share downside for Union in respect of its short-term storage and transportation business as unbundling will create a more open and competitive market for these services. Consequently, in the absence of any changes to balance out this risk, rates under a pure cost of service model would need to be higher. However, the balancing of all upside and downside risks for Union in a more competitive environment is addressed through the pricing flexibility and responsiveness provided within the PBR proposal.

1.1.5 Unbundling Proposals – Evidence Overview

The evidence supporting Union's unbundling proposals is structured in a manner which addresses upstream transportation first, followed by storage and other unbundling related issues. Union's upstream transportation proposals are found in Section 1.3. The evidence related to the unbundling of upstream transportation is structured in a manner which addresses the Southern Operations area first followed by the Northern and Eastern Operations area. For the Southern Operations area, the evidence also addresses other issues related to the unbundling of upstream transportation such as the elimination of the Delivery Commitment Credit, delivery commitments at Parkway, and options to increase shipper delivery point flexibility. These issues are closely linked to the unbundling of upstream transportation and accordingly must be addressed.

The upstream transportation and storage proposals address separately the allocation methodologies for the Southern and Northern and Eastern operations areas. The unique nature of each area is

reflected in the rates approved in E.B.R.O. 499 and the unbundling proposals continue to reflect these differences.

Lastly, the evidence addresses certain transitional and other issues related to the unbundling proposals including an overview of the need for and timing of a further application required to address the unbundling of the billing function.

1.2 UNBUNDLING OVERVIEW

Unbundled services for the various customer classes have been designed with consistent terms and conditions that allow access by all customers. However, not all customers will find the new unbundled services attractive. Unbundled services give the customer more control. However, the additional control requires more attention and involvement in activities such as the daily nomination and balancing of transportation flows, storage injections and withdrawals, with consumption. Some customers have indicated that they are not interested in acquiring this greater level of control given the greater degree of management needed for unbundled services and, as such, prefer to retain their current bundled service. Unbundled services represent a choice available to those customers wishing a higher degree of flexibility and control and willing to take on the obligations to manage the unbundled service to obtain the benefits.

When contracting for unbundled services, customers must plan one day in advance and nominate a mix of volumes from storage, spot gas, and firm upstream transportation to meet their anticipated consumption for a given day. In the case of daily metered customers, the accountability for projecting daily consumption and balancing rests with the customer. For non-daily metered end-users, the projected daily consumption will be provided to the marketer by Union based on a forecast algorithm which takes into account certain factors, including the forecast temperature for a

given day. All supplies (upstream transportation, spot gas and storage) are managed by the customer and the balance between total supplies and consumption must be maintained daily within specific tolerance limits.

1.3 UPSTREAM TRANSPORTATION

1.3.1 Overview (Southern and Northern and Eastern Operation Areas)

Union's unbundling proposal as it relates to the allocation and management of upstream transportation will differ between the various TCPL delivery areas because of the significant differences in the way Union provides delivery capacity into these areas.

In the Southern market area, Union serves the demand , through a portfolio of firm upstream pipeline capacity operated at 100% load factor and storage which is used to provide seasonal balancing and peaking requirements .

In the Northern and Eastern areas, Union has served demand through a combination of storage, upstream capacity (mainly firm TCPL) into each of the six separate TCPL areas, additional Storage Transportation Services ("STS") contracted with TCPL to allow Union to shift deliveries from one area to another, and capacity on the Dawn-Trafalgar transmission system. The combination of all of these contracted services allow Union to efficiently serve firm demands in all areas by centrally planning and operating all assets and supplies. The unbundling proposal in the Northern and Eastern area provides for some continued aggregation of the STS capacity and Dawn Trafalgar capacity in order to unbundle upstream transportation in an efficient manner and to avoid significant increases in costs to bundled service customers in the various TCPL delivery areas.

1.3.2 Southern Operations Area Methodology and Related Proposals

Customer Responsibility for Upstream Transportation Capacity

As a general principle, existing customers electing either a bundled or unbundled direct purchase arrangement on Union's system are obligated to take an assignment of Union's upstream transportation capacity. Union has entered into upstream transportation capacity contracts over the years for the purpose of serving and providing capacity to end-users within its franchise area. The OEB has approved the inclusion of the costs associated with these transportation contracts in Union's cost of service. Some customers are either unwilling or unable to hold upstream transportation capacity contracts directly for a variety of reasons. The upstream transportation capacity contracts held by Union reflect a variety of terms (from 1-15 years) and it is not possible for Union to remove itself from these contracts immediately without incurring significant costs.

Union recognizes that the transportation tolls associated with its upstream transportation contracts may be more or less than the market value of the capacity at any point in time. Currently, TCPL capacity can be purchased in the secondary market for less than posted tolls. However, two years ago, the opposite was true and TCPL capacity was trading at a premium in the market place. Given the current market conditions, if Union were unable to turnback the capacity to TCPL or was in a position of holding unutilized capacity, this would result in an immediate cost to the contract holder (ie. Union). In Union's view, it is not appropriate for Union to be put into a position of having to liquidate its upstream contracts simply due to market conditions which happen to exist at a point in time. Managing upstream capacity in this fashion would focus solely on short-term market conditions and would result in higher costs to all or certain customer groups depending on the regulatory decisions related to the disposition of these costs.

The manner in which Union facilitates direct purchase and the manner in which the unbundling proposals described herein have been designed is to minimize any stranded costs associated with

upstream transportation capacity. The unbundling proposals transfer the rights and obligations of the existing upstream transportation contract portfolio to those parties contracting for the unbundled service. Union has and will continue to provide as much flexibility as possible without incurring stranded upstream transportation costs that would affect the cost of service to all customers on Union's system.

1.3.3 Existing Upstream Transportation Allocation Methodology

To date, Union has facilitated primarily bundled direct purchase arrangements. The direct purchase arrangements in place reflect either an actual (ie. Ontario direct purchase) or a notional (ie. Western direct purchase) assignment/allocation of TCPL capacity only. This approach of allocating 100% TCPL capacity to facilitate direct purchase has been endorsed by the Ontario Energy Board on numerous occasions, most recently in E.B.R.O. 493/494.

All bundled direct purchase arrangements (except in those circumstances where customers have contracted for TCPL capacity directly themselves) are underpinned by a Western direct purchase contract which ties the direct purchase arrangement to Union's TCPL capacity. Union has and will authorize an Ontario point of delivery on an annual basis that results in Union facilitating an assignment of the TCPL capacity for a one year term. Should the direct purchase arrangement be terminated or the customer no longer wish to take a direct assignment of Union's upstream transportation capacity, the upstream transportation capacity (ie. TCPL) returns to Union. In this circumstance, the customer reverts back to a Western direct purchase arrangement or is returned to system. In short, customers electing direct purchase in Union South have an obligation related to the upstream transportation contracted by Union in the past to serve their demands.

Union has facilitated direct purchase in the manner outlined above recognizing the very strong link between the bundled direct purchase "delivery" service and Union's upstream transportation

capacity. Union has structured direct purchase contracts in a manner which recognizes the obligation to deliver gas on a firm daily basis at Parkway given Union's reliance on TCPL Firm Transportation ("FT") at Parkway from both a system design and operating perspective. In other words, bundled direct purchase on Union's system has generally consisted of a mandatory 100% assignment or allocation of Union's TCPL upstream transportation at cost and an associated obligation to deliver gas using this TCPL capacity on a firm basis 365 days a year.

It is also noted that all existing bundled direct purchase customers are essentially served by a "portfolio" of Union's upstream TCPL transportation contract terms. As such, any permanent assignment and/or turnback of this capacity must respect the fact that all bundled direct purchase customers are equally served by the "portfolio".

The assignment of upstream transportation capacity to facilitate direct purchase as described above has generally been characterized as a "temporary one year assignment". In the case of bundled direct purchase arrangements, these assignments are truly one year assignments which are cancelable either by Union or the customer. Under a bundled direct purchase arrangement, Union is the underlying contract holder of the TCPL capacity and is required to take back and manage this capacity should the capacity no longer be required by the customer or the direct purchase arrangement is terminated. Again, Union wishes to emphasize that should a customer no longer wish to take an assignment of Union's capacity, the customer reverts back to a western direct purchase arrangement or is returned to system. In essence, the infranchise delivery service provided by Union cannot be provided without the direct purchase customer accepting an assignment of Union's upstream transportation capacity.

To summarize, the key terms and conditions associated with the upstream transportation assignment for all existing bundled direct purchase arrangement are as follows:

a) Obligation to deliver gas on a firm basis 365 days a year (ie. Parkway).

b) Mandatory assignment/use of Union's upstream transportation capacity.

c) Upstream transportation assignment cancelable by the customer or Union given proper notice.

d) All upstream transportation assignments are "tied" to the associated direct purchase redelivery contract.

1.3.4 Proposed Upstream Transportation Allocation Methodology

As of the "unbundling start date", (ie. effective date at which the unbundled service is approved and available to all customers). Union proposes to allocate/assign upstream transportation based on a "vertical slice" of Union's upstream transportation portfolio. The vertical slice will be based on the assets in the portfolio as at November 1 of any year . The vertical slice will include all portfolio components consisting of all of the various upstream transportation contracts and spot gas (ie. component of portfolio not underpinned by assets). In addition, the vertical slice methodology will apply to all system customers electing either a bundled direct purchase or unbundled service as of the unbundling start date. The vertical slice will be initiated (on the unbundling start date) using Union's portfolio effective November 1, 2000.

In the Southern Operations area, transportation capacity is allocated by computing a customer's Daily Contract Quantity (DCQ). In general, the DCQ is calculated by taking a customer's firm normalized consumption for the most recent 12 month period divided by 365 days. The allocation of capacity through the proposed vertical slice will be based on the DCQ. In subsequent years, the DCQ will be updated to reflect the normalized consumption for the most recent 12 month period. For bundled direct purchase customers, the DCQ is adjusted on an annual basis and the underlying capacity is similarly adjusted. For unbundled customers, the DCQ is adjusted annually but there will be no adjustment to the upstream capacity after the initial vertical slice allocation.

For all direct purchase arrangements (ie. Ontario and Western) operating and in place prior to the unbundling start date, all existing allocations or assignments of upstream transportation (ie. 100% TCPL FT) will be grandfathered (ie. both Western and Ontario direct purchase arrangements). In addition, all bundled direct purchase arrangements will continue to have terms and conditions associated with the upstream transportation assignment as outlined in Section 1.3.6.

However, in the case of the new unbundled services, the nature of the proposed unbundled service is such that there is no longer the strong "link" between the unbundled delivery service and the upstream transportation assignment. Unbundled customers must nominate sufficient supplies, on a daily basis, from upstream transportation and storage to meet their demand requirements. Consequently, Union proposes that customers electing the unbundled service have the flexibility to divert their upstream capacity 365 days a year with the only upstream obligation proposed under the new unbundled service being a 22-day obligation/call at Parkway. The Parkway obligation is dealt with in Section 1.3.12 . For the unbundled service, Union proposes that all upstream assets either directly assigned or allocated be one year evergreening agreements that will automatically roll over every year subject to one of the following :

a) Mutual agreement (Union and customer) to terminate the assignment.

b) Customer decontracts TCPL capacity via Union's TCPL turnback policy (as described further below).

c) Customer default.

d) Appropriate credit arrangements.

e) Underlying upstream contracts can be renegotiated with terms and conditions acceptable to the customer and Union (ie. renegotiation of Panhandle contracts) given that some assets allocated to customers have an expiry date and as such will need to be either renewed or replaced on expiry.

f) Changes resulting from future regulatory decisions. One example may be any changes TCPL may apply to the STS service would directly affect the allocation of the redelivery service.

The need for the above terms and conditions for the new unbundled services is to ensure that the risks and rewards associated with the unbundled service, including upstream transportation capacity, rest with the customer. Further, in Union's view, there is a mature market for secondary transportation in Ontario and Union should not be put in the position of having to actively manage upstream transportation capacity on behalf of customers electing the unbundled service. This is a necessary step towards evolving the competitive marketplace in Ontario that could eventually see Union much less active in planning for and managing contracts for upstream transportation capacity to Ontario.

In the Spring of 1999, Union implemented a TCPL turnback policy in order to provide flexibility to direct purchase customers in accessing discounted transportation capacity available in the marketplace. Union's TCPL turnback policy was designed in a manner which would eliminate any stranded upstream transportation costs. The ability to turnback TCPL capacity is an option available to both bundled and unbundled direct purchase customers. As such, customers have the ability to manage, over time, the upstream transportation assignment/allocation received from Union. The TCPL turnback policy is described in further detail in Section 1.3.8.

To summarize, the primary terms and conditions associated with upstream transportation assignments for the unbundled service are as follows:

a) 22-day commitment/call to deliver volumes at Parkway.

b) Customer obligated to take a mandatory assignment or allocation of Union's existing upstream assets.

c) One year perpetual evergreening agreements.

Vertical Slice Methodology

The vertical slice that will be used to allocate Union's upstream transportation portfolio will be based on the assets in the portfolio as at November 1 each year. Starting with November 1, 2000, this allocation will be frozen and all allocations in the subsequent 12 months will be based on this allocation. The vertical slice will be a proportional allocation of the transportation, exchanges and spot gas used to serve existing system customers moving to direct purchase. An example illustrating the vertical slice allocation methodology is found in Appendix B.

1.3.5 Upstream Transportation Capacity Details

The following table summarizes the various components of Union's Southern portfolio as at November 1998 and provides an indication of how capacity would be allocated with the vertical slice methodology. As noted in this evidence, the vertical slice will be implemented on the unbundling start date using Union's portfolio as at November 1, 2000. Union notes that the amount of TCPL FT capacity will continue to decline until November 1, 2000 as additional direct purchase is facilitated. The details of each transportation contract is attached in Appendix C.

Summary of System Portfolio – Union South

November 1998

South	Quantity ($10^3m^3/d$)	% of Portfolio
TCPL – FST	383.0	8.0
TCPL – FT	1572.0	32.9
Empress to Parkway-Exchanges	283.3	5.9
Empress to Dawn-Exchanges	778.5	16.3
Chicago to Dawn-Exchange	212.4	4.4
Panhandle	1558.0	32.5
Total	4787.2	100.0
Nova (AECO)*	874.3	

*Nova (AECO) capacity is used to move gas from AECO to Empress. This capacity will be allocated with Empress based TCPL FT and Exchanges.

1.3.6 Upstream Transportation Assignment Terms and Conditions

The terms and conditions associated with the assignment of upstream transportation for both the bundled direct purchase and unbundled service options are as outlined above.

In terms of US capacity currently held by Union, existing FERC rules prevent Union from directly assigning this capacity to customers. Union will endeavor to facilitate an allocation of this capacity in a manner acceptable to FERC. If Union is unable to facilitate this allocation of transportation assets, Union will replace this allocation with other assets within the portfolio.

The term of each assignment must also be considered when administering unbundling. In the case of TCPL capacity, the one year evergreening assignments that roll over every year will be administered as per the TCPL turnback policy. The other transportation contracts have a variety of terms that may have no automatic renewal provisions and may therefore require the contact to be renegotiated. When Union assigns/allocates an asset with no renewal provisions, the term of the assignment/allocation will match the term of the underlying contract held by Union. In other words, at the end of the assignment/allocation, the customer will no longer have or be responsible for the capacity and are obligated to replace the capacity. Union will however facilitate a pooled renegotiation if desired by REM's for the capacity that can be extended through renegotiations. As an example, the Panhandle contract currently held by Union can be renegotiated at the end of the initial contract term with the volume, price and term subject to change. Union will also facilitate other options for acquiring transport through a queuing process.

In the Southern Operations area, Union will permanently assign upstream transportation capacity to the extent requested by customers. Customers will need to meet all financial and credit requirements of the transporter in order to effect the permanent assignment. In this regard, Union will, at its discretion, attempt to split its underlying contracts in order to provide to the extent possible a pro rata allocation of the underlying contract terms. Union's discretion in this instance will be governed by the materiality and administrative practicality associated with splitting the existing upstream transportation contracts at a point in time.

As described above, Union currently facilitates direct purchase through a mandatory one year assignment of upstream transportation capacity. In May of 1999, Union adopted its TCPL turnback policy (see Section 1.3.8) which allows parties having an assignment or allocation of Union's upstream transportation capacity to turn this capacity back to the extent Union has the corresponding ability to turnback its underlying capacity to TCPL (ie. capacity which Union currently has under one year renewable contracts). This policy was adopted and put in place in order to allow parties the ability to access discounted firm capacity currently available in the marketplace. However, Union notes that to the extent the market changes in the future and short term capacity is either unavailable or is not as attractively priced as it is today, customers may wish Union to enter upstream transportation queues on their behalf. In these circumstances, Union is prepared to enter into the appropriate transportation queues and contract for long term transportation capacity in order to ensure adequate transportation is available to Union's franchise. In these circumstances and depending upon future market conditions, Union continues to reserve the right in the future to seek a longer term commitment from customers in return for Union contracting for long-term capacity. Union may seek and the customer must be prepared to provide a longer term commitment for this incremental capacity in order to more closely match the contract term of the underlying capacity being acquired by Union on the customer's behalf. In Union's view, this is both fair and equitable given that Union is currently in a position, as a result of the TCPL turnback policy, of reducing the term flexibility currently available within its portfolio as it relates to the one year renewable contracts with TCPL. The net impact of facilitating the turnback of TCPL capacity will be to increase the underlying term of Union's transportation portfolio which may require, in the future, a longer term commitment from customers in return for Union contracting for new long term upstream capacity.

1.3.7 Transportation Clearinghouse

As described previously, customers are required to take a mandatory assignment (vertical slice) of Union's upstream transportation portfolio under either a bundled or unbundled arrangement subsequent to the unbundling start date. Union will attempt to accommodate customer requests for a different mix of transportation capacity, if possible. Union refers to this as an upstream transportation clearinghouse function which will be governed by the following principles:

a) Any change to a customer's upstream transportation allocation would be at Union's discretion.

b) The specific criteria and considerations that Union would take into account in facilitating changes in the transportation allocation are as follows:

- Union will facilitate a change in the transportation mix to the extent that there is an equal and offsetting request from another Union customer.
- Union can facilitate customer requests and Union and other customers are not exposed to costs associated with facilitating the request.
- Customers will need to provide sufficient notice to Union in advance of the contract start or contract renewal date.
- Union will treat all customers equitably based on the requests from customers received at a particular point in time.

1.3.8 TCPL Turnback Policy

In the spring of 1999, Union adopted a TCPL turnback policy in response to numerous requests from customers wishing to reduce their assignment of capacity from Union in order to access discounted capacity available in the secondary market. Union's TCPL turnback policy, as adopted was structured in a fashion to allow customers to reduce their assignment of upstream transportation capacity from Union at levels equal to the capacity Union could turnback to TCPL

without incurring any direct costs (ie. stranded costs, unabsorbed demand charges, etc.). A copy of the April 5, 1999 letter written to the Ontario Energy Board outlining the background and details surrounding TCPL turnback policy is found at Appendix D.

Union notes that a customer's turnback of upstream transportation capacity originally assigned by Union gives rise to two related issues which are as follows:

a) The continued obligation by customers to deliver an equivalent amount of firm gas supply at Parkway.
b) The process required in the future to facilitate customer requests for additional upstream transportation capacity.

Union's TCPL turnback policy incorporated a condition that required customers to continue to provide obligated firm deliveries for 365 days at Parkway regardless of the amount of capacity turned back to Union. This condition is directly related to the current design of Union's system and the design of infranchise rates as discussed in Section 1.3.9.

In terms of the future process required to facilitate customer requests for increased upstream transportation capacity, Union has indicated to customers that it will continue to accept requests from customers through a queuing mechanism. Further, Union has indicated to customers that any such requests will need to be made on a timely basis in order to allow Union sufficient time to enter the applicable queues in order to apply for upstream transportation capacity.

1.3.9 Current System Design and Allocation of Benefits Associated with East End (Parkway) Deliveries

Union has historically relied on obligated East End deliveries at Parkway in designing the Dawn-Trafalgar transmission system. As a result of Union's ability to rely on Parkway deliveries, the

Dawn-Trafalgar transmission system is smaller than it would otherwise be. The primary beneficiaries of this smaller and less expensive design have been infranchise customers through lower delivery rates in the Southern Operations Area, although all customers have benefited to some degree.

Dawn-Trafalgar transmission costs are allocated between infranchise and exfranchise customers in proportion to distance weighted design day demand. For that portion of infranchise design day demand that can be served by deliveries at Parkway, the distance on the Dawn-Trafalgar transmission system that the gas travels is measured from Parkway to each interconnected transmission lateral being used to serve infranchise demand. This distance is much smaller than if the distance was measured from Dawn to each lateral. Infranchise customers in the Southern Operations Area are in a sense receiving a "distance credit". The distance traveled by the remaining infranchise demand and all exfranchise demand is measured from Dawn to each lateral or take-off point (for exfranchise demand). Union has proposed, and the OEB has approved, this approach for many years and it was most recently confirmed by the Board in their E.B.R.O. 493/494 Decision dated March 20, 1997. Even though the gas delivered by infranchise customers on design day at Parkway physically flows to exfranchise customers, it is the infranchise customers who commit to obligate deliveries at Parkway that allow for the system design benefit. A flow diagram is found at Appendix E which identifies how Union forecasts to serve 1999 demand on the Dawn-Trafalgar system using a combination of Dawn-Trafalgar capacity and East End deliveries at Parkway.

Although infranchise demand accounts for 28% of total demand, allocating costs in the manner described above results in only 12% of the Dawn-Trafalgar transmission costs being allocated to infranchise customers in the Southern Operations Area. If Union could not rely on deliveries at Parkway on design day, Dawn-Trafalgar costs would be higher and the infranchise customers' proportionate allocation of Dawn-Trafalgar costs would increase as a result of losing the distance

credit. Under the existing methodology, it is primarily infranchise customers in the Southern Operations Area who would pay to replace the capacity currently being provided by East End deliveries at Parkway.

With reference to the line diagram found at Appendix E the total demand on the system and the total capacity of the system are balanced at 144,003 10^3m^3/day. An extremely critical element of this overall balance is the East End Deliveries of 21,300 10^3m^3/day which are supplies delivered on behalf of infranchise Union South customers at Parkway. Historically these supplies were part of Union's system supply portfolio dating back to the mid 1980's when deregulation first came into effect. When Union controlled all of the transportation, it nominated all of its FT gas to arrive at the East End of its system at Parkway. In doing so, Union minimized the facilities required on the Dawn-Trafalgar transmission system or required TCPL to contract for transportation on Union's system and to pay a share of the cost of the additional facilities. Since that time, Union has enabled customers to directly purchase their own Western Canadian natural gas and transport it to Ontario on Union's assigned TCPL capacity arriving at Parkway. It is this TCPL capacity, acquired over time by Union on behalf of its system customers, which by being delivered at Parkway optimizes the overall Dawn to Trafalgar system capacity by, in a sense, putting gas into both ends of the line. It was during the E.B.R.O. 412 proceedings that Union identified that costs would increase if customers were provided with delivery point flexibility. As a result, customers who have been temporarily assigned FT capacity from Union continue to obligate their deliveries at Parkway. In addition, as outlined above, Union continues to require an obligation to deliver volumes at Parkway to the extent customers reduce their upstream transportation assignment from Union through the TCPL turnback policy.

Eliminating the reliance of all East End deliveries at Parkway would result in the need for additional looping and compression on the Dawn-Trafalgar system as well as incremental compression at Dawn at a projected capital cost of $258 million. It would also eliminate the

distance credit that infranchise customers currently receive. The combined impact of removing the distance credit and additional facilities would be an increase to delivery rates, excluding the impacts on fuel, of up to 27% under the existing cost allocation methodology.

Options to provide customers greater delivery point flexibility currently being investigated by Union are described in Section 1.3.13.

1.3.10 Delivery Commitment Credit ("DCC")

As described above, customers served by Union who then wish to elect a direct purchase arrangement (bundled or unbundled) must take a mandatory assignment of Union's upstream transportation which has to date been 100% TCPL FT. Customers with new incremental demands (not served previously by Union) have and continue to have the option of contracting for their own upstream transportation capacity. In either case, Union has generally required that all deliveries be obligated at Parkway (ie. delivered to Union on a firm basis 365 days a year). As noted above, this is necessary in order to preserve the design and operation of the Union system (ie. reliance on east end deliveries) and is consistent with the assumptions used in the design of all infranchise rates.

In addition to the above, Union currently pays a Delivery Commitment Credit (DCC) to customers managing their transportation capacity and obligating to deliver in accordance with the terms and conditions of the delivery service. The DCC mechanism arose historically from Union's buy/sell pricing methodology where the DCC represented the difference between the Ontario buy/sell price and Union's weighted average cost of gas ("WACOG"). The payment of the DCC was extended to bundled t-service customers when this service was introduced in order to maintain equivalency between the buy/sell and bundled-t direct purchase options. In E.B.R.O. 499, Union changed the methodology supporting the calculation of the DCC and based the calculation on the avoided cost

of Dawn-Trafalgar transmission and storage costs. These payments total approximately $27 million per year and are recovered from all infranchise users of the delivery system.

The obligation to deliver means that Union must give approval before a customer can assign capacity to another infranchise user or divert supplies away from Union's franchise area. Having control over the deliverability at the east end of its system allows Union to design and operate the system with less capacity to move gas eastward from Dawn storage (during the winter peak) than would otherwise be required. All customers (both infranchise and exfranchise) benefit from this through lower rates.

As part of the unbundling proposal Union proposes to:

a. eliminate the payment of the DCC and the related charge (recovery) in delivery rates,

b. replace the current restrictions on diversions and assignments (ie. requirement for Union authorization) of capacity for unbundled customers with a right by Union to call on deliverability of supply at Parkway for up to 22 days between November 1 and March 31, and

c. retain current restrictions on diversions and assignments for all customers operating under a bundled direct purchase arrangement (including T1).

The elimination of the DCC and the proposal to move to a 22-day call back at Parkway for unbundled customers is outlined below.

1.3.11 Delivery Commitment Credit Elimination and Related Rate Adjustments

Union proposes that the Delivery Commitment Credit (DCC) currently paid to customers in the Southern Operations area be eliminated as close as possible to the time Union is able to provide a wholesale billing service, giving retail energy marketers the ability to bill end-use consumers.

The DCC was always premised on 365 days of constant delivery of gas to Union's franchise and must be eliminated to accommodate and align with the new unbundled service and the proposed flexibility provided to unbundled customers (ie. only a 22-day call obligation). Further justification supporting the elimination of the DCC is as follows:

(i) Rationale for the DCC is generally not understood.

(ii) Continuation of the DCC would require a continuation of the existing deferral account mechanisms to track the costs, with any variances to be flowed through under the proposed PBR mechanism.

(iii) The DCC is unique to Union's Southern operations area and does not exist for other North American pipeline companies.

Based on the above, Union proposes that the forecast 1999 DCC payout to each rate class be removed from each rate class' delivery rate to reflect the elimination of the DCC. Union's objective in handling the DCC elimination in this manner is to minimize the impact on individual customers.

In order to ensure customers are not harmed by this change and given that the DCC was a commodity-based payment, each rate class' delivery commodity charge would have to be reduced by the DCC payout that each rate class would have otherwise received. Union proposes that

commodity charges for the M2, M4, M5A, M6A, and M10 rate classes be reduced to reflect the elimination of the DCC.

M7 and T1 customers may have contracted for both firm and interruptible delivery services. In these instances it may be necessary to allocate a customer's Obligated Daily Contract Quantity (DCQ) between their firm and interruptible delivery service. Union proposes that in instances where a customer's Obligated DCQ exceeds their firm Contract Demand (CD), that the excess be used to reduce the customer's interruptible delivery commodity charge.

Union plans to use each M7 and T1 customer's actual Obligated DCQ and firm CD at a point in time as close as possible to the effective date of the DCC being eliminated (excluding assignments). This will likely be 6-8 weeks prior to the effective date to provide sufficient time to create and process the required contractual amendments and discuss the changes with customers.

To promote customer neutrality Union is proposing a different treatment for the firm and interruptible delivery service components.

M7 and T1 firm delivery commodity charges (and unbundled equivalents) are not large enough to absorb the required firm rate reduction. If the required firm rate reduction was reflected as a uniform reduction to all customers' demand charges as an alternative, high load factor customers would see a net increase, and low load factor customers would see a net decrease in their cost. In order to avoid this Union is proposing to reduce delivery demand charges by utilizing a customer specific formula. Each individual customer's demand charge would be calculated in a manner that keeps their effective cost the same as it was prior to the DCC being eliminated. Union proposes that the reduction in the posted demand charge for each M7 and T1 customer be equal to:

(Firm Service Obligated DCQ X 365 days X \$4.25 / $10^3 m^3$) / (12 months X Firm CD)

Given the wide range of customer load factors within the M7 and T1 rate classes, Union anticipates monthly demand charges will range between 2 and 16 cents/m^3. In the future, the demand charge for new M7 and T1 customers will be determined in relation to existing comparable load factor customers.

Where necessary, M7 and T1 interruptible delivery commodity charges, which have historically been negotiated within a range, will also be reduced. All M7 and T1 interruptible customers supply their interruptible consumption using firm obligated deliveries and/or non-obligated deliveries. To promote customer neutrality, an adjustment needs to be made to the interruptible delivery charge of each individual customer to recognize the portion of their interruptible consumption supplied by obligated deliveries. In instances where there is significant year over year volatility in interruptible consumption due to production swings or alternate fuel competition, a tiered M7 and T1 interruptible delivery charge may be required. The first tier of a M7 and T1 customer's interruptible delivery commodity charge would reflect the reduction in price that results from the elimination of the DCC using the customer's actual interruptible consumption for the last 12 months. The second tier of a M7 and T1 customer's interruptible delivery commodity charge would remain unadjusted from what existed 6-8 weeks prior to the effective date of the elimination of the DCC.

Union proposes that M9 and T3 demand charges be reduced uniformly to reflect the elimination of the DCC. Delivery commodity charges are not large enough to absorb the required rate reduction. However, due to the similarity in customer load factors, there is no need to reduce delivery demand charges by utilizing a customer specific formula.

Retail energy marketers will not be neutral to the elimination of the DCC. The reduction in the residential delivery rate will be less than the DCC retail energy marketers have been paid by Union. This is a consequence of not paying residential customers a DCC if they were buying

system supply from Union but having all residential customers share in the DCC delivery rate reduction that results from eliminating the DCC.

1.3.12 Parkway Commitment

Today, virtually all Union South customers contract for a "bundled" service on Union's system. The terms and conditions of the bundled service require customers to obligate to deliver gas volumes 365 days a year to Union. In addition, all diversions and assignments requested by customers contracting for a bundled service are restricted and must be authorized by Union in advance in order to maintain the integrity of Union's system at the east end.

Today, the obligation to deliver is in most cases tied to the original upstream transportation assignment from Union to the customer. Moving forward, there are two significant changes that require Union to review how it manages the deliverability at Parkway required to maintain the integrity on Union's system. These two changes are :

a) Bundled direct purchase customers who continue to have a 365 day delivery obligation now have the ability to turnback TCPL capacity via Union's turnback policy. As such, the ability to clearly link the Parkway delivery obligation to the upstream transportation assignment no longer exists.
b) For customers taking the new unbundled service, Union is proposing to replace the current diversion and assignment restrictions with a 22 day call at Parkway in order to provide unbundled customers with more flexibility and to do so in a manner which avoids increasing costs to other system users or jeopardizing the integrity of Union's system.

Given these changes, the Parkway delivery obligations, from a practical perspective, can no longer be tied to the original upstream transportation assignment. As such, Union proposes that the

Parkway delivery obligation for both bundled and unbundled customers no longer be tied to the original upstream transportation assignment, but rather be tied to the customers' Daily Contract Quantity ("DCQ"). In general, the DCQ is adjusted/recalculated on an annual basis at contract renewal. In the case of marketers serving M2 customers, the DCQ is adjusted to reflect changes in the number of customers served and the normalized average consumption of all customers served under a particular contract. To accommodate the above changes while still managing the deliverability required at Parkway, Union will track, by individual direct purchase contract, the proportion of Parkway capacity provided to individual customers or REM's. The proportion of Parkway capacity within each individual direct purchase contract will change annually as a result of capacity allocated by Union to customers according to the vertical slice proposal. On an annual basis, the weighted average percentage of Parkway capacity allocated by Union over time to an REM will be tracked and applied against the DCQ to derive that portion of the total DCQ that must be obligated to be supplied at Parkway. The weighted average percentage of Parkway capacity allocated by Union over time to an REM will not be impacted by any changes that an REM chooses to make in managing their individual portfolio. As an example, any TCPL FT capacity at Parkway that is turned back via Union's TCPL turnback policy must be replaced by an alternate firm supply at Parkway.

As customers move from one REM to another, the obligated Parkway portfolio percentage of the transferor will shift to the transferee. As an example, if customers currently served by REM A with a DCQ of 10,000 GJ's and an obligated Parkway portfolio percentage of 73.5% are transferred to REM B, the obligated Parkway DCQ that REM B would inherit as a result of attaining these customers will be 7,350 GJ's. This commitment would then blend into REM B's existing direct purchase contract, and any customer(s) subsequently leaving that contract would transfer at the new blended Parkway portfolio percentage.

To the extent that solutions to increase the flexibility to deliver supplies at locations other than Parkway are agreed to and implemented (as discussed in Section 1.3.13), the percentage reduction in Parkway deliveries system wide would be extended to each individual direct purchase contract. Using the above example, if Union were able to reduce the percentage of Parkway deliveries required by the system in total by 10%, REM B's obligated Parkway DCQ would be reduced by 735 GJ's (7,350 GJ's x 10%) to 6,615 GJ's.

To summarize, Union will continue to require that bundled customers deliver firm (365 days a year) supplies at Parkway at a level equal to the Parkway capacity allocated/assigned to customers at the time a switch from system gas to direct purchase is facilitated. Capacity allocations/assignments over time within individual direct purchase contracts will be blended together resulting in an obligated Parkway percentage. The Parkway delivery obligation for unbundled customers will be similarly based on the obligated Parkway percentage as described above but will be limited to the 22 day call at Parkway. Changes in the percentage of Parkway capacity allocated to REM's over time according to the proposed vertical slice allocation methodology will be individually tracked by direct purchase contract. This approach will ensure that Union maintains the existing level of Parkway deliverability required to operate the system and to ensure all firm demands can be served.

22 Day Call Requirement

Originally the "call" concept was considered to be similar to the Winter Peaking Services that Union contracts for from time to time. Upon further review and study it became clear that determining the number of days of call is more complex and is impacted by the following variables:

- the load duration curve for the Dawn Trafalgar system,
- the total unbundled Parkway DCQ,

- the average size of the call volume (on a per contract basis), and
- the potential variances in forecast versus actual weather

The load duration curve for the Dawn Trafalgar system shows the in-franchise demands during the winter period from the coldest days through to the warmest. This curve shows the highest demand occurring on the coldest days and the demand gradually decreasing as the weather gets warmer. The analysis using the current load duration profile indicated that assuming an average size of the call contract of 140 10^3m^3, that 22 days of callback would be sufficient coverage for up to 7650 10^3m^3 of unbundled DCQ. The average size of the unbundled DCQ contract is a significant factor in determining the number of required call days. The smaller the contracts the more effective use can be made of them in matching the specific deliveries at Parkway with the call rights.

In Union's view, a 22 day call provides a greater level of flexibility to unbundled customers as compared to the 365 day firm supply commitment required for a bundled service and allows Union to maintain East End deliverability. If some customers prefer to be completely unrestricted in the ability to move capacity out of Union's franchise area or to deliver at a point other than Parkway, Union would evaluate the ability to purchase a peaking service on their behalf and charge them for it.

Union will exercise its call rights for up to 22 days during the winter season. It is noted that the 22 day call is not a curtailment of delivery or consumption by a customer, but a limited restriction on the ability to have contracted gas supply delivered at some point other than Parkway. The call would be applied in a way that would minimize the amount of supply call at Parkway and thereby allow deliveries at points other than Parkway or diversions of supply away from Parkway. Union will use predefined criteria in order to treat all shippers equitably.

The 22 day Parkway call (and option to pay winter peaking costs) applies to all unbundled customers. The current diversion and exchange restrictions will continue to apply to bundled services.

Union will exercise its Parkway call rights in a manner which:

a. minimizes the call only to the extent needed to meet anticipated East End deliverability requirements on a given day.

b. shares the impact of Parkway call across all shippers .

c. maximizes the system deliverability available through the Parkway call.

Union will attempt to exercise the Parkway call for a given customer in its entirety on a given day and will base the Parkway call on the following criteria:

1. the size of the shippers' delivered contract quantity, and

2. frequency of previous calls for that shipper.

Applying the above criteria means that a shipper will be more likely to be called on if the size of the shippers DCQ matches the call required by Union on a given day, and if it has been called on infrequently. Conversely, a shipper is less likely to be called on if the size of the shippers DCQ does not match up well against the call required by Union on a given day, and if it has been frequently called on previously during that winter.

Union will be more likely to exercise its Parkway call rights when it is colder and when a large volume of capacity is either being diverted from Parkway or delivered at points other than Parkway.

When Parkway call rights are exercised, impacted shippers will be notified by 5:30 p.m. on the day ahead and will have until 7:00 p.m. to renominate. These nomination confirmations and renomination deadlines are consistent with GISB standards and will be the minimum notice period provided by Union.

An example illustrating how the 22 day Parkway call would be administered is found at Appendix F.

Union will review on an annual basis the number of days of Parkway call projected to be required for the next winter period . Any changes required to the number of days of Parkway call will be primarily a function of the projected level of unbundled service and the average size of the unbundled contracts. Additionally, Union's experience in being able to meet its Parkway obligations for its in-franchise bundled and unbundled customers in the preceding winter period will be considered. Any change in the number of days of Parkway call will be reflected in the contract requirements established for the following winter period. The number of days of Parkway call will be adjusted as necessary at Union's discretion and reflected in customer contracts before the start of the next winter season. Union expects to complete this analysis and communicate any change in the number of days of Parkway call to all customers, in the spring of each year. This will provide Union and customers sufficient time to make any necessary changes to their supply plans for the next winter.

1.3.13 Options to Reduce Parkway Commitment and Increase Shipper Flexibility

In terms of both the existing bundled and new unbundled service offerings, customers have strongly indicated their necessity and desire for increased delivery point flexibility. All customers (bundled or unbundled) have indicated the desire for flexibility to access competitively priced gas

supplies at Dawn and to not be restricted to Parkway. In respect of the unbundled service and the proposed 22-day Parkway call, customers have indicated that although the proposal provides greater flexibility relative to the current restrictions on assignments and diversions contained as part of the bundled service, that in fact any number of days of Parkway call limits the options and flexibility available to customers.

Recognizing the requirements by all customers (bundled and unbundled) for increased delivery point flexibility, Union has committed to finding a solution to provide the requested flexibility. Union has recently assembled a group to examine this issue and to consult further with customers in order to pursue all options and suggested solutions.

At this time, Union does not feel that the solution lies in attempting to reduce the number of days of Parkway call. The two primary reasons supporting this conclusion are :

a) Attempting to reduce the number of days of Parkway call is a solution that would be specific only to customers electing the unbundled service and would not be responsive to existing bundled customers seeking similar delivery point flexibility.

b) Focusing on reducing the number of days of Parkway call does not really provide greater flexibility – as noted above, customers have indicated that any number of days of Parkway call restricts the options available to customers in the marketplace.

Given the above, the options currently being examined by Union include building additional capacity on the Dawn-Trafalgar transmission system, acquiring additional Dawn-Trafalgar capacity that may exist should existing M12 shippers wish to decontract for capacity on Union's system and the ability to change the delivery points on upstream contracts. These options are clearly focused on reducing the amount of a customer's DCQ that must be obligated at Parkway. The economics and rate impacts associated with the options identified to date are currently being examined. Further work and customer consultation is required before Union will be in a position

to further advance these options. Once these details are available, Union will provide an evidence update to all parties which outlines the options and the associated rate impacts.

Union notes that to the extent that a solution is found to increase delivery point flexibility, any costs associated with implementing this solution would need to be dealt with as a separate matter in the context of Union's PBR proposal. Union's PBR proposal is based on the existing system design and rates and any costs incurred to move away from the existing reliance on Parkway volumes in order to provide increased delivery point flexibility would need to be addressed as a separate matter and adjustment from a rates perspective.

1.4 NORTHERN AND EASTERN OPERATIONS AREA – METHODOLOGY AND RELATED PROPOSALS

1.4.1 Overview of Northern and Eastern Operations Area

In the Northern and Eastern Operations area the markets are served through a combination of Union storage and transportation capacity, TCPL FT and STS capacity and delivered gas supplies resulting in a complex system operation. All of the assets held by Union today are operated in an integrated manner in order to optimize the system and to attain the highest load factor at the lowest cost possible.

From a transportation perspective, there are six separate TCPL delivery areas with separate TCPL capacity contracted to each area. These six TCPL delivery areas are: Manitoba, Western, Northern, Sault Ste. Marie, Central and Eastern. In addition to firm TCPL FT capacity to each area, other assets consisting of storage (Dawn/LNG), Storage Transportation Service (STS), STS pooling rights, Dawn to Parkway capacity and other third party assets such as exchange contracts and other transportation capacity are used to provide the integrated service to all customers across

all delivery areas in the North and East. In general, the firm capacity and other assets are used to transport Alberta supply to the market area. All other services listed above are used to transport volumes from Dawn (supplies from storage or US pipeline capacity) to the market areas and to transport volumes from the market areas to Dawn (storage) depending on seasonal or market conditions. Accordingly, there is no direct relationship between the assets used to serve an individual delivery area and the demand in that area.

Union currently manages all of the Northern and Eastern transportation assets and is able to manage market demand swings through the capability to nominate daily firm capacity, diversions, STS services and injections and withdrawals into and out of Dawn storage. Each delivery area in the North is unique. Given the current asset mix, not all delivery areas use all of the various transportation assets in the same way or to the same extent. However, all delivery areas have been managed on an integrated basis and rates have been set in a way that recognizes this integration. Given the integrated nature of the system, and the fact that no delivery area operates independent of another delivery area, the allocation of assets necessary to develop and offer an unbundled service provides two primary challenges :

i) Allocating sufficient assets/capacity to allow an unbundled customer to meet all or substantially all of their load requirements (ie. peak day).

ii) Allocating assets/capacity in a manner that leaves sufficient assets/capacity to provide service to the remaining bundled customers without significant cost increases.

In developing the unbundling proposals for the North and East, Union has attempted to balance these challenges. At a high level, the allocation of assets is based on both the current asset mix and current operation of the assets. In addition, Union attempted to allocate assets in manner that best allows customers to serve average and peak day demands. However, Union notes that unbundling will create a winter peak day shortfall. Union and customers electing the unbundled service will be required to meet any peak day shortfall by acquiring additional assets. In designing the

unbundled service, Union has attempted to minimize this shortfall but cannot fully eliminate it given that the shortfall is a direct result of unbundling in the North and East. Overall, the benefits of operating the system on an integrated basis are diminished as a result of unbundling.

1.4.2 Existing Approach to Facilitating Direct Purchase in the Northern and Eastern Operations Area

To date, direct purchase in the North has been facilitated by allowing customers to provide their own supply in Alberta (ie. Empress). In general, customers in the North are not responsible for managing upstream transportation and storage. Union manages all assets on behalf of all customers and individual customers in the North have no Unabsorbed Demand Charge ("UDC") risk. The majority of bundled direct purchase arrangements in the North are "Western" direct purchase arrangements and are more of a supply arrangement than a "true" direct purchase arrangement. In this context, it is noted that upstream transportation capacity has generally not been allocated or assigned to specific customers in contrast to how direct purchase has been facilitated and operated in the South. The historical approach to direct purchase in the North along with the operational differences described above results in certain differences in the design and structure of the unbundled service in the North as compared to the South. These differences are outlined in greater detail below.

1.4.3 Asset Allocation Details and Assignment Terms and Conditions

The methodology and approach to allocating assets/capacity in the North and East has been structured based on both the current asset mix and the current operation of all assets. The assets were allocated according to a three step process as follows:

1) Upstream transportation capacity (primarily TCPL FT)
2) Delivery/redelivery service (STS, Dawn-Trafalgar, Exchanges)

3) Storage

Two types of transportation service are required to serve markets in the North and East, upstream transportation capacity and the proposed delivery/redelivery service. Each of these are addressed below.

Allocation of Upstream Transportation Capacity

Bundled direct purchase arrangements, will continue to be provided in a manner similar to that which currently exists. Most bundled direct purchase arrangements will continue to be essentially supply arrangements in Alberta with no explicit allocation or assignment of upstream transportation capacity. However, there may be situations where the supply arrangements may change subject to the vertical slice process described below.

For the proposed unbundled service, Union proposes to allocate upstream transportation capacity in a manner similar to that outlined above for the Southern Operations Area. Union proposes to assign to customers a "vertical slice" of its portfolio at any given point in time. Union notes that the vertical slice will be comprised of all portfolio components including spot delivered supplies. To the extent Union's portfolio contains spot gas at a point in time, customers electing the unbundled option would be responsible for arranging these supplies. Currently, Union's transportation portfolio in the North is comprised of approximately 97% firm transport from Empress (TCPL and exchanges) capacity and 3% other. Union recognizes that to allocate capacity on a vertical slice containing a very small percentage of non-TCPL capacity may be very difficult. In addition, it may be inefficient for customers to manage supply arrangements for a small volume of U.S. supplies or exchanges. For this reason, Union proposes to provide an assignment of only TCPL FT capacity at this time and Union will continue to manage the U.S. supplies and exchanges for system supply purposes. Union's proposal in this regard is consistent with the transportation clearinghouse concept outlined earlier for the Southern Operations area in Section 1.3.7. Union

will continue to assign/allocate 100% TCPL capacity for both bundled direct purchase and unbundled customers as long as the overall level of TCPL FT capacity in the portfolio is greater than 60%. If the TCPL FT capacity falls below this 60% threshold, all new direct purchase customers and new unbundled customers will be allocated a vertical slice in the same manner as described for the Southern Operations area.

The proposed terms and conditions of upstream capacity assignments related to the unbundled service are proposed to be similar to those outlined for the South. Specifically, the terms and conditions of the assignment are as follows:

a) Customers required to take a mandatory assignment or allocation of Union's capacity.
b) Upstream transportation assignment or allocation is cancelable only by mutual agreement (ie. one year assignment is evergreened perpetually).
c) Upstream transportation assignment or allocation managed in accordance with Union's TCPL turnback policy.

In the Northern and Eastern Operations Area, Union is not in a position at this time to guarantee a permanent assignment of upstream transportation capacity (ie. TCPL FT). Union's Storage Transportation Service ("STS") contracts and the associated STS pooling rights are contractual rights Union has with TCPL based on Union's underlying portfolio of FT contracts. As such, Union can not guarantee a permanent assignment of TCPL FT capacity in the North at this time given both the uncertainty as to how that would impact the STS rights and Union's STS pooling rights currently in place today. Any impairment of these rights would result in Union being unable to physically operate and provide firm service to all customers in the Northern and Eastern Operations Area.

It is Union's view that there is a mature market for secondary transportation capacity and customers electing the unbundled service should be required to manage the capacity without Union having an ongoing obligation to manage capacity assigned to unbundled customers.

Allocation of TCPL FT Capacity

All current contracted firm capacity is allocated to its specific delivery area. The total amount of firm capacity in each delivery area was then allocated amongst all rate classes within each delivery area according to the following formula:

Average daily demand by rate class
\+ rate class allocation of excess firm capacity in the delivery area
= Firm transportation allocated to rate class

Definitions:

a) Average daily demand by rate class = total annual demand by rate class ÷ 365 days

b) Excess/shortfall of firm capacity by area = (total firm capacity to the area – average daily demand by area)

c) Peak day shortfall by rate class = [peak day demand by rate class – average daily demand by rate class]

Allocation of excess by rate class = [peak day shortfall by rate class ÷ peak day shortfall by area] x b) (only in circumstances where an "excess" exists)

In circumstances where the firm capacity in a delivery area is lower than the average daily demand (shortfall of firm capacity) in the delivery area, the firm capacity was allocated to each rate class in the delivery area in proportion to the average daily demand.

An example of this allocation is detailed below for the residential customers in the Eastern delivery area.

Example:

To determine the TCPL FT allocated to residential (Rate 01) customers in the Eastern delivery area, the average daily demand for the rate class was calculated by taking the total annual demand for the rate class and dividing by 365 days. The average daily demand for Rate 01 is assumed to be 650 10^3m^3/day in this example. Next, the excess firm capacity in the area is calculated by taking the total firm capacity in the area and subtracting the sum of the average daily demands for all the rate classes in the delivery area. The excess firm capacity in the Eastern area (in this example) is assumed to be 514 10^3m^3/day. The next step allocates the excess firm capacity within the delivery area to each rate class by multiplying the excess firm capacity (514 10^3m^3/day) by the peak day shortfall for the rate class (peak day demand by rate class – average daily demand for rate class) and dividing by the sum of the peak day shortfall for all rate classes in the delivery area. Assuming that the Rate 01 proportion of the peak day shortfall in the Eastern delivery area is 69.3%, the allocation of the excess TCPL FT to Rate 01 is 356 10^3m^3/day (514 x 0.693) resulting in a total of 1006 10^3m^3/day of TCPL FT allocated to Rate 01. This process is repeated for each rate class in each delivery area.

A summary of the allocation of firm transportation capacity for each rate class in each delivery area is attached in Appendix G.

The rationale underlying the above methodology is to allocate firm capacity by rate class and by customer in a manner which recognizes both the average daily demand by rate class and the peak day requirements of each rate class relative to the total firm capacity available to a given delivery area.

Customers electing the unbundled service and taking an assignment of Union's upstream TCPL FT capacity will have access to diversion rights (subject to TCPL's policy and procedures) within the FT service in order to optimize the transportation and any associated UDC.

1.4.4 Delivery / Re-delivery Service

In addition to the firm transportation (FT contracted with TCPL and transportation through the secondary market) and storage, bundled customers in the Northern and Eastern Operations Area today are served by a combination of other assets consisting of Storage Transportation Service (STS contracted with TCPL) and associated pooling rights, Dawn-Trafalgar capacity, and exchanges. For purposes of providing an unbundled service for the Northern and Eastern Operations Area, Union has bundled all of these other assets together under what has been termed a "delivery / re-delivery" service.

The delivery / re-delivery service is a semi-bundled service that uses the above noted assets. Union proposes to provide this service to customers wishing to elect the unbundled service option. The delivery / re-delivery service is a mandatory firm service associated with the unbundled service which provides customers the ability to nominate the "delivery" of gas from a particular delivery area to Dawn storage (ie. summer storage injection) and to nominate the "re-delivery" of gas from Dawn Storage back to a given delivery area (ie. winter storage withdrawal).

The STS assets move gas from Dawn (in the case of the Sault Ste. Marie delivery area only) or Parkway to the delivery areas in the winter and from the delivery areas to Dawn or Parkway in the summer. The STS pooling rights within Union's STS contracts allow Union to move nominations from one area to another. In the summer, if Union nominates an amount less than the contractual maximum STS in a particular TCPL delivery area, the contract allows (with the exception of a 1,500 10^3m^3/day limit in the Northern Delivery area) Union to nominate the difference to another

TCPL delivery area. Similar flexibility exists in the winter with the exception of the eastern delivery area which is excluded from the STS pooling.

The rationale as to why Union is unable to fully unbundle all of the underlying assets comprising the proposed delivery / re-delivery service is as follows:

1) Contractually, at this time, Union cannot individually assign the STS contracts and associated STS pooling rights.
2) The contractual STS rights are attributable to the underlying contract holder of the TCPL capacity (ie. Union).
3) Operationally, Union's ability to serve customers in the Northern and Eastern Operations Area relies on the aggregation of all of the assets comprising the proposed delivery / re-delivery service. Even if Union were able to unbundle and assign these components, this disaggregation would result in a significant loss of the existing benefits associated with serving markets in the North on an integrated basis. This would result in additional assets and costs to meet the requirements of the remaining bundled customers.

In short, structuring the delivery / re-delivery service in the manner proposed by Union was the best way for Union to make unbundling work while continuing to preserve the operational and cost efficiencies which currently exist.

Delivery / Re-delivery Methodology

Currently Union transports volumes to Parkway using Dawn-Trafalgar capacity and from Parkway to the delivery area using STS and exchanges. Exchanges of capacity from Parkway to the delivery area may not be available once Union is fully unbundled. Union will manage the replacement of the exchange service in order to maximize the redelivery assets available.

Redelivery Capacity

The amount of redelivery capacity allocated to each delivery area was determined through a two step process.

The first step in the allocation process involves Union reserving some redelivery capacity in each delivery area for system integrity to manage the demand swings due to temperature variances from forecast. Union will continue to manage inter-day variances from forecast and customers who are unbundled will not need to adjust their nominations throughout the gas day. The amount of capacity reserved for system integrity was based on historical temperature variances between Environment Canada's weather forecast for the next day and the actual temperature. This historical variance analysis resulted in a 4 Degree Day forecasting variance in each of the Sault Ste Marie/Northern/Central and Eastern delivery areas and an 8 Degree Day forecasting variance in the Western/Manitoba delivery areas.

The amount of capacity reserved for system integrity is shown below:

	Total Redelivery Capacity	Capacity Reserved For System Integrity ($10^3m^3/d$)	Contingency %
Manitoba	25	-	0
Western	570	200	35.1
Sault Ste Marie	1060	100	9.4
Northern	2008	250	12.5
Central	532	100	18.8
Eastern	1499	250	16.7
TOTAL	5694	900	15.8

The second step allocates the remaining redelivery capacity identified in Step 1 to each delivery area in proportion to the difference between the peak day demand and the allocated firm transportation capacity in each delivery area. This step in the allocation process recognizes the flexibility Union has, through its exchanges and STS pooling rights to move capacity between the various delivery areas, despite not having physical STS capacity into each delivery area.

For example: If the peak day demand in the Northern delivery area is 500 $10^3m^3/d$ and the firm transportation capacity is 300 $10^3m^3/d$, the proportion of the STS redelivery allocated was based on a peak day shortfall of 200 $10^3m^3/d$. This example applies consistently to all delivery areas.

The redelivery capacity allocated to each delivery area is then allocated to each rate class and customers within each rate class using the same methodology as outlined above (ie. in proportion to the peak day shortfall for the delivery area). The allocation methodology recognizes the

proportional requirement by each rate class and customer to manage peak day requirements. For industrial customers, the peak day demand is equal to the customers daily contract demand.

There will, in most cases, be a winter firm peak day shortfall which customers and Union will have to serve with additional assets or services. The existence of a peak day shortfall occurs as a direct result of unbundling and the loss of the synergies which currently exist today in operating all assets in a bundled or integrated manner

Delivery Capacity

The amount of delivery capacity allocated to each delivery area was determined in a manner similar to the allocation of redelivery capacity described above. The delivery capacity in the summer is allocated to each delivery area in proportion to the difference between the amount of firm transportation capacity allocated and the average summer daily demand. Delivery capacity of 300 10^3m^3 was reserved for system integrity to manage demand swings resulting from nominations and variances from forecast.

Example: If the average summer demand in the EDA is 200 $10^3m^3/d$ and the firm capacity allocated was 300 $10^3m^3/d$ then the proportion of delivery capacity allocated would be based on a 100 10^3m^3 requirement.

The delivery capacity as determined for each delivery area is then allocated to the rate classes and customers within each delivery area using the same methodology as outlined above. This allocation methodology recognizes the requirement by customers to manage the UDC risk which exists when summer demands are less than the firm transportation allocated.

A summary of the allocation of delivery/redelivery capacity by area, by rate class, is provided at Appendix G.

In addition, the detailed allocation of the delivery / re-delivery capacity to customers within rate classes 01/10 and zones is consistent with the allocation of storage space outlined earlier. Specifically, the delivery / re-delivery capacity entitlements are determined as follows:

a) Rate 01 (residential) – delivery / re-delivery capacity by area divided by # of customers
b) Rate 01 (commercial) – delivery / re-delivery capacity by area divided by annual volume
c) Rate 10 (small commercial / industrial) – delivery / re-delivery capacity by area divided by annual volume

1.4.5 Transportation Capacity Details

As discussed above, the allocation of firm transportation capacity in the Northern and Eastern Operations area will consist of 100% TCPL FT until such time as the percentage of TCPL FT in the system portfolio falls below 60%.

The portfolio for the Northern and Eastern Operations area as of November 1, 1998 consists of the following:

Summary of System Portfolio – Union North

November 1998

North	Quantity ($10^3m^3/d$)	% of Portfolio
TCPL FT-EDA	2105	24
TCPL FT-MDA	120	1
TCPL FT-NDA	3153	37
TCPL FT-SSMDA	805	9
TCPL FT-WDA	1782	21
Exchanges-EDA	638	7
Total	8603	100

A summary of the various transportation contracts is found in Appendix H.

1.4.6 Northern and Eastern Market Area - Implications for Bundled Services

Overall, the unique and integrated nature and operation of the Northern and Eastern Operations Area will diminish as customers elect the unbundled service. As unbundled customers are allocated capacity, costs to the remaining bundled customers will increase. Under the present operation of the system in the Northern and Eastern Area, Union manages virtually all transportation capacity for all customers. The size of the portfolio and the diversity of the various

customer loads within the various delivery areas has allowed Union to optimize the use of the total pipeline capacity in order to minimize Unabsorbed Demand Charges ("UDC").

Increased costs as a result of unbundling in the North may arise in one of two ways:

1) If a significant number of high load factor customers (typically industrials) unbundle and take their proportionate share of upstream transportation capacity, this will result in higher overall levels of unutilized pipeline capacity during the year (ie. the remaining pipeline capacity will be operated at a lower load factor). This unutilized capacity will be used to the extent possible to displace forecast spot and other delivered services. However, to the extent that the unutilized pipeline capacity cannot be fully mitigated and/or used to displace spot and delivered services, this would result in an increase in costs to remaining bundled customers.
2) If a significant number of low load factor customers unbundle and take their proportionate pipeline allocation, the remaining pipeline capacity serving the remaining bundled customers would be utilized at a higher load factor. In this circumstance, Union would have less unutilized capacity compared to the existing portfolio to bring in incremental volumes and offset forecast spot or other delivered service purchases. Again, the cost associated with higher spot or delivered services purchases would represent a higher cost for the remaining bundled customers.

Both unbundled and bundled customers have the potential to experience higher costs in an unbundled world. Specific impacts are difficult to predict and depend on the level of unbundling, future market conditions, and the ability of Union and customers to mitigate these costs. Union's design of the proposed delivery/redelivery service is based on Union's desire to minimize the cost impacts associated with offering an unbundled service in the Northern and Eastern Operations area.

The costs arising from unbundling will be dependent on how many customers unbundle and in which rate classes and delivery zones these customers are in. Union will continue to attempt to mitigate any incremental costs arising from unbundling to the best of its ability through either selling excess capacity into the secondary market or acquiring incremental capacity from the secondary market. However, in Union's view, it is unlikely that all of the cost impacts resulting from unbundling in the Northern and Eastern Operations will be fully mitigated.

Union estimates that in the extremes cases of all Rate 01 and Rate 10 (general service) customers or all Rate 20 and Rate 100 (industrial) customers unbundling, bundled service costs would increase by approximately $7-9 million. In terms of estimated rate impacts, this would represent an increase in gas supply transportation costs of approximately 10-22% to all remaining bundled customers. A fully bundled customer, would experience an increase of approximately 2-4% on the total bill including gas supply in this circumstance.

Given the above, it is Union's proposal to manage the risks associated with unbundling in the North up to a level at which 30% of the demand in the North is being served through an unbundled service option. Union will adjust, on an annual basis as part of the customer review process, the gas supply transportation charge applicable to all bundled customers in the Northern and Eastern Operations Area only when this level of unbundling is achieved. This would allow for both changes in the mix and cost of transportation assets as well as the above noted impacts resulting from unbundling to be incorporated into rates.

1.5 STORAGE UNBUNDLING AND RELATED ISSUES

1.5.1 Overview of Current Storage Operation

Currently, storage is operated as a part of the integrated system in the Southern and Northern and Eastern Operation Areas. To date, storage required for infranchise requirements has been used primarily to provide bundled service (system and direct purchase).

Union operates a number of different storage pools, each with separate and unique operating characteristics. Union also contracts for a small amount of storage from third parties. The majority of Union's storage pools can be characterized as "base" pools which provide a base level of deliverability dependent on inventory levels and the manner in which the pools are operated. In addition, Union has a smaller number of pools which exhibit the physical characteristics to provide higher than average storage deliverability. These pools provide Union with the operational flexibility to supplement the injection and withdrawal capability associated with the base pools and provide peaking capabilities to meet peak day demands.

Union has incorporated the physical operating characteristics of the storage pools in the design of the unbundled storage service. The high deliverability peaking pool capacity on Union's system (Southern Operations Area) has been used to provide the standard peaking service (SPS) and to maintain Union's system integrity requirements. The peaking pool capability has also been used to provide the base level for the standard storage service (SSS) in the late season when the SSS is at low inventory levels.

1.5.2 Implications of Unbundling Storage

The offering of an unbundled storage service provides a contractual entitlement to a specified amount of capacity (ie. storage space and related deliverability). Unbundled customers have the

ability to fully utilize their allocated storage based on the contractual entitlement associated with the unbundled storage service.

Unbundling storage will result in storage being used in a different manner compared to the operation of storage today in support of bundled in-franchise services. The holder of an unbundled storage contract has the ability to nominate to their maximum SSS contractual entitlement on any given day and has the ability to nominate their maximum SPS contractual entitlement on any day when the temperature constraints are met. Union, in turn, must be able to fully meet these contractual entitlements. Unbundling provides the opportunity to those electing the unbundled service option to use storage to meet both in-franchise requirements as well as market opportunities outside Union's franchise.

1.5.3 Structure of Unbundled Storage Services

Union has structured the unbundled storage service in a manner which establishes a base level of storage service, referred to as the "Standard Storage Service (SSS)" and a higher deliverability peaking service referred to as the "Standard Peaking Service (SPS)". As discussed in greater detail below, the SPS is a service which is available only in the Southern Operations Area.

The structures of the SSS and SPS recognize the way in which storage has been used to serve all markets in Union's franchise and the manner in which costs have been allocated in rates. As an example, the SPS is available only in the Southern Operations Area, which reflects the fact that higher deliverability storage has been used principally to serve the general service (Rate M2) market in the South. The allocation of costs and design of rates reflect this.

The reasons for a "standard" unbundled service option are as follows:

a) Having a standard storage service is the practical way to manage the introduction of an unbundled service, particularly to the general service rate class.
b) A standard storage service provides Union the ability to plan, manage, and design the storage system to meet current and future growth.
c) A standard storage service is necessary to administer unbundled storage entitlements for all customers.
d) A standard storage service is consistent with Union's efforts to date in structuring the storage services offered to the market (ie. primarily ex-franchise C1 storage services).

1.5.4 Unbundled Storage Service

The proposed unbundled storage service consists primarily of a "base" SSS available to all customers in both the Southern and Northern and Eastern Operations Areas. In addition to the SSS, an SPS is available to general service (Rate M2) customers in the Southern Operations Area. The SSS and SPS (where applicable) are a mandatory component of the unbundled service. The structure and parameters associated with both the proposed SSS and SPS are described below.

SSS

The proposed SSS has specific injection and withdrawal parameters which are based on the amount of gas in inventory, the physical capabilities and characteristics of the underlying storage pools and the physical capabilities of Union's storage compression and pipeline facilities. The injection parameters decrease as the amount of gas in storage increases whereas the withdrawal parameters decrease as the amount of gas in storage decreases. The injection and withdrawal parameters have been established by recognizing the contractual entitlements available to

unbundled customers on a daily basis. The injection and withdrawal parameters associated with the proposed SSS are as follows:

	Inventory Balance	Daily Entitlement
Injection	- less than or equal to 80%	0.75%
	- greater than 80%	0.50%
Withdrawal	- greater than or equal to 20%	1.2%
	- less than 20%	0.8%

The structure of the SSS as outlined above has been amended to reflect one ratchet at the predefined inventory levels noted above. This one ratchet structure is consistent with all existing ex-franchise (Rate M12 and Rate C1) contracts. The one ratchet structure also reflects comments and feedback from numerous parties who questioned both the need for and the administrative complexities associated with an SSS service containing numerous ratchets. Also, structuring the SSS with one ratchet, provides greater administrative ease to customers in operating the unbundled service and is consistent with Union's other market based storage services. The standardization of storage services will provide greater market transparency in the future.

In terms of the SSS injection parameters, the prior design of the SSS had focused principally on the withdrawal parameters necessary to meet a customer's peak day requirement. Consequently, the SSS injection parameters were established on a basis equal to the withdrawal parameters. The physical capabilities and operation of the storage pools do not support the injection parameters previously discussed with stakeholders. The physical constraints on Union's storage pools and related facilities do not support filling storage in the 92 days indicated in the initial proposal. The operation of the storage pools from an injection viewpoint are different from the physical capabilities associated with storage withdrawal. Union also notes that the proposed SSS injection

parameters are consistent with the injection parameters related to all ex-franchise (M12 and C1) contracts.

The SSS withdrawal parameters and the structure of both the SSS and SPS have been modified to better align the service with the design and operation of Union's storage system. The SSS parameters reflect Union's contractual obligations to provide the unbundled storage service up to the maximum entitlement on a given day. Union's ability to provide this base level of SSS relies on the use of the peaking pool (high deliverability) flexibility which underlies the SPS and storage required for system integrity. Union has attempted, through the design of the unbundled storage service, to maximize the flexibility provided by Union's high deliverability peaking pools in order to provide the maximum storage parameters associated with the SSS, SPS, and to provide the storage required for system integrity. It is noted that the SSS, as proposed, is consistent with all of the ex-franchise storage services recently sold by Union to the marketplace. Finally, Union notes that the proposed rates associated with the SSS have been adjusted to reflect the above noted changes.

Further to the above, the most recent storage offering related to the Century Pools Storage Development had the following parameters:

a) Injection – inventory less than or equal to 75% - 0.75%
b) Injection – inventory greater than 75% - 0.50%
c) Withdrawal – inventory greater than or equal to 25% - 1.2%
d) Withdrawal – inventory less than 25% - 0.8%

Union notes that the injection and withdrawal entitlements within the Century Pool contracts are interruptible in the October/November and April/May periods respectively in contrast to the proposed SSS which has firm injection and withdrawal rights at all times.

SPS

The SPS is a service in addition to the SSS which applies to all general service customers in the Southern Operations Area electing the unbundled service. The SPS service provides storage space with a high deliverability entitlement in order to serve heat sensitive customers in the Southern Operations Area and reflects the capacity used to serve customers in this market today.

The deliverability of the SPS is 10% of the Maximum Storage Balance (of SPS). This is equivalent to a 10 day peaking service. The SPS service is mandatory as it represents the amount of storage deliverability used today for this market. The costs associated with this service are recovered in the distribution delivery charge. Unbundled customers will have the ability to use and manage this service in conjunction with the SSS.

The terms and conditions associated with the SPS are as follows:

a) High firm deliverability service (ie. 10% deliverability of SPS Maximum Storage Balance).
b) SPS accounts managed separately from the SSS – there must be inventory within the SPS account in order to access the high deliverability associated with this service.
c) SPS plus the SSS maintains the existing Rate M2 class deliverability.
d) SPS is a mandatory service for the M2 Rate Class in the Southern Operations Area.
e) The SPS entitlement is equal to 16% of the SSS entitlement.
f) The fixed cost associated with providing SPS is recovered in the distribution delivery charge.
g) The charge for SPS injections and withdrawals is the authorized storage injection and withdrawal overrun rate.
h) The customer will have access to the SPS account and associated deliverability when the forecast mean temperature for a day is minus 4ºC or lower.

i) The customer has full access to the SPS deliverability on a given day once the minus 4°C temperature threshold is reached.

j) Injections into the SPS account will be subject to the injection parameters associated with the SSS for the period of April 1 to October 31. For the period of November 1 to March 31, injections into the SPS account are 5% of the SPS Maximum Storage Balance which is equivalent to a 20 day service.

k) The SPS is only available when a customers' SSS inventory is in excess of 20%.

Union has modified the SPS (as described above) from that discussed previously with stakeholders in order to increase the flexibility and management of the SPS by a customer. In particular, the temperature threshold at which the SPS can be accessed is warmer, the SPS deliverability has been increased, and the SPS account is now structured in a manner which allows a customer the ability to manage the SPS separately from the SSS. The weather threshold and the inability to access the SPS when SSS inventory levels are less than 20% reflect both the physical operating characteristics of the storage pools and the design of the unbundled Standard Storage Service. The high deliverability SPS service is constrained from the perspective that Union must have the ability to physically refill the high deliverability pools after gas has been withdrawn from these pools to meet the peaking requirements of the markets. The temperature threshold provides Union with the capability (ie. injection window) to physically refill these pools during the winter in order to meet the requirements associated with future peak market conditions for the general service market. (ie. Colder than minus 4ºC) Further, the inability to access the SPS at inventory levels less than 20% reflects the fact that Union is using peaking pool capability to provide the late season storage deliverability of 0.8% associated with the SSS at inventory levels less than 20%. As such, the SPS is not accessible in circumstances where the SSS inventory levels are less than 20%.

1.5.5 Unbundled Storage Space Allocation

In general, the allocation of storage space to customers electing the unbundled service option reflects the existing Board approved cost allocation methodologies. In this regard, it is noted that the allocation methodologies and approaches for the Southern and Northern and Eastern Operation Areas are different and continue to reflect the unique operational characteristics associated with each of these areas.

Southern Operations Area

Union's Board approved cost allocation methodology allocates storage space and the associated costs to bundled rate classes in proportion to each rate class' "aggregate excess" (the difference between winter demand and average annual demand for a 151 day winter period). Union proposes that the allocation of storage space to individual customers who unbundle be based on this same methodology.

Further, Union proposes that a factor of 97.6% be applied against each customer's aggregate excess when the amount of storage space available to a customer who unbundles is determined. The application of a factor recognizes that some customers (e.g. paving, cement, construction, grain drying and tobacco) have a predominately summer load that has served to reduce the aggregate excess of their rate class in total. In the absence of a factor being applied, Union would be allocating approximately 32 106m3 (1.1 Bcf) more storage space to customers who unbundle than is available to the various rate classes. This "over-allocation" of storage space to unbundled customers would reduce the system integrity space available to Union to manage the provision of all services and maintain system integrity.

For administrative ease Union has calculated a single factor, to be applied in all rate classes in the Southern Operations area, rather than factors that would vary by rate class. In addition, to simplify

the determination of storage allocations at the time of unbundling, Union is proposing to allocate a fixed amount of storage per M2 residential customer and to calculate the amount of storage an M2 commercial/industrial customer receives in relation to their annual consumption. The application of the 97.6% factor applied against the aggregate excess for the M2 rate class is incorporated in the proposed M2 residential and commercial/industrial storage allocations.

Union is proposing the following allocation of storage space to individual customers in the Southern Operations area:

M2 General Service:

Residential (SSS)	742 m^3 (28 GJ's) per customer
Commercial/Industrial(SSS)	23.6% of a customer's annual normalized volume

(Note: SPS entitlement for Rate M2 customers is 16% of SSS entitlement.)

M4, M5A, M7, M9, M10

97.6% X Individual customer's aggregate excess

Rate M6A

No storage

The aggregate excess profile of residential and commercial/industrial customers has been used to compute the storage allocation factors identified above and are based on 1999 Board approved, general service throughput forecasts. Union will annually evaluate and adjust if necessary, the storage allocations should there be a change in the underlying aggregate excess profile of customers.

Northern and Eastern Operations Area

The allocation of storage space to customers electing the unbundled option in the Northern and Eastern Operations Area is consistent with the allocation methodology used for the redelivery capacity described previously. The storage space available to customers in the North is allocated by delivery area in proportion to the peak day shortfall. As noted earlier, the peak day shortfall is the difference between the peak day demand and the allocated firm transportation capacity. The allocation of the storage space associated with each delivery area is then similarly allocated to the rate classes in proportion to the peak day shortfall.

The allocation of storage space to individual customers within each delivery area and rate class is determined as follows:

a) Rate 01 (residential) – Rate 01 (residential) storage space by delivery area divided by number of customers in delivery area
b) Rate 01 (commercial) – Rate 01 (commercial) storage space by delivery area divided by annual demand/volume in delivery area
c) Rate 10 (small commercial/industrial) – Rate 10 storage space by delivery area divided by annual demand/volume in delivery area
d) Rate 20/100 – customer specific allocation by delivery area in proportion to the peak day shortfall and peak day as described above

A summary of the allocation of storage space for the Northern and Eastern Operations Area, is found at Appendix G and incorporates the total storage space available in the Northern and Eastern Operations area net of the storage space held for system integrity purposes (ie. 14.0 Bcf). The Northern system integrity space included in Union's total system integrity requirements as outlined at Section 1.5.6 is approximately 0.6 Bcf. In addition, there is no allocation of storage to Rate 25/16/30/77 customers consistent with the current cost allocation and rate design methodologies.

A summary of the customer specific storage allocation for individual Rate 01 residential customers in the North, by zone, along with the customer specific allocation percentage based on annual demand for Rate 01 and Rate 10 commercial customers in the North, by delivery area, is found at Appendix I. These storage allocations are based on the 1999 Board approved Rate 01 and Rate 10 throughput forecasts. Union will annually evaluate and adjust, if necessary, these storage allocations should there be a change in the factors (ie. peak day shortfall) underlying the storage allocation.

1.5.6 System Integrity Storage

Union currently maintains approximately 10.4 Bcf of system integrity storage space to provide the bundled services that are offered today. This system integrity space allows Union to continue to accept delivery of more gas than forecast entering the heating season and gas use is below forecast (e.g. weather warmer than normal in November/December). It also allows Union to continue to meet demands above forecast through to the end of the winter (e.g. weather colder than normal in March/April) by keeping some extra gas in storage for late season deliverability.

As customers choose unbundled services they will manage these forecast variations. However, Union will need system integrity space for other purposes. Union's unbundling proposal sets aside 9.1 Bcf of storage space for reserve capacity and operational balancing required to manage all services and ensure system integrity. This represents approximately 7% of Union's total storage capacity. This level of system integrity space will allow Union to provide the following services on behalf on all system users:

		System Integrity Storage Requirements (Bcf)
a)	Manage weather variances on algorithm based estimates for non-daily metered customers. (3.0 - 4.0 Bcf)	3.3
b)	Backstop supply failures (limited and for a fee to those shippers who fail to supply). (2.0 – 3.0 Bcf)	2.3
c)	Operational integrity (3.0 - 4.0 Bcf) (ie. variances related to line pack management, unaccounted for gas variance and operating balancing agreements with interconnecting pipelines)	3.5
	Total	9.1

Except for this space set aside for system integrity, all remaining storage space is allocated to customers. Consequently, Union will have the same per unit storage capacity (space and deliverability) to serve bundled customers as is being allocated to those choosing unbundled services.

This system integrity space need was quantified assuming all customers elect unbundled storage service and provide their own balancing and deliverability requirements from the storage they have been allocated. To the extent some customers do not elect unbundled storage service, Union will provide balancing and deliverability from the storage capacity retained to serve bundled customers in the same way as unbundled storage customers.

1.5.7 Unbundled Storage Pricing

Union is proposing to initially unbundle its infranchise storage services at cost. During the proposed five year term of the PBR framework, Union will continue to unbundle and allocate storage at the infranchise unbundled storage rate. The unbundled storage rate will be subject to the provisions of the PBR framework governing service price increases.

As described previously, Union is proposing to allocate storage in the same manner as storage costs are allocated in current rates. In addition, Union is proposing to maintain the storage entitlements as outlined above subject only to changes justified on the basis of changes to the underlying rate class storage profiles. Any such change in the storage allocation factor would be brought forward through the customer review process. This will ensure that all unbundled customers, at any given point in time, will receive a consistent allocation of storage regardless of the timeframe in which individual customers elected the unbundled service. This will also ensure that existing bundled customers who elect to unbundle at some future time, or new customers that are added to Union's system will retain or be allocated the same storage entitlement as those who elected to unbundle earlier.

Retail Energy Marketers (REMs) will be allocated annually, on behalf of their M2 Rate class customers', an amount of storage (SSS and SPS) reflecting their end use customers portfolios. Each year (ie. April 1), the amount of storage capacity allocated will be recalculated based on the number of end-use customers under contract. The amount of storage capacity allocated will be a fixed amount per residential end user based on 1999 OEB approved cost allocation. As noted above, the fixed amount of storage may change in the future should the customer profile change the basis upon which storage was originally allocated (ie. in the case of residential Rate M2 customers, the fixed storage per residential customer could change should the average aggregate excess for the Rate M2 class change in the future). Similarly, storage capacity allocated for non-residential end use customers will be redetermined annually based on annual contract volume and load factor. It is noted that Union's commitment to assume the risk of managing in-franchise storage growth at cost over the PBR term is premised on both the proposed rate escalator for the PBR proposal and Union's proposal to price all ex-franchise storage at market at the time of contract renewal and the elimination of all existing storage and transportation deferral accounts.

1.5.8 Transition from Cost to Market Pricing for Storage

In the MDTF report, it was agreed that storage would initially be provided at cost, conditional upon an agreement in the industry for:

a. a transition to market based rates, and

b. a firm commitment to develop a market pricing mechanism.

In order to implement storage unbundling consistent with the principles agreed to by the MDTF, the following is required:

a. Develop and agree on a market pricing mechanism.

b. Agree on an appropriate transition mechanism to move from cost to market.

c. Agree on how the market value charged by the utility will impact rates.

After numerous and lengthy discussions with stakeholders about the mechanism and process to transition to market pricing for in-franchise storage, Union believes that a consensus is not achievable to move to market pricing for in-franchise storage at this time. Union therefore proposes to allocate all infranchise storage at cost. Union will maintain its current practice of transitioning all ex-franchise storage services to market upon contract expiry and subsequent renewal.

Union modified its earlier position to price all in-franchise storage at market after it became clear during discussions with stakeholders that the proposal to transition to market pricing for in-franchise storage using projections of the seasonal price differences at Dawn as a proxy for free negotiations was causing concerns. The concerns expressed by some stakeholders included the perceived lack of competitive alternatives to those customers still being served through Union's system gas offering. There were also concerns related to potential price volatility, and the

effectiveness of using a proxy method to substitute for free negotiations between the parties to determine market value for storage. Exfranchise storage services have clear market alternatives (as demonstrated in Union's Bentpath/Rosedale and Century Pools Phase I Storage development applications) and market prices currently exist.

1.5.9 Future Standardization of Storage Contract

As described previously, the design and parameters associated with the unbundled SSS are consistent with all of the recent market based storage offerings made by Union. At the time of contract renewal, it is Union's intention to structure all existing storage contracts (M12 and C1) to be consistent with the proposed SSS. In Union's view, having a consistent base storage service will provide greater transparency for storage pricing in the market place and will provide a platform by which to better assess moving in-franchise storage to market at a future date. Union notes that certain existing contracts currently have a high deliverability component. Union will review its ability to provide an SPS service on contract renewal.

1.5.10 Future Storage Development

As described above, Union is proposing to maintain a fixed storage entitlement for customers electing the unbundled service offering, subject to adjustment only in those circumstances where the profile of the customers support a change in the storage entitlement. As such, Union would manage all future storage requirements related to growth over the term of the proposed PBR plan. Union notes that the proposal to manage the additional storage costs associated with developing or acquiring additional storage capacity would result in the incurrence of incremental costs relative to those reflected in current storage prices. Union's proposal to manage this risk is dependent on both the proposed PBR rate escalator and pricing all ex-franchise storage at market at the time of

contract renewal and the elimination of all existing storage and transportation service deferral accounts.

1.5.11 Annual Reallocations/Redistribution of Unbundled Storage

Other than the initial date at which unbundling is implemented, Union is proposing to reallocate/redistribute unbundled storage allocations once a year, every April. The rationale supporting an annual reallocation/redistribution of storage every April is as follows:

a) At April 1, storage inventory levels are low which will minimize inventory transfer and other transitional issues.

b) April 1 represents the "start" of the storage injection season and the summer strip.

c) Attempting to administer storage allocations other than once a year every April would significantly increase the administrative complexity and costs associated with managing the unbundled service.

d) Once unbundling is in place, Union notes that existing unbundled customers (REMs) who already have an existing allocation of storage are not precluded from adding additional unbundled customers to their portfolio at any time. An REM has the ability to choose to manage additional customers within their existing unbundled storage allocation. In this circumstance, an allocation or reallocation of storage would still only occur every April. Union would also note that customer movement between system and bundled direct purchase arrangements will continue to be facilitated in a manner consistent with current practices.

1.6 OTHER UNBUNDLING RELATED ISSUES

1.6.1 Title Transfers

Currently, title transfers are facilitated and can occur on Union's system at any of Union's pipeline interconnects. The fee currently charged by Union for title transfers is $0.003/GJ. In addition to

this title transfer fee, the amounts charged per contract to customers for title transfers are capped at $1,800 per month or $850 per month if the level of transactional business with Union exceeds $5,000. However, the process by which title transfers are facilitated will differ between bundled and unbundled customers.

For bundled customers, Union will attempt to facilitate an assignment of supply between parties to allow bundled direct purchase customers the flexibility to balance under the terms and conditions of their bundled direct purchase arrangement. In this context, the assignment would be facilitated using supply entering Union's system. Further, in these circumstances (ie. balancing), Union will approve assignments between bundled direct purchase customers as long as the assignment serves to mitigate the imbalance position of both parties (ie. one party long gas, one party short gas). In this case, the charge to facilitate the assignment is the $0.003/GJ title transfer fee.

In circumstances where a bundled direct purchase customer fails to proactively manage an imbalance prior to the contract renewal date by title transferring volumes entering Union's system, a bundled transfer of the imbalance (from storage) may be necessary. In this circumstance, the fees for the bundled transfer are $0.03/GJ plus the $0.003/GJ title transfer fee.

For unbundled customers, title transfers are facilitated in the same manner as described above for bundled direct purchase customers. In addition, title transfers for unbundled customers are less restrictive as compared to a bundled direct purchase customer given that unbundled customers separately manage all of the components associated with the unbundled service, including storage.

In situations where an unbundled customer wishes to title transfer gas in storage, they will have to use their contractual unbundled storage parameters (ie. injection and withdrawal) to facilitate a title transfer. As noted above, as long as two parties have gas coming into Union's system at one of the various pipeline interconnects, the title transfer can be facilitated without the need to use storage.

1.6.2 Allocation of Inventory and Storage

Union is proposing to allow customers to move to an unbundled service during a transition period (ie. from the date that the unbundled service is available to March 31, 2001.

Union's proposal to transfer gas in storage to customers who choose an unbundled service is addressed in the following sections:

1. Background
2. Amount and Value of Inventory Transfer
3. Financial Settlement of ABC Contract
4. Storage Costs

Background

Union's gas in inventory includes gas purchased to supply its system and buy/sell customers. In the case of buy/sell customers, the gas purchased from those customers at the Alberta or Ontario borders is sold to those customers at their burnertip. Union also purchases gas to meet its design day requirements and maintain system integrity. In addition, this gas is used to balance the supply and demand of all of Union's bundled customers including bundled direct purchase customers who are only required to balance under their contracts upon contract renewal.

Generally, customers will be permitted switch to unbundled service at April 1 of each year starting April 1, 2001. April 1 was selected as it is the beginning of the injection period and the amount of gas in storage is low. However, there will still be some volume of gas in storage at April 1.
Union proposes to transfer to the customer its proportional share of the gas in storage at the time that a customer chooses to take the unbundled service. The amount of gas to be transferred and the related costs are described in the following sections.

Amount and Value of Inventory Transfer

a) System Customers

For system customers choosing the unbundled service, the amount of gas to be transferred will be equivalent to their prorata amount of gas in inventory at that time. This prorata amount is determined by applying the percentage of storage capacity filled in the month on behalf of all customers operating under a bundled service to the amount of storage space allocated to the customer choosing unbundled service. For example, if Union's bundled storage space is 10% full and the customer electing the unbundled service has been allocated 28,000 10^3m^3 of storage space, the prorata amount of gas to be transferred would be 2,800 10^3m^3.

The gas transfer will be initially charged to the customer at Union's inventory reference price. This rate is equivalent to the landed cost of Union's Alberta supply using firm TCPL transportation. This gas will be deemed as system supply and will accordingly attract its proportionate share of all of Union's gas supply related deferral accounts upon their disposition at the end of the year during which the inventory transfer took place.

b) Bundled Direct Purchase Customers

Under normal circumstances, Union's bundled direct purchase customers (ie. buy/sell and bundled-t) are allowed to change their service at contract renewal. In addition, as bundled direct purchase customers are required to balance their deliveries and consumption only at contract renewal, there will be an imbalance at any other time of the year. If a bundled direct purchase customer wishes to change to unbundled service during the term of the existing bundled contract, the imbalance will need to be considered in determining the inventory transfer.

Similar to a system customer electing unbundled service, there will first be a determination of the prorata amount of gas in storage (ie. the 2,800 10^3m^3 in the above example). The level of the

customer's imbalance will then be compared to the volume of storage allocated and the following rules will apply.

i) If the customer has delivered more than it has consumed (ie. positive imbalance) and if this imbalance is equivalent to the unbundled prorata amount of gas in storage, there is no need for the customer to purchase Union's gas inventory as it has already provided an equivalent amount of gas to Union.

ii) If the customer's positive imbalance exceeds the unbundled prorata amount of gas in storage then the customer's imbalance will be transferred into the allocated storage space. Once again, the customer will not have to purchase any of the gas in inventory. However, the customer will need to manage gas in storage under the terms and conditions of the unbundled storage service.

iii) If the customer's positive imbalance is less than the unbundled prorata amount of gas in storage, the customer must purchase the shortfall from Union. This gas will be initially charged to the customer at Union's inventory rate. This gas will be deemed as system supply and attract its share of all of Union's gas supply related deferral account balances upon disposition at year end.

iv) If the customer has a negative imbalance, Union has purchased the gas filling the allocated space. As a bundled direct purchase customer is allowed to balance within +/- 4% at contract expiry, the gas between –4% and the prorata amount of gas in storage must be purchased from Union on the same basis as outline above. Consistent with the current treatment of direct purchase imbalances, the gas filling the remaining shortfall will be purchased from Union at the greater of Union's spot purchases for the quarter or Union's landed WACOG.

Financial Settlement of ABC Contract

Under ABC service, Union purchases an REM's supply at the rate that the REM instructs Union to collect from the REM's customers. On an annual basis, if the amount of gas delivered to Union were equivalent to the amount consumed by the REM's customers, the amount collected would be equivalent to the amount paid to the REM. However, at any point during the year, there may be a net payable or receivable between the REM and Union.

Currently, on an annual basis or at contract renewal, there is a financial settlement of any net receivable or payable balance. Similarly, if an ABC service contract is converted to unbundled service prior to contract renewal, a financial settlement of the outstanding receivable or payable balance is required.

Storage Costs

Issues related to storage costs are only applicable for customers electing the unbundled service in the transition period (ie. date unbundled service is available and March 31, 2001).

Storage costs are paid by the customer effective the preceding April 1 to correspond to the beginning of the injection period. For those customers that switch to unbundled service at April 1, there are no transition issues related to storage given that April 1 represents the start of the injection period. However, for customers electing an unbundled service during the initial transition period (ie. from the date that the unbundled service is available to March 31, 2001). There is a requirement to pay all unbundled storage related costs, retroactive to April 1, 2000 net of any amounts already recovered from the customer under their bundled service.

The storage costs will include space and deliverability charges from April 1, 2000. For customers that unbundle prior to the end of the injection season, the customer will be required to pay the

unbundled storage injection charges on the amount of gas transferred to its storage account. Customers who unbundle after October 31 will also be responsible for storage withdrawal costs.

The customer will receive an offsetting credit for any amounts recovered under their bundled service. This amount will be determined based on an average load profile.

The true-up for storage costs outlined above for customers wishing to elect the unbundled service during the unbundling transition period is necessary to ensure that Union is financially neutral to customers switching mid-year from a bundled to an unbundled service. This true-up mechanism is administratively burdensome and underscores why Union is not prepared to accommodate customers electing the unbundled service on a date other than April 1, except for the unbundling transition period.

1.6.3 Return to System

Union currently provides a default supply function and as such manages return to system for all bundled direct purchase arrangements. When customers are on a bundled direct purchase arrangement and customers return to system (either due to the customer or REM's initiative), Union has and continues to manage the resulting default supply function. In this circumstance (ie. bundled service), there is no allocation of storage and all remaining upstream transportation capacity assigned to customers reverts back to Union at the time customers return to system. The treatment of any gas in storage which exists at the time when bundled direct purchase customers return to system is dealt with in a predefined manner.

With the proposed unbundled services, return to system is more complex. The proposed terms and conditions associated with upstream transportation capacity assignments for the unbundled service option does not result in the upstream transportation automatically reverting back to Union at the

time of return to system. Any return of upstream transportation capacity to Union in this circumstance would require the mutual consent of both Union and the customer.

The treatment of storage in the circumstance of an unbundled customer returning to system is also different as compared to the current bundled service offerings. Under the existing bundled service, there is no allocation of storage as compared to the unbundled service where there is a specific allocation of storage capacity. Furthermore, Union proposes that unbundled storage capacity will only be reallocated/redistributed on an annual basis every April 1st.

In addition to the above, Union's TCPL turnback policy also impacts Union's management of return to system. Under the TCPL turnback policy, both bundled and unbundled service customers can turnback TCPL capacity and arrange for replacement capacity available in the secondary market. As such, when customers return to system in the future, Union will be unable to simply access the TCPL capacity assigned at the time the original direct purchase arrangement was initiated (as it has traditionally done in the past) and therefore will have to access the secondary market to acquire sufficient capacity to fulfill the default supply function for both bundled and unbundled customers.

Within the proposed unbundled service, Union is taking on the following obligations associated with customers returning to system:

a) Gas Supply (Commodity)
b) Upstream Transportation
c) Storage
d) East End Commitment Obligations

In terms of a) and b) above, these costs are similar to the costs arising from Union's existing management of return to system. However, the costs may be higher or lower as compared to the existing bundled service given that the REM is under no obligation to return the transportation

capacity to Union when customers are returned to system. The cost consequences of managing these items are currently captured in the existing gas supply related deferral accounts in both the Southern and Northern and Eastern Operations area. Moreover, these costs are generally disposed of to customers based on an understood and approved disposition methodology. The management of storage (or lack thereof) is a new exposure facing Union if unbundled customers return to system. Union has addressed this issue in part by proposing to only reallocate/redistribute unbundled storage amounts on April 1 of each year.

The management of the firm supplies at the east end of Union's system is an obligation related to return to system and is a new exposure facing Union which results from a combination of the new unbundled service and Union's TCPL turnback policy. Specifically, when customers (bundled or unbundled) return to system, Union will no longer be assured of receiving back all of the TCPL FT (Parkway) capacity originally assigned at the time the direct purchase arrangement was initiated. As such, when customers return to system, Union must arrange the default supply in a fashion which preserves the integrity of the deliverability at the east end of Union's system. Union will do this either by arranging TCPL FT capacity which provides for deliveries at Parkway or by contracting separately for a Winter Peaking Service ("WPS"). Any costs incurred by Union associated with managing the east end obligation arising from return to system will be captured in a new deferral account and be recovered from system customers.

In a situation where a customer returns to system and shortly thereafter elects the unbundled service within the same contract period, Union will continue to displace gas supply and provide a vertical slice of the portfolio at that point in time. In this circumstance, Union's proposal to only allocate storage once a year at April 1 is designed to prevent the circumstance of storage being allocated twice for the same customer. The management of storage under the unbundled service was discussed in Section 1.5 in the evidence.

In general, Union's options to manage return to system are as follows:

a) Spot supplies (Dawn delivery gas) plus WPS.
b) Firm capacity (secondary market capacity or TCPL contract).
c) Combination of a) and b).

The cost consequences of managing return to system are outlined below. However, Union's clear position is that any costs incurred to provide the default supply function and facilitate return to system should be recovered from ratepayers. The risks and challenges associated with facilitating the continued development of the market in Ontario while simultaneously maintaining the default supply function are significant. Union is prepared to proceed with unbundling as proposed, but in Union's view, there must be an explicit recognition and acknowledgement of the impacts to Union and the assurance of cost recovery.

Return To System Policy

The principal elements of Union's return to system policy, in addition to issues outlined above, have been designed to provide as much flexibility as possible (ie. to move from system to direct purchase) while balancing Union's ability to manage return to system and the associated cost implications.

Unbundled Direct Purchase

The unbundling process has created a need to re-examine the current return to system policy to address the costs and risks that may arise from consumers who unbundle and then return to system. Under the proposed unbundled service, the upstream transportation and storage assets required to serve customers either do not necessarily return to Union (ie. transportation assets) or may not immediately return to Union (ie. storage assets) should those customers return to system supply. Union, in managing the default supply function, may incur significant and unanticipated costs to

serve these customers. In particular, Union may need to purchase higher priced winter spot gas, secure additional Parkway peaking service or purchase incremental peak storage.

In Union's view, managing return to system in the context of the proposed unbundled service requires different terms and conditions from those currently in place for bundled direct purchase arrangements. Union must have sufficient the ability to access the storage necessary to serve customers returning to system and must have sufficient time to plan for and arrange the necessary supplies.

To address the return to system issues related to the new unbundled service options, Union is proposing that customers (REM's) enter into a firm one year contract for the unbundled service during which an REM is not allowed to return end use customers to system. The marketer would be responsible for all end use customers served under the unbundled contract until the expiration of the contract the following April. A REM operating under an unbundled arrangement and wishing to return customers to system will be required to provide 90 days notice prior to April 1. A customer who is returned to system in this circumstance will be required to stay on system gas for minimum term of 60 days. If an REM returns customers to system prior to the April 1 contract expiry date, this would constitute a contract default. In this circumstance, all upstream transportation and storage capacity used to serve these customers would immediately revert to Union. In addition, Union would require the ability to purchase any inventory in storage at that time which was acquired by the marketer on behalf of the end use customers served by the unbundled service. In either case, the storage capacity would return to Union to manage on behalf of those customers returning to system. This policy will apply equally to Southern and Northern customers.

Bundled Direct Purchase Customers

In the spring of 1999 Union Gas modified its return to system policy. Previously, a customer who returned to system gas was required to remain as a system customer for a minimum of twelve months. In addition, a marketer intending to move a retail consumer from system supply to a direct purchase supply option was required to give Union notice of at least 60 days, to allow Union time to process the request. Under the modified return to system policy, the customer is only required to return to system for 30 days and provided a marketer gives Union prior notice, the customer could leave system having only been back on system supply for 30 days. Given the introduction of the TCPL turnback policy, Union is no longer in the position of getting back the upstream transportation assets as it has in the past when customers return to system. As such, Union is proposing to modify the return to system policy to provide for 90 days prior notice from a marketer wishing to return customers to system and in turn, customers will be required to stay on system gas for a minimum of 60 days. These time periods are consistent with those proposed for return to system related to the unbundled service as outlined above.

Cost Recovery

Union proposes to continue to manage return to system in a manner similar to today where the costs related to return to system are captured in Union's gas supply deferral accounts and disposed of to customers according to the existing disposition methodologies. In Union's view, there is no reason to deviate from the manner in which Union manages the impacts of return to system today.

However, in the event of an 'abnormal' return to system circumstance (defined as a deferral cost impact of at least $5 per consumer and includes a marketer failure or bankruptcy), Union proposes to have the right, under the PBR mechanism, to address such circumstances through the customer review process and to the extent necessary, propose an alternate disposition methodology. While Union is hopeful that such circumstances will not arise, there should be agreement on the process

by which such a circumstance will be addressed. Union notes that if such a circumstance were to arise, Union would immediately inform the Ontario Energy Board and all parties, regardless of the timing of the next customer review process.

1.6.4 Imbalance Fees

The offering of an unbundled service provides customers with a contractual entitlement to use the assets allocated to them to meet their requirements (infranchise or exfranchise). From an operating perspective, customers will need to manage, on a daily basis, supply nominations related to upstream pipeline capacity and storage. In order to continue to manage the system efficiently, customers must manage their nominations within reasonable tolerance levels. Union is proposing imbalance fees for variances between nominated and actual amounts as outlined in Appendix J. The imbalance fees proposed are consistent with the imbalance fees currently charged by TCPL. In Union's view, it is appropriate that the imbalance fees on the TCPL and Union systems be consistent.

1.6.5 Unauthorized Storage Overrun

A key principle underpinning Union's unbundling proposal is that system integrity cannot be jeopardized. Union's system is designed and operated to ensure that all demands can be met everyday of the year. To date, Union has managed system integrity by controlling and managing the majority of supplies entering Union's system. Under firm bundled direct purchase arrangements today, supplies arrive on a firm basis, 365 days a year.

With the introduction of the proposed unbundled service, the operation of the integrated system will become more complex and difficult. Customers electing the unbundled service will have greater flexibility to manage their supplies to meet demand requirements. Consequently, Union

must have the ability, through the unbundled contract, to ensure customers operate within the unbundled service contract parameters. Union is proposing that a $100/GJ storage overrun penalty apply to all customers electing the unbundled service. This is not cost based penalty but is intended to be a punitive charge to ensure that customers do not, under any circumstance, exceed their authorized storage entitlement on a given day. Should an unbundled customer exceed their storage entitlement, particularly under peak day conditions, Union could be in a position of being unable to meet all firm demands. In Union's view, this situation must be avoided at all cost in order to preserve the integrity of Union's system.

Union notes that the unbundled service for the small volume market will rely on the demand forecast as provided by Union through the usage algorithm. As such, customers will use this forecast to manage their storage nomination and to determine any excess capacity which may be available on a given day. For the large volume market, customers are accountable for projecting their own demands and managing the nomination of their supplies.

1.6.6 Customer Impacts

Union's unbundling proposals have been developed with the objective of allowing customers to retain their current bundled services without significant cost increases. The cost of unbundled services will be customer specific and will depend upon usage characteristics (e.g. load factor) and how unbundled services are managed. Union does not anticipate material cost increases to bundled services as a result of some customers choosing unbundled services. This is dependent upon the following key assumptions:

a. Union obtains the 22 day Parkway call rights for unbundled customers and retains the existing 365 day commitments at Parkway for bundled customers.

b. Union retains the system integrity storage space as proposed.

c. Union does not incur stranded asset costs.

d. The structure of the unbundled service offering in the Northern and Eastern Operations Area remains as proposed with the continued aggregation of the assets and capacity underlying the proposed delivery/redelivery service.

e. Storage unbundling includes the transfer of the applicable inventory balances as proposed to maintain neutrality for system gas users.

f. Union's return to system policy for both bundled and unbundled customers is as proposed.

g. Union's vertical slice methodology is applied (after the effective unbundling date) to all system customers electing either a bundled direct purchase or unbundled offering.

1.6.7 Unbundling Implementation Issues

A number of systems and process changes are required to implement unbundling. Some of these require significant lead times. Systems and process changes are dependent on the final unbundling details, which are subject to OEB approval, and many of these changes cannot be completed prior to this approval. The key changes required to implement unbundling are:

a. Daily nominations

- ability for marketers and end use customers to receive daily consumption data.
- ability for Union to receive larger volume of nominations from unbundled customers.

b. Systems to track storage allocations and to adjust/redistribute storage annually (ie. April 1).

c. System to track all transportation allocations and requests for changes.

Union is currently developing a daily usage algorithm to provide an estimate of the daily consumption of residential and small commercial customers given forecast weather in multiple delivery areas. The algorithm will also be used to compute consumption based on actual weather. This daily consumption information will be provided to retail marketers to allow them to make daily nominations and load management decisions as required with the unbundled service. The daily usage algorithm prevents the need for daily metering of every end user.

At the same time Union is working on the development of a wholesale billing and information exchange system. This will support marketers having their own billing and customer care systems. Union is currently working on developing this capability in order to operationalize the unbundled service once approved. However, Union notes that the final structure of the unbundled service, in addition to the details related to issues such as customer mobility are required before the necessary system changes can be finalized. Any delays in finalizing these critical aspects of the unbundled service will impact the ability to complete the required system changes on a timely basis.

In order for retail marketers to be able to use unbundled services they must be able to bill their end-use retail customers. Union is focusing its systems change efforts on providing wholesale billing and the related information exchange (as described above).

Union notes that the existing Agency Billing and Collection ("ABC") service is a transitional service provided by Union to allow retail marketers to sell gas to end-use consumers without having their own billing capability. Union will continue to offer the existing ABC service for the current bundled services, but it will not be modified to provide the capability to extend the ABC service to the new unbundled services.

An example, illustrating at a high level, the nomination process for a U2 (general service market) unbundled customer, is found at Appendix J.

1.6.8 Unbundling of Billing

As agreed to by all stakeholders during the initial consultative sessions held by Union, Union will be addressing unbundling in two stages requiring two separate OEB applications. The first stage of unbundling as outlined in Union's application and as addressed in this evidence involves the unbundling of upstream transportation and storage. The second stage of unbundling is related to billing and it is that process that will provide for the determination of a wholesale delivery rate.

In terms of the second stage of unbundling, Union is pursuing three initiatives necessary to provide wholesale billing capability which are as follows:

1. Internal Process - Internally, Union is evaluating the existing billing function in order to isolate all processes and related costs. Union then needs to examine how the existing billing function will change to facilitate the transition to retail energy marketers having the ability to bill end use customers directly and to minimize any stranded costs.

2. External Process – The OEB has recently began discussions related to the development of a distribution access code. This process, which will involve stakeholder input, will establish access rules as required and will address issues related to parties other than the regulated utilities billing end use consumers

3. Customer Communication - Union will be working on out a customer communication plan required to inform customers, among other things, of the following:

    a. legislative changes resulting from Bill 35

    b. Union's changing role as a delivery company

    c. the ability of retail energy marketers to bill directly for the total burner tip service provided to customers (including the delivery related costs) - this communication

will need to inform customers of the potential that they will no longer receive a bill from Union and will need to "bridge" the customer communications done as part of the introduction and implementation of ABC Service.

Union is committed to working with stakeholders in developing these communications. In terms of the process associated with billing unbundling, Union anticipates following a consultative process similar to that followed for upstream transportation and storage.

1.6.9 Unbundling Implementation Timing

Union's current application addresses the unbundling of upstream transportation and storage. A separate application will be required in order to address the development of a wholesale billing rate. At this time, Union anticipates OEB approval of the unbundled upstream transportation and storage services in approximately May, 2000. However, the ability to implement and operationalize these new unbundled services is dependent on the systems and process design work related to unbundling the billing function. The proposals as outlined in this evidence will require new or enhanced systems in order to manage the daily nomination and other parameters related to the unbundled service for both the small and large volume markets. Union is currently projecting to have these systems and processes in place and operational by September 1, 2000. As such, Union is targeting September 1, 2000 to implement all unbundled services, including the wholesale billing service.

Appendix C

Exhibit B, Tab 4, including Appendix C, RP-2000-0078 - Filed as referenced in Union's Prefiled Evidence

RETAIL BILLING OPTIONS

The purpose of this evidence is to describe: 1) the billing options that Union proposes to offer that will allow Retail Energy Marketers ("REMs") to bill for the Direct Purchase ("DP") services that they provide to their gas customers, which includes maintaining an Agent, Billing and Collections ("ABC") service and providing a direct billing option so that REMs may elect to bill their customers directly for their services; and 2) the context in which this proposal is presented.

This evidence is presented in the following sub-sections:

1. Background
    a) Current Customer Care Operation
    b) REM Requests for Improved Billing Options
    c) Customer Research Summary
    d) Implications for Union's Customer Care (Billing) Function
2. Proposed Retail Billing Options For Direct Purchase Services
    a) ABC Service
    b) Direct Billing
3. Why Union Does Not Propose Marketer-consolidated Billing

1. Background

This section will outline Union's current customer care operation in serving the small volume customers, requests from REMs for improved billing options, a summary of customer research that

was completed in July 2000 relating to the billing preferences of these gas consumers, and the resulting implications for Union's customer care (billing) function drawn from this context.

a) Current Customer Care Operation

Customer care includes the functions of billing and collections, remittance processing, call handling for billing and operational purposes, and the maintenance of systems and processes that allow the provision of these services. These functions operate together in that the provider of the billing function also requires the functions of collections, remittance processing and call handling in order to support and complete the billing operation.

Union currently delivers natural gas to 1.1 million consumers in Ontario through a network of 27,640 kilometers of distribution pipelines in over 400 communities. Union has a considerable utility investment of $2.9 billion in these distribution, and related storage and transportation assets in the province.

As a result of natural gas deregulation and the availability of more choice in the retail gas market, approximately 40% of small volume natural gas consumers within Union's franchise area have elected to purchase their gas supply through an REM. The remaining 60% continue to choose Union for their gas supply needs. Union also provides a default system supply service so that DP customers can be returned to system if their REMs fail to supply or exit from the market. Although there are a number of REMs in the small volume market, three REMs are dominant and serve over 90% of the small volume direct purchase market.

Currently, all small volume gas consumers in the Union franchise area receive a consolidated monthly bill from Union for all gas related commodity, transportation and delivery charges.

Regardless of whether consumers purchase their commodity and transportation services through an REM or from Union, these charges are included on the bill from Union. The current gas bill itemizes four types of charges: commodity, transportation to Union, delivery to the customer, and a fixed monthly charge. The latter two charges are for monopoly services that are supplied by Union. Upstream transportation in the Northern and Eastern Operations area is also a service provided by Union. Conversely, the commodity charge in both operational areas, and the upstream transportation charge in the Southern Operations area may either be a Union charge, if the customer purchases these services from Union, or an REM charge if customers have a corresponding DP agreement with an REM.

Union offers an ABC service so that REMs can include their charges on Union's bill, as described above. Union remits payments each month to REMs for the gas that they deliver to Union on behalf of their gas supply customers, less the appropriate ABC service fees. Union then collects the entire bill amount from the customers for all the gas-related charges including the commodity, transportation and delivery charges.

It should be noted that this ABC service is provided to the REMs serving small volume customers only. REMs who operate in the large volume market issue their own bills directly to these customers for the services they provide.

Union operates a sophisticated customer care operation in order to support the gas distribution business. Customers rely on and are well served by the billing, collections and call handling functions. Union issues over 13 million bills annually in the small volume market and receives

and responds to approximately 1.3 million customer calls annually. Systems and processes have been continually improved to handle this high level of activity, and employees have received extensive training to develop their knowledge and skills to be able to provide the level of service demanded by customers.

The gas retail bill serves a greater purpose than simply an invoice to customers. Not only does it provide necessary information to the customers about gas usage, rates and amounts owing, but also is a main conduit of other information to customers. The types of information that Union includes in the bills by way of bill inserts or messages include rate notifications, industry restructuring announcements and explanations, safety tips and required actions, energy efficiency promotions, natural gas equipment and maintenance services, and community and charity event announcements. Bill inserts are Union's *best way* to communicate these important messages. A listing of bill inserts sent with the bills, and bill messages included on the bills from the January 1999 through September 2000 period are included at Appendix A and Appendix B, respectively. Copies of the bill inserts are available in the Board's library.

The gas retail billing service is also an important aspect of the total gas service that customers receive from Union, as it is the one tangible feature of the service that small volume customers can see and respond to each month. To a significant extent, customers evaluate the level of service that they receive from Union, and perhaps the industry in general, on the billing service that they experience each month. That is, the retail bill is a manifestation of the service relationship that Union has with each of its customers.

b) REM Requests for Improved Billing Options

REMs who operate within Union's franchise area have expressed a continued interest in an ABC service so that consumers can continue to receive a consolidated utility bill for all gas supply and delivery charges. REMs have used this service to-date in the small volume market and have not developed the capability to bill and collect from their customers directly for the gas supply services. Hence, the ABC service is desired until such time as other billing alternatives are developed. It is conceivable that some REMs will choose the ABC service indefinitely to bill for their services so that they can avoid the need to undertake this function themselves. Some REMs have suggested improvements to the current ABC service, including the capability to bill for unbundled DP services.

Some REMs have also requested the option to bill their customers directly rather than use the ABC service. In these cases, the REMs have suggested a marketer-consolidated bill where consumers could continue to receive one bill for their gas services but this bill would be sent by the REM rather than by Union. They suggest that participating REMs would bill their customers for all of their gas-related services, while Union would continue to bill system customers and customers of REMs that continued to take Union's ABC Service. Union would also need to be prepared to bill customers who returned to system supply from a DP service.

c) Customer Research Summary

With the knowledge that customers have a strong interest in the billing of their gas service, and with the desire to consider customers' views in the consideration of retail billing options, Union undertook a residential customer research study in July 2000 to directly solicit

customers' preferences in three billing options: utility-consolidated (Union issues one bill for all the gas-related services), marketer-consolidated (the REM issues one bill for all the gas-related services), and direct bills (the bill is "direct" as both Union and the REM issue bills for the services that they provide, hence two bills are sent). Union also inquired about the customers' perceived value in using Union and the bill as important sources of information about the industry. The study involved both system and DP customers, and responses were tallied for each group individually, and combined. System customers were asked to envision themselves as DP customers, and then like the DP customers, were asked which of the billing options they would prefer. Union felt it was important to include these system customers as well as the DP customers in the study as decisions being made now regarding billing options would affect their choices in the future as they continue to make gas supply decisions.

An independent marketing research firm, Canadian Facts, designed, implemented and reported on the study for Union. The complete report including the objectives, methodology, executive summary, general summary, and questionnaire is contained at Appendix C.

The conclusions of the study include:

- Overall, customers prefer a single utility-consolidated bill by a large margin. Reasons given for this opinion largely reflect their familiarity and trust in Union and past good service experiences.
- The inclusion of other REM charges for products and services such as electricity or long distance telephone on their bills does not substantially change customers' opinions. They still strongly prefer a single bill from Union.

- Although customers state that they prefer one bill (i.e. consolidated) for all of their gas services as opposed to direct bills from Union and their REM, given the choice of a marketer-consolidated bill versus direct bills, no preference was discernible (within the margin of error) between these two options. DP customers were slightly more in favour of the marketer-consolidated bill than the system customers. Overall, however, direct bills should be seen as an equally preferred second choice of billing options to the marketer-consolidated bill.
- Supporting this finding, customers were asked how strongly they agreed/disagreed with the statement "*I prefer to receive a separate bill from each company I deal with*". Overwhelmingly, 70% of customers agreed strongly with this statement while only 5% disagreed strongly. It seems that generally customers are not opposed to separate bills from each service provider. Their earlier preference for a consolidated gas bill may reflect the past success of this bill type from Union, and their desire to "continue what works".
- Customers do not perceive there to be excessive information on the bill, and indicate that they look at more than just the amount owing on the bill.
- Union is the preferred source of gas industry information. Furthermore, the gas bill (or an insert with the bill) is seen to be a good way to receive such information. These findings support Union's experience that bills provide not simply an invoice, but also an effective delivery of information that customers want from Union. These findings are also consistent with customer research conducted in July 1999 and filed in RP-1999-0017, Exhibit C3.77.
- In an attempt to better understand what may be influencing customers' responses to the various questions, customers were asked whether or not they had experienced problems

with an REM or Union. 23% of customers had experienced problems with an REM while 5% had experienced problems with Union.

d) Implications for Union's Customer Care (Billing) Function

The implications drawn from all of the above, relative to this Application, are as follows:

- Union has a large investment at stake in the small volume gas delivery business. Utilization of the delivery assets is of greatest concern to Union and its shareholders, and will contribute to ensuring reasonable rates for all users. The direct retail relationship, and customer care function, is an important tool to affect the satisfaction with gas and its use.
- The gas market will experience greater competition in the future from other energy sources, primarily electricity. It will be increasingly important to market gas against these competing sources. The gas distributor has the primary bias for natural gas use by customers, and it cannot afford to relinquish this role to any other party, as other parties' products are mixed and may compete against Union's interest.
- Customer care is an important service to customers. Moreover, Union's infrastructure to supply this service is significant, has been developed and enhanced over a number of years, and could not easily be replicated.
- Billing for system customers will continue to be a large commitment of Union for some time as the majority of customers, over 600,000 in number, continue to choose system supply.
- The ABC service has been well accepted by DP customers and is the customers' preferred billing option. Further enhancements will respond to REMs' requests and will streamline the processes for all — REMs, Union and DP customers.

- REMs' request to take on the customer care function demonstrates their view that the retail customer relationship has commercial value. Union does not wish to deny the REMs the ability to establish this value with respect to the services they offer, but also recognizes that this value needs to be maintained within Union as well. Direct billing would accomplish this goal, and would be equally satisfying to customers as marketer-consolidated billing.

2. <u>Proposed Retail Billing Options for Direct Purchase Service</u>

Union proposes to support two billing options that would allow an REM to collect from its customers all of its gas-related services. These two billing options include ABC service and direct billing. Each is described below.

a) <u>ABC Service</u>

Union proposes to continue offering an ABC service where REM charges are included on Union's bills, including unbundled storage services as well as commodity and transportation charges, where applicable.

Union continues to work with the REM community and other stakeholders to improve and expand the ABC service to increase the value to customers, REMs and Union. Union is currently considering offering additional service features such as messaging capability, REM logos, and line items on the bills for REMs to access and enhance their bill presence. The costs for these service enhancements would be recovered directly from REMs through the ABC fee, and would only be incurred after consultation with REMs to assess the demand and benefits of such enhancements.

As identified in the customer research, the ABC service is the customers' much preferred billing option as customers state that they prefer to receive a single bill from Union for all of their gas services. The ABC service also provides a valued and convenient service to REMs who may not wish to undertake the substantial responsibility and risks of direct billing themselves.

b) Direct Billing

Union proposes to develop processes that would allow REMs the option to issue bills directly to their customers for the gas-related services that they provide. Since Union would continue to issue a bill to these customers for its delivery charges, customers would receive two bills for their gas-related services.

To accommodate direct billing, Union will provide to the REMs the monthly consumption data, presented in cubic meters, for each of their customers. The information would be transferred electronically upon the completion of each daily meter reading cycle using the Internet-based customer information exchange described in Exhibit B, Tab 2.

The proposed one-time costs required to establish the daily transfer of consumption data is $0.7 million. This is an incremental cost to the process and system changes described in Exhibit B, Tab 2. Union proposes to record these costs in the Incremental Unbundling Costs deferral account for recovery from customers. Further details regarding the deferral account are provided at Exhibit B, Tab 6.

The direct billing option provides REMs direct contact with customers to develop a stronger retail relationship. REMs may exercise their creativity in their billing offering, and may bring unique solutions, new products and competitiveness to the market.

Likewise, the direct billing option also allows Union to maintain its direct relationship with its customers. Through its bills, Union is able to demonstrate good customer service, and continue to foster the positive relationships that Union has built over many years for the gas industry. Union is also able to communicate the benefits of natural gas and promote safe, efficient use of gas through the bill inserts. Union would maintain responsibility for its delivery bills, just as some REMs would gain responsibility for their gas supply bills in the small volume market.

In addition, direct billing is cost effective. Given Union's role in the provision and maintenance of a safe and reliable gas delivery system for gas consumers in its franchise area, Union requires and maintains a comprehensive customer information system. Under any billing scenario, this system must be maintained, and is included in the delivery costs that are shared by all gas consumers. Union also requires that this system be capable of maintaining detailed customer information for billing and credit reasons given its role as a default supplier in the market. With over 600,000 system customers, Union has a substantial billing responsibility as a full service gas provider. Regardless of any billing option pursued for DP customers, Union's billing role for system customers will continue.

REMs will have an option to bill for their services directly rather than subscribe to the

traditional ABC service. In so doing, they would thereby incur a reduced monthly ABC fee (i.e. excluding billing and bad debt costs). Presumably, REMs would do this if they found greater value in a direct billing solution -- either due to a lower price or other benefits.

3. Why Union Does Not Propose Marketer-Consolidated Billing

Marketer-consolidated billing option acceptance would fundamentally alter the relationship between Union and its customers in a way that has potentially significant adverse financial consequences for both Union and its customers. Apart from the impediments to marketer-consolidated billing arising from the *Ontario Energy Board Act, 1998*, Union does not propose to facilitate marketer-consolidated billing for several reasons. Each of these reasons are described below:

a) Managing Asset Utilization Risk

Union has invested over $2.9 billion in natural gas transmission, storage and distribution facilities in Ontario. Union's ability to recover its costs and earn a reasonable return on this significant investment depends on the use of natural gas by consumers. This is especially true given the high proportion of revenue recovered through volumetric charges as opposed to demand or monthly fixed charges. New appliances and homes are being produced with increasing energy efficiency. As a result, the average use of the typical residential or commercial consumer is declining. From 1986 to 1996 the average annual use of natural gas per small volume customer declined at an annual rate of 1%. More recently, Union has seen this declining trend accelerate. Consequently, Union continually needs to promote the efficient use of natural gas to existing and potential customers so that natural gas remains the preferred

energy choice and the number of gas applications is increased. Although Union's facilities enjoy a high level of natural gas utilization today, this does not mean that Union can take for granted that utilization will remain high. As the existing stock of natural gas equipment ages and is replaced, consumers have the opportunity to assess whether they should continue to use natural gas or choose an alternate energy choice such as electricity. Equipment such as water heaters, ranges and clothes dryers can be replaced relatively easily by electric equipment when the natural gas equipment reaches the end of its useful life. Without the constant promotion of gas, through the most effective channels, Union risks declining utilization of its existing gas facilities, which immediately reduces the Company's profitability, and would eventually result in higher rates for gas consumers.

As identified earlier, customers view the natural gas bill as a valued and useful means of obtaining information about natural gas. Union uses this communication channel to its retail distribution customers to reinforce the positive attributes of natural gas. With marketer-consolidated billing, Union would not be able to assume that REMs would promote natural gas with its bills to the degree Union requires, yet Union would have lost the ability to communicate monthly with consumers through the most effective communication channel.

Although REMs have an interest in selling natural gas today, ultimately many will be selling both gas and electricity. In fact, some REMs are currently signing-up customers for electricity supply services in addition to the gas supply services. REMs do not have a sizable facilities investment in Ontario dependant upon natural gas sales. If utilization of Union's facilities declines, REMs would not be adversely impacted nearly to the extent that Union would, and

therefore the REMs do not have the same interest in ensuring that Union's facilities are used to the greatest extent possible.

Union has established goodwill with customers through years of hard work and exemplary service. Union relies on this goodwill to strengthen the customer relationship and encourage greater use of gas. Marketer-consolidated billing would deprive Union of the best use of this goodwill; that is, the goodwill earned by Union in providing distribution service would be transferred to a large extent to the provider of the gas bill, and the future provision of exemplary service would also be attributed to the strengthening of the goodwill REMs will have with consumers. As REMs will sell a mix of services in the future, this goodwill, earned within the gas industry, will be transferred to these other products, very possibly including competing energy sources such as electricity.

b) Municipal Franchise Relations

Union's ability to continue to deliver natural gas is dependent upon securing and maintaining franchise agreements with the municipalities in which it operates. These agreements with municipalities periodically require renewal. Smooth renewals will be impacted by the quality of service provided by Union and Union's ability to work harmoniously with municipal officials and community members. While Union's positive interactions with municipal officials will aid in the renewal of franchises, consumers' knowledge of the role Union plays in the community also plays a part in influencing municipal officials (who are accountable to the citizens) that franchises should be renewed. The provision of a monthly bill, together with the other information Union provides with the bill, help to ensure that citizens are continually

aware of the benefit of having Union in their communities. With marketer-consolidated billing, Union will risk becoming invisible to the consumer. Union does not want to lose its most important communication channel as a means of assistance in securing franchise renewals.

This is especially of concern to Union as the municipalities with which it negotiates franchise agreement renewals are also in many cases competitors through ownership of Municipal Electricity Utilities (MEUs). These MEUs and their energy marketing affiliates have an interest in increasing electricity sales even if it comes at the expense of natural gas consumption. By maintaining a strong connection to the consumers in the community, Union can help ensure that municipalities consider the benefits Union brings to the community, even in the face of the municipalities' interest in growing their MEU and MEU affiliates.

c) Value of Company and Cost of Capital

Union competes for debt and equity capital in the Canadian capital markets. These markets direct capital, on the most favourable terms, to the best investment opportunities in terms of risk and return.

In recent years, the Canadian energy utility industry has been perceived by investors to be increasing in risk while at the same the returns available from these investments have been declining.

Some of the attractiveness of investing in a utility is being eroded as fewer variables in the business equation are covered under the regulatory system and more are subject to market forces and circumstances that are further from the control of the utility. While some of these

changes are positive in that they will lead to greater choice and competitive pricing for consumers, others, such as marketer-consolidated billing, may add little or no benefit to consumers while meaningfully impacting the ability of the utility to influence the ultimate user of its service.

Investors would perceive that a diminished ability on the part of the utility to communicate, in an official capacity, on a regular basis with consumers who use gas, would increase the risk associated with that investment. A further shift in the risk/return equation would adversely impact the utilities' cost of and accessibility to capital. This adverse impact on the cost and availability of capital would ultimately adversely affect Union’s customers through reflection in distribution rates and in constraints on system expansion, which limit the availability of service to prospective customers in Ontario.

The financial community perceives value in the utilities' ability to influence the consumer relationship as a means for managing usage risk and to support growth as well as a means for diversifying the credit risk. The ability to communicate officially, on a frequent basis, has value. At the very least, investors would expect that the shareholders of Union and Westcoast Energy would be compensated for the loss of this value in the event that it is removed under a marketer-consolidated billing system.

Given the large proportion of Union's contribution to Westcoast Energy's total earnings, a shift in investor perception of the risk and value associated with Union would likely impact on the valuation of the parent company resulting in its shareholders, most of whom are Ontario residents, suffering a negative financial impact.

d) Other Impediments to Marketer-Consolidated Billing

The following issues also cause concern for Union when considering the marketer-consolidated billing option. Notwithstanding that Union recognizes that these issues could be managed to some extent to lessen their impact, they continue to represent significant impediments to Union's acceptance of a marketer-consolidated billing option.

i) Public Safety

Union has a legal and public interest obligation to operate its natural gas distribution system in a manner that ensures public safety. Part of ensuring the safety of the public is keeping the public informed about how natural gas can be used in a safe manner. To this end, Union regularly sends information through bill inserts (Appendix A) on safety issues such as:

1. identifying natural gas odours and what to do when a customer smells gas;
2. what to do before excavating (call before you dig); and
3. the need to avoid ice and snow build ups around gas meters.

As Union's customer preference research shows, consumers consider the gas bill and the information sent with it to be important sources of information about the natural gas product and the natural gas industry. Union does not want to lose this effective vehicle to communicate important safety messages to its retail distribution customers.

ii) Credit Risk

Marketer-consolidated billing represents a significantly higher credit risk for Union in collecting its revenue. This is because Union would lose the benefit of risk diversification by having much smaller amounts owing from many different customers, and instead, would be obligated to collect large amounts from a limited number of high-risk counter parties. Although Union would endeavor to manage this higher risk to some extent through prudential securities from REMs, and possibly customers, the exposure to bad debt would increase, potentially very significantly. This higher risk would be reflected in higher costs to gas consumers and a higher risk profile to Union's shareholders.

iii) Confusion in the Energy Market

Significant changes are now occurring in the energy marketplace in Ontario. Consumers are currently dealing with the changes in the corporate structure of MEUs. The MEUs are dealing with incorporating and separating out their energy marketing functions from their distribution functions. Competition in the supply of electric energy is to be introduced in 2001, which will require consumers to become informed about alternative electricity suppliers and about competitive electricity supply markets.

In the natural gas industry, REMs will be adding storage to the services that they may use to tailor their product offerings, further differentiating themselves from Union's system offer and from the offerings of other REMs.

All of this amounts to a significant amount of change for energy consumers to absorb. Union considers it inadvisable to require consumers to become informed of and adapt to a new natural gas billing relationship while these changes are occurring.

iv) Customer Preference

Finally, as shown by the consumer preference research in Appendix C, retail consumers prefer Union to provide their natural gas distribution bill consolidated with charges for the commodity. This preference is similarly prevalent for both customers that purchase their commodity from Union and those that purchase the commodity from an REM. Although, in theory, customers would not be forced to choose the marketer-consolidated billing option, the practical manifestation of the process would be that, in order to take advantage of the retail offerings of REMs, the offerings may also require the consumers to select a marketer-consolidated bill.

Conclusion

Given the above reasons, Union considers it essential to maintain a billing relationship with its retail distribution customers. However, Union also acknowledges that some REMs wish to develop a direct relationship with their small volume customers. It is for this reason that Union proposes in this Application to facilitate the direct billing by REMs of the services provided by the REM to the consumer. Union considers that REMs should have the right to bill directly for their services, just as Union should have the right to bill for the services that it provides.

Appendix C – Document headed “Report Billing Preference, August 2000” in not available electronically from Union Gas.

Appendix D

Exhibit B, Tab 6 Addendum, pp. 1-6, Appendix A (5 pages), Appendix B - RP-2000-0017 - Filed as referenced in Union's Prefiled Evidence

6.0 OTHER APPROVALS / EXEMPTIONS

6.3 APPROVAL TO CONTINUE NGV, ABC, AND GAS MOLECULE SALES ACTIVITIES

The purpose of this evidence is to seek the Board's approval to continue to operate the NGV business within Union and to continue to provide Union's Agency Billing and Collection ("ABC") service to retail energy marketers ("REMs") and the sale of gas molecules to consumers. The background and details supporting this request are provided below.

Background

Union has provided a number of Undertakings to the Ontario government containing certain parameters within which the company operates. These parameters include the business activities that the company carries out. On December 9, 1998, these Undertakings were amended.

Section 2.0 of the amended Undertakings indicates that "Union shall not, except through an affiliate or affiliates, carry on any business activity other than the transmission, distribution or storage of gas, without the prior approval of the Board."

At paragraph 2.4.5 of its E.B.R.O. 499 Decision with Reasons, the Board directed Union to formally request the Board's approval to carry out such activities from April 1, 1999 to the end of fiscal 1999. The Board also directed Union to seek the Board's direction regarding the long-term operation of these businesses prior to fiscal 2000.

In response to the first directive, Union submitted a request dated February 5, 1999 to continue to operate its NGV business within Union, to continue to provide Union's Agency Billing and Collection ("ABC") service to retail energy marketers ("REMs"), and to continue the sale of gas molecules to consumers. The Board provided approval to December 31, 1999 by letter dated February 18, 1999.

By letter dated December 9, 1999, Union requested the Board's approval to continue to provide these services for an indefinite period beyond December 31, 1999. This letter outlined the general reasoning behind Union's request for an indefinite period. The Board assigned file number EB-1999-0522 to Union's request. A copy of this letter has been provided at Appendix A.

By letter dated December 23, 1999, the Board approved the inclusion of these business activities within Union for the January 1, 2000 to August 31, 2000 period and indicated that it expected Union to filed evidence concerning the long term plan for these activities in the RP-1999-0017 rates proceeding. A copy of this letter has been provided at Appendix B.

Union notes that the Board issued, on November 15, 1999, an interpretation guideline for the electricity industry on what constitutes distribution activities. In determining whether an activity is

a distribution service, the guideline considers whether the activity is essential to enable the conveyance of the energy, and whether an activity's predominant use is for the provision of distribution services. Union submits that such principles should also be considered in assessing the distribution activities of the natural gas industry so that the gas and electric industries do not gain any undue advantage from the form of regulation to which they are subject.

Long-Term Plan

Union's proposals with respect to the long-term operation of these businesses are provided below. In general, Union proposes to continue to carry out the above activities within the company for the foreseeable future.

a) NGV

Union's revised NGV business plan was submitted in E.B.R.O. 499. The NGV program was restructured in response to the emergence of competition in some aspects of the business and a shift to fully allocated costing of the program. Under this plan, Union no longer invests in the competitive areas of the business. Instead, the competitive sector operates those aspects while Union continues to operate the aspects for which the competitive market has not developed.

In the E.B.R.O. 499 ADR agreement, the parties agreed to an adjustment to Union's 1999 forecast in order to increase the NGV program's return, on a fully allocated basis, to the overall utility return. As such, ratepayers are not subsidizing the NGV program in Union.

Consistent with the business plan brought forward in E.B.R.O. 499, Union proposes to continue to operate the NGV program within the company until a competitive market develops for those remaining aspects currently carried out by Union. It is Union's view that this approach is appropriate as it will ensure that the social benefits of NGV continue to be provided without impacting distribution rates. Further, without the aspects of the NGV business provided by Union, natural gas customers using NGV would not be able to continue taking natural gas service for NGV. Union is on track with its plan filed in E.B.R.O. 499. In 1999 Union exited, as planned, the retail NGV conversion sales business in favor of competitive service providers. Union is also looking at other alternatives to reorganizing the NGV business in combination with other entities who have similar interests, and will report to the Board if any of these alternatives turn out to be viable and will be pursued.

b) ABC Service and Molecule Sales

In E.B.R.O. 493/494, the Board approved Union's proposal for an Agency Billing and Collection ("ABC") service to enable REMs to bill their customers directly through Union. ABC service provides an avenue for end-use customers to elect to have their gas commodity provided by an REM. This service is used to bill approximately 400,000 end-use consumers who have contracted for direct purchase arrangements and is obviously a service which is valued by both the end-use consumer and the REM.

The current application for the unbundling of Union's upstream transportation and storage services is another step in the further evolution of the marketplace for competitive gas services. With the

introduction of these services and wholesale billing, the marketplace should develop further and direct purchase activity should increase. It is unknown, however, how quickly REMs will acquire the capability to bill end-use consumers and attract Union's remaining system customers. As a result, Union is unable to provide a specific long-term transition plan for the ABC service.

With respect to gas molecule sales, the OEB Act contemplates gas distributors providing this service. Section 36(1) references the need for an order to sell gas and section 48(3) exempts distributors from the need to obtain a gas marketer's license if acting in accordance with an order from the Board. Union has this approval by virtue of its rate orders. In addition, the Board is in the process of establishing a task force for the development of a gas utility access rule that also contemplates distributors providing a Standard Service Offering, or default supply function.

Approximately 650,000 end-use consumers remain on system gas and continue to want this service. It is Union's policy not to force customers off system gas.

Given the above, Union will need to continue to provide ABC service to REMs and sell gas molecules to end-use consumers for the foreseeable future. Accordingly, Union proposes to continue to provide these services from within Union until REMs have attracted substantially all of Union's

December 9, 1999

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

Attention: Mr. Paul Pudge, Board Secretary

RE: Approval of Business Activities Other than Distribution, Transmission, and Storage of Gas

Dear Mr. Pudge:

On February 5, 1999 Union sought approval, pursuant to the Undertakings Union has made to the provincial government, and pursuant to a direction at paragraph 2.4.5 of the Board's E.B.R.O. 499 Decision, to carry out certain business activities. These activities were:

- ABC Service;
- the NGV program;
- and gas sales service (i.e. the merchant function).

On February 18, 1999 the OEB notified Union that it had approved Union's involvement in these business functions for one year and directed Union to file a long-term plan for the above business activities before the end of fiscal 1999.

Copies of the correspondence requesting the approval and the OEB's approval are attached for reference.

This letter is to seek additional approvals as may be necessary to continue to engage in these business activities for an indefinite period beyond December 31, 1999. Union views these approvals as appropriate based on the following.

ABC SERVICE AND GAS SALES SERVICE

In providing distribution service there are related services that are necessary for, and facilitate the provision of, the distribution service. These related services may or may not be regulated services. Union submits that ABC service and gas sales service fall into this category of related services.

The provision of ABC service facilitates Union's distribution service to customers that elect to be served by Retail Energy Marketers (REMs). Currently REMs do not have billing capabilities so this service allows

distribution customers access to competitive energy suppliers consistent with government policy and OEB regulation.

The provision of natural gas supply also facilitates the distribution service. Without Union providing a supply service, distribution customers that do not sign with an REM would have no gas for Union to distribute to them. Union provides the gas supply service because customers want Union to provide this service. It is Union's intention to provide this service option as long as customers want it. In any event, the rates at which gas supply service is provided by Union are approved by the OEB; therefore, implicit in approval of the rate should be approval to offer the service.

NGV SERVICE

The OEB reviewed Union's NGV business through E.B.R.O. 499. In that proceeding Union provided its plans for the business and described the benefits of the program as cleaner air emissions and reduced costs for customers using NGV. Additionally the program was included in Union's cost of service with revenue forecast to achieve Union's allowed return on a fully allocated cost basis. Therefore distribution customers are left indifferent to the actual performance of the program. Union's plans continue to be to remove itself from those aspects of the NGV market, which the competitive non-regulated sector enters sufficiently to allow Union's withdrawal. Until then, it is Union's view that approval to engage in this business is appropriate given the benefits of the program and the fact that it has no impact on distribution rates.

REQUESTED TERM OF APPROVAL

Union is requesting approval to offer ABC service and gas supply service for an indefinite period.

The indefinite period is requested for gas sales service because a significant portion of customers have not yet elected to take service from REMs. Approximately 664,000 customers are served on system gas supply. This number has remained relatively stable for about two years and shows no signs at this time of declining. Union will need to offer gas supply service until the REMs are successful in attracting these system supply customers to their service offerings.

The indefinite period for ABC service is requested because REMs are currently unable to bill their customers directly for gas sales service. Union has invited the REMs to work with Union to determine their information and process needs for facilitating billing by REMs. Union has already had discussions with some REMs concerning this issue and progress is being made. Union is working on unbundling proposals for its customer billing function so that REMs can assume the billing function when ready. Union expects to file an application to deal with this issue next year. However, not all REMs will be capable of assuming responsibility for billing their customers immediately and Union will have to maintain its ABC service until all or substantially all REMs are ready.

An indefinite period for NGV service is requested, as Union will need to be in this business until the competitive unregulated sector enters the market sufficiently to allow Union to withdraw.

LONG TERM BUSINESS PLANS

Union considers ABC service a transitional service; necessary until the REMs are capable of billing and no longer require Union to bill for them. Union is not planning to further develop ABC service. Union has previously stated that it would not invest to expand ABC service capabilities because this service will not be needed once REMs produce their own bills. Union's efforts over the past year have been, and continue to be, focused on developing its unbundling proposals so that Union will be capable of facilitating REM billing when the REMs are ready. Once all of Union's unbundling proposals have been reviewed and approved, Union will be better able to assess of how quickly REMs will take the new services. Union will then be better able to assess how much longer it will need to offer ABC service. In Union's view the development of a business plan for this service would benefit from waiting until the unbundled services are approved and REMs have indicated their plans.

Union also considers the provision of gas supply to be a transitional service. The utility will need to provide supply until REMs are successful in attracting substantially all customers away from system supply. As with ABC service, Union has no plans to develop this business, as that would compete with the competitive market providers. Instead Union will continue to provide a high quality default option for customers as long as a significant number of customers do not choose an REM. Union is unable to offer a long term plan for this business because the duration and size of this business is dependent upon how quickly the REMs attract the remaining system gas customers.

Union filed its 1997 – 2001 business plans in E.B.R.O. 499, Exhibit C1, Tab 5.

If you require any additional information concerning this matter please call me at (519) 436-4515.

Yours truly,

Marcel Reghelini
Manager, Regulatory Affairs

attach.

REMAINING 3 LETTERS ARE NOT AVAILABLE IN ELECTRONIC FORMAT, THEY WILL BE FAXED UPON REQUEST.

Appendix E

To: Direct Energy Marketing Limited (the "Agent")

I agree to participate in the TrueRate® Price Protection Program and hereby appoint the Agent as my sole and exclusive agent and supplier for all purposes relating to arranging natural gas supply and transportation (including volume balancing, purchasing and billing) from any source on my behalf for 5 years from the date that deliveries of natural gas commence under this agreement which is expected to occur within 90 days from the date the application is executed. The price I pay the Agent for my natural gas delivered to the Alberta/Saskatchewan border will be 5 year fixed price at 25.6 cents/m3 plus approx 3.3 cents for admin and fuel charges on Direct Energy's True Rate Plan. The Utility is entitled to rely on any document executed by the Agent in connection with this agreement as though such document had been executed by me. Provided that I receive an advance written notice of the renewal no more than 120 days before the date of renewal, and I have at least 30 days from the receipt of such notice and prior to the date of renewal to cancel the renewal, the Agent has the right to renew this contract for successive 5 year terms on the same terms, or for successive 1 year terms on changed terms.

My monthly bill will reflect the utility's charges for distribution, meter reading and other services, and the Agent's charge for gas, transportation and applicable charges for billing and all services related to the Agent's supply of gas. The Agent has the right to change to a different billing system whereby the Agent, rather than the Utility, bills me for all costs of delivering gas to me, provided that I incur no additional costs as a result of such a change. In the event of non-payment by me, the Agent has the right to terminate this agreement.

The Agent will not disclose any information pertaining to this agreement to a third party except where such information is required to be disclosed. No authorization given to a Utility for the disclosure of information concerning me to any person other than the Agent or me will be effective unless accompanied by the written consent of the Agent. I authorize the Agent to receive gas consumption and other data with respect to my account from the Utility.

I acknowledge that the TrueRate® Program Protection Program is being offered by the Agent, who is not a regulated distributor. This agreement may be assigned by the Agent to another licensed marketer.

I may cancel this agreement, without penalty or obligation, within 10 days from the Enrollment Date by personally delivering, or mailing by registered mail, or by facsimile transmission a written notice of cancellation to the Agent at 25 Sheppard Avenue West, Suite 1400, Toronto, M2N 6S6, Attention: Supervisor, Contract Administration, facsimile number 416-221-4948 or toll free 1-877-259-3513. Any inquiry or complaint I may have concerning this agreement can be communicated to the Agent in the foregoing manner or by telephoning 416-221-9710 or toll free 1-800-348-2999 or, if the applicant is unable to resolve the applicant's complaint with the Wholesaler, the applicant can telephone the Ontario Energy Board (OEB) at 416-314-2455 or toll free at 1-877-632-2727 and request that the OEB inform the Applicant of the applicable dispute resolution process.

Appendix F

Letter of R. Schwindt dated February 23, 2001

SIMON FRASER UNIVERSITY

Professor Richard Schwindt
Department of Economics
Burnaby, British Columbia
Canada, V5A 1S6

February 23, 2001

Mr. Marcel Reghelini
Regulatory Affairs
Union Gas Limited
50 Keil Drive
Chatham, Ontario, N7M 5M1

Dear Mr. Reghelini,

You have asked me to identify the potential economic impacts of section 8.3 of the February 6, 2001, "Proposed Gas Distribution Access Rule." Section 8.3 allows for the introduction of gas vendor consolidated billing and split billing. My understanding is that at present Union Gas provides consolidated billing for all retail gas customers (as opposed to high volume industrial customers) within its franchise. In my opinion there are at least two, potentially significant, cost impacts of this regulatory initiative.

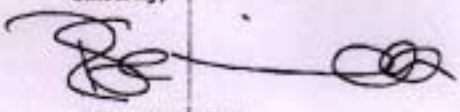
First, if the major gas vendors choose to provide consolidated billing this will result in a substantial reduction in Union Gas' billing activity. Given that there are scale economies in the billing function, this reduction in volume will increase per unit costs that ultimately will be passed on to customers. It should be noted that distributor provided billing service has facilitated the entry of marketers in that they have been spared significant investments in billing capabilities. To the extent that the distributors pass on cost increases to vendors opting for ABC-T service, this will impede new entry.

Second, since the distributor will remain the "backstop" provider of both the gas commodity and the billing service it will have to maintain slack capacity in the billing function in order to accommodate any substantial returns to the system. This is different from the distributor's role as a backstop commodity supplier in that the distributor need not maintain inventories of the commodity in order to discharge that responsibility. In the event that a vendor fails to supply its customers with the commodity, the distributor can access gas markets for the commodity, and use extant transportation capacity. However,

if the vendor was providing its customers with a billing service, the distributor must be prepared to supplant this. Some elements of the billing service, in particular the call centre function, cannot be quickly expanded. In the result, the distributor is put in the position of maintaining slack billing capacity in order to satisfy its backstop obligations. This raises the distributor's costs and is inefficient in the sense that duplicative capacity is being maintained (i.e., both the distributor and the vendor maintain billing capacity).

To my knowledge there has been no systematic analysis of the cost impacts of the proposed distribution access rule. Moreover, I have seen no study of the effects of the proposed changes in the billing options upon competition in the industry. For example, while the changes might advantage incumbent vendors *vis a vis* the relevant distributor, their effect upon potential new entrants is not clear. In my view, analysis of both the potential cost and competitive impacts of these rule changes should be undertaken before they are implemented.

Sincerely,



Richard Schwindt

RS/wa

August 2000

CURRICULUM VITAE

Richard Schwindt

Office: Department of Economics and
Faculty of Business Administration
Simon Fraser University
Burnaby, British Columbia
Canada, V5A 1S6
Telephone (604) 291-4166
Email: schwindt@sfu.ca

Home: 4989 Ross Road
Mt. Lehman, British Columbia
Canada, V4X 1Z3
Telephone (604) 856-2145
Facsimile (604) 856-1833

Education: A.B. 1967 (Economics, with distinction)
University of California, Berkeley

Ph.D. 1973 (Economics) University of California, Berkeley--Specializations:
Industrial Organization, Antitrust Policy
Thesis Supervisor: Joe S. Bain Jr.

Honors, Awards, Grants:

-Phi Beta Kappa (1967)
-Special Career Fellow, Berkeley (1967-1971)
-Graduate In-Trust Award, Berkeley (1971-1972)
-President's Research Grant, Simon Fraser University (1974 and 1978)
-Canada Council Research Grant (1978)
-Max Bell Foundation Research Grant (1983-1984)
-Research Fellow, University of Tromso and Norwegian School of Economics and Business Administration (1986)
-Excellence in Teaching Award, Simon Fraser University (1991)
-Listed in *Canadian Who's Who*

Teaching Interests:

Industrial Organization
Antitrust Policy
Business, Government and Society
Business Strategy

Employment:

-Instructor, then Assistant Professor, then Associate Professor, Department of Economics and Faculty of Business Administration, Simon Fraser University (1972-present)
-Commissioner, Province of British Columbia, Resources Compensation Commission (1992)

Publications:

A. Books, Monographs, Technical Studies:

Chopping Up the Money Tree: Distributing the Wealth from British Columbia's Forests, with T. Heaps (Vancouver: David Suzuki Foundation, 1996).

Market Solutions for Native Poverty, with H. Drost and B. Crowley (Toronto: C.D. Howe Institute, 1995).

Business Administration Reading Lists and Course Outlines, editor, fourth edition, 20 volumes (Duke Station, NC: Eno River Press, 1995)

Report of the Commission of Inquiry into Compensation for the Taking of Resource Interests (Victoria, B.C.: Queen's Printer, 1992) R. Schwindt, sole Commissioner

Business Administration Reading Lists and Course Outlines, editor, third edition, 14 volumes (Duke Station, NC: Eno River Press, 1991)

An Analysis of Vertical Integration and Diversification Strategies in the Canadian Forest Sector, Research Monograph (Vancouver: Forest Economics and Policy Analysis Project, University of British Columbia, 1985) 79 pages

Business Administration Reading Lists and Course Outlines, co-edited with James W. Dean, second edition, 12 volumes (Duke Station, NC: Eno River Press, 1985)

Industrial Organization of the Pacific Fisheries, Research Monograph (Vancouver: Commission on Pacific Fisheries Policy, 1981) 220 pages

Business Administration Reading Lists and Course Outlines, co-edited with James W. Dean, first edition, 14 volumes (Duke Station, NC: Eno River Press, 1981)

The Existence and Exercise of Corporate Power - A Case Study of MacMillan Bloedel Limited, Study 15 (Ottawa: Royal Commission on Corporate Concentration, 1977)

The Real Cost of the British Columbia Milk Board, with H. Grubel, (Vancouver: Fraser Institute, 1977)

B. Chapters in Books

"Evaluating the Efficiency Consequences of Mergers in Network Industries: Complications and Concerns -- Merger Policies," (with S. Globerman) in G. Leslie ed., *Papers of the Canadian Bar Association Annual Fall Conference on Competition Law - 1999* (Toronto: Juris Publishing, 2000)

"The Canadian Pacific Salmon Fishery: Issues in Resource and Community Sustainability," in John T. Pierce and Ann Dale editors, *Communities, Development, and Sustainability Across Canada* (Vancouver: University of British Columbia Press, 1999)

"Intellectual Property Rights: Anti-competitive Abuses and Competition Policy Antidotes," (with S. Globerman) in R.S. Khemani and W.T Stanbury editors, *Canadian Competition Law and Policy at the Centenary* (Halifax: Institute for Research on Public Policy, 1991)

"Testing Hypotheses about Business-Government Relations: A Study of the British Columbia Forest Products Industry," (with S. Globerman), in Lee Preston ed. *Business and Politics: Research Issues and Empirical Studies* (Greenwich, CN.: JAI Press Inc., 1990), (note: revision of a 1985 paper).

"The Structure of Salmon Markets: Implications for Forecasting," (with T. Bjorndal), in D. Devoretz, ed., *Salmon Price Forecasts for the 1990s* (Vancouver: Department of Fisheries and Oceans, 1990).

"The British Columbia Forest Sector," Chapter 6, and "The Pacific Salmon Fishery," Chapter 7, in T.Gunton and J.Richards eds., *Resource Rents and Public Policy in Western Canada* (Halifax: Institute for Research on Public Policy, 1987)

"The Dual: the Market and Planning, "Chapter 7 in J.Richards and D.Kerr eds., *Canada, What's Left* (Edmonton: NeWest Press, 1986)

"Business-Government Relations: Towards a Synthesis and Test of Hypothesis," (with S.Globerman) in V.V.Murray ed., *Theories of Business-Government Relations* (Toronto: Trans-Canada Press, 1985)

"Business and Society: a Review of the Work of the Royal Commission," in P.Gorecki and W. Stanbury eds., *Perspectives on the Royal Commission on Corporate Concentration* (Scarborough, Ont.: Butterworths, 1979)

"A Pessimistic View of Specialization Agreements," in N.Orvik ed., *Canada and the European Community* (Kingston, Ont.: Centre for International Relations, 1978)

C. Articles:

"Net Loss: A Cost-Benefit Analysis of the Canadian Pacific Salmon Fishery," (with A. Vining and S. Globerman*), Journal of Policy Analysis and Management*, Vol. 19, No 1, 2000.

"Proposal for a Mutual Insurance Pool for Transplant Organs," *Journal of Health Politics, Policy and Law*, vol. 23, No. 5, 1998

"Takings of Private Rights to Public Resources: A Policy Analysis," (with S. Globerman), *Canadian Public Policy*, Vol. 22, No. 3, 1996, pp. 205-224.

"Economics of Retroactive Liability for Contaminated Sites," (with S. Globerman), *University of British Columbia Law Review*, Vol. 29, No. 1, 1995, pages 27-62.

"An International Analysis of the Industrial Economics of Salmon Aquaculture," (with T. Bjorndal), *International Institute of Fisheries Economics and Trade: Proceedings of the IV Biennial Conference*, 1992, pages 1031-1046.

"Have a Heart: Increasing the Supply of Transplant Organs for Infants and Children," (with A.Vining), *Journal of Policy Analysis and Management*, Vol.7, No.4, Fall 1988, pages 706-710

"Proposal for a Future Delivery Market for Transplant Organs," (with A.Vining), *Journal of Health Politics, Policy and Law*, No. 3, Fall, 1986, pages 483-500

"The Organization of Vertically Related Transactions in the Canadian Forest Products Industries," (with S.Globerman), *Journal of Economic Behavior and Organization*, Vol. 7, 1986, pages 199-212

"Testing Hypotheses about Business-Government Relations: A Study of the British Columbia Forest Products Industry," (with S.Globerman), *Research in Corporate Social Performance and Policy--A Research Journal*, Vol. 7, 1985, pages 103-136

"Harvesting Canadian Fish and Rents: A Partial Review of the Report of the Commission on Canadian Fisheries Policy," (with D.Devoretz), *Marine Resource Economics*, No. 4, Spring, 1985, pages 347-367

"Structural Change in the Canadian Pacific Salmon Fishery," *The Canadian Journal of Regional Science*, No. 2, Autumn, 1984, pages 195-210

"Structure of the British Columbia, Washington and Oregon Hotel Industries--A Comparative Analysis," (with T.Var) *Journal of Travel Research*, No. 1, Summer, 1980, pages 2-8

"Advertising, Direct Foreign Investment and Canadian Identity," (with B.Schoner), *Canadian Review of Studies in Nationalism*, No. 1, Spring, 1980, pages 127-150

"The Pearse Commission and Industrial Organization of the British Columbia Forest Industry," *B.C. Studies*, No. 41, Spring, 1979, pages 3-35

"Industrial Structure of the British Columbia Traveller Accommodation Sector: An Application of the Industrial Organization Model to Service Industries," (with T.Var) *Journal of Travel Research*, No. 4, Spring, 1978, pages 21-29

"Bank Act Revision in Canada: Past and Potential Effects on Market Structure and Competition," (with James W. Dean) *Banca Nazionale del Lavoro--Quarterly Review*, No. 116, March 1976, pages 19-49

"Competition in Canadian Financial Markets," (with James W. Dean) *Proceedings of a Conference on Bank Structure and Competition*, Federal Reserve Bank of Chicago, 1974, pages 196-200

Consultancy

A. Expert Testimony

Competition Tribunal, *Director of Investigation and Research and Chrysler Canada* Ltd. (testified for the Crown)

Court of Queen's Bench of Alberta, *Ed Miller Sales & Rentals Ltd. v. Caterpillar Tractor Co. et al.* (testified for the plaintiff)

National Transportation Agency of Canada, Review of the proposed acquisition of Purolator Courier Ltd. by Canada Post (testified for Canada Post)

Competition Tribunal, *Director of Investigation and Research and Air Canada et al.* (testified for The Gemini Group)

Ontario Court, General Division, *Polaroid Canada Inc. and Continent-Wide Enterprises Ltd.*, (testified for the respondent)

Competition Tribunal, *Director of Investigation and Research and Tele-Direct (Publications) Inc.* (testified for the Crown)

Ontario Energy Board, *E.B.O 177-17*, (testified for Union Gas)

Competition Tribunal, *Competition Commissioner and Superior Propane Inc.* (testified for the Crown)

B. Consulting engagements

Government of Canada, Department of Consumer and Corporate Affairs, Competition Bureau. Advised the Crown with respect to investigations involving the following industries.

Plywood manfacture
Dairy processing
Petroleum refining
Gasoline distribution
Newsprint manufacture
Computer maintenance services
Distilling
Book retailing
Automobile parts distribution
Coffee services
Flour milling
Sanitary tissues
Directory advertising
Propane distribution
Newspaper publishing/Television

Private Antitrust Consultancy. Advised clients engaged in the following industries.

Heavy equipment distribution
Rail freight forwarding
Pesticide distribution
Tug and barge transportation
Natural gas appliance rentals
Small parcel express services
Photographic film distribution
Brewing
Feed additives
Automobile parts