CCC Technical Conference Materials

Enbridge Gas Rebasing – Phase 2

Panel 4

EB-2024-0111

INDEPENDENT REVIEW OF THE ACCOUNTING AND COST ALLOCATION FOR UNREGULATED AND REGULATED STORAGE OPERATIONS

BLACK & VEATCH PROJECT NO. 179537

PREPARED FOR

Union Gas Limited

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1 Introduction and Summary

In the Natural Gas Electricity Interface Review ("NGEIR") Decision in EB-2005-0551[1], the Ontario Energy Board (the "Board") determined that the market for Union's ex-franchise storage services was a competitive market and that Union Gas Limited ("Union" or the "Company") would no longer be subject to rate regulation for those services. The Board stated that it would cease regulating the prices charged for the following storage services:

- All storage services offered by Union and Enbridge to customers outside their franchise areas;
- New storage services offered by Union and Enbridge to their in-franchise customers; and
- All storage services offered by other storage operators, including storage operators affiliated with Union and Enbridge.[2]

This decision established an unregulated storage operation within Union. In response to this decision, Union implemented a comprehensive accounting and cost allocation process to identify and separate costs between regulated and unregulated storage operations. Separating the revenues and costs of Union's unregulated storage operations from its regulated utility operations was necessary to properly account for the unregulated operations and to identify regulated storage costs for the purpose of setting Union's regulated utility rates. In addition, the identification and compilation of the revenues and costs of Union's unregulated storage operations are required to determine standalone utility financial results for regulatory reporting. Finally, the costs of Union's unregulated storage operations are used in the computation of storage margins subject to deferral in its storage deferral account – Account No. 179-70 Short-Term Storage and Other Balancing Services.

A key element of the Board's decision was that it did not require Union to functionally separate its regulated and unregulated storage operations. At page 73 of its Decision in EB-2005-0551, it was stated that:

> "The Board finds that functional separation is not necessary. The evidence before the Board is that it would be costly and difficult to establish a functional separation of utility and non-utility storage, and there was no evidence to suggest that there would be significant benefits from such a separation. To the extent there may be concerns regarding the integrated operations, these will be addressed through the reporting requirements set out in section 5.4. We also conclude that Union's current cost allocation study is adequate for the purposes of separating the regulated and unregulated costs and revenues for ratemaking purposes. The Board agrees with the Board Hearing Team that it is important to ensure that there is no cross-subsidization between regulated and unregulated storage. However, the Board is content that with its findings on the treatment of the premium on short-term storage services (Chapter 7) Union will have little incentive to use the cost allocation for purposes of cross-subsidy."

[1] EB-2005-0551 Decision With Reasons issued on November 7, 2006

[2] EB-2005-0551 Decision With Reasons, Page 3.

Union's then current cost allocation study was its Board-approved 2007 cost allocation study. This cost allocation study was utilized by Union to separate the costs of its regulated and unregulated storage operations since the issuance of the NGEIR Decision in late 2006.

In view of the complexities of the process, its level of detail, and its impact upon rate levels, the allocation of costs between Union's regulated and unregulated storage operations has been an issue in its past regulatory proceedings before the Board. In EB-2010-0039, Union applied for the approval of its regulated and unregulated cost allocation methodology for its storage lines of business to address the concerns raised by intervenors and Board Staff in certain of its prior regulatory proceedings. In that proceeding, Union filed a Settlement Agreement which the Board approved. One of the provisions of the Settlement was to address the allocation of costs between Union's regulated and unregulated storage operations. Specifically, Part 20 of the Agreement stated that:

> "The parties agree that, upon approval of this Agreement by the Board, Union will commission an independent study ("the Study") of its cost allocation methodology for allocation of costs between its regulated and unregulated storage operations. The Study will also examine the attribution of revenues to deferral accounts 179-70 and 179-72 and provide a volumetric reconciliation between physical space and space sold "short term" and "long term". Union will solicit a person, group or organization to conduct the study ("Study Staff") by way of a request for proposals ("RFP"). Union will provide an opportunity to the other parties to comment on a draft version of the RFP and to suggest changes. Final drafting of the RFP and selection of Study Staff will be at the sole discretion of Union.
>
> Union will take steps to ensure that, at or near the outset of the Study, the other parties will be provided an opportunity to present Study Staff with their concerns, questions, and/or opinions on the subject matters of the Study.
>
> The Study will be filed by Union in connection with its application to dispose of 2010 deferral account balances with sufficient time to permit full discovery and review of the Study as part of the application.
>
> Any changes that Study Staff may recommend to Union's cost allocation methodology will not be implemented until after receiving approval from the Board. Any findings or recommendations made by Study Staff will be adopted, if at all, on a prospective basis, and will have no impact on balances disposed of prior to 2010.
>
> This Agreement is without prejudice to any party's right to disagree with, or challenge any of the findings of Study Staff."[3]

Union retained Black & Veatch to conduct the required study. Black & Veatch completed the above-described study in March of 2011. That report was included in evidence in Union's 2010 Deferral Disposition and Earnings Sharing proceeding, EB-2011-0038.

[3] EB-2010-0039, Decision and Order – Appendix A - Settlement Agreement, Page 9.

In Union's 2013 Cost of Service Decision and Order, the Board concluded that, "in order for parties, and the Board, to confirm that the allocation of storage costs between Union's utility and non-utility storage operations is correct, the Board requires up-to-date continuity schedules related to Union's non-utility storage business. The Board directs Union to file, as part of its 2014 rates filing, these continuity schedules."[4] It is understood that Union Gas filed the required Regulated and Unregulated plant continuity schedules with its filing in EB-2013-0109 on May 8, 2013.

The Decision and Order further states, "the Board directs Union to hire an independent consultant to update what was filed in the EB-2011-0038 proceeding and file that report as part of its 2014 rates proceeding."[5] Based on the Board's directive, Union retained Black & Veatch to update the storage cost allocation study it conducted in 2011.

The purpose of this report is to update the results of Black & Veatch's review and evaluation of Union's cost allocation process and accounting for its regulated and unregulated storage operations that was prepared and submitted to the Board in EB-2011-0038.

1.1 SCOPE OF THE REVIEW

Black & Veatch understands that Union requires an update to the prior review of the cost allocation and accounting for its unregulated and regulated underground storage operations. In addition, Union specifically requested that Black & Veatch review the revenue and cost allocations and the underlying assumptions used in the calculation of its deferral account used to track short-term storage contracts, and to reconcile the storage sold to the physical storage owned by Union.

Based on these requirements, Black & Veatch structured its current review to include the following work tasks:

1. Review and evaluate Union's current cost allocation and accounting processes for its unregulated and regulated underground storage operations and make recommendations on any changes to the underlying assumptions and/or methodologies.
2. Review and evaluate Union's revenue and cost allocations for the deferral account used to track its short-term storage transactions and make recommendations on any changes to the underlying assumptions and/or calculations, and reconcile the storage sold by Union to the physical storage space owned by Union.
3. Prepare a written report which sets forth in detail the findings and recommendations of the review with respect to all material issues and methodologies, and which is structured in an appropriate format for submission to the Board in Union's 2014 rates filing.

1.2 GUIDING CONSIDERATIONS AND AREAS OF CONCENTRATION

In conducting our updated review of Union's cost allocation and accounting processes for its unregulated and regulated storage operations, we were guided by the following considerations which mirrored those followed by Black & Veatch in its previous review:

[4] EB-2011-0210, Decision and Order, page 79.

[5] EB-2011-0210, Decision and Order, page 80.

1. The fundamental and underlying philosophy applicable to every utility cost of service study pertains to the concept of cost causation for purposes of allocating costs to customer groups or service types.
2. Cost causation (or cost causality) addresses the question – *Which customer or groups of customers cause the utility to incur particular types of costs?* To answer this question, it is necessary to establish a linkage between a utility's customers and the particular costs incurred by the utility in serving those customers.
3. *A Key Consideration* – the ability to establish operating relationships between customer service requirements and the costs incurred by the utility in meeting those requirements (e.g., satisfying a customer's peak demand requirements through the incurrence of capacity-related costs to provide the required level of gas delivery service).
4. The three broad steps most often followed to perform utility cost of service studies: (1) cost functionalization; (2) cost classification; and (3) cost allocation will be utilized for this review as a framework for evaluating the various steps involved in Union's current cost allocation process.
5. A utility's cost allocations should stand on their own objective merits (i.e., costs should be assigned to the classes or categories of service based on the design and operational considerations of the utility's system rather than on achieving results that support a desired outcome for the allocation of revenues to classes and/or rate design).
6. Consistency of structure, methodology, and computational details between Union's cost allocation process used for separating its storage-related assets and expenses and the cost allocation study it utilizes to evaluate the costs of serving its in-franchise customers and service offerings.

We saw our primary roles and responsibilities in this project as follows:

- To understand the system planning, operation, and utilization of Union's underground storage facilities to confirm that cost causation is properly reflected in its cost allocation and accounting processes;
- To understand the differences between the accounting for Union's unregulated and regulated storage operations;
- To understand the revenue and cost transactions that comprise Union's unregulated and regulated storage operations, including the allocation of costs of its current integrated storage system and its incremental storage facilities;
- To reconcile the storage space sold by Union to in-franchise and ex-franchise customers compared to the total physical space owned by Union; and
- To provide sufficient commentary on our recommendations and supporting information pertaining to alternative cost allocation and accounting processes and the related treatment of costs so that Union can adequately evaluate our findings and decide whether or not to propose changes in its subsequent rate and regulatory filings with the Board.

These above-described elements defined the focus areas in which Black & Veatch concentrated its review and evaluation in this project. In our review of Union's cost allocation process and accounting for its storage lines of business, Black & Veatch conducted its work in a manner so that it could determine:

- If Union's cost allocation methodology for the allocation of costs between its regulated and unregulated storage operations had a conceptual basis that was grounded in sound and acceptable utility costing principles and the operational realities of its gas utility system.
- If there were certain regulatory precedents established by the Board that Union recognized and incorporated into its cost allocation and accounting methods.
- If Union's cost allocation and accounting methods provided analytical and computational transparency (i.e., did it create a sufficient and verifiable audit trail - identification of input data sources, traceable information flows, identification of each computational step).

These were the same focus areas that Black & Veatch addressed in its previous review of Union's cost allocation and accounting processes for its unregulated and regulated storage operations as documented in its written report to Union dated March 2011. In this review, Black & Veatch has specifically focused on Union's treatment of its storage-related assets and expenses during the twelve months ending December 31, 2012 for purposes of evaluating the manner in which the various cost components were allocated to Union's unregulated storage operations.

1.3 OVERALL ASSESSMENT

Based on the results of our review, Black & Veatch's overall assessment consists of the following observations:

- *The conceptual underpinnings and resulting methodologies upon which Union's cost allocation process is based are well-conceived, thorough, and reasonable in their treatment of storage-related plant and expenses.*

- *The storage-related assets and expenses incurred by Union in 2012 were allocated to its unregulated storage operations in a reasonable manner consistent with its established cost allocation process and related costing methodologies.*

- *The regulatory presentation of Union's separation of costs between its regulated and unregulated storage operations does not provide a sufficient level of detail for a third-party to readily understand how Union's annual level of unregulated storage assets and O&M expenses change as a result of changes to certain of its cost allocation factors, or to verify that the necessary changes to these cost allocation factors are computationally accurate and supportable.*

- *The computational basis used by Union to determine its net deferral balance for Account No. 179-70 in 2012 appears to be sound and accurately follows the relevant regulatory precedents associated with this annual determination.*

- *The revenues and expenses claimed by Union to be associated with the unregulated short-term and long-term storage services provided to its ex-franchise customers in 2012 could be tracked and replicated with the supporting data and explanations provided by Union.*

1.4 RECOMMENDATIONS

Black & Veatch's recommendations resulting from this evaluation are summarized below. The specific findings and recommendations are presented and discussed in the subsequent sections of this report.

Black & Veatch recommends the following near-term enhancement to Union's evidentiary presentation and computational process:

1. Establish more robust documentation in Union's regulatory filings to provide a complete understanding and explanation of the process Union utilizes to update its cost allocation factors each year, and provide representative computational support to explain and illustrate how the changes made to Union's cost allocation factors are derived.

2 Background Perspectives

As a backdrop and to provide sufficient context to our subsequent detailed review of Union's costing and accounting methods for its storage lines of business, Black & Veatch initiated its work effort with a review of the operational characteristics and service offerings of Union's storage facilities. Specifically, our review addressed the following activities:

- The physical attributes and operations of the Dawn Hub storage facilities
- The nature and level of storage services available to Union's ex-franchise customers.

In addition, we reviewed the relevant regulatory, ratemaking, and accounting aspects of Union's regulated and unregulated storage operations to better understand the evolution of the issues, regulatory decisions, and implementation processes required to allocate costs to these activities and to account for them in Union's financial statements and ratemaking filings before the Board.

2.1 OPERATIONAL

Union's underground storage facilities are an integral part of what is commonly known as the Dawn Hub - an important market center in North America for the trading, transfer, and storage of natural gas. Union's storage operations include 23 depleted gas fields with a working gas capacity of approximately 166 PJ and a peak deliverability of approximately 3.2 PJ per day. Union's Dawn-Parkway transmission system consists of parallel, large diameter pipelines and compressors which transport natural gas across its franchise area and serves as a primary west to east gas transport link. The Dawn-Parkway system currently has a capacity of approximately 6.8 PJ per day. Union's storage and transportation system is depicted in Figure 1.

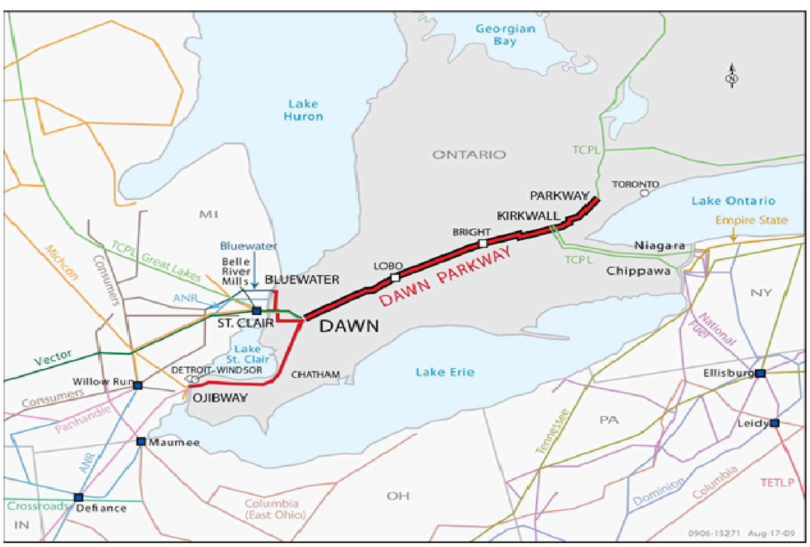

Figure 1 Union's Gas Storage and Transportation System

Union's storage pools connect with the Vector, Great Lakes, Panhandle, Michigan Consolidated Gas, and Bluewater transmission pipelines from Michigan to the west, and (via Union's Dawn-Parkway pipeline) the TransCanada pipeline and Enbridge's gas distribution system to the east. Figure 2 shows these pipeline interconnections with the Dawn storage operations.

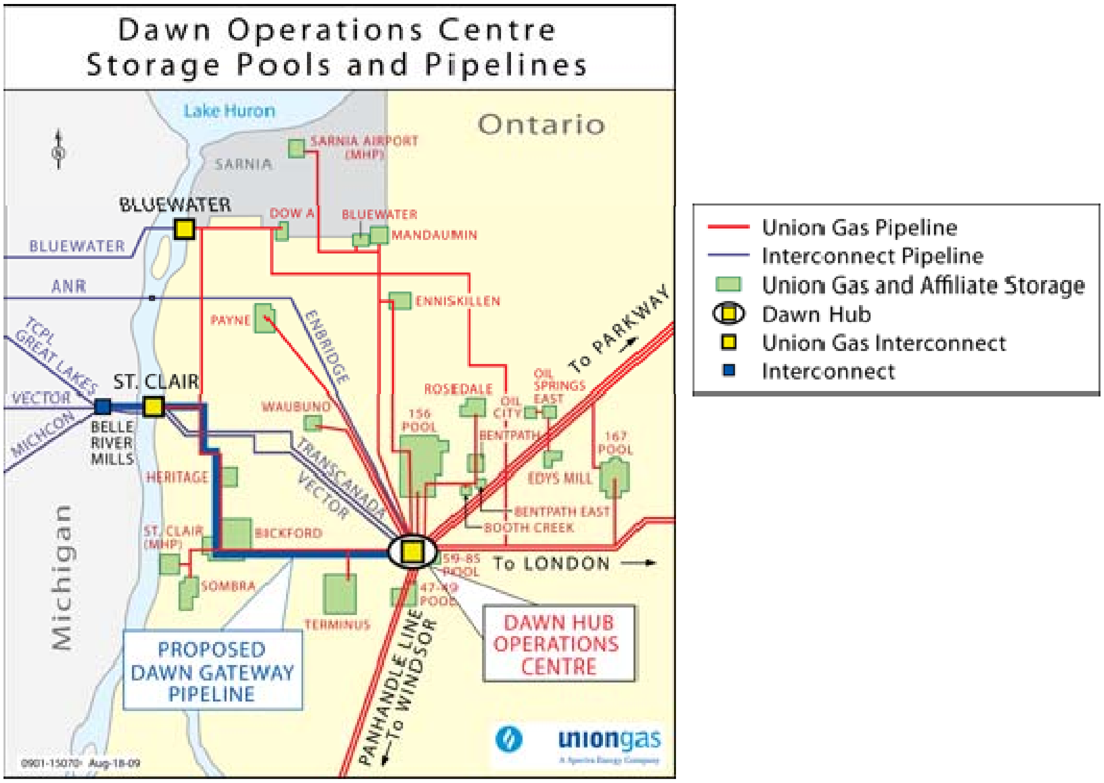

Figure 2 Dawn Storage Pools and Interconnected Pipelines

Regarding Union's storage operations, its various storage pools are operated as an integrated system with each pool affecting the operation of the other pools throughout the injection and withdrawal seasons.

2.2 STORAGE SERVICE CHARACTERISTICS

Union's ex-franchise market consists of Canadian and U.S. local distribution companies ("LDCs"), transmission service providers (e.g. TransCanada Pipelines) and marketers. Storage services for these customers have been priced at market rates endorsed by the Board since 1989 in E.B.R.O. 456. Ex-franchise storage services are fully unbundled from transportation and other services, and ex-franchise customers can select among unbundled services for their requirements. Further, there is no requirement that ex-franchise customer's contract for transmission service or any other service provided by Union when they contract with Union for storage service.

Union offers to its ex-franchise customers various types of storage-related services at market-based rates. Union's long-term storage services are offered to ex-franchise customers through the storage capacity in excess of the amount made available to its in-franchise customers at cost-based rates. Union's short-term storage services are offered to ex-franchise customers through the unused regulated utility storage assets that are considered surplus to its current in-franchise needs.

The actual storage service levels and revenues for Union's ex-franchise customers in 2010 through 2012 are presented in Table 1 below.

Table 1 Union's Actual Unregulated Storage Service Levels in 2010, 2011 and 2012

SERVICE TYPE	2010		2011		2012	
	Service Level (10^3m^3)	Amount ($000)	Service Level (10^3m^3)	Amount ($000)	Service Level (10^3m^3)	Amount ($000)
Long-Term Peak Storage	5,546,756	$87,166	5,595,943	$86,896	5,265,362	$82,065
T1 Deliverability and Up. Bal.	62	$1,825	58	$1,860	28	$1,857
Downstream Balancing	107	$742	84	$747	15,985	$991
Dehydration Service	282,453	$1,257	1,898,234	$1,265	1,763,342	$1,254
Storage Compression		$772		$774		$777
High Deliverability Storage	911,717	$20,179	791,566	$12,027	812,157	$13,422
Total Long-Term Storage	**6,741,095**	**$111,941**	**8,285,885**	**$103,570**	**7,856,875**	**$100,366**
C1 Off-Peak Storage	928,617	$1,710	1,374,733	$342	1,848,984	$1,351
Supplemental Bal. Services	1,244,925	$3,240	1,097,341	$1,461	468,860	$1,620
Gas Loans	1,080,066	$916	745,887	$57	827,994	$18
Enbridge Load Bal. Agreement	14,794	$135	3,515	$68	4,530	$93
C1 ST Firm Peak Storage	841,446	$14,886	1,036,095	$9,036	1,262,736	$10,557
Total Short-Term Storage	**4,109,848**	**$20,887**	**4,257,571**	**$10,964**	**4,413,104**	**$13,639**

Long-Term Storage Services

1. Long Term Peak Storage – offered for a period of two years or more.
2. T1 Deliverability (incremental to cost based T1 Deliverability) – allows Shippers to contract for injections and withdrawals greater than the maximum level of deliverability available at cost based rates.
3. Upstream Balancing – allows Shippers to balance rateable (evenly) flows arriving at Dawn (includes purchased gas supplies, withdrawals from storage, or gas arriving from upstream pipelines) with non-rateable downstream consumption requirements.
4. Downstream Balancing - a balancing service designed for Shippers who have very short notice delivery requirements (15 minutes notice) at Parkway/Kirkwall.
5. Dehydration Service – provided to third party storage providers directly connected to Union's system who request the service.
6. Storage Compression – an elective compression service for third party storage operators.
7. High deliverability Storage - allows Shippers to hold a minimum amount of inventory but withdraw or inject gas in high daily quantities on a firm basis.

Short-Term Storage Services

1. C1 Off-Peak Storage/Balancing/Loan Services – offers customers the flexibility to balance their supplies to meet short-term market demands or to capitalize on existing or unexpected market conditions using off peak storage, loans or balancing.

2. Enbridge Load Balancing Agreement.
3. C1 Short-Term Firm Peak Storage – usually offered for a period of one year or less.

2.3 REGULATORY AND RATEMAKING

Since the issuance of the NGEIR Decision by the Board in late 2006, Union has addressed the cost allocation and accounting issues associated with the separation of its storage lines of business in a number of regulatory proceedings. Schedule 1 presents a regulatory chronology of these proceedings which served as another point of reference for Black & Veatch's updated review. This Schedule also identifies the key issues addressed in the Board's Decisions and Orders which have become the basis for the regulatory precedents that apply to the topics addressed in this report.

2.4 ACCOUNTING

To implement a separation model for Union's regulated and unregulated storage operations, as required by the NGEIR Decision, there were three options available to Union: (1) a functional separation; (2) an accounting separation; or (3) an asset divestiture. As pointed out earlier, the Board found that functional separation of Union's storage assets was not necessary, nor was an asset divestiture a desired alternative in light of Union's integrated storage operations. Therefore, implementation of an accounting separation process was the only viable alternative to consider.

The adoption of that approach, however, created the need for a comprehensive set of cost allocation methods to be applied to Union's storage assets, direct expenses, and other indirect costs. Union proposed that its then most recent cost allocation study (filed in EB-2005-0520) could be utilized to allocate costs between its regulated and unregulated storage operations. The Board agreed with that proposal and approved its implementation. In light of the detailed and complex nature of Union's cost allocation study and supporting methodology, it was to be expected that an added level of scrutiny by interested parties would be created by the accounting separation of its storage-related costs and operation of its two storage deferral accounts.

In addition, while the NGEIR Decision required Union to make certain accounting changes for its regulated and unregulated storage operations compared to its methods of the past, it is recognized that Union has been accounting for its short-term and long-term storage revenues and costs (i.e., margins) and sharing such margins between in-franchise customers and the utility for a number of years. At the time of the NGEIR Decision, Union's method was to forecast the amount of short-term and long-term storage margins for the particular rate year as part of its rates case. Of the Board approved forecast amount, 90% was included as a credit against distribution rates for the year. To the extent that actual margins varied from the forecast built into rates, Union booked the difference in deferral accounts (Account No.179-70 for short-term transactions and Account No. 179-72 for long-term transactions). When cleared, these deferral account balances were shared 75% to Union's distribution ratepayers and 25% to Union's shareholders.

As approved by the Board in its Order in EB-2005-0520, the ratepayer portion of the deferred margin in Union's then current Long-Term Peak Storage Services Account No. 179-72 was 0% in 2011. As a result, there was no balance in this account at December 31, 2011. In EB-2011-0025 (Union's 2012 rate application), the Decision of the Board directed Union to close Account No. 179-72 effective January 1, 2012.

3 Cost Allocation for Union's Storage Operations

The purpose of this section is to detail the findings and recommendations of Black & Veatch's review and evaluation of Union's cost allocation methods for its regulated and unregulated storage operations. With a basic operational foundation established, a review of Union's cost allocation process structure and framework was conducted. The following areas were reviewed in detail:

- Phases or steps included in the cost allocation process.
- Organizational layout of and interrelationship between filed information and schedules which present Union's cost allocation results.
- Flow of data and sequencing of steps within the cost allocation process.
- Degree to which the cost allocation process is presented on a "self-contained" basis (i.e., analyses and supporting data are an integral part of Union's evidentiary presentation).
- Basis for the total storage cost of service reflected in the cost allocation results.
- The interrelationship and methodological consistency between Union's cost allocation process for its storage operations and its Board-approved 2007 cost allocation study to derive the cost of service for its in-franchise (rate regulated) customers.

3.1 PURPOSE

As discussed earlier, Union's cost allocation process for its storage operations is used for the following purposes:

1. To separate the costs of Union's unregulated storage operations from its regulated utility operations to properly account for the unregulated operations and to identify regulated storage costs for the purpose of setting Union's regulated utility rates.
2. To identify and compile the revenues and costs of Union's unregulated storage operations to determine standalone utility financial results for regulatory reporting.
3. The costs of Union's unregulated storage operations are required in the computation of storage margins subject to deferral in its storage deferral account – Account No. 179-70 Short-Term Storage and Other Balancing Services.

The results of Union's cost allocation process for its storage operations are presented each year in its annual deferral account proceeding (e.g., EB-2011-0038) and the results were also submitted in its 2013 rates application (EB-2011-0210), where Union re-computed the underlying costs of its in-franchise customers to rebase its regulated delivery rates under incentive regulation. Black & Veatch understands that this report will be submitted to the Board as part of Union's upcoming 2014 rates filing.

3.2 STRUCTURE

In many respects, the structure of Union's cost allocation process for its storage operations is very similar to the structure and framework of the cost allocation study it utilizes to derive the costs of serving its in-franchise customers. Before the NGEIR Decision which created Union's unregulated storage operations, its cost allocation study contained a class of service entitled, Bundled Storage Space and Interruptible Deliverability - Rate C1. This class contained Union's ex-franchise customers who received various types of storage services provided by Union. Before the NGEIR Decision, these services were offered by Union on a regulated basis under Rate C1 priced at market-based rates. Currently, these services are offered by Union on an unregulated basis under its Market Price Service Schedule - MPSS.

Page 1 of Schedule 2 depicts Union's treatment of storage-related costs in its currently-effective cost allocation study and the three-phase process it followed to derive those costs by class of service. After Union's total storage cost of service is established through the functionalization process, it then classifies those costs into the following cost categories: (1) Demand; (2) Commodity; (3) Space; and (4) System Integrity. Finally, Union allocates the functionalized and classified costs of storage to its classes of service using various direct assignment and cost allocation methods. For purposes of deriving the storage costs for its regulated and unregulated storage operations, Union utilized its 2007 Board-approved cost allocation study filed in EB-2005-0520. This cost study was the most recently completed Board approved cost allocation study at the time of the NGEIR Decision. As will be discussed in more detail below, the primary purpose of Union's cost allocation study was to separate its storage assets existing at the time of the NGEIR Decision - with this step representing a one-time transfer of assets to Union's unregulated storage operations.

Pages 2-5 of Schedule 2 provide a comparative mapping of Union's Board-approved cost allocation study and supporting methodology approved in EB-2005-0520, and the methodology utilized by Union to allocate costs to its unregulated storage operations. This comparison clearly shows that the vast majority of allocation methods used by Union, and approved by the Board, in its most recently completed cost allocation study have been carried forward and applied to the cost allocation process Union now uses to separate its storage cost of service between the regulated and unregulated storage operations.[6]

Schedule 3 presents a high-level view of the overall functional process Union follows to separate its regulated and unregulated storage costs. Union's overall cost allocation process addresses nine (9) separate cost elements related to its underground storage operations, including:

1. Existing storage assets at December 31, 2006;
2. Existing general plant at December 31, 2006;
3. New storage assets;
4. New general plant;
5. Depreciation expense;
6. Cost of gas;
7. Operating & maintenance expenses
8. Property and capital tax; and

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[6] As will be discussed in detail later in this report, while Union relies upon the cost allocation methodologies presented in Schedule 2 for purposes of allocating costs to its unregulated storage operations, it updates certain of the supporting cost allocation factors on an annual basis to reflect changes to: (1) the relative level of total unregulated storage plant in service to total plant in service; (2) the relative level of storage space and deliverability between Union's regulated and unregulated storage operations caused by new storage asset additions; and (3) the level of Operations & Maintenance expenses by individual asset and on a composite basis.

9. Cost of unutilized in-franchise storage capacity.

Each of these elements requires Union to identify and compile the required input cost data, to select the direct assignment and/or cost allocation methods that are to be applied to the relevant costs, and to derive the costs associated with Union's unregulated storage operations. As will be discussed in the next section, certain of these cost elements were allocated to Union's unregulated storage operations on a one-time basis while others are allocated to that business line on an annual basis using allocation factors that are updated each year.

3.3 DATA SOURCES AND THE TIMING OF UNION'S COST ALLOCATION PROCESS

Union's on-going allocation of costs to its unregulated storage operations is premised upon, for the most part, the same sources of data that it utilizes to derive its total cost of service for regulated operations that is reflected in its cost allocation study. The one exception is for Union's existing storage assets that were assigned at the time of the NGEIR Decision as a one-time transfer to Union's unregulated storage operations. Based upon recommendations from KPMG LLP, Union implemented various accounting and process changes to its existing financial and management reporting. This was done because accounting for unregulated storage operations is required to follow Canadian Generally Accepted Accounting Principles ("GAAP"). For Property, Plant, and Equipment ("PP&E") assigned to its unregulated storage operation, Union established a new asset category - Underground Storage - in its SAP business accounting and management software system. The associated plant accounts currently reflect the one-time transfer of Union's storage-related assets that existed at December 31, 2006 and the ongoing asset additions and retirements that have occurred since that time.

The timing of Union's cost allocation process is presented in Schedule 4. There are three categories reflected in this Schedule, with costs allocated on: (1) a one-time basis; (2) an annual basis; and (3) a periodic basis. Schedule 4 presents the particular cost elements that comprise Union's unregulated storage cost of service grouped according to these three categories. Details of the timing associated with Union's cost allocation process are discussed in subsequent sections of this report.

3.4 ASSIGNMENT OF STORAGE SPACE TO UNION'S UNREGULATED STORAGE OPERATIONS

In the Board's NGEIR Decision, it was determined that Union should reserve 100 PJ of storage space (i.e., storage capacity) at cost-based rates to accommodate in-franchise growth.[7] At that time, Union's total storage capacity was equal to approximately 162.1 PJ, which meant that approximately 62.1 PJ of storage space was assigned to Union's unregulated storage operations. These storage space levels served as the primary basis for Union's allocation of the direct and indirect costs of storage space to its regulated and unregulated storage operations in its 2007 Board-approved cost allocation study.

In addition, the Board stated that Union should continue to charge its in-franchise customers based only on the amount of storage space required in any year. In other words, if Union's in-franchise customers required less than 100 PJ in any one year, its cost-based rates for in-franchise customers

[7] EB-2005-0551, Decision with Reasons, Page 83.

should be based on that amount. Under this approach, Union's unregulated storage operations would be assigned an additional amount of storage space based on the difference between the 100 PJ and the lower level required by its in-franchise customers. This additional amount of storage space could then be sold by Union on an unregulated basis as short-term storage services. At the time of the NGEIR Decision, Union's in-franchise customers required approximately 92.1 PJ of storage space. Therefore, the levels of Union's regulated rates were designed to reflect this lower level of storage space by assigning to its unregulated storage operations the additional costs of 7.9 PJ of storage space. Through this cost assignment, the current rates of Union's in-franchise customers actually reflect an amount of storage space equal to 92.1 PJ rather than the 100 PJ level stated in the Board's NGEIR Decision.

3.5 STORAGE-RELATED ASSETS

This section describes the treatment of Union's existing storage and general plant assets at December 31, 2006, new asset additions, and asset retirements within its cost allocation process for storage operations.

3.5.1 Existing Storage Assets at December 31, 2006

After issuance of the Board's NGEIR Decision, Union completed a comprehensive review of all its existing underground storage assets to determine which assets needed to be removed from its regulated utility rate base and allocated to its unregulated storage operations. The first step was for Union to functionalize its existing storage assets as of December 31, 2006. Union determined that its storage assets could be functionalized into the following three categories:

- Storage assets that are directly attributable to providing storage services only;
- Storage assets that are directly attributable to providing transmission services only; and
- Storage assets that are utilized to provide both storage and transmission services.

These categories are the same ones that Union uses in its costs allocation study to functionalize its storage-related assets for purposes of setting regulated rates for its in-franchise customers. As can be seen on pages 2-5 of Schedule 2, there are certain assets booked to Union's storage plant accounts that it re-functionalized from storage to transmission based on their specific functional composition and operational characteristics. To complete the functionalization step, Union either directly assigned or derived an allocation factor for each of its storage assets to quantify the level of storage assets required to provide the storage services offered by Union.

The second step in the process was to either directly assign or derive an allocation factor for each storage asset (or portion of a storage asset) functionalized as storage to determine the level of storage assets required to support Union's unregulated storage operations. To facilitate the completion of this step, Union further grouped its storage assets into four specific categories: (1) Storage Dehydration; (2) Storage - All Other; (3) Storage Compression; and (4) Storage Measuring & Regulating ("M&R"). Page 1 of Schedule 5 presents the results of completing these two steps, and Page 2 of Schedule 5 presents the assignment of Union's unregulated storage assets by OEB Account as of December 31, 2007 (the point in time when Union's asset transfer was completed). Schedule 6 presents details of how the various storage allocation factors were derived by Union to first functionalize storage-related assets and then assign the appropriate amounts to Union's unregulated storage operations.

Finally, it should be noted that the above-described process required the allocation of individual assets in order for Union to create and maintain on a going forward basis the proper plant accounting records at the individual asset level for its unregulated storage operations.

1. Existing Storage Assets Providing Storage Services

Examples of storage assets that Union uses solely to provide storage services include: storage lines, storage wells, outboard storage compression, and dehydration assets. Since these storage assets provide storage services only, the first step in the allocation process was to directly assign 100% of these assets to the storage function. The second step in the allocation process was to determine allocation factors to separate these assets between Union's regulated and unregulated storage operations.

To determine the allocation factor to apply to its storage lines, storage wells, and outboard storage compression assets, Union utilized the storage space and deliverability allocators from its Board-approved 2007 cost allocation study, adjusted to recognize the requirement to reserve 100 PJ for regulated utility operations based on the Board's NGEIR decision.

In the Board-approved 2007 cost study, Union's ex-franchise storage operations were allocated 45.3% of Union's storage space and 39.2% of Union's storage deliverability. Adjusting the Board-approved 2007 cost allocation study for the NGEIR Decision resulted in Union's unregulated storage operations being allocated 40.2% of Union's storage space and 35.1% of Union's storage deliverability. The average of these adjusted storage space and deliverability allocation factors resulted in a weighted allocation factor of 37.7% for Union's unregulated storage operations. This method reflects the fact that storage serves the dual purpose of providing capacity (space) and daily deliverability. The result of applying this allocation factor to storage lines, storage wells and outboard storage compression assets is that 37.7% of these storage assets are allocated to Union's unregulated storage operations. Page 1 of Schedule 6 presents the resulting allocation factor and the basis for its derivation.

To determine the unregulated allocation factor for dehydration assets, Union utilized a dehydration demand allocator from its Board-approved 2007 cost allocation study, adjusted for the NGEIR Decision. In the Board-approved 2007 cost allocation study, Union's ex-franchise storage operations were allocated 24.8% of Union's total dehydration demand. Adjusting the Board-approved 2007 cost allocation study for the NGEIR Decision resulted in an allocation factor for dehydration assets of 22.2%. The result of applying this allocation factor to dehydration assets is that 22.2% of these assets are allocated to Union's unregulated storage operations. Page 1 of Schedule 6 presents the resulting allocation factor and the basis for its derivation.

2. Existing Storage Assets Providing Transmission Services

Union's system of accounts identifies all Dawn facility assets as underground storage assets. Certain Dawn facility assets, however, are only used in providing regulated transmission services even though they are classified as underground storage assets in the plant accounting records. In Union's Board-approved 2007 cost allocation study, Union directly assigns these assets to the transmission function. The directly assigned assets included in the Board-approved 2007 cost allocation study are:

- *The Dawn-Parkway meter runs* - represents an investment in measuring and regulated equipment (26", 34', and 42" meter runs) installed at Dawn to measure Dawn-Parkway transportation volumes.
- *Tecumseh measurement facilities* - represents an investment in measuring and regulating equipment installed at Dawn to measure Dawn-Parkway transportation volumes.
- *TCPL measurement facilities* - represents an investment in structures and improvements, compressor station equipment, and measuring and regulating equipment installed to accept the delivery of transportation volumes at Dawn.
- *Oil Springs East measurement* - represents an investment in structures and improvements and measuring and regulating equipment to provide custody transfer metering for volumes flowing between the Oil Springs East Pool and the Dawn-Parkway transmission facilities.
- *The Great Lakes Header* - represents an investment in compressor equipment installed to accept the delivery of transportation volumes at Dawn.

In addition, as a result of Union's comprehensive review of its storage assets, the Plant E compressor at Dawn was also directly assigned to the transmission function since it is dedicated to providing only regulated transmission services. Therefore, no storage assets providing only transmission services are allocated to Union's unregulated storage operations.

3. Existing Storage Assets Providing Storage and Transmission Services

The remaining compression and measuring and regulating assets at Union's Dawn facility are used to provide both storage and transmission services. To determine the portion of these assets to allocate to Union's unregulated storage operations, it first derived allocation factors to functionalize these assets between its storage and transmission functions.

For Dawn compression assets, Union used the Board-approved horsepower allocation method as the basis for determining the allocation factor. The horsepower allocation is used to separate costs between Union's storage and transmission functions based on the amount of compression horsepower required to provide storage and transmission services on a design day. The compression horsepower required to bring the pressure up to 4,926 kPa (700 psig) on a design day is deemed to be storage-related. The compression horsepower required to bring the pressure from 4,926 to 6,270 kPa (700 to 895 psig) on a design day is deemed to be transmission-related. This operational alignment results from Union's receipt of gas from TCPL at Dawn at 700 psig and its operation of the Dawn-Parkway transmission system at 895 psig.

The Board-approved 2007 cost allocation study allocated 44.4% of Dawn compression related costs to Union's storage function and 56.6% of Dawn compression-related costs to its transmission function. The 2007 Board-approved horsepower allocation was then adjusted to recognize the compression that is directly allocated to storage or transmission services. This resulted in an adjusted Board-approved horsepower factor of 52.7% applied to Union's compression assets providing both storage and transmission services at Dawn to determine the storage allocation. To determine an unregulated factor for storage compression assets at the Dawn facility, Union used the average of the NGEIR-adjusted storage space and deliverability allocators of 37.7 % as described above. The result of applying the storage and unregulated factors to compression assets at the Dawn facility is that 19.9% of the assets are allocated to the unregulated storage operations. Page 2 of Schedule 6 presents the resulting allocation factors and the basis for their derivation.

To determine the allocation factor for measuring and regulating assets at the Dawn facility, Union used the allocation factor in the Board-approved 2007 cost allocation study based on the forecasted storage and transmission activity at Dawn. In that cost study, Union's measuring and regulating assets were functionalized as 26.3% storage-related and 73.7% as transmission-related. Union utilized that allocation factor to assign measuring and regulating assets to the storage function. The Board's NGEIR Decision did not impact this allocation factor for measuring and regulating equipment. To determine an allocation factor for the portion of the measuring and regulating assets at the Dawn facility attributable to its unregulated storage operations, Union utilized the average of the NGEIR Decision-adjusted storage space and storage deliverability allocator of 37.7% described above.

The result of applying these allocation factors to measuring and regulating assets at the Dawn facility is that 9.9% of the assets are allocated to the unregulated storage operations. Page 2 of Schedule 6 presents the resulting allocation factors and the basis for their derivation.

3.5.2 Existing General Plant at December 31, 2006

Union's general plant assets are not directly attributable to either the regulated or unregulated storage operations because of the support nature of a utility's general plant facilities. Therefore, it was necessary for Union to allocate these assets to its unregulated storage operations through allocation factors that recognize their support nature. In Union's Board-approved 2007 cost allocation study, general plant assets were assigned to the storage function in proportion to net plant and O&M and classified in the same manner. The resulting costs were then allocated to ex-franchise storage services based on the space, deliverability, commodity and system integrity allocators. Union generally followed this approach when allocating general plant assets to its unregulated storage operations by utilizing two separate allocation factors – one factor that is specific to vehicles and heavy equipment and one factor applicable to all other categories of general plant.

First, Union created a functional allocation factor based on the vehicles and heavy equipment used in its storage and transmission operations. This allocation factor (11.9%)[8] was derived based on the value of vehicles and heavy equipment used in its storage and transmission operations as a percent of the total value of vehicles and heavy equipment for Union's entire operations. Union then determined the portion of these assets that supported its unregulated storage operations by applying the previously derived storage space and deliverability allocator of 37.7% to the 11.9%, which resulted in a composite allocation factor of 4.5%.

Union then created a second allocation factor based on Union's storage assets and O&M expenses. This allocation factor applied to all other categories of general plant. The asset portion of the

[8] Total value of vehicles and heavy equipment related to Union's Dawn Storage and Transmission Operations of $5,829,466 divided by the total value of Union's vehicles and heavy equipment of $48,839,315.

allocation factor (3.32%)[9] was derived based on the value of unregulated storage plant (excluding construction work in progress, asset retirement obligations, and general plant) as a percent of the value of Union's total plant in service. The O&M expense portion of the allocation factor (2.52%)[10] was derived based on the portion of O&M expenses allocated to Union's unregulated storage operations as a percent of total O&M expenses. The resulting allocation factor based on an equal weighting of these two allocators is 2.92%.

Page 1 of Schedule 7 presents the results of completing this allocation process, and Page 2 of Schedule 7 presents the allocation of Union's general plant assets to its unregulated business by OEB Account as of December 31, 2007 (the point in time when Union's asset transfer was completed). Page 1 of Schedule 8 presents the resulting allocation factors and the basis for their derivation.

3.5.3 Application of Allocation Factors to Union's Existing Storage Assets

The cost allocators determined through the cost allocation approach described above for storage assets and general plant were applied to individual asset records to separate unregulated storage assets and to calculate the Gross Book Value and Accumulated Depreciation at an individual asset level. In order to maintain separate accounting records for the unregulated storage assets, Union established separate plant records in its asset sub-ledger in 2008. Black & Veatch confirmed in its previous review that the assets allocated to the unregulated storage operation were properly excluded from the calculation of Union's regulated utility rate base, and that the storage additions during the 2007-2009 time period were properly reflected in Union's plant continuity schedules.[11]

Plant continuity schedules for 2010 through 2012 for Union's unregulated storage and associated general plant assets are provided in Schedule 9 to this report. Black & Veatch confirmed that the ending balance at December 31, 2009[12] for Union's unregulated storage-related assets was carried forward as the beginning balance at January 1, 2010 in Schedule 9, page 1 of 6.

3.5.4 New Storage Assets

Any new storage assets constructed after the NGEIR Decision that provides an increase in storage capacity or deliverability will be directly assigned to Union's unregulated storage operations. For any new storage projects that only replace Union's existing storage assets, the cost of those projects will be allocated to Union's unregulated storage operations using the most recent cost allocators. Finally, for any new storage projects that replace and serve to improve operational efficiency and/or provide growth opportunities for Union's unregulated business, Union will directly assign to

[9] Union's total unregulated storage plant at December 31, 2007 (excluding CWIP, Asset Retirement Obligations, and General Plant) of $172,571,936 divided by Union's total plant at December 31, 2007 (excluding CWIP, Asset Retirement Obligations, and General Plant) of $5,198,765,878.

[10] Union's O&M storage support expenses for 2007/2008 (details of how the allocation factor was derived were not made available to Black & Veatch).

[11] See Schedules 9-11 in Black & Veatch's Final Report of its Independent Review of the Accounting and Cost Allocation for Unregulated and Regulated Storage Operations, dated March 2011.

[12] See Schedule 9, page 3 of 4, column (g) in Black & Veatch's Final Report of its Independent Review of the Accounting and Cost Allocation for Unregulated and Regulated Storage Operations, dated March 2011.

its unregulated storage operations that portion of costs associated with the increased efficiency and/or growth of that storage operation. A summary of Union's method of categorizing and allocating its storage projects for purposes of allocation between its regulated and unregulated storage operations is provided in Table 2 below.

Table 2 Union's New Storage Asset Categorization and Allocation Process

DESCRIPTION	ALLOCATION METHODOLOGY
New Storage Asset – increase in capacity or deliverability	Allocated 100% to unregulated operations
New Storage Asset – no increase in capacity or deliverability	Allocated to regulated and unregulated operations based on the Regulated vs. Unregulated Storage Asset Allocations analysis. (Note 1)
Replacement Storage Asset – no increase in capacity or deliverability	Allocated to regulated and unregulated operations based on the Regulated vs. Unregulated Storage Asset Allocations analysis. (Note 1)
Replacement Storage Asset – increase in capacity or deliverability	Allocated to regulated and unregulated operations based on an analysis of the cost to replace the existing asset like for like and the cost of providing the incremental capacity or deliverability. The cost to replace the existing asset like for like is allocated to regulated and unregulated operations based on the Regulated vs. Unregulated Storage Asset Allocations analysis (Note 1) and the cost of providing incremental capacity or deliverability is allocated 100% to unregulated operations.

Note 1 – the Regulated vs. Unregulated Storage Asset Allocations analysis is prepared for each storage pool and compressor station annually to show the appropriate allocation to regulated and unregulated operations for new capital additions for each asset class. The analysis is prepared for each fiscal year early in the year using Union's previous year end information. The current allocation at any year-end is based on the historical allocation to Union's regulated and unregulated operations for a particular storage pool/compressor station based on the one-time separation of plant, as approved in EB-2011-0038, and any subsequent additions based on the allocation methodology described above.

Schedule 9 also provides the additions and retirements to Union's unregulated storage assets for 2010 through 2012. Schedule 10 presents a listing of Union's storage projects (including those replacing existing storage assets) during 2010-2012. Schedule 10 also shows the amounts that were assigned to Union's regulated and unregulated storage operations. You can see from Schedule 10 that certain storage asset additions were directly assigned to Union's unregulated storage operations, because no asset additions were assigned to the "regulated" column, and other asset additions were assigned between its regulated and unregulated storage.

Black & Veatch also reviewed the basis used by Union to determine the level of capital additions assigned to its unregulated storage assets in 2010-2012, as presented in Schedules 9 and 10. Schedule 10 also details the manner in which these amounts were derived by Union. It provides the annual level of Construction Work in Progress ("CWIP") at the prior year-end, actual annual storage expenditures made by Union, the inclusion of capital overheads, and various adjustments to those projects during each year of the 2010-2012 time period.

It is important to understand that from the time Union conducted its one-time asset separation between its regulated and unregulated storage operations, any new plant additions that were made each year were assigned to one of the four categories presented in Table 2. As this process progressed from January 1, 2007 to the present, it has changed the allocation percentages that were originally determined for certain of Union's storage assets where the functionality of the new plant additions was different from the allocation percentages based on the original separation of assets.

Schedule 11 presents representative examples of the cost allocation basis for three of Union's storage pools. As depicted in Schedule 11, the resulting allocation percentages for the Sombra and Dawn 167 storage pools have not changed from their original allocations, while those for the Dawn 156 pool have changed for the asset categories that are shaded. This occurred because a portion of the storage additions for the Dawn 156 pool since 2007 was comprised of assets that increased the capacity or deliverability of the pool. For each asset category in Schedule 11 with an allocation percentage that is shaded, the percentage for the unregulated portion is higher and the percentage for the regulated portion is lower compared to the original percentages from the NGEIR Decision. Union has tracked these changes since December 31, 2006 for each asset class and category associated with its storage operations. The resulting allocation percentages are maintained by Union for use as assets are retired and replaced or added over time. These same allocation percentages are used by Union in the allocation of certain of its annual storage-related expenses, as will be discussed in a later section of this report.

Black & Veatch has reviewed the manner in which Union updates the cost allocation factors for its unregulated storage assets and concludes that the method is appropriate and results in reasonable cost allocation factors that properly reflect the functionality and business purpose of Union's storage-related assets that are added over time.

3.5.5 New General Plant

Union allocates new general plant to its unregulated storage operations by using the allocation factor applicable to the particular asset category (i.e., Vehicles and Heavy Equipment or All Other) derived at the time the asset was placed into service.

For example, in 2012 Union created an unregulated storage allocation factor for new vehicles and heavy equipment added during 2012 based on the storage portion of the same type of assets that were used in its storage and transmission operations at the end of 2011. First, a functional allocation factor (12.83%)[13] was derived based on the value of vehicles and heavy equipment used in its storage and transmission operations as a percent of the total value of vehicles and heavy equipment for Union's entire operations. Union then determined the portion of those assets that supported its storage operations by using a horsepower-based allocation factor (66.6%) derived from Union's level of storage compression and its total transmission and storage compression available during the 2011-2012 winter period. Finally, Union determined the portion of those

[13] Total value of vehicles and heavy equipment related to Union's Dawn Storage and Transmission Operations of $8,597,663 divided by the total value of Union's vehicles and heavy equipment of $67,023,808.

resulting assets that supports its unregulated storage operations by applying its combined storage space and deliverability allocator of 48.6%[14] to the 8.54% amount (12.83% x 66.6%), which resulted in a composite allocation factor of 4.15%.

Union then created a second allocation factor for all other general plant based on a combination of Union's storage assets and O&M expenses. This allocation factor applied to all other categories of new general plant. The asset portion of the allocation factor (5.19%)[15] was derived based on the value of unregulated storage plant (excluding construction work in progress and general plant) as a percent of the value of Union's total plant in service (excluding construction work in progress and general plant). The O&M expense portion of the allocation factor (2.90%)[16] was derived based on the portion of O&M expenses allocated to Union's unregulated storage operations as a percent of total O&M expenses. The resulting allocation factor based on an equal weighting of these two allocators is 4.04%. Page 2 of Schedule 8 presents the resulting allocation factors for 2012 and the basis for their derivation.

Black & Veatch recognizes that the above-described allocation factor derived by Union for vehicles and heavy equipment was an issue that was addressed by parties in EB-2011-0210. It was originally addressed in Black & Veatch's 2011 review during which time it was recommended that the method used by Union to derive the allocation factor should be revised.[17] In response to an interrogatory from Board Staff,[18] Union stated that it would revise this allocation factor starting in 2012 on a perspective basis. Black & Veatch has reviewed Union's revision to the derivation of this allocation factor and concludes that the allocation factor has been derived appropriately for 2012.

Schedule 9 also provides the additions and retirements to Union's unregulated general plant for 2010 through 2012. Black & Veatch reviewed the Capital Additions for 2012 presented in Schedule 9 to confirm that the additions to general plant were derived by Union in an appropriate manner. Detailed plant records were examined to determine if the general plant allocation factors described above were applied correctly to the individual plant accounts. Based on this information, Black & Veatch was able to see where each of the two allocation factors were applied and the resulting portions of the general plant additions by asset category that were allocated to Union's unregulated storage operations. The 4.15% allocator was applied to Transportation – Vans and Pickups and

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[14]The average of Union's unregulated storage space allocator of 48.9% and unregulated storage deliverability allocator of 48.3% based on its 2011 Budget.

[15] Union's total unregulated storage plant at December 31, 2011 (excluding CWIP and General Plant) of $323,157,118 divided by Union's total plant at December 31, 2011 (excluding CWIP and General Plant) of $6,227,537,421.

[16] Based on Union's O&M storage support expenses included in its 2011 Budget for its regulated and unregulated storage operations. It should be noted that in future years, Union has changed its process to derive the O&M storage support allocation factor so that it will be based upon actual storage O&M expense amounts.

[17] See Recommendation No. 3 at page 1-6 of Black & Veatch's Final Report of its Independent Review of the Accounting and Cost Allocation for Unregulated and Regulated Storage Operations, dated March 2011.
[18] See J.B-6-1-1, page 1 of 2 filed on May 4, 2012 in EB-2011-0210.

Heavy work equipment, and the 4.04% allocator was applied to all the remaining general plant asset categories.[19]

3.6 STORAGE-RELATED EXPENSES

Union derives storage-related expenses for its unregulated storage operations on an annual basis to reflect the latest activity supporting that business line. The starting point is Union's total cost of service by cost element, with a set of detailed allocation factors applied to each expense element to determine the portion attributable to Union's unregulated storage operations. Each of Union's cost elements that support (either directly or indirectly) its unregulated storage operations, and the associated allocation methods, is described below.

3.6.1 Cost of Gas

The total cost of gas allocated to Union's unregulated storage operations consists of Unaccounted for Gas ("UFG"), storage compressor fuel, net of the amount of gas in kind supplied by customers providing their own fuel, and the cost of storage space purchased from others. The method for allocating these gas costs to Union's unregulated storage operations is consistent with the allocation method used in the Board-approved 2007 cost allocation study.

To calculate the UFG associated with Union's unregulated storage operations, Union first determined the ratio of actual unregulated storage volumes (365,711,594 GJ) to Union's total actual storage and transportation volumes (2,999,868,002 GJ). This ratio (12.19%) was then applied to Union's total actual UFG incurred in 2012 of $12.903 million to derive the unregulated storage-related UFG of $1.573 million.

Total storage compressor fuel assigned to Union's unregulated storage activity is also based on a volumetric allocation determined by using the ratio of actual unregulated storage activity to the actual total storage activity. This allocation is applied to Union's total actual storage compressor fuel incurred in 2012 of $2.501 million. The result is that $1.450 million of compressor fuel was allocated to the unregulated storage activity. Total UFG and compressor fuel allocated to Union's unregulated storage activity in 2012 was $3.023 million. Of this amount, $3.020 million was supplied in kind by customers who have contracted for unregulated storage services, resulting in a net cost of approximately $0.003 million.

Finally, Union's Board-approved 2007 cost allocation study includes an allocation of $0.179 million of costs associated with the purchase of the third party storage space (Enbridge - Black Creek) to its unregulated storage operations. In total, the cost of gas allocated to Union's unregulated storage operations in 2012 was $0.182 million.

Schedule 12 describes these allocation factors and the basis for their derivation.

[19] One exception to that approach was the treatment of approximately $3.789 million of the $4.664 million under the general plant category Office Equipment – Computers on Schedule 9, page 5 of 6, line 13, column (b) which was directly assigned to Union's unregulated storage operations to recognize the asset addition supports the optimization of storage space which only relates to its unregulated storage activities.

3.6.2 Operating & Maintenance Expenses

The Operating and Maintenance ("O&M") Expenses assigned to Union's unregulated storage operations are allocated based on the underlying activities within each expense category. This process began after the NGEIR Decision was issued with Union undertaking a comprehensive review of its existing internal work orders and categorizing them according to their operational function. Each Internal Order ("IO") was assigned to one of the O&M categories presented in Table 3 below.

Table 3 Union's Storage-Related O&M Expense Categories

O&M CATEGORY	DESCRIPTION
Storage General	Activity exclusively related to storage operations
Storage Shared	Activity related to both transmission and storage operations
Storage Unregulated	Activity exclusively related to unregulated storage operations
Storage Regulated	Activity exclusively related to regulated storage operations
Storage Support	Activity supports storage operations and all other operations

For these five groups, Union has developed six different types of allocators to reflect the nature of the costs incurred and the supporting information available to create the particular cost allocation factor(s). Table 4 below presents a summary of the various cost allocation methods used by Union to assign storage-related costs to its unregulated storage operations.

Since the majority of Union's storage-related O&M expenses are associated with the operating and maintenance of Union's existing storage assets, the expenses categorized as Storage-General and Storage-Shared were further classified into the following plant-related categories: supervision, wells, lines, compressors, measuring and regulating, dehydration, rents, and other.

Table 4 Union's Storage-Related O&M Expense Allocators

ALLOCATOR BASIS	DESCRIPTION
Plant, Property & Equipment	IO allocator matched to the allocation of the related asset
Plant, Property & Equipment	KPMG's PP&E Model (see Page 1 of Schedule 14)
Cost Study	Same allocator used in Union's most recent Cost Allocation Study
Time Estimates	Individual staff assessment of time worked on unregulated storage projects
Most Recent Actual Regulated and Unregulated Split	Allocator based on Union's actual unregulated storage O&M to the total net operational O&M for the most recent year
Determined When IO is Opened	One-time assessment made based on the nature of the IO activity

Costs related to operating and maintaining Union's storage-related assets are allocated in the same manner in which the underlying asset is allocated. Storage support costs such as general operating and engineering O&M are allocated based on the activities conducted by Union's departments related to storage operations. Administrative & General ("A&G") expenses are allocated in proportion to Union's storage O&M expenses. These allocation methods are consistent with Union's treatment of these costs in its Board-approved 2007 cost allocation study.

Schedule 13 provides a high level view of the cost allocation methods relied upon by Union by department or expense category for assigning annual O&M expenses to its unregulated storage operations. Further details of this process are provided below.

1. Storage Operations

The cost of storage operations are separated between Union's unregulated and utility storage operations based on the underlying asset that the expenditure supports. This is determined by Union reviewing how the costs relate to the storage assets with its engineers residing in the Storage Transmission Operations ("STO") department and with budget contacts in each group that support the maintenance of Union's existing storage assets. For example, the operating costs related to individual storage pools is separated between Union's unregulated and regulated storage in the same manner in which the storage pool assets are allocated (see Schedule 11).

2. Business Development

O&M expenses related to the development of new storage assets are assigned to Union's unregulated storage operations based on an estimate of time spent annually on the development of its unregulated storage projects. These allocations are reviewed by Union with its key contacts in the Business Development group, and updated annually as part of the forecast process. Adjustments are made during the year if the actual activity levels vary significantly from the expected levels.

3. Regulatory

O&M expenses related to the regulatory activities associated with the development of new storage projects are assigned to Union's unregulated storage operations based on an estimate of the time spent annually on the development of its unregulated storage projects. These allocations are reviewed by Union with its key contacts in the Regulatory group, and updated annually as part of the forecast process.

4. Other O&M Expenses

O&M expenses related to Union's human resources, benefits, information technology, and administrative & general areas are assigned to its unregulated storage operations based on Union's previously assigned unregulated storage-related O&M expenses.

5. Illustrative Examples of Union's Cost Allocation Process for O&M Expenses

Schedule 14 presents Union's specific O&M expense allocation factors and examples to illustrate how its cost allocation methods and allocation factors are applied to the various O&M expense categories described above. Page 1 of Schedule 14 presents the resulting allocation factors for the Storage-General, Storage-Shared, and Storage-Support categories for the years 2007 and 2012. The derived allocation factors (percentages) are reviewed and updated annually by Union for areas directly involved in storage operations as well as for those supporting storage activities that reflect the operation and maintenance of its storage assets, the supporting corporate services, and the development of new storage capacity.

The 2007 allocation factors were used by Union to assign O&M expenses during the first year in which its unregulated storage operations was in existence. As a point of contrast, Schedule 14 also presents the allocation factors that are being used by Union in 2012 to show that all of the allocation factors have increased since 2007 in recognition of the additions made to Union's unregulated storage assets since the original asset transfer which occurred in 2007.

Pages 2 and 3 of Schedule 14 present illustrative examples of how Union's cost allocation process works for the various types of expenses that support its unregulated storage operations. Page 2 of Schedule 14 illustrates the process followed by Union in determining which allocation factor should be applied to particular storage-related activities and the associated O&M expenses. Further explanations for a few of the examples presented on page 2 of Schedule 14 are provided below:

- Under the Storage-General category, Storage Operations expenses associated with Union's gas dehydration operations at Dawn are allocated to its unregulated storage operations using a 69.0% allocation factor (which is the same factor used in Union's cost allocation study for demand-related dehydration costs).

- Under the Storage-General category, Storage Operations expenses associated with the wells at Union's Bentpath storage pool are allocated to its unregulated storage operations using a 38.0% allocation factor (which is the same allocation percentage represented by the unregulated wells assets at the Bentpath storage pool).

- Under the Storage-Support category, Information Technology expenses supporting Union's storage operations are allocated to its unregulated storage operations using a 2.9% allocation factor (which is based on Union's unregulated storage O&M expenses to its total Operational O&M expenses).

- Under the Storage-Support category, Business Development expenses supporting Union's storage operations are allocated to its unregulated storage operations using a 27% allocation factor (which is based on individual time estimates of the Union staff members who perform these activities).

Page 3 of Schedule 14 illustrates how Union applies the selected cost allocation factors to the various O&M expense components to derive the portion of O&M expenses each year that is assigned to its unregulated storage operations by cost center and department. The example on page 3 represents the costs of three Union IOs and how their costs are allocated to the Unregulated O&M, Regulated O&M, and Capitalization categories. While this one example addresses only 3 IOs, Union's cost allocation process is much more complex than that since it must allocate each year the O&M expenses of over 2,000 IOs between its unregulated and regulated storage operations.

6. O&M Results for 2012

Based on the cost allocation process just described, Union derived the O&M expenses for 2012 attributable to its unregulated storage operations. Table 5 below presents these results by department, with the total amount equal to the O&M expense amount reflected in Union's Determination of 2012 Net Margin for Account No. 179-70 which will be presented later in this report.

Table 5 Union's 2012 Unregulated Storage-Related O&M Expenses by Department

DEPARTMENT	ALLOCATED AMOUNT
Business Development	$2,282,757
Regulatory	$1,568,396
Information Technology	$682,805
Operations	$4,216,510
Human Resources	$2,944,878
Administrative and General	$495,009
Total	$12,190,355

3.6.3 Depreciation Expense

As reported in Black & Veatch's previous review, Union used the results of its depreciation study, less salvage value, to depreciate its unregulated storage assets. Beginning in 2010, Union began depreciating its unregulated storage assets based on the useful life of the asset component.

The 2012 Unregulated Provision for Depreciation, Amortization, and Depletion for Union's unregulated storage assets was $10.357 million.[20] Table 6 below presents Union's depreciation expense and resulting average annual depreciation rates for its unregulated storage assets by asset class.

Table 6 Union's 2012 Depreciation Expense for Unregulated Storage Assets

ASSET CLASS	DEPRECIATION EXPENSE ($000)	ANNUAL AVERAGE DEPRECIATION RATE
Land Rights	$431	2.0%
Structures & Improvements	$649	3.3%
Wells and Lines	$1,915	2.2%
Compressor Equipment	$4,031	2.8%
Measuring & Regulating Equipment	$513	1.8%
Subtotal	$7,539	
General Plant	$1,681	15.7%
Total	$9,220	

[20] The Unregulated Provision for Depreciation, Amortization, and Depletion for 2012 is composed of an amount for Depreciation and Amortization of $9,220,000, an adjustment for vehicle clearing of ($67,000), and an adjustment for establishment of an Asset Retirement Obligation for Non-Regulated Storage Wells of $1,204,000.

Depreciation expense for Union's general plant is allocated to its unregulated storage operations using the same allocators used to allocate general plant. This general plant depreciation allocation is added to the underground storage depreciation expense to determine the total unregulated storage depreciation expense.

3.6.4 Property and Capital Tax

Union's actual property tax related to the assets at Dawn is allocated to its unregulated storage operations in proportion to the level of its unregulated gross storage plant to its total gross storage plant (excluding general plant). The 2012 property and capital tax charges for Union's unregulated storage assets was $1.351 million.

Schedule 15 describes these resulting allocation factors and the basis for their derivation.

3.6.5 Cost of Unutilized In-Franchise Storage Capacity

Union accounts for the costs associated with the portion of its storage capacity not utilized by its in-franchise customers by assigning these costs to its unregulated storage operations. This method ensures that the regulated rates for Union's in-franchise customers will continue to recover no more than the costs of the in-franchise storage space requirements of 92.1 PJ. Since in-franchise customers currently require less than 100 PJ of storage capacity, Union sells the difference between the space needed and the reserve amount, equal to 7.9 PJ, on a short-term basis.

The revenue requirement (excluding UFG and compressor fuel) for the unutilized 7.9 PJ of storage space was derived by comparing Union's Board-approved 2007 cost allocation study to the same cost study adjusted to reflect an assumed in-franchise storage space requirement of 100 PJ. The O&M costs, depreciation expense, taxes, and regulated return on equity for 7.9 PJ of underground storage services (i.e., space, deliverability, commodity and dehydration) is $2.261 million per year[21]. This amount has been charged to Union's unregulated storage operations annually during the period 2007 through 2012 because this amount reflects the most recent cost basis for this resource. The costs of UFG and compressor fuel associated with this unutilized level of storage space was already derived and reflected in Union's storage deferral accounts (i.e., attributed to Union's unregulated storage operations) because the actual storage volumes used in the derivation of the allocation factor for UFG and compressor fuel costs includes the unregulated storage activity associated with the 7.9 PJ of storage space.

In Union's 2013 cost of service proceeding, Union filed a new forecast of its in-franchise storage space requirements, with the resulting amount of storage space to be sold by Union as short-term storage services and the corresponding revenue requirement to be charged to its unregulated storage operations. This amount will be used in Union's margin calculation for its short-term storage deferral account for sharing with ratepayers. Finally, this amount will remain unchanged until Union's next rebasing proceeding.

[21] O&M expense of $0.743 million, depreciation expense of $0.498 million, property and capital tax of $0.102 million, interest of $0.537 million, income taxes of $0.126 million, deferred tax drawdown of ($0.113) million, preferred dividend requirement of $0.017 million, and regulated return of $0.351 million.

3.7 RECONCILIATION OF UNION'S STORAGE UTILIZATION AND AVAILABLE CAPACITY

As part of the cost allocation review, Black & Veatch conducted a reconciliation of the storage space sold by Union to its in-franchise and ex-franchise customers with the total physical space owned by Union. To undertake this task, Black & Veatch reviewed the utilization by customers of Union's storage space during a recent time period for its short-term and long-term storage services and the level of storage space required to support such services. The objective of this process was to confirm that: (1) the level of Union's storage space not utilized by its in-franchise customers was, in fact, utilized by Union to support the short-term storage services offered by its unregulated operations; (2) the available storage space above the 100 PJ level set aside for Union's in-franchise customers was utilized to support the long-term storage services offered by its unregulated storage operations; and (3) the level of Union's unregulated storage services was consistent with, and supported by, the total physical storage space owned by Union.

As a backdrop for this analysis, it would be useful to explain how the storage space available to Union's unregulated storage operations is utilized by its ex-franchise customers. For short-term storage services, Union provides a wide range of short-term storage services that enable customers to meet their varying gas load requirements on a seasonal, daily, and intraday basis. At the same time, these customers (who are typically more active in the gas market) have the ability to utilize Union's storage services to create supply optimization opportunities premised upon the prevailing natural gas prices. To utilize Union's storage resources in this manner, we understand that it is not uncommon for some of Union's short-term storage service customers to cycle their storage inventory 2-3 times in one year (which results in storage transactional volumes equal to 4-6 times the physical storage space).[22] With such high cycling rates (i.e., high inventory turnover ratios), it is not unusual for Union to experience volumetric activity levels for these customers that are much higher than the level of the underlying contracted storage space. In contrast, Union's ex-franchise customers who contract for long-term storage services sometimes cycle their storage space less than once in a particular year.

The starting point for this analysis was Union's actual storage service (or activity) levels in calendar 2012 presented in Table 1. The physical storage space owned by Union that was available to support the short-term storage services it provided during 2012 was equal to the difference between the storage space required to serve Union's in-franchise customers (which was 88.0 PJ from Union's Integrated Supply Plan) and 100 PJ, or 12.0 PJ. This unused level of storage space was utilized by Union to provide the following short-term storage services to its ex-franchise customers: C1 Short Term Firm Peak Storage, C1 Off-Peak Storage/Balancing/Loan Services, C1 Firm Short-Term Deliverability, and Enbridge Load Balancing Agreement. Page 1 of Schedule 16 provides a summary of the storage space and storage activity by customer associated with Union's short-term storage services at October 31, 2012 that was supported by the 12.0 PJ of available storage space. Consistent with the above discussion, the storage turn-over rates for Union's short-term storage services range between 0.5 and 3.7 times, with an average of about 1.4 times. The activity level for Union's short-term peak storage services of 1,323,110 10^3 m^3, presented at page 1 of Schedule 16, is

[22] A customer that contracts for 10 PJ of storage space would be expected to have about 20 PJ of activity to complete one full storage cycle (10 PJ of injections to fill the contracted storage space and 10 PJ of withdrawals to empty the space).

approximately equal to the service level in 2012 for the C1 ST Firm Peak Storage category as shown in Table 1.

The physical storage space owned by Union that was available to support the long-term storage services it provided during 2012 was equal to 79.9 PJ[23]. This level of storage space was enhanced through Union's ongoing resource optimization activities (e.g., gas loans and space optimization) which increased its available storage space for long-term transactions to 98.4 PJ. Page 2 of Schedule 16 provides a summary of Union's long-term storage space at October 31, 2012 categorized by Long-Term Peak Storage and High Deliverability Storage. Once again, consistent with the above discussion, the storage turn-over rates for Union's long-term storage services are 1.0 times for Long-Term Storage and 5.7 times for High Deliverability Storage, with an average of about 1.2 times. The activity level for Union's long-term peak storage services of 229.8 PJ (6,077,519 10^3 m^3), presented at page 2 of Schedule 16, reconciles with the service level in 2012 for the Long-Term Peak Storage and High Deliverability Storage categories as shown in Table 1.

3.8 FINDINGS AND RECOMMENDATIONS

Based upon Black & Veatch's review of Union's storage allocation process, methodology, and results, the conceptual underpinnings and resulting methodologies upon which Union's cost allocation process is based are well-conceived, thorough, and reasonable in their treatment of storage-related plant and expenses. However, the regulatory presentation of Union's separation of costs between its regulated and unregulated storage operations does not provide a sufficient level of detail for a third-party to readily understand how Union's annual level of unregulated storage assets and O&M expenses change as caused by changes to certain of its cost allocation factors, or to verify that the necessary changes to its cost allocation factors are computationally supportable.

As a result of these findings, Black & Veatch recommends the following near-term enhancements to Union's computational process and evidentiary presentation:

- Establish more robust documentation in Union's regulatory filings to provide a complete understanding and explanation of the process Union utilizes to update its cost allocation factors each year, and provide the necessary computational support to explain and illustrate how the changes made to Union's cost allocation factors are derived.

Our specific findings and recommendations are discussed in more detail below:

Structure of Union's Cost Allocation Process

1. Union implemented a comprehensive accounting separation model to comply with the Board's NGEIR Decision issued in November 2006.
2. For purposes of deriving the storage costs for its regulated and unregulated storage operations, Union's accounting separation model relied upon its then most recent Board-approved cost allocation study (filed in EB-2005-0520).

[23] Union's available storage capacity of 79.9 PJ for long-term transactions includes third-party storage capacity in the amount of 15.9 PJ, which equates to a storage capacity level of 64.0 PJ held by Union at December 31, 2012 for its owned unregulated storage operations.

3. The primary purpose of Union's cost allocation study was to separate its storage assets existing at the time of the NGEIR Decision - with this step representing a one-time transfer of assets to Union's unregulated storage operations.
4. Union has recognized and incorporated into its cost allocation process the regulatory precedents established by the Board (see Schedule 1) pertaining to the separation of storage assets and expenses between its regulated and unregulated storage operations.
5. The vast majority of allocation methods used by Union, and approved by the Board, in its most recently completed cost allocation study have been carried forward and applied to the cost allocation process Union now uses to separate its storage cost of service between the regulated and unregulated storage operations (see Schedule 2).

Data Sources and the Timing of Union's Cost Allocation Process

1. Union's on-going allocation of costs to its unregulated storage operations is premised upon, for the most part, the same sources of data that it utilizes to derive its total cost of service for regulated operations that is reflected in its cost allocation study. The one exception is for Union's existing storage assets that were assigned at the time of the NGEIR Decision as a one-time transfer to Union's unregulated storage operations.
2. It was necessary and appropriate for Union to allocate certain of the cost elements supporting its unregulated storage operations on a one-time basis while others were allocated to that business line on an annual basis using allocation factors that are updated each year (see Schedule 4).

Assignment of Storage Space to Union's Unregulated Storage Operations

1. Union has reserved 100 PJ of storage space (i.e., storage capacity) at cost-based rates, in compliance with the NGEIR Decision, to accommodate in-franchise growth - which meant that approximately 62.1 PJ of storage space was assigned to Union's unregulated storage operations.
2. The current rates of Union's in-franchise customers actually reflect an amount of storage space equal to 92.1 PJ rather than the 100 PJ level stated in the Board's NGEIR Decision in recognition of the actual amount of storage space required by Union's in-franchise customers in any year.

Treatment of Union's Existing Storage Assets

1. Union properly completed a comprehensive review of all its existing underground storage assets to determine which assets needed to be removed from its regulated utility rate base and allocated to its unregulated storage operations.
2. Union properly conducted a detailed cost functionalization process of its existing storage assets at December 31, 2006 to determine whether those assets: (1) were directly attributable to providing storage services only; (2) were directly attributable to providing transmission services only; or (3) were utilized to provide both storage and transmission services.
3. For purposes of either directly assigning or deriving an allocation factor for each storage asset (or portion of a storage asset) functionalized as storage, Union further grouped its storage assets into four specific categories: (1) Storage Dehydration; (2) Storage - All Other; (3) Storage Compression; and (4) Storage Measuring & Regulating. This process is consistent with the

process followed by Union in its Board-approved cost allocation study and properly reflects the operational functions and design characteristics of these assets.

4. Union's process and the results of functionalizing and allocating its existing storage assets to determine which assets needed to be removed from its regulated rate base and allocated to its unregulated storage operations were verified by Black & Veatch, as summarized in Schedule 5.
5. The allocation methods chosen by Union to directly assign or allocate its existing storage assets to its unregulated storage operations are reasonable and consistent with the operational functions and design characteristics of these assets, and the derivation of Union's resulting allocation factors are appropriate and verified (see Schedule 6).

Treatment of Union's Existing General Plant

1. Union's general plant assets are not directly attributable to either the regulated or unregulated storage operations because of the support nature of a utility's general plant facilities. Therefore, it was necessary for Union to allocate these assets to its unregulated storage operations through allocation factors that recognize their support nature.
2. Union's process and the results of allocating its existing general plant to determine which assets needed to be removed from its regulated rate base and allocated to its unregulated storage operations were verified by Black & Veatch, as summarized in Schedule 7.
3. The allocation methods chosen by Union to allocate its general plant existing at December 31, 2006 to its unregulated storage operations are reasonable and consistent with the operational functions and design characteristics of these assets.
4. The derivation of Union's general plant allocation factors for plant existing at December 31, 2006 is appropriate and verified (see Schedule 8).

Treatment of Union's New Storage Assets

1. Union properly treated any new storage assets constructed after the NGEIR Decision that increase its storage capacity or deliverability by directly assigned them to its unregulated storage operations.
2. Union properly treated any new storage projects that only replace its existing storage assets by allocating the cost of those projects to its unregulated storage operations on the same basis as the original assets.
3. Black & Veatch did verify that Union's treatment of its new storage assets was properly reflected in the storage asset balances for 2010-2012 (see Schedules 9 and 10).

Treatment of Union's New General Plant Assets

1. Union properly allocated new general plant to its unregulated storage operations by using the allocation factor applicable to the particular asset category (i.e., Vehicles and Heavy Equipment or All Other) derived at the time the asset was placed into service.
2. Union properly derived its asset allocation factors for general plant (Vehicles and Heavy Equipment or All Other) based on the level of applicable assets and storage/transmission activity that existed at the time the new asset was placed into service.

Treatment of Union's Storage-Related Expenses

1. Union derives storage-related expenses for its unregulated storage operations on an annual basis to reflect the latest activity supporting that business line.
2. The total cost of gas allocated to Union's unregulated storage operations consists of Unaccounted for Gas ("UFG"), storage compressor fuel, net of the amount of gas in kind supplied by customers providing their own fuel, and the cost of storage space purchased from others. The method for allocating these gas costs to Union's unregulated storage operations is consistent with the allocation method used in the Board-approved 2007 cost allocation study (see Schedule 11).
3. The Operating and Maintenance ("O&M") Expenses assigned to Union's unregulated storage operations are allocated based on the underlying activities within each expense category.
4. Since the majority of Union's O&M expenses are associated with the operating and maintenance of Union's existing assets, it was appropriate to classify the expenses categorized as Storage-General and Storage-Shared into the following plant-related categories: supervision, wells, lines, compressors, measuring and regulating, dehydration, rents, and other (see Schedule 14).
5. Union's O&M expenses for Storage Operations were properly allocated to its unregulated storage operations based on its derived allocation factors applied to the corresponding expense levels in 2012.
6. The allocation factors for Storage Operations used by Union in 2012 (see Schedule 14) have all increased since 2007 in recognition of the major additions made to Union's unregulated storage assets since the original asset transfer which occurred in 2007.
7. The allocation methods and associated allocation factors for Union's other storage-related O&M expenses: Business Development, Regulatory, Human Resources, Information Technology, and Administrative & General are reasonable and properly reflect the underlying activities and costs in support of Union's unregulated storage operation (see Schedule 14).
8. The allocation methods and associated allocation factors for Union's other storage-related expenses: Depreciation Expense, Property Taxes, and Capital Taxes are reasonable and properly reflect the underlying activities and costs in support of Union's unregulated storage operation (see Schedule 15).

Cost of Union's Unutilized In-Franchise Storage Capacity

1. Union accounts for the costs associated with the portion of its storage capacity not utilized by its in-franchise customers by assigning these costs to its unregulated storage operations. This method properly ensures that the regulated rates for Union's in-franchise customers will continue to recover no more than the costs of the in-franchise storage space requirements of 92.1 PJ.
2. Since in-franchise customers currently require less than 100 PJ of storage capacity, Union sells the difference between the space needed and the reserve amount, equal to 7.9 PJ, on a short-term basis.
3. Union's revenue requirement (excluding UFG and compressor fuel) for the unutilized 7.9 PJ of storage space was derived by comparing its Board-approved 2007 cost allocation study to the

same cost study adjusted to reflect an assumed in-franchise storage space requirement of 100 PJ.

4. Union properly computed the total costs (i.e., revenue requirement) of its unutilized storage capacity of $2.261 million per year using the above-described method of comparing its two cost allocation studies under different storage space assumptions for its in-franchise customers.
5. It is appropriate that this amount has been charged to Union's unregulated storage operations annually for 2007 through 2012 because this amount reflects the most recent cost basis for this resource.
6. In Union's 2013 cost of service proceeding (EB-2011-0210), Union filed a new forecast of its in-franchise storage space requirements, with the resulting amount of storage space to be sold by Union as short-term storage services and the corresponding revenue requirement to be charged to its unregulated storage operations.[24]

Reconciliation of Union's Storage Utilization and Available Capacity

1. It was confirmed that: (1) the level of Union's storage space not utilized by its in-franchise customers was, in fact, utilized by Union to support the short-term storage services offered by its unregulated storage operations; (2) the available storage space above the 100 PJ level set aside for Union's in-franchise customers was utilized to support the long-term storage services offered by its unregulated storage operations; and (3) the level of Union's unregulated storage services was consistent with, and supported by, the total physical storage space owned by Union (see Schedule 16).

[24] Union's Non-Utility Cross Charge for Storage Space will be $3.810 million associated with 11.3 PJ of excess utility storage space. This amount will be utilized by Union in its deferral account margin calculation for 2013 and subsequent years, and will remain unchanged until Union's next rate rebasing proceeding.

4 Accounting for Union's Storage Operations

The purpose of this section is to detail the findings and recommendations of Black & Veatch's review and evaluation of the accounting for Union's storage operations. As outlined in the NGEIR Decision, the costs of Union's unregulated storage operations are used in the computation of storage margins subject to deferral in its storage deferral account – Account No. 179-70 Short-Term Storage and Other Balancing Services. During Union's annual rate proceedings, year-end annual deferral account balances are submitted to the Board for review and approval.

4.1 DEFERRAL ACCOUNT DEFINITION

As prescribed under the Ontario Energy Board Act, Account No. 179-70 is defined as follows[25]:

> *Account No. 179-70*
> *Other Deferred Charges-Short-Term Storage and Other Balancing Services*
>
> To record, as a debit (credit) in Deferral Account 179-70 the difference between actual net revenues for Short-term Storage and Other Balancing Services….and the net revenue forecast for these services as approved by the Board for ratemaking purposes

Net revenues in Account No. 179-70 are defined to be the revenues net of the costs associated with Union's unregulated short-term storage and other balancing transactions. For purposes of this report, net revenue will henceforth be referred to as net margin.

4.2 DEFERRAL ACCOUNT STRUCTURE AND OPERATION

In order to determine the balances in Account No. 179-70, actual net margins are first determined using Union's actual calendar year data. The shareholder portion of 10% is deducted from the net margin in order to derive the ratepayer portion of net margin. Next, these resultant totals are compared with forecasted net margins incorporated into Union's distribution rates as approved by the Board in EB-2007-0606. If the actual margin exceeds the level built into rates, the result is a net deferral credit. Conversely, if the actual net margin is less than the amount assumed in rates, the result is a deferral debit.

The Board determined in the NGEIR Decision that Union should reserve 100 PJ of storage space for in-franchise customers. The balance of storage capacity, 62.1 PJ, is assigned to long term unregulated storage operations. Further, the Board noted that since distribution customers currently require less than 100 PJ of storage capacity, Union sells the difference between the space needed and the total amount reserved on a short term basis. Revenues and costs associated with unregulated short-term storage operations are cleared through Account No. 179-70.

The short-term and long-term storage revenues from Union's ex-franchise customers are recorded based on the services provided. Union's unregulated storage revenues are recorded as billed to customers in separate storage revenue accounts. The short-term storage revenues subject to deferral are discussed in Section 2.2.

[25] EB-2005-0520 Decision and Order, Appendix F

Union employs for the most part the Board approved 2007 cost allocation methodology, as depicted in Schedule 2, to allocate costs to its unregulated storage operations. Total unregulated storage costs are then assigned to Union's short-term storage account in order to calculate the actual net margins. Union's actual 2012 data was used to undertake this review.

Presented in Table 7 below are Union's total actual 2012 unregulated storage revenue and costs. Table 7 presents the actual 2012 net margins determined for Account No. 179-70 based on the total 2012 unregulated storage costs and the assignment methodologies.

Table 7 Determination of Union's 2012 Net Margin for Account No. 179-70

ITEM	ACCOUNT NO. 179-70 UNREGULATED S-T STORAGE COSTS 2012 ACTUAL ($000)
Revenue	
	$13,639
Total Revenue (A)	**$13,639**
Commodity Costs	
UFG	$582
Compressor Fuel	$379
Customer Supplied Fuel	N/A
Third Party Storage	N/A
Total Commodity (B)	**$961**
Demand Costs	
Revenue Requirement on 7.9 PJs of excess in-franchise storage capacity	$2,261
Total Demand Costs (C)	**$2,261**
Net Margin	
Net Margin = (A)-(B)-(C)	**$10,417**

After the actual net margin is computed, the next step is to compare Union's actual calendar year data to its forecasted net margins incorporated into distribution rates as approved by the Board. For 2012, net margin included in rates was established in EB-2007-0606. Finally, the resulting balance is shared between Union and its ratepayers.

According to the NGEIR Decision and further summarized at pages 4 and 5 of the Board's Decision in EB-2005-0520, net margin on Account No. 179-70 short-term transactions:

> "Will be shared by Union and ratepayers in proportion to the allocation of rate base between utility and non-utility assets. The allocation is currently 79% utility and 21% non utility. Union will receive 10% of the margin deemed to be earned from utility assets and 100% of the margin deemed to be earned from non-utility assets."

In EB-2012-0206, the Board concluded that all net revenues (minus a 10% incentive payment to Union) should accrue to the benefit of its ratepayers, thus, changing the original determination of the sharing basis.[26] Based on this sharing formula, the 2012 net deferral balances in Account No. 179-70 is shown in Table 8 below.

Table 8 Determination of Union's 2012 Deferral Balances for Account No. 179-70

LINE	DESCRIPTION	ACTUAL 2012 ($000)
1	Actual Net Margin (from Table 7)	$10,417
2	Less: Shareholder Portion @10%	($1,042)
3	Subtotal	$9,375
4	Less: Margin Approved in Rates	$11,254
5	Deferral Account Balance Payable to/(Collected From) Ratepayers	($1,879)

4.3 FINDINGS AND RECOMMENDATIONS

Based upon Black & Veatch's review of Union's storage deferral account activity, accounting, and results for 2012, the computational basis for determining the net deferral balance for Account No. 179-70 appears sound and accurately follows regulatory precedents established in the NGEIR Decision, EB-2005-0520, EB-2007-0606, and subsequent Board orders regarding Union's storage deferral account filings made after 2006. In addition, using the supporting data and explanations provided by Union, Black & Veatch was able to track and replicate the revenues and expenses claimed by Union to be associated with the unregulated short-term and long-term storage services provided to its ex-franchise customers in 2012.

Therefore, Black & Veatch has no recommendations related to the computational basis or presentation of the revenue and cost components of Union's Account No. 179-70.

[26] EB-2012-0206, Decision and Order on Board Motion, July 18, 2012, pages 4 and 9.

Schedules

UNION GAS LIMITED
Accounting and Cost Allocation for Unregulated and Regulated Storage Operations
Regulatory Chronology of Relevant OEB Proceedings

OEB Proceeding	Key Issues	OEB Decision and Order	Issue Date
EB-2005-0520	• Rates application by Union filed with the OEB on December 15, 2005	• Approval of Union's delivery, storage, and transportation rate changes to be implemented January 1, 2007	December 19, 2006
EB-2005-0551 Natural Gas Electricity Interface Review (the "NGEIR Decision") - Notice of Proceeding issued by the OEB on December 29, 2005	• Rates and services for gas-fired generators • Storage regulation	• The OEB will cease regulating the prices charged for: (1) all storage services offered by Union to customers outside of its franchise area; (2) new storage services offered by Union to its in-franchise customers; and (3) all storage services offered by other storage operators, including storage operators affiliated with Union • Rates for storage services provided to Union's distribution customers will continue to be regulated by the OEB on a cost of service basis • The OEB concluded that the sharing of profits from Union's short-term storage services will continue, with 100% accrual to ratepayers for short-term storage	November 7, 2006

OEB Proceeding	Key Issues	OEB Decision and Order	Issue Date
		transactions that are underpinned by “utility asset” storage space • The OEB found that profits from new long-term storage transactions should accrue entirely to Union, not to ratepayers • The OEB ordered that after 2007, Union’s share of long-term margins will be 25% in 2008, 50% in 2009, 75% in 2010, and 100% in 2010 and thereafter • Functional separation of Union’s unregulated storage operations was not necessary • Union’s current cost allocation study (filed and approved in EB-2005-0520) was adequate for the purposes of separating its regulated and unregulated costs and revenues for ratemaking purposes	
EB-2007-0598 (the “2006 Deferral Account Proceeding”)	• Union sought approval for the final disposition and recovery of certain 2006 year-end deferral account balances and the 2006 year-end earnings sharing amount (application filed by Union on April 27, 2007)	• Union’s 2006 actual year end Gas Supply, Storage, and Transportation, and Other deferral account balances were approved • The balance in Union’s Long-Term Peak Storage Services Account (Account No. 179-72) was revised to a credit of $3.015 to ratepayers to reflect the elimination of any	August 17, 2007

OEB Proceeding	Key Issues	OEB Decision and Order	Issue Date
		deferred income tax expense from this account	
EB-2007-0606	• Union sought approval of a multi-year incentive rate mechanism to determine rates for the regulated distribution, transmission, and storage of natural gas (application filed by Union on May 11, 2007)	• The OEB approved the proposed rate order effective January 1, 2008 and implemented April 1, 2008, reflecting its EB-2007-0606 Decision dated January 17, 2008	March 4, 2008
EB-2007-0725 Natural Gas Storage Allocation Policies - Notice of Proceeding issued by the OEB on August 28, 2007	• Methodology used by Union to allocate storage to its distribution customers at cost-based rates	• The OEB found that storage space and deliverability should be allocated to Union's T1 and T3 customers in a manner that is consistent with the storage that underpins Union's services to bundled customers • The OEB concluded that the maximum level of deliverability available to a T1 or T3 customer at cost-based rates should equal the greater of DCQ and CD-DCQ • The OEB found that the proposed revisions to Union's A/E Method were appropriate and should be implemented to determine cost-based storage space allocations	April 29, 2008
EB-2008-0034 (the "2007 Deferral Account Proceeding")	• Union sought approval for the final disposition and recovery of certain 2007 year-end deferral account balances including	• Union's 2007 actual year end Long-Term Peak Storage Services deferral account balance was approved	June 3, 2008

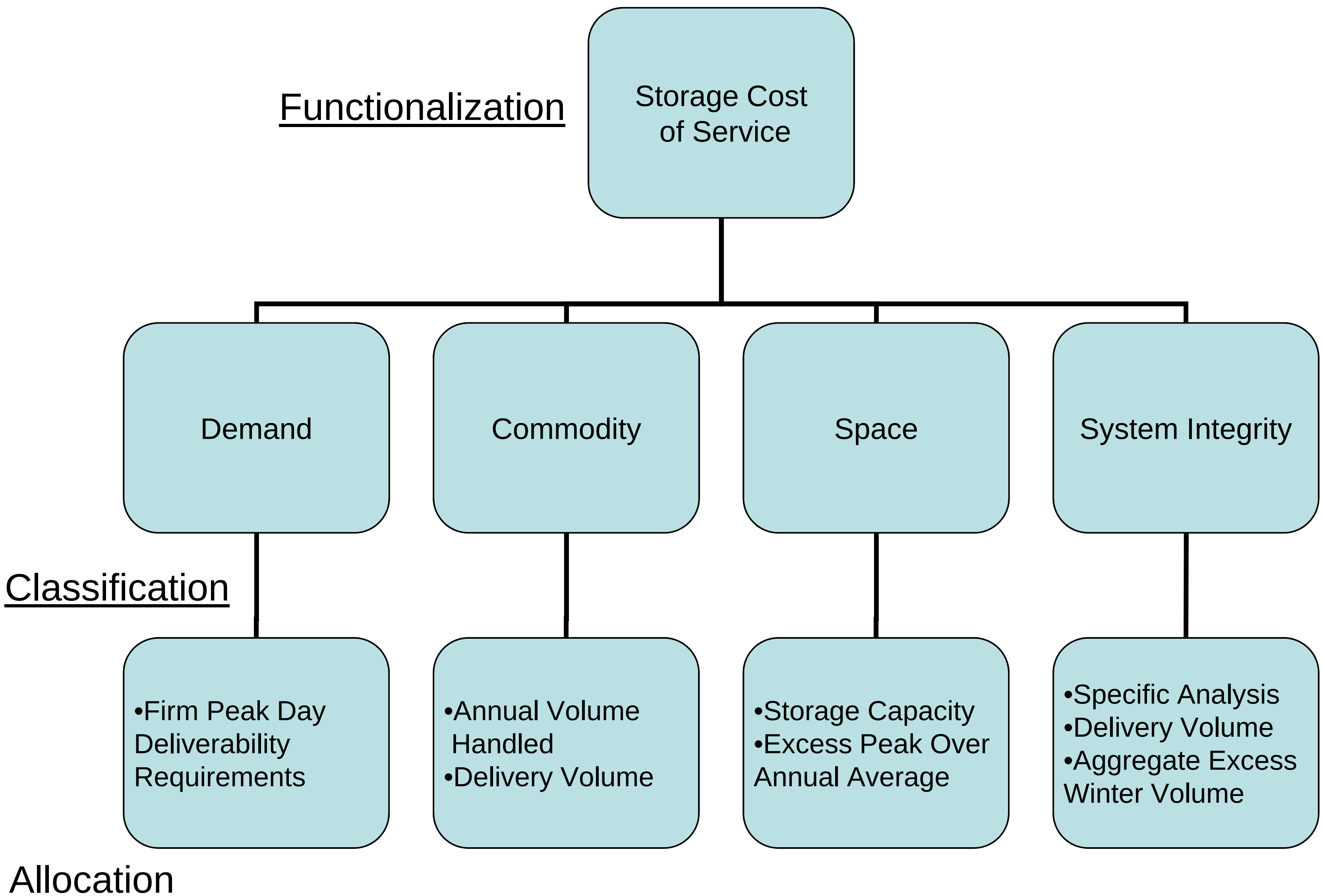
OEB Proceeding	Key Issues	OEB Decision and Order	Issue Date
	approval and disposition of the market transformation incentive and capital tax deferral amounts (application by Union filed on March 3, 2008)	• The OEB ordered Union to recalculate its 2007 balance in Account No. 179-72 to equal 75% of the excess of (i) actual net revenues on all long-term storage transactions less (ii) the OEB-approved forecast net revenue of $21.405 million, for disposition at a later time	
EB-2008-0154	• Motion to review Union's 2006 and 2007 deferral account disposition and earnings sharing (motion by Union filed on June 23, 2008)	• The OEB dismissed Union's motion for review	October 13, 2008
EB-2009-0052 (the "2008 Deferral Account Proceeding")	• Union sought approval for the final disposition and recovery of certain 2008 year-end deferral account balances including approval and disposition of the market transformation incentive (application filed by Union on March 31, 2009)	• Union's 2007 actual year end Short-Term Storage and Balancing Services and Long-Term Peak Storage Services deferral account balances were approved	August 6, 2009
EB-2010-0039 (the "2009 Deferral Account Proceeding")	• Union sought approval of amendments to the rates charged to customers as of October 1, 2010 in connection with the sharing of 2009 earnings under the incentive rate mechanism • Union sought approval for the	• The OEB approved a Settlement Agreement on all of the issues raised in Union's Application • The Settlement Agreement accepted Union's proposed disposition of the Short-Term Storage and Other Balancing	August 10, 2010

OEB Proceeding	Key Issues	OEB Decision and Order	Issue Date
	final disposition and recovery of 2009 year-end deferral account balances • Union sought approval of a cost allocation methodology used to allocate costs between Union's regulated and unregulated businesses (application filed by Union on April 22, 2010)	Services and Long-Term Peak Storage Services deferral account balances • The Settlement Agreement specified that Union will commission an independent study of its cost allocation methodology for allocation of costs between its regulated and unregulated storage operations	
EB-2011-0038 (the "2010 Deferral Account Proceeding")	• Union sought approval of amendments to the rates charged to customers as of October 1, 2011 in connection with the sharing of 2010 earnings under the incentive rate mechanism • Union sought approval for the final disposition and recovery of 2010 year-end deferral account balances • Union submitted a report prepared by Black & Veatch that reviewed the cost allocation and accounting processes for Union's unregulated and regulated storage operations	• The OEB finds that the intent of the NGEIR Decision was to effect the one-time separation of plant assets between Union's utility and non-utility businesses. Therefore, there is no need for a subsequent separation (or the filing of another cost study) • The OEB finds that Union has appropriately applied its 2007 Cost Allocation Study for the one-time separation of plant • The OEB finds that the entire cost amount (being $2.261 million) of the 7.9PJs of storage space (the amount of space available between the in-franchise requirements and the 100PJ cap) is allowable for inclusion in the margin sharing	January 12, 2012

OEB Proceeding	Key Issues	OEB Decision and Order	Issue Date
		calculation in the Short-term Storage account. • The OEB finds that only the Board-approved ROE can be used for the margin sharing calculation in the Long-term Storage account related to incremental assets and that no return can be included related to long-term storage contracts.	
EB-2012-0206	• The calculation of Union's margin sharing under its Deferral Account 179-70 – Short-Term Storage and Other Balancing Services	• The OEB concluded that the correct amount to be credited to Union's ratepayers related to margin sharing in its Short-Term Storage Account for 2010 was $3.824 million (instead of $0.831 million). • The OEB concluded that all net revenues (minus a 10% incentive payment to Union) accrue to the benefit of its ratepayers. • The OEB directed Union to dispose of a credit balance of $2.992 million (plus any applicable interest) related to the correction as part of its October 2012 QRAM proceeding.	July 18, 2012
EB-2011-0210	• Union sought approval or fixing of rates for the distribution,	• The OEB approved a Settlement Agreement on some of the issues	October 25, 2012

OEB Proceeding	Key Issues	OEB Decision and Order	Issue Date
	transmission and storage of natural gas, effective January 1, 2013.	raised in Union's Application. Broadly, the Agreement addressed rate base and cost of service. • The OEB found that Union's allocation methodologies for capital additions and O&M costs related to the utility and non-utility storage operations are appropriate. The Board is of the view that these allocation methodologies reasonably reflect cost allocation principles. • The OEB found that Union's methodology for allocating system integrity space is appropriate. • The OEB approved Union's proposals for New Ex-Franchise Services. • The OEB directed Union to hire an independent consultant to update what was filed in the EB-2011-0038 proceeding and file that report as part of its 2014 rates proceeding.	

Union Gas Limited
Union's Cost Allocation Study – Treatment of Storage-Related Costs



Union Gas Limited
Unions' Cost Allocation Study – Treatment of Storage-Related Costs

EB-2005-0520 Board-approved cost allocation methodology	Methodology used to allocate costs to Union's unregulated storage operations
Existing Underground Storage Assets	Existing Underground Storage Assets
Certain assets (specific structures, measuring and regulating and compression assets) in the Dawn Station yard are installed solely for transmission purposes and are directly assigned to the transmission function. These assets include the meter runs into the Dawn-Trafalgar system, metering at Tecumseh, Oil Springs and TCPL, and the Great Lakes header. The Dawn Plant E compressor is not directly assigned to transmission in Union's Board-approved cost allocation study.	Consistent with the Board-approved 2007 cost allocation methodology, the meter runs into the Dawn-Trafalgar system, metering at Tecumseh, Oil Springs and TCPL, and the Great Lakes header are directly assigned to the transmission function. In addition, the Dawn Plant E compressor, which was installed to provide transmission compression from Dow-Moore into the Dawn-Trafalgar system, was directly assigned to transmission.
Compression-related assets that are not directly assigned to transmission provide both storage and transmission services at Dawn and are allocated between storage and transmission functions based on horsepower requirements. Union's Board-approved 2007 cost allocation study allocated 44.4% of Dawn compression related costs to the storage function and 55.6% of Dawn compression-related costs to the transmission function. These factors were applied to total compression-related costs.	Compression-related assets were allocated at the individual asset level. Outboard storage compressors located at Union's storage pools are directly assigned to storage. As noted above, the Dawn Plant E compressor was directly assigned to transmission. Compression-related costs of assets that are used to provide storage and transmission services were split between storage and transmission based on a horsepower allocation that excluded the outboard storage compressors and the Dawn Plant E compressor. This resulted in an adjusted Board-approved horsepower allocation that allocates 52.7% of Dawn compression-related costs to the storage function and 47.3% of Dawn compression-related costs to the transmission function. These factors were used for the one-time separation of the assets.
Measuring and regulating equipment assets that are not directly assigned to transmission provide both storage and transmission services at Dawn and are allocated between storage (26%) and transmission (74%) based on the forecasted activity into and out of Dawn. The storage costs are classified as deliverability. Storage deliverability costs are allocated to rate classes based	For measuring and regulating equipment assets that are not directly assigned Union used the 2007 Board-approved split of assets between storage and transmission and allocated the storage assets to unregulated storage using an average storage space and deliverability allocator of 37.7%. The result wa an allocator for measuring and regulating equipment of 9.9% for unregulated operations. These factors were used

EB-2005-0520 Board-approved cost allocation methodology	**Methodology used to allocate costs to Union's unregulated storage operations**
on design day demands from storage (the NETFROMSTOR allocator), which allocated 39.2% of these storage costs to ex-franchise storage services. The result is that 10.2% of allocated M&R costs are allocated to ex-franchise storage services.	for the one-time separation of the assets.
Storage land, land rights, buildings, wells and lines and base pressure gas are classified between space, deliverability and system integrity, and are allocated to ex-franchise storage services based on space, deliverability and system integrity allocators.	Storage assets were allocated to unregulated storage using an average storage space and deliverability allocator of 37.7%. These factors were used for the one-time separation of the assets.
<u>General Plant</u>	<u>General Plant</u>
In Union's Board-approved 2007 cost allocation study, general plant assets are assigned to the storage function in proportion to net plant and O&M and classified in the same manner. Costs are allocated to ex-franchise storage services based on the space, deliverability, commodity and system integrity allocators.	General plant is separated into two categories to determine the allocation factor for the unregulated storage operations. The vehicle and heavy equipment allocator was determined using the relative asset value of vehicles used in the Storage & Transmission Operation compared to the total value of vehicles and heavy equipment for all of Union (11.9%). Vehicle assets applicable to Union's unregulated storage operations were allocated using the average space and deliverability factor used for other storage assets (37.7%). This results in an allocation for vehicles of 4.5% for unregulated operations.[1] The second category of general plant includes all other categories of general plant. These assets were allocated to the unregulated storage operations using an allocation factor that combines storage assets and storage O&M. The percentage of unregulated storage to total plant (3.32%) is averaged with percentage of allocated support costs to total O&M (2.52%). This results in an allocation for other general plant of 2.92% for unregulated operations.

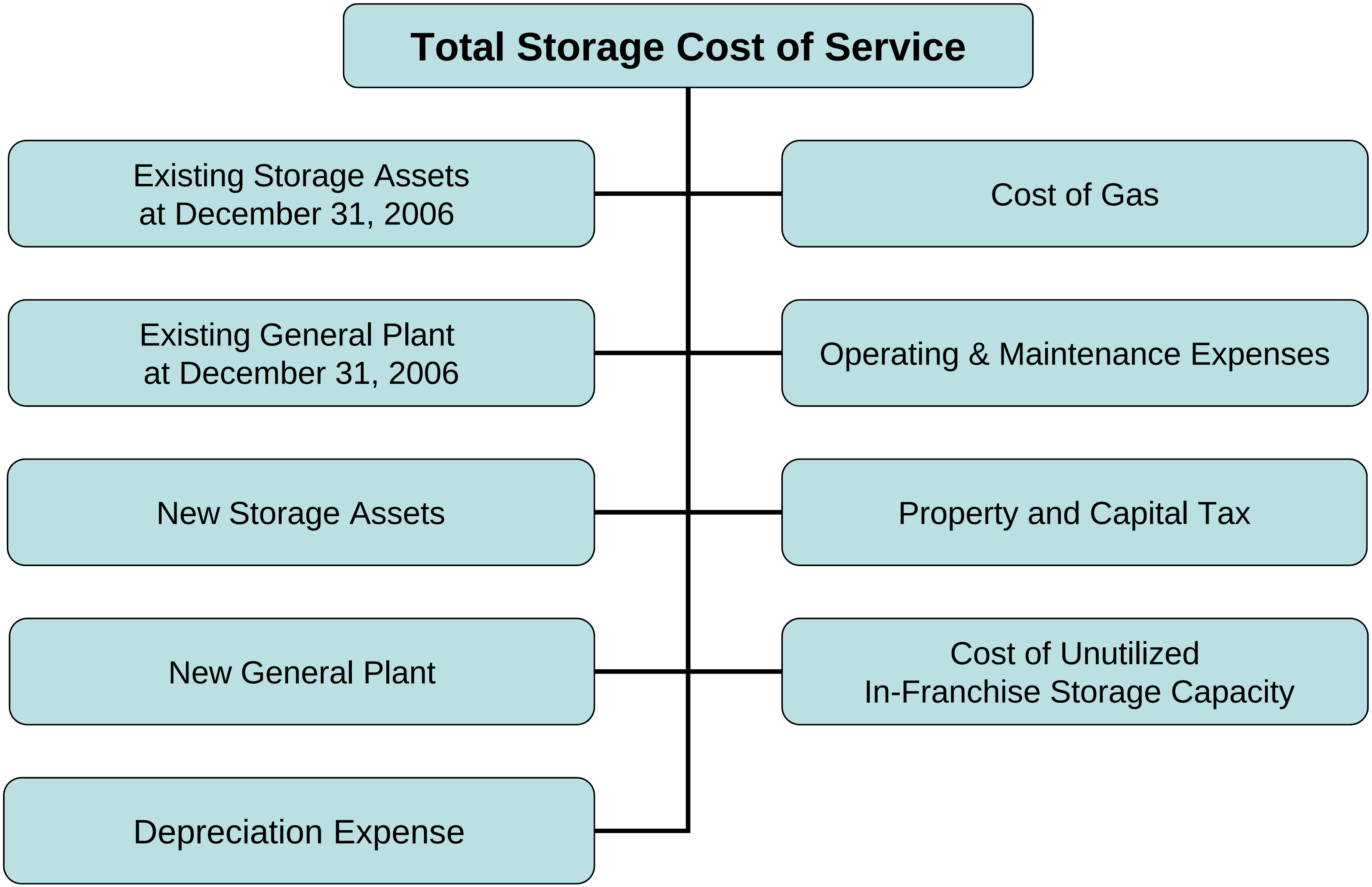
[1] For calendar 2012 and subsequent years, Union has modified its cost allocation method for vehicles and heavy equipment to also reflect a functional allocation (using a compressor horsepower based allocator) of the total value of its vehicles and heavy equipment used in its Storage & Transmission Operations to quantify the portion of these general plant assets that support only Union's storage operations. The resulting amount for the storage-related function is then allocated between Union's regulated and unregulated storage operations in the same manner as described above.

EB-2005-0520 Board-approved cost allocation methodology	**Methodology used to allocate costs to Union's unregulated storage operations**
<u>Working Capital</u>	Inventory of stores, spare equipment and prepaid and deferred expenses are allocated to unregulated storage in proportion to the allocation of total storage net plant. Cash working capital is calculated using regulated O&M and cost of gas.
<u>Taxes</u>	<u>Property Taxes</u> Property tax related to the assets at Dawn is allocated between unregulated storage and regulated utility operations in proportion to the allocation of total storage gross plant. <u>Deferred Tax Drawdown</u> The deferred tax drawdown is allocated based on the split of the December 31, 1996 plant balance between regulated and unregulated. The result is an allocation factor of 10.3%. <u>Accumulated Deferred Taxes</u> The accumulated deferred tax balance associated with the December 31, 1996 plant balance was allocated using the same allocation factor as described under the deferred tax drawdown allocation (10.3%).
<u>Operating & Maintenance Expenses</u>	<u>Operating & Maintenance Expenses</u>
O&M is allocated based on an analysis of activities or in the same manner as the underlying assets. Costs are allocated to ex-franchise storage services based on the space, deliverability, commodity and system integrity allocators.	Actual O&M related to the operation of the storage facilities was allocated to the unregulated storage operation using the same allocators applied to the assets for that facility. Administrative and general expenses and benefits in support of unregulated storage operations were allocated in proportion to storage O&M. O&M costs related to the development of new storage assets are assigned based on an estimate of time spent annually on the development of unregulated projects. O&M costs related to the Regulatory department for development of new storage assets, are assigned based on an estimate of time spent annually on the development of unregulated projects.

EB-2005-0520 Board-approved cost allocation methodology	**Methodology used to allocate costs to Union's unregulated storage operations**
<u>Cost of Gas</u>	<u>Cost of Gas</u>
The compressor fuel budget is allocated to storage and transmission in proportion to forecast volume. Storage fuel is allocated to ex-franchise storage services in proportion to forecast volume.	The storage compressor fuel forecast is allocated based on estimated unregulated storage activity.
Unaccounted for gas (UFG) costs are allocated to storage and transmission in proportion to forecast volume. Storage UFG is allocated to ex-franchise storage services in proportion to forecast volume.	The unaccounted for gas costs in 2012 are allocated based on estimated unregulated storage activity. The UFG allocation factor is the ratio of unregulated storage volumes to Union's total storage and transportation volumes.
<u>System Integrity</u>	<u>System Integrity</u>
	Union allocates system integrity space requirements for UFG forecast variances between its utility and non-utility operations in proportion to total storage injection and withdrawals and transmission volumes. The result is that 79.5 percent of total storage and transmission volumes are related to utility operations. Union allocates system integrity space requirements for OBA and LBA imbalances between its utility and non-utility operations in proportion to total storage injection and withdrawals and transmission volumes. The result is that 76.5 percent of total storage and transmission volumes for OBA and LBA imbalances are related to utility operations. Union allocates system integrity space requirements for storage pool hysteresis between its utility and non-utility operations based on storage space requirements in proportion to total company storage space. The result is that 51.5 percent of total storage space requirements are related to utility operations. To determine the utility integrity space, Union added the 4.1 Bcf system integrity space for weather variances, line pack and supply backstopping.

Schedule 3

Union Gas Limited
Regulated and Unregulated Storage Costs – Functional Separation Process

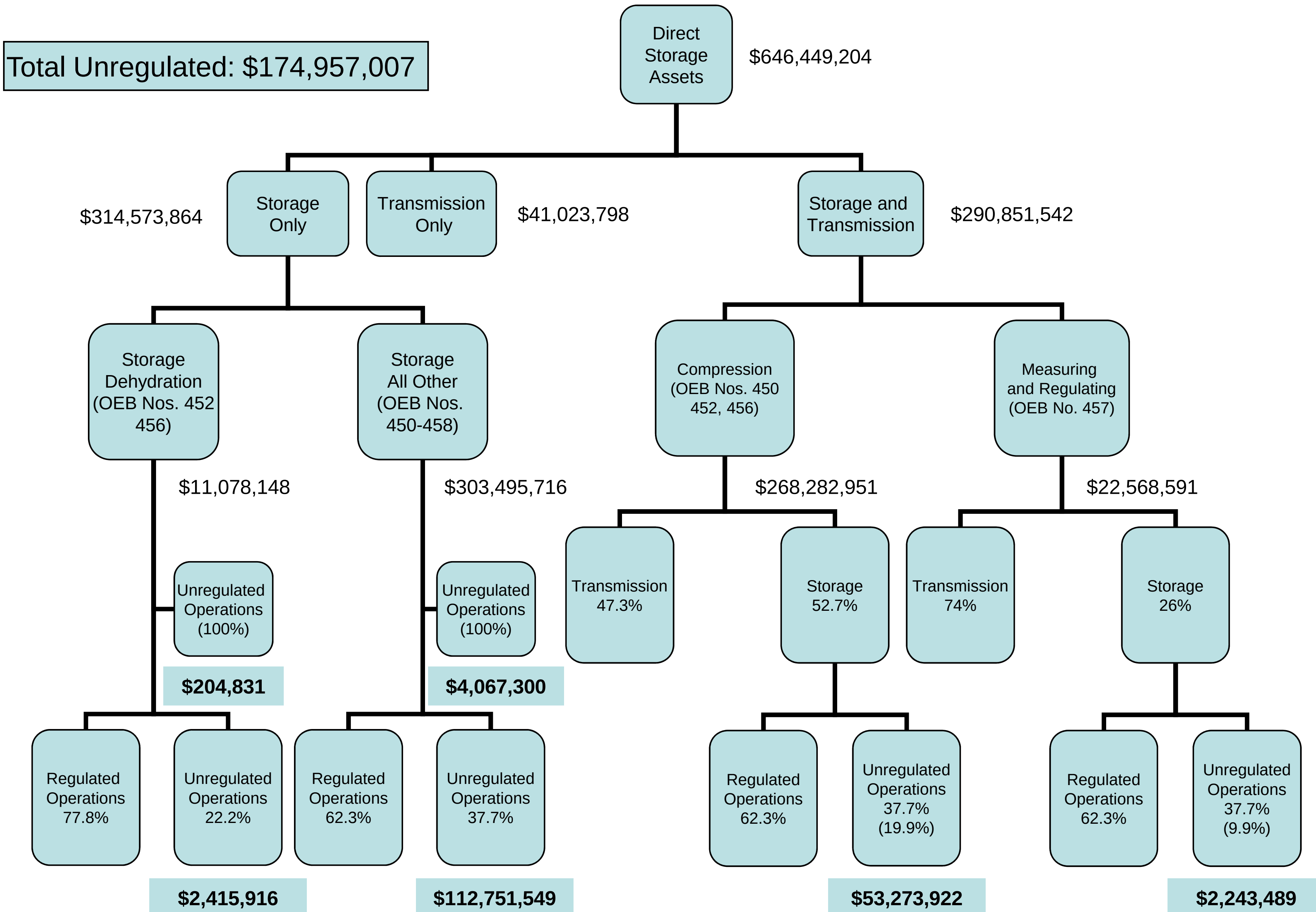


Schedule 4

Union Gas Limited
Timing of Union's Cost Allocation Process

One-Time	Annual	Periodic
•Storage Assets Existing at December 31, 2006 –Direct Assignments –Allocations	•Storage Asset Additions and Retirements –Direct Assignments –Allocations	•New Cost Allocation Study for Union's In-Franchise Customers –Updates allocation factors to apply to future additions and retirements of General Plant –Revalues the cost of in-franchise storage capacity available for short-term unregulated storage transactions •New depreciation rates
•General Plant Existing at December 31, 2006 –Allocations	•General Plant Additions and Retirements –Allocations	
•Cost of Unutilized In-Franchise Storage Capacity (7.9 PJ) –Change in costs between Union's cost allocation studies	•Gas Costs –UFG –Compressor Fuel –Allocations	
	•O&M Expenses –Allocations	
	•Property and Capital Tax –Allocations	

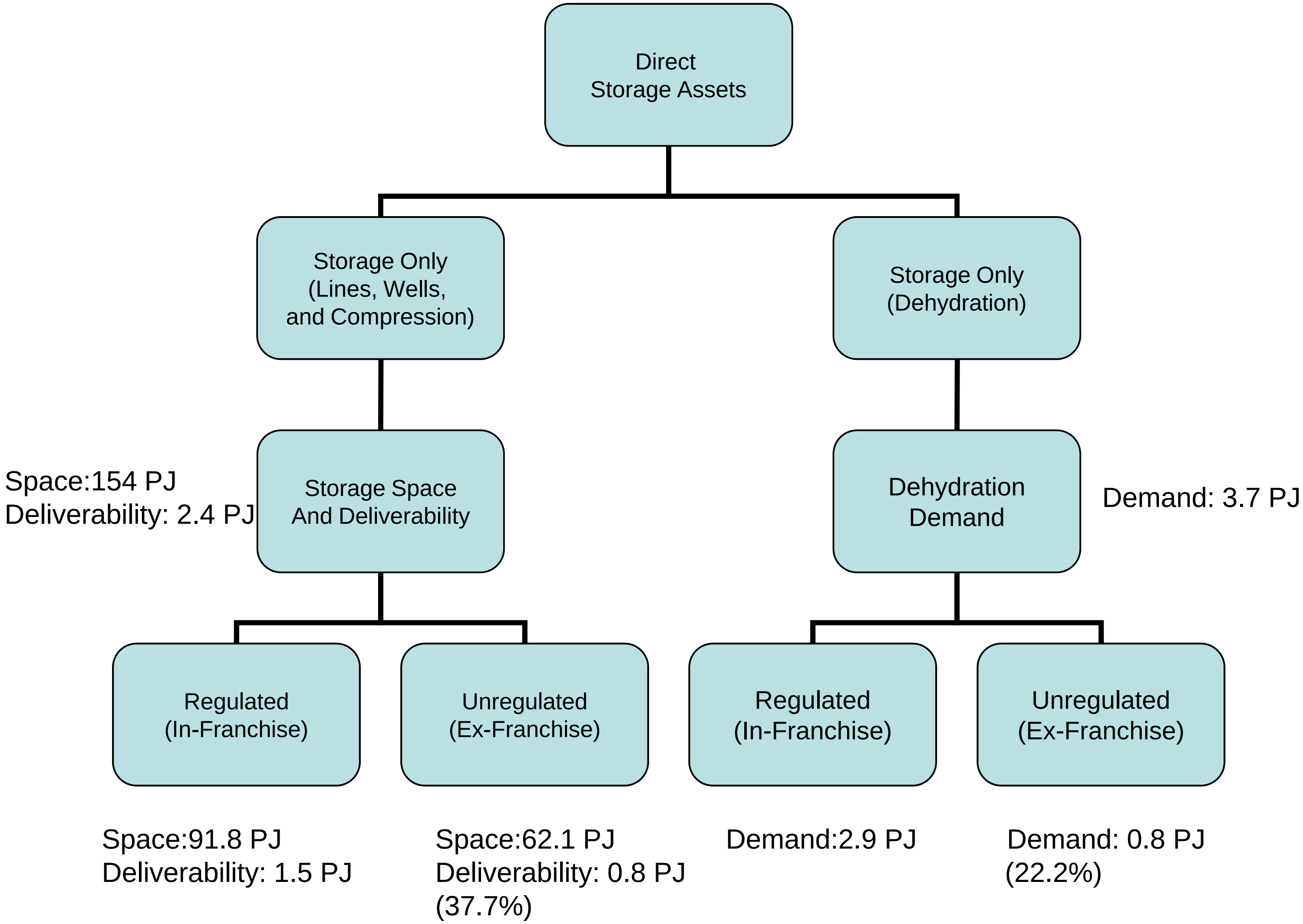
Union Gas Limited
One-Time Separation of Direct Storage Assets - Unregulated
As of December 31, 2007



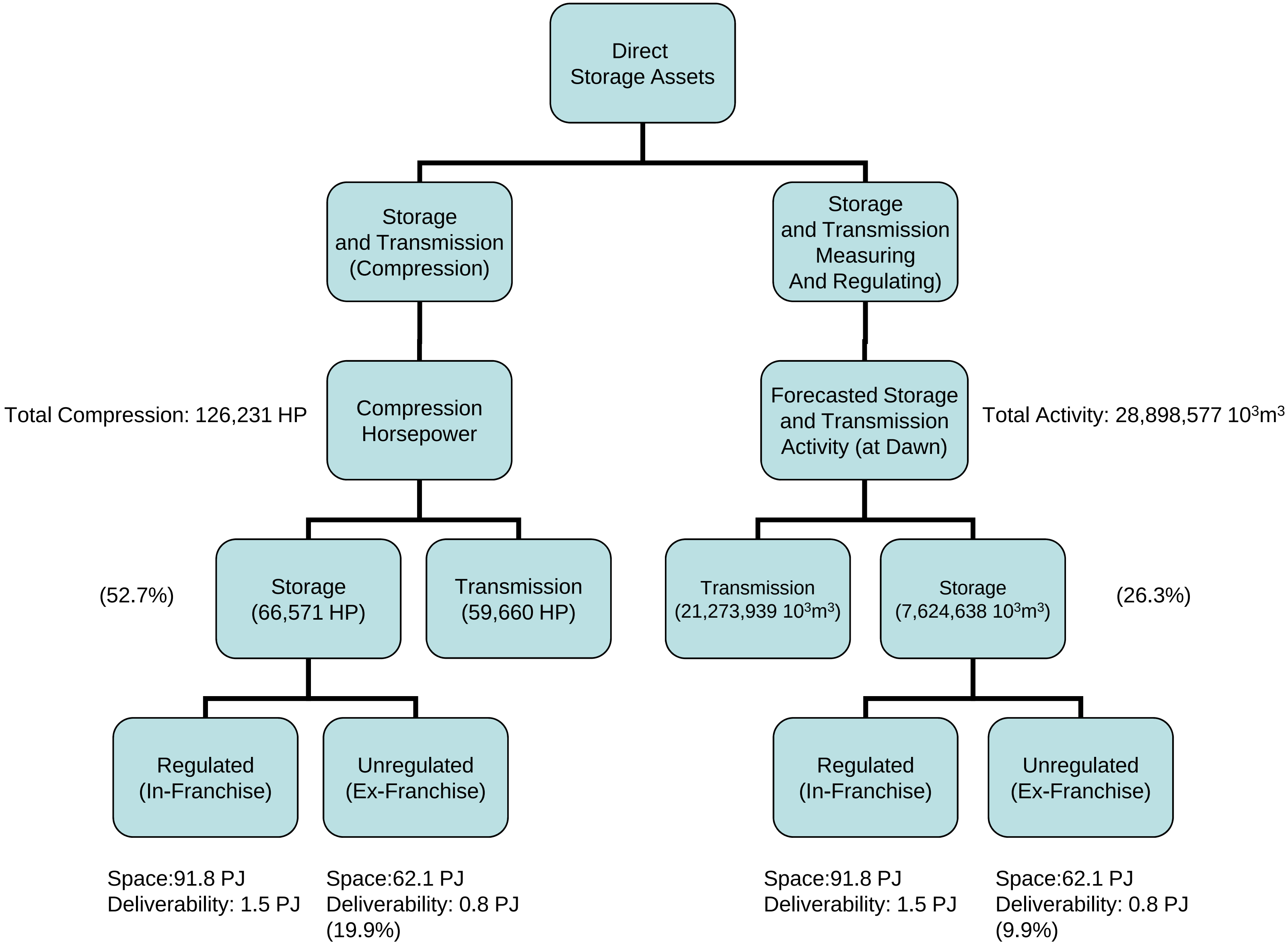
Union Gas Limited
One Time Separation of Direct Storage Assets - Unregulated
As of December 31, 2007

Underground Storage Plant in Service	OEB No.	Storage Dehydration	Storage All Other	Storage Compression	Storage M&R	Total
Land	450		$488,839	$742,544		$1,231,383
Land Rights	451		$19,319,679			$19,319,679
Structures and Improvements	452	$457,920	$1,482,773	$9,618,344		$11,559,037
Wells	453-455		$51,843,688			$51,843,688
Compressor Equipment	456	$2,162,827	$14,076,742	$42,913,034		$59,152,603
Measuring & Regulating Equipment	457		$11,271,332		$2,243,489	$13,514,821
Base Pressure Gas	458		$18,335,796			$18,335,796
Other Equipment	459					
Total		$2,620,747	$116,818,849	$53,273,922	$2,243,489	$174,957,007

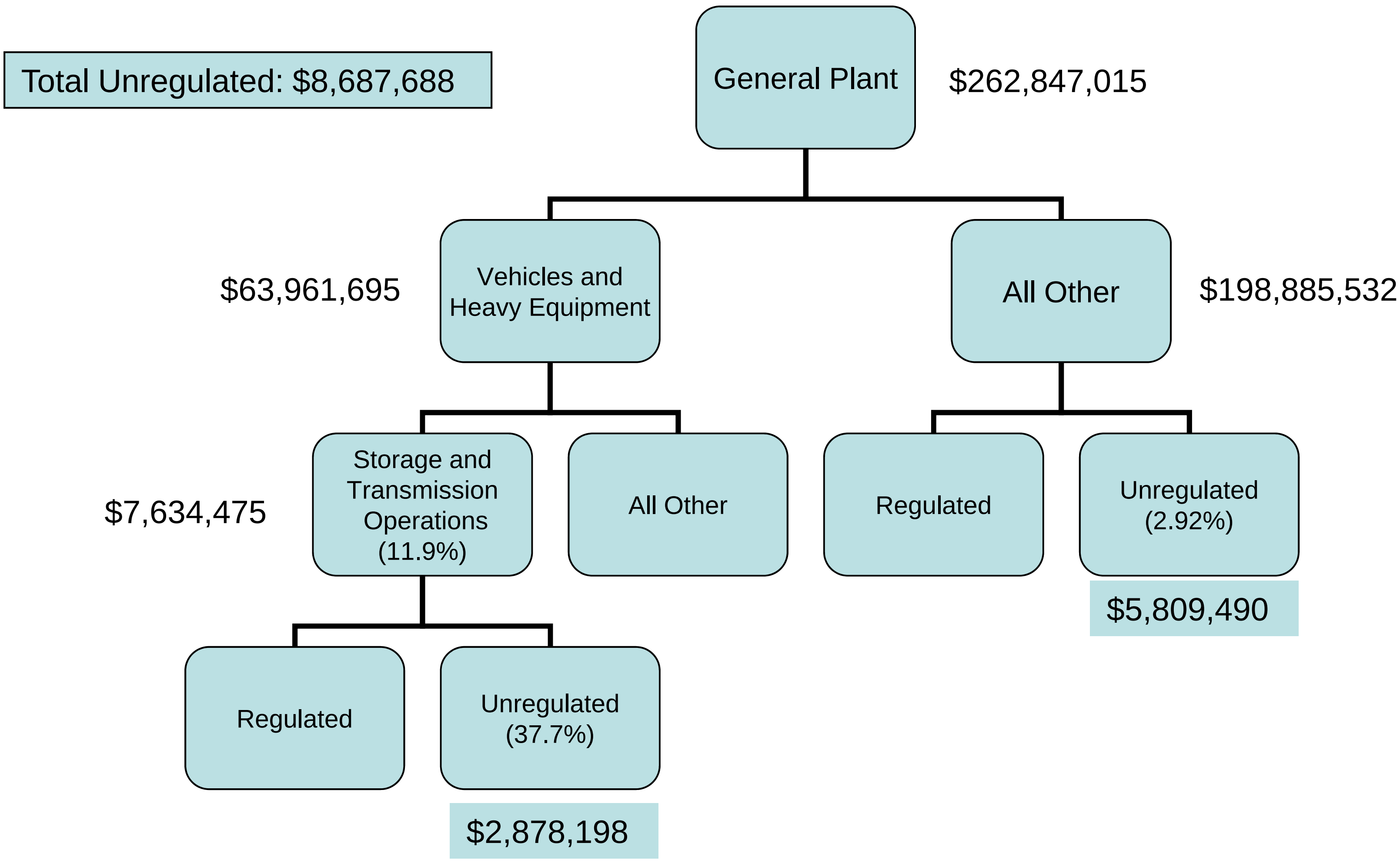
Union Gas Limited
Derivation of Storage Asset Allocation Factors



Union Gas Limited
Derivation of Storage Asset Allocation Factors



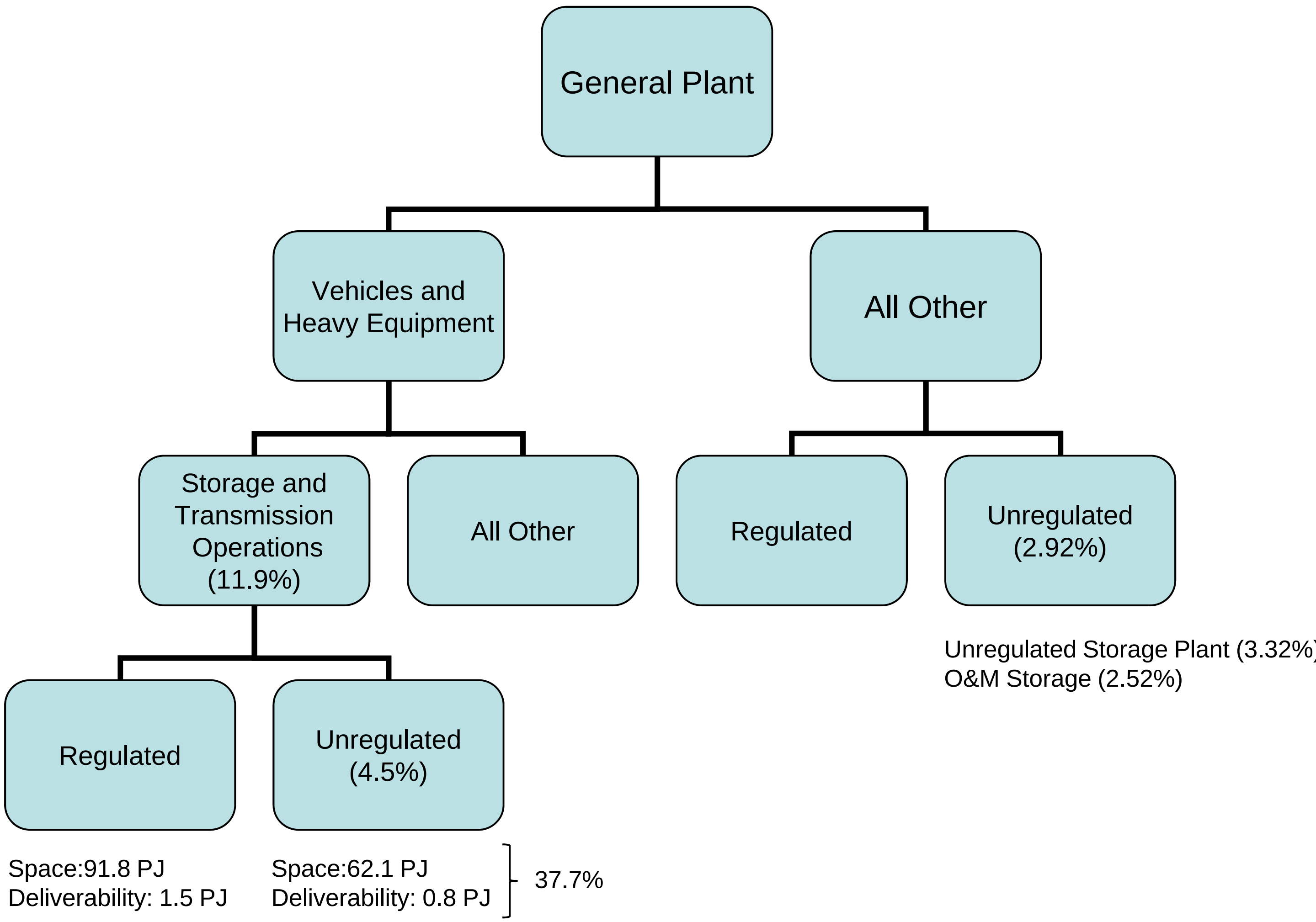
Union Gas Limited
One-Time Separation of General Plant - Unregulated
As of December 31, 2007



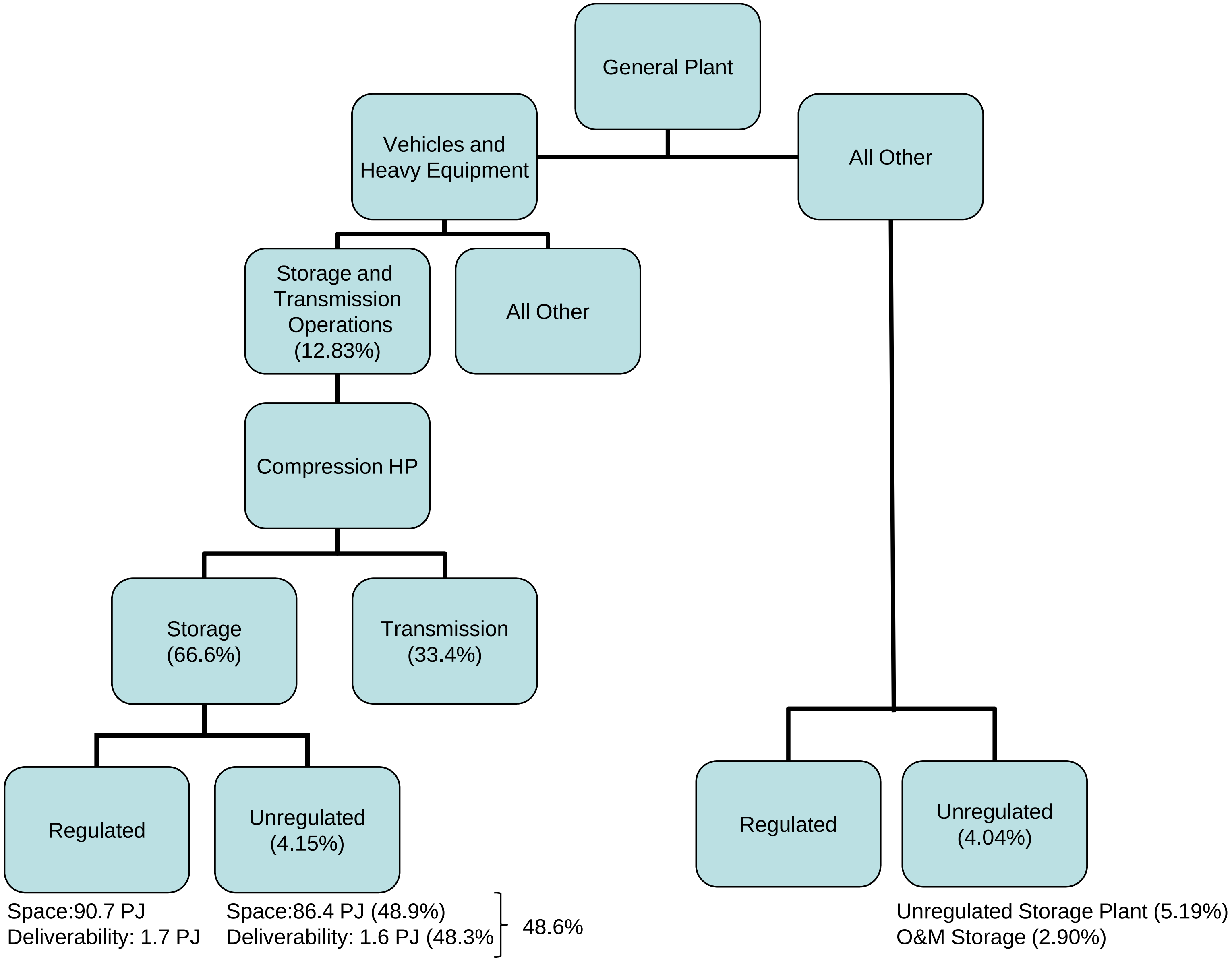
Union Gas Limited
One Time Separation of General Plant - Unregulated
As of December 31, 2007

General Plant in Service	OEB No.	Total Union Gas	Allocation Factor	Storage Unregulated
Land	480	$639,517	2.92%	$18,672
Structures and Improvements	482	$41,476,054	2.92%	$1,210,993
Leasehold Improvements	482	$956,163	2.92%	$27,917
Office Equipment - Furniture & Equipment	483	$16,777,717	2.92%	$489,866
Office Equipment - Computer Hardware	483	$25,102,410	2.92%	$732,925
Office Equipment - Computer Software	483	$59,290,638	2.92%	$1,731,132
Transportation - Vans and Pickups	484	$49,666,179	4.50%	$2,234,917
Transportation - Heavy Work Equipment	485	$14,295,516	4.50%	$643,281
Tools and Work Equipment	486	$33,349,694	2.92%	$973,724
Communication Structures	488	$3,273,021	2.92%	$98,121
Communication Equipment	488	$18,020,107	2.92%	$526,140
Total		$262,847,015		$8,687,688

Union Gas Limited
Derivation of General Plant Allocation Factors
Applicable to Existing Assets as of December 31, 2007



Union Gas Limited
Derivation of General Plant Allocation Factors
Applicable to New Assets in 2012



UNION GAS LIMITED
Continuity of Property, Plant and Equipment
Calendar Year Ending December 31, 2010

Line No.	Particulars ($000's)	Balance Dec. 31/09	Additions: Capital Additions	Additions: Transfers	Additions: Net Salvage	Additions: Net Additions	Retirements	Balance Dec. 31/10	Adjustments	Adjusted Balance
		(a)	(b)	(c)	(g)	(h)	(d)	(e)	(f)	(g)
	Unregulated Gas Plant in Service:									
	Underground storage plant:									
1	Land	1,260	204			204		1,464		$ 1,464
2	Land rights	21,909	(203)			(203)		21,706		21,706
3	Structures and improvements	18,758	81			81		18,839		18,839
4	Wells	85,331	486			486		85,817		85,817
5	Compressor equipment	134,730	379			379	(2,632)	132,477		132,477
6	Measuring & regulating equipment	21,502	905	7		912		22,414		22,414
7	Base pressure gas	19,996	2,932			2,932		22,928		22,928
8	Other equipment	-				-		-		-
9		303,486	4,784 (1)	7	-	4,791	(2,632)	305,645		$ 305,645
	General plant:									
10	Land	19				-		19		$ 19
11	Structures & improvements	1,237	7			7		1,244		1,244
12	Office furniture & equipment	450	8			8	(134)	324		324
13	Office equipment - computers	2,540	506			506	(532)	2,514		2,514
14	Transportation equipment	1,846	266			266	(103)	2,009		2,009
15	Heavy work equipment	581	182			182	(18)	745		745
16	Tools & work equipment	990	53			53	(116)	927		927
17	Communication equipment	396	20			20	(16)	400		400
18	Communication structures	78				-		78		78
19	Other general equipment	-				-		-		-
20		8,137	1,042	-	-	1,042	(919)	8,260	-	$ 8,260
21	Total gas plant in service	311,623	5,826	7	-	5,833	(3,551)	313,905	-	$ 313,905
22	Gas plant under construction	680	7,415			7,415		8,095		8,095
23	Total unregulated property plant and equipment	312,303	13,241	7	-	13,248	(3,551)	322,000	-	$ 322,000

(1) See Schedule 10, Page 1 of 3, Line 6 (2010 Additions)

UNION GAS LIMITED
Continuity of Accumulated Depreciation
Calendar Year Ending December 31, 2010

Line No.	Particulars ($000's)	Balance Dec. 31/09	Transfers	Provisions	Retirements	Net Salvage /(Costs)	Balance Dec. 31/10
		(a)	(b)	(c)	(d)	(e)	(f)
	Unregulated Gas Plant in Service:						
	Underground storage plant:						
1	Land rights	5,815		434			$ 6,249
2	Structures & improvements	4,751		718	(3)		5,466
3	Wells and lines	17,961		2,094			20,055
4	Compressor equipment	27,543		3,935	(2,226)		29,252
5	Measuring & regulating equipment	8,156	4	474	(3)		8,631
6		64,226	4	7,655	(2,232)	-	$ 69,653
	General plant:						
7	Structures & improvements	537		28			$ 565
8	Office furniture & equipment	274		26	(134)		166
9	Office equipment - computers	1,337		631	(532)		1,436
10	Transportation equipment	419		194	(103)	9	519
11	Heavy work equipment	34		30	(18)		46
12	Tools and other equipment	513		64	(116)		461
13	Communication structures	57		4		(2)	59
14	Communication equipment	188		27	(16)		199
15		3,359	-	1,004	(919)	7	$ 3,451
16	Total unregulated gas plant in service	67,585	4	8,659	(3,151)	7	$ 73,104

UNION GAS LIMITED
Continuity of Property, Plant and Equipment
Calendar Year Ending December 31, 2011

			Additions							
Line No.	Particulars ($000's)	Balance Dec. 31/10	Capital Additions	Transfers	Net Salvage	Net Additions	Retirements	Balance Dec. 31/11	Adjustments	Adjusted Balance
		(a)	(b)	(c)	(g)	(h)	(d)	(e)	(f)	(g)
	Unregulated Gas Plant in Service:									
	Underground storage plant:									
1	Land	1,464	179			179		1,643		$ 1,643
2	Land rights	21,706	(47)			(47)		21,659		21,659
3	Structures and improvements	18,839	807			807	(17)	19,629		19,629
4	Wells	85,817	435	15		450	(15)	86,252		86,252
5	Compressor equipment	132,477	4,589	(75)		4,514	(218)	136,773		136,773
6	Measuring & regulating equipment	22,414	11,814			11,814		34,228		34,228
7	Base pressure gas	22,928				-		22,928		22,928
8	Other equipment	-				-		-		-
9		305,645	17,777 (2)	(60)	-	17,717	(250)	323,112		$ 323,112
	General plant:									
10	Land	19				-		19		$ 19
11	Structures & improvements	1,244	17			17	(1)	1,260		1,260
12	Office furniture & equipment	324	24			24	(44)	304		304
13	Office equipment - computers	2,514	637			637	(931)	2,220		2,220
14	Transportation equipment	2,009	482			482	(157)	2,334		2,334
15	Heavy work equipment	745	42			42	(104)	683		683
16	Tools & work equipment	927	41			41	(73)	895		895
17	Communication equipment	400	24			24	(32)	392		392
18	Communication structures	78				-		78		78
19	Other general equipment	-				-		-		-
20		8,260	1,267	-	-	1,267	(1,342)	8,185	-	$ 8,185
21	Total gas plant in service	313,905	19,044	(60)	-	18,984	(1,592)	331,297	-	$ 331,297
22	Gas plant under construction	8,095	(1,505)			(1,505)		6,590		6,590
23	Total unregulated property plant and equipment	322,000	17,539	(60)	-	17,479	(1,592)	337,887	-	$ 337,887

(2) See Schedule 10, Page 2 of 3, Line 6 (2011 Additions)

UNION GAS LIMITED
Continuity of Accumulated Depreciation
Calendar Year Ending December 31, 2011

Line No.	Particulars ($000's)	Balance Dec. 31/10	Transfers	Provisions	Retirements	Net Salvage /(Costs)	Balance Dec. 31/11
		(a)	(b)	(c)	(d)	(e)	(f)
	Unregulated Gas Plant in Service:						
	Underground storage plant:						
1	Land rights	6,249		431			$ 6,680
2	Structures & improvements	5,466		717	(14)		6,169
3	Wells and lines	20,055	6	1,957	(6)		22,012
4	Compressor equipment	29,252	(4)	4,007	(117)		33,139
5	Measuring & regulating equipment	8,631		649			9,280
6		69,653	2	7,761	(137)	-	$ 77,280
	General plant:						
7	Structures & improvements	565		28	(1)		$ 592
8	Office furniture & equipment	166		21	(44)		143
9	Office equipment - computers	1,436		592	(931)		1,097
10	Transportation equipment	519		219	(157)	24	605
11	Heavy work equipment	46		33	(79)		-
12	Tools and other equipment	461		61	(73)		449
13	Communication structures	59		4			63
14	Communication equipment	199		26	(32)		193
15		3,451	-	984	(1,317)	24	$ 3,142
	Miscellaneous Plant						
	Heavy Work Equipment				(25)		(25)
16	Total unregulated gas plant in service	73,104	2	8,745	(1,479)	24	$ 80,397

UNION GAS LIMITED
Continuity of Property, Plant and Equipment
Calendar Year Ending December 31, 2012

Line No.	Particulars ($000's)	Balance Dec. 31/11	Additions: Capital Additions	Additions: Transfers	Additions: Net Salvage	Additions: Net Additions	Retirements	Balance Dec. 31/12	Adjustments	Adjusted Balance
		(a)	(b)	(c)	(g)	(h)	(d)	(e)	(f)	(g)
	Unregulated Gas Plant in Service:									
	Underground storage plant:									
1	Land	1,643				-		1,643		$ 1,643
2	Land rights	21,659				-		21,659		21,659
3	Structures and improvements	19,629	366	48		414		20,043		20,043
4	Wells	86,252	573	113		686		86,938		86,938
5	Compressor equipment	136,773	11,737	573		12,310	(1,169)	147,914		147,914
6	Measuring & regulating equipment	34,228	(11,100)	(115)		(11,215)	(604)	22,408		22,408
7	Base pressure gas	22,928				-		22,928		22,928
8	Other equipment	-				-		-		-
9		323,112	1,576 (3)	619	-	2,195	(1,773)	323,534	-	$ 323,534
	General plant:									
10	Land	19				-	(2)	17		$ 17
11	Structures & improvements	1,260	242	1		243		1,503		1,503
12	Office furniture & equipment	304	93			93	(35)	362		362
13	Office equipment - computers	2,220	4,664			4,664	(619)	6,265		6,265
14	Transportation equipment	2,334	192	(37)		155	(336)	2,153		2,153
15	Heavy work equipment	683	49	38		87	(82)	688		688
16	Tools & work equipment	895	83			83	(54)	924		924
17	Communication equipment	392	48			48	(5)	435		435
18	Communication structures	78				-	(57)	21		21
19	Other general equipment	-				-		-		-
20		8,185	5,371	2	-	5,373	(1,190)	12,368	-	$ 12,368
21	Total gas plant in service	331,297	6,947	621	-	7,568	(2,963)	335,902	-	$ 335,902
22	Gas plant under construction	6,590	430			430		7,020		7,020
23	Total unregulated property plant and equipment	337,887	7,377	621	-	7,998	(2,963)	342,922	-	$ 342,922

(3) See Schedule 10, Page 3 of 3, Line 5 (2012 Additions)

UNION GAS LIMITED
Continuity of Accumulated Depreciation
Calendar Year Ending December 31, 2012

Line No.	Particulars ($000's)	Balance Dec. 31/11	Transfers	Provisions	Retirements	Net Salvage /(Costs)		Balance Dec. 31/12
		(a)	(b)	(c)	(d)	(e)		(f)
	Unregulated Gas Plant in Service:							
	Underground storage plant:							
1	Land rights	6,680		431			$	7,111
2	Structures & improvements	6,169	(6)	649				6,812
3	Wells and lines	22,012		1,915				23,927
4	Compressor equipment	33,139	151	4,031	(998)			36,323
5	Measuring & regulating equipment	9,280	(157)	513	(604)			9,032
6		77,280	(12)	7,539	(1,602)	-	$	83,205
	General plant:							
7	Structures & improvements	592	1	45			$	638
8	Office furniture & equipment	143		30	(35)			138
9	Office equipment - computers	1,097		1,244	(619)			1,722
10	Transportation equipment	605	(8)	209	(336)	16		486
11	Heavy work equipment	-	8	30	(44)			(6)
12	Tools and other equipment	449		83	(54)			478
13	Communication structures	63		3	(57)			9
14	Communication equipment	193		37	(5)			225
15		3,142	1	1,681	(1,150)	16	$	3,690
	Miscellaneous Plant							
16	Heavy Work Equipment	(25)			(38)	4		(59)
17	Total unregulated gas plant in service	80,397	(11)	9,220	(2,790)	20	$	86,836

UNION GAS LIMITED
Continuity of Storage Additions
Year ended December 31, 2010
($000s)

Line No.	Particulars ($000's)	CWIP - Dec. 31/09		2010 Cap Ex		Overheads		CWIP - Dec. 31/10		Adjustments		2010 Additions	
		Regulated	Unregulated	Regulated	Unregulated	Regulated	Unregulated	Regulated	Unregulated	Regulated	Unregulated	Regulated	Unregulated
1	Maintenance Capital	2,018	281	6,847	1,094	122	-	(2,057)	(327)	(26)	(14)	6,904	1,034
2	Major Maintenance - Dawn J	1,376	313	4,207	4,637	1,160	-	(6,743)	(4,950)	-	-	-	-
3	Storage Support	166	-	898	306	9	-	(498)	(90)	27	(27)	602	189
4	Other	52	1	42	-	(16)	-	(36)	-	4,812	2,931	4,854	2,933
5	Expansion - Subtotal	-	84	(63)	3,268	-	-	-	(2,728)	2	4	(61)	628
6	Total Storage	3,612	679	11,931	9,305	1,275	-	(9,334)	(8,095)	4,815	2,894	12,299	4,784

UNION GAS LIMITED
Continuity of Storage Additions
Year ended December 31, 2011
($000s)

Line		CWIP - Dec. 31/10		2011 Cap Ex		CWIP - Dec. 31/11		Adjustments		2011 Additions	
No.	Particulars ($000's)	Regulated	Unregulated	Regulated	Unregulated	Regulated	Unregulated	Regulated	Unregulated	Regulated	Unregulated
1	Maintenance Capital	2,420	327	5,528	1,226	(676)	(85)	(1,266)	(161)	6,006	1,307
2	Major Maintenance - Dawn J	6,743	4,950	16,018	11,220	-	-	103	(103)	22,864	16,067
3	Storage Support	134	90	2,243	443	(745)	(160)	50	33	1,682	406
4	Other	36	-	17	2	-	-	(53)	(2)	-	-
5	Expansion - Subtotal	-	2,728	-	3,213	-	(5,943)	-	-	-	(2)
6	Total Storage	9,333	8,095	23,806	16,104	(1,421)	(6,188)	(1,166)	(233)	30,552	17,778

UNION GAS LIMITED
Continuity of Storage Additions
Year ended December 31, 2012
($000s)

Line		CWIP - Dec. 31/11		2012 Cap Ex		CWIP - Dec. 31/12		Adjustments		2012 Additions	
No.	Particulars ($000's)	Regulated	Unregulated	Regulated	Unregulated	Regulated	Unregulated	Regulated	Unregulated	Regulated	Unregulated
1	Maintenance Capital	676	85	8,301	1,552	(5,239)	(598)	(516)	(210)	3,222	829
2	Major Maintenance - Dawn J	-	-	1,564	496	-	-	(1,444)	(243)	120	253
3	Storage Support	745	160	1,238	402	(235)	(69)	1	-	1,749	493
4	Expansion - Subtotal	-	5,943	520	223	-	(6,166)	-	-	520	-
5	Total Storage	1,421	6,188	11,623	2,673	(5,474)	(6,833)	(1,959)	(453)	5,611	1,575

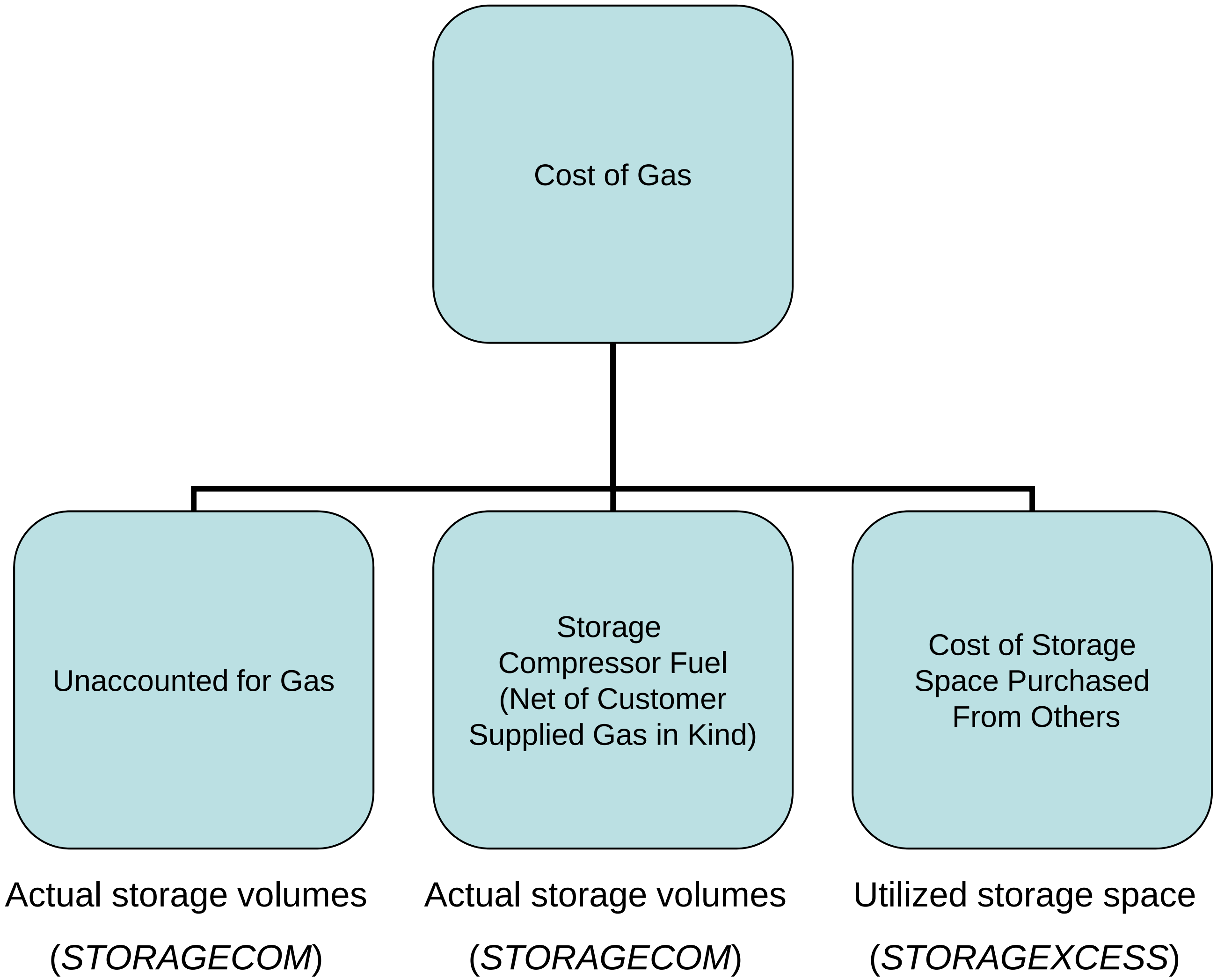
Union Gas Limited
Examples of Asset Allocation between Regulated and Unregulated by Storage Pool
As of December 31, 2011[1]

Asset Class	Operations	Allocation Percentage		
		Sombra Pool	**Dawn 167 Pool**	**Dawn 156 Pool**
Land	Regulated	62.34%	80.14%	62.34%
	Unregulated	37.66% [2]	19.86% [3]	37.66%
Land Rights	Regulated	62.34%	N/A	43.46%
	Unregulated	37.66%	N/A	56.54%
Structures & Improvements	Regulated	62.34%	80.14%	62.34%
	Unregulated	37.66%	19.86%	37.66%
Storage Wells	Regulated	62.34%	62.34%	31.56%
	Unregulated	37.66%	37.66%	68.44%
Field Lines	Regulated	62.34%	62.34%	14.94%
	Unregulated	37.66%	37.66%	85.06%
Compressor Equipment	Regulated	62.34%	80.14%	35.75%
	Unregulated	37.66%	19.86%	64.25%
Measuring & Regulating Equipment	Regulated	62.34%	90.06%	26.42%
	Unregulated	37.66%	9.94% [4]	73.58%
Base Pressure Gas	Regulated	62.34%	62.34%	62.34%
	Unregulated	37.66%	37.66%	37.66%
Total – Regulated %		63%	69%	32%
Total – Unregulated %		37%	31%	68%
Total – Regulated Asset Value		$16,917,481	$12,253,384	$19,462,268
Total – Unregulated Asset Value		$10,123,102	$5,575,640	$41,964,923
Total – Pool Asset Value		$27,040,583	$17,829,024	$61,427,191

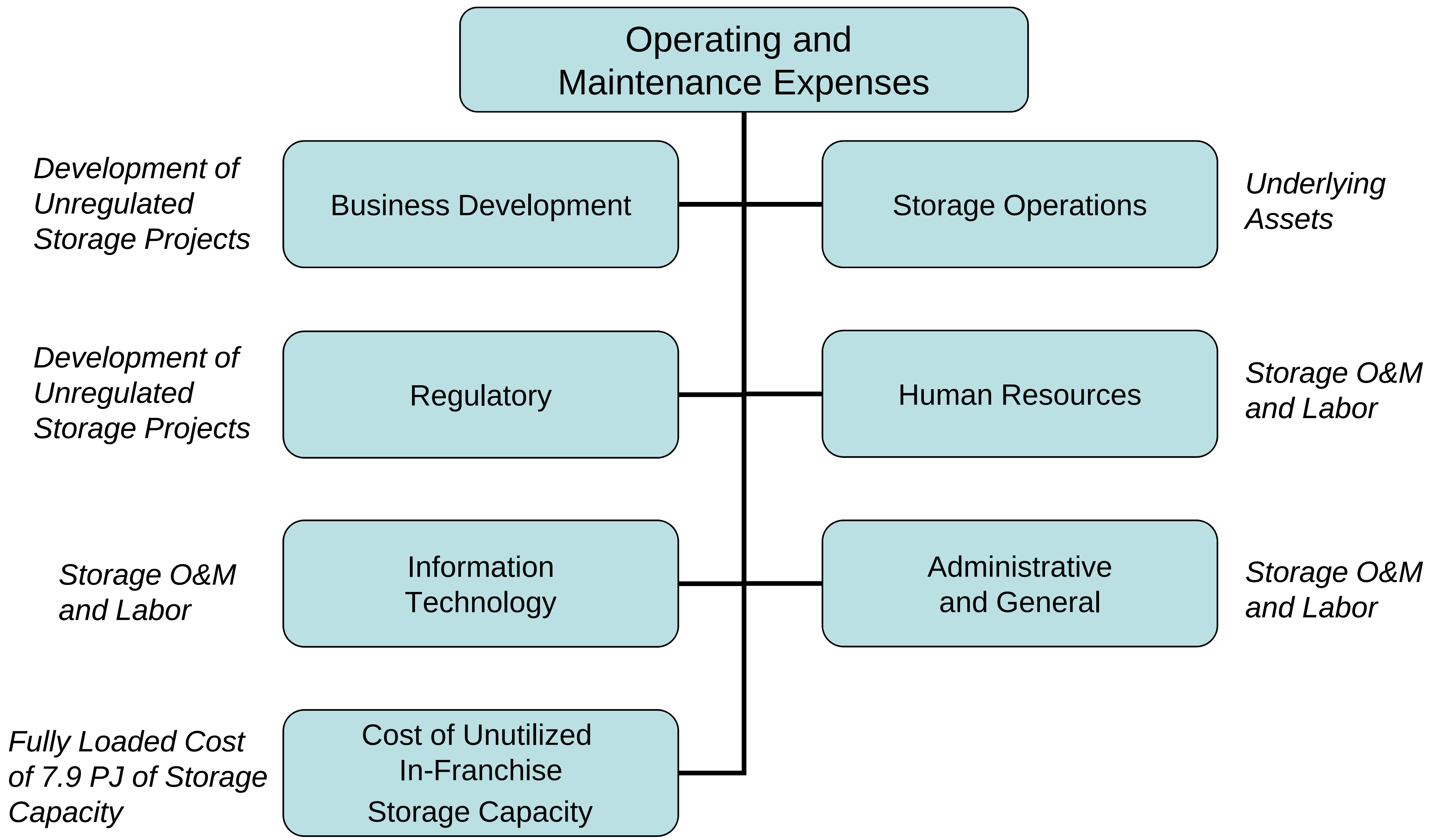
[1] To be used for the allocation of 2012 Maintenance Capital Projects
[2] See Schedule 6, page 1 of 2 (storage lines, wells, and compression)
[3] See Schedule 7, page 2 of 2 (storage and transmission - compression)
[4] See Schedule 7, page 2 of 2 (storage and transmission - measuring and regulating)

Schedule 12

Union Gas Limited
Separation of Regulated and Unregulated Storage Costs – Cost of Gas



Union Gas Limited
Separation of Regulated and Unregulated Storage Costs – O&M Expenses



Union Gas Limited
O&M Expense Allocation Factors and Illustrative Examples
O&M Expense Allocation Factors for 2007 and 2012

O&M Category	O&M Sub-Category	Allocation Factor Type	Allocation Factor Description	2007 Unregulated Allocation %	2012 Unregulated Allocation %
Storage General (internal orders are 100% storage) Note: Use asset split by asset location where available	Supervision	PP&E	Total Weighted Average Unregulated Factor	38.3%	58.4%
	Wells	PP&E	Wells Unregulated Factor	37.7%	63.9%
	Lines	PP&E	Lines Unregulated Factor	37.7%	60.0%
	Compressors	PP&E	Compressors Unregulated Factor	39.4%	60.6%
	Measuring & Regulating	PP&E	M&R Unregulated Factor	37.7%	59.9%
	Rents	PP&E	Total Weighted Average Unregulated Factor	38.3%	58.4%
	Other	PP&E	Total Weighted Average Unregulated Factor	38.3%	58.4%
Storage General (internal orders are 100% storage)	Dehydration	Cost Study	Cost Study Allocation (Dehydration Demand)	24.8%	69.0%
Storage Shared (internal orders are split between storage & transmission)	Wells	PP&E	Wells Unregulated Factor	37.7%	50.6%
	Lines	PP&E	Lines Unregulated Factor	37.7%	48.3%
	Compressors	PP&E	Compressors Unregulated Factor	20.4%	37.7%
	Measuring & Regulating	PP&E	M&R Unregulated Factor	22.2%	30.4%
	Supervision	Cost Study	Cost Study Allocation (O&M STO Split)	9.8%	13.0%
	Rents	Cost Study	Cost Study Allocation (O&M STO Split)	9.8%	13.0%
	Other	Cost Study	Cost Study Allocation (O&M STO Split)	9.8%	13.0%
Storage Support	N/A	Actual Expenses	Unregulated Storage O&M Expenses to Total Operational O&M Expenses	2.5%	2.9%

Union Gas Limited
O&M Expense Allocation Factors and Illustrative Examples
Choice of Cost Allocation Methods and Allocation Factors by Storage Category

Storage Category	Allocation Method	Examples for Calendar Year 2012				
		I/O #	Description	Unregulated Allocation Factor (1)		Schedule 14 Group
1) Storage General						
Dehydration	Cost Study Allocator	330240	Dawn Dehy Operations	69.0%	Cost Study Allocation (Dehy Demand)	Storage Operations
Wells	PP&E Allocations and KPMG PP&E Model	330007	Bentpath Wells Operations	37.7%	Regulated vs. Unregulated Storage Assets Allocation (by Asset Name)	Storage Operations
Lines	PP&E Allocations and KPMG PP&E Model					
Compressors	PP&E Allocations and KPMG PP&E Model					
M&R	PP&E Allocations and KPMG PP&E Model					
Supervision	PP&E Allocations and KPMG PP&E Model					
Rents	PP&E Allocations and KPMG PP&E Model					
Other	PP&E Allocations and KPMG PP&E Model					
2) Storage Shared	PP&E Allocations and KPMG PP&E Model					
Wells	PP&E Allocations and KPMG PP&E Model					
Lines	PP&E Allocations and KPMG PP&E Model					
Compressors	PP&E Allocations and KPMG PP&E Model	330243	Dawn A Operations	37.7%	PP&E Allocators - Compressors - Storage Shared	Storage Operations
M&R	PP&E Allocations and KPMG PP&E Model					
Supervision	Cost Study Allocator	342101	STO Administrative Support	13.0%	Cost Study Allocation (STO O&M Expense Split)	Storage Operations
Rents	Cost Study Allocator					
Other	Cost Study Allocator					
3) Unregulated Storage	PP&E Allocation	220469	Heritage Compressor Operations	100%	Determined at time IO was opened as Heritage Pool is 100% unregulated	Storage Operations
4) Non Storage	Determined when IO was opened	Transmission/Distribution-only IOs				
5) Storage Support	Most recent total O&M actual reg/unreg split (Human Resources, Information Systems, Finance)	316762	Information Systems Administration	2.9%	Actual Expenses - Unregulated Storage O&M Expenses to Total O&M Expenses	Information Technology
	Time estimates (Business Development, Regulatory Projects, and Certain Engineering Groups)	240892	Business Development	27%	Storage Support - Time Estimate	Business Development

(1) See page 1 of 3 of Schedule 14 under the column, "2012 Unregulated Allocation %"

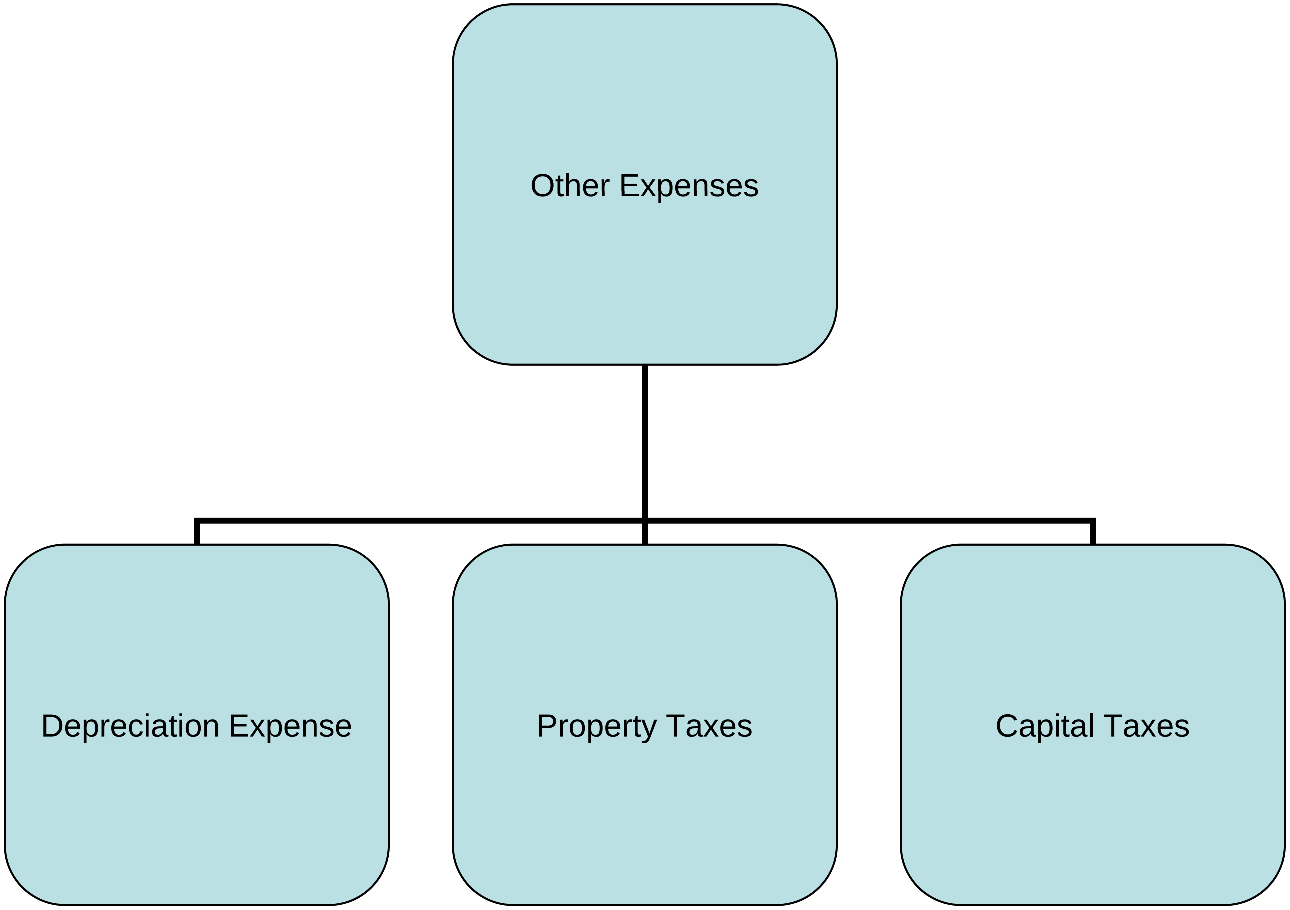
Union Gas Limited
O&M Expense Allocation Factors and Illustrative Examples
Applicaton of Selected Allocation Factors to O&M Expenses by Individual IO and Employee

		A	B	C	D	E	F	
Internal Order	Internal Order Category	2012 $000s	Allocator	Total O&M	Regulated O&M	Unregulated O&M	Capitalization	Total
123456	Storage Shared - Compressors	1,000	37.7%	90.0%	56.1%	33.9%	10.0%	100.0%
234561	Storage Support - Time Estimate	1,000	10.0%	80.0%	72.0%	8.0%	20.0%	100.0%
345612	Storage Support - Unregulated to Total O&M	1,000	2.9%	100.0%	97.1%	2.9%	0.0%	100.0%
	Total	3,000						
			Cost Center No.		4457	5792	2265	
			Cost Center Name		Dep't Name Regulated O&M	Dep't Name Unregulated O&M	Dep't Name Capitalization	Total
			Cost Center Amount		$ 2,252	$ 448	$ 300	$ 3,000

Column
- A Internal Order cost
- B From Schedule 14 Allocation Factors or Time Estimate
- C 100% less Capitalization %
- D 100% less Capitalization % less Unregulated %
- E 100% less Capitalization % times 2012 Allocator
- F Capitalization %

The resulting allocated amounts are assigned to each Internal Order which result in
an aggregation of the costs in a Regulated O&M, Unregulated O&M, or Capitalization Cost Center

Union Gas Limited
Separation of Regulated and Unregulated Storage Costs – Other Costs



•Depreciation rates for Unregulated storage assets
•Depreciation for general plant – allocated on the same basis as general plant

Actual property tax for Dawn assets – allocated between regulated and unregulated based on gross storage plant

Allocated based on the percentage of unregulated storage assets to total assets (excluding general plant)

Union Gas Limited
Reconciliation of Storage Utilization and Available Capacity
Summary of Short Term Storage
(October 31, 2012)

					Storage	Revised Storage
Unutilized Storage to 100 PJs from Union Integrated Supply Plan (ISP)		12.0				
Short-Term Peak Storage Sales	Contract	Space (PJs)	Activity (PJs)	Activity (103m3)	Turn Over Rate	Turn Over Rate
Customer 1	HUB Contract 1	1.1	1.4	36,468	1.3	0.7
Customer 2	HUB Contract 2	1.1	3.2	84,353	3.0	1.5
Customer 3	HUB Contract 3	1.1	1.1	27,949	1.0	0.5
Customer 4	HUB Contract 4	1.1	1.2	30,978	1.1	0.6
Customer 5	HUB Contract 5	1.1	1.1	27,949	1.0	0.5
Customer 6	HUB Contract 6	1.1	5.5	146,015	5.2	2.6
Customer 7	HUB Contract 7	0.5	0.7	18,402	1.3	0.7
Customer 8	HUB Contract 8	1.1	1.1	27,948	1.0	0.5
Customer 9	HUB Contract 9	1.1	1.2	32,465	1.2	0.6
Customer 10	HUB Contract 10	1.1	1.0	27,295	1.0	0.5
Customer 11	HUB Contract 11	2.1	15.7	415,943	7.5	3.7
Subtotal		12.1	33.1	875,766	2.7	1.4
Customer 12	Expired prior to October 31, 2012		1.5	40,624		
Customer 13	Expired prior to October 31, 2012		1.1	27,923		
Customer 14	Expired prior to October 31, 2012		1.1	27,949		
Customer 15	Expired prior to October 31, 2012		1.1	27,897		
Customer 16	Expired prior to October 31, 2012		4.3	114,943		
Customer 17	Expired prior to October 31, 2012		0.5	13,974		
Customer 18	Expired prior to October 31, 2012		1.8	46,725		
Customer 19	Expired prior to October 31, 2012		4.5	119,361		
Customer 20	Expired prior to October 31, 2012		1.1	27,949		
Total Short Term Peak Storage Sales		12.1	50.0	1,323,110		
Excess/(Shortfall)		(0.1)				

Union Gas Limited
Reconciliation of Storage Utilization and Available Capacity
Summary of Long Term Storage
(October 31, 2012)

	Space (PJs)	Activity (PJs)	Storage Turn Over Rate
Capacity			
Total Official Working Capacity (1)	164.0		
Less: Reserved for In-Franchise Customers	(100.0)		
Available for Ex-Franchise Customers	64.0		
Add: 3rd Party Storage Capacity	15.9		
Available Capacity for Long Term Storage	79.9		
Add: Resource Optimization (2)	18.5		
Total Available Storage Capacity	98.4		
Sales			
Long Term Peak Storage	95.7	199.0	1.0
High Deliverability Storage	2.7	30.7	5.7
Total Long Term Storage Sales	98.4	229.8	1.2

Notes:
(1) As per Union's Integrated Supply Plan (ISP)
(2) Combination of resource gas loans and space optimization.

PP&E Allocators for O&M Mapping Model			
Allocator	**O&M I/O Classification**	**O&M Sub-Category**	**2013 Rate Allocations**
Total Weighted Average Unregulated Factor	Storage General (internal orders are 100% storage) Note: Use asset split by asset location where available	Supervision	58.4%
Wells Unregulated Factor		Wells	63.9%
Lines Unregulated Factor		Lines	60.0%
Compressors Unregulated Factor		Compressors	60.6%
M&R Unregulated Factor		M&R	59.9%
Total Weighted Average Unregulated Factor		Rents	58.4%
Total Weighted Average Unregulated Factor		Other	58.4%
Wells Unreguated Storage Factor	Storage Shared (internal orders are split between storage & transmission)	Wells	50.6%
Lines Unregulate Storage Factor		Lines	48.3%
Compressors Unregulated Storage Factor		Compressors	37.7%
M&R Unregulated Storage Factor		M&R	30.4%

Other Allocators			
Allocator	**O&M I/O Classification**	**O&M Sub-Category**	**2013 Rate Allocations**
Cost Study Allocation (Dehy Demand)	Storage General (internal orders are 100% storage)	Dehydration	69.0%
Cost Study Allocation (O&M STO Split)	Storage Shared (internal orders are split between storage & transmission)	Supervision	13.0%
		Rents	13.0%
		Other	13.0%
Unregulated Storage O&M to Total Operational O&M	Storage Support	N/A	2.9%

Regulated vs Unregulated Storage Assets Allocation

as at December 31, 2011
To be used for 2012 Maintenance Capital Projects

Storage Pools

Asset Class		Oil City X 139	Mandaumin X 140	Mandaumin (Sarnia Airport) X 140	Bluewater X 145	HTLP Custody Transfer X 148	Dow Moore X 151	Waubuno X 152	Payne X 153	Bickford X 154
Land	Reg	80.14%	62.34%	N/A	N/A	N/A	N/A	62.34%	62.34%	62.34%
	Nreg	19.86%	37.66%	N/A	N/A	N/A	N/A	37.66%	37.66%	37.66%
Land Rights	Reg	62.34%	62.34%	N/A	62.34%	N/A	62.34%	62.34%	62.34%	N/A
	Nreg	37.66%	37.66%	N/A	37.66%	N/A	37.66%	37.66%	37.66%	N/A
Structures & Improvements	Reg	N/A	62.34%	0.00%	N/A	N/A	N/A	62.34%	62.34%	62.34%
	Nreg	N/A	37.66%	100.00%	N/A	N/A	N/A	37.66%	37.66%	37.66%
Storage Wells	Reg	51.06%	62.34%	N/A	51.06%	N/A	N/A	62.34%	43.24%	62.34%
	Nreg	48.94%	37.66%	N/A	48.94%	N/A	N/A	37.66%	56.76%	37.66%
Field Lines	Reg	62.34%	62.34%	N/A	62.34%	N/A	N/A	62.34%	62.34%	62.34%
	Nreg	37.66%	37.66%	N/A	37.66%	N/A	N/A	37.66%	37.66%	37.66%
Compressor Equipment	Reg	N/A	N/A	0.00%	N/A	N/A	N/A	62.34%	35.54%	62.34%
	Nreg	N/A	N/A	100.00%	N/A	N/A	N/A	37.66%	64.46%	37.66%
Measuring & Regulating Equipment	Reg	90.06%	62.34%	100.00%	62.34%	0.00%	N/A	62.34%	62.34%	62.34%
	Nreg	9.94%	37.66%	0.00%	37.66%	100.00%	N/A	37.66%	37.66%	37.66%
Base Pressure Gas	Reg	62.34%	62.34%	N/A	62.34%	N/A	62.34%	62.34%	62.34%	62.34%
	Nreg	37.66%	37.66%	N/A	37.66%	N/A	37.66%	37.66%	37.66%	37.66%

	Oil City	Mandaumin	Mandaumin (Sarnia Airport)	Bluewater	HTLP Custody Transfer	Dow Moore	Waubuno	Payne	Bickford
Total Regulated - %age	64%	62%	92%	58%	0%	62%	63%	52%	62%
Total Unregulated - %age	36%	38%	8%	42%	100%	38%	37%	48%	38%
Total Regulated - Asset Values	6,472,631.59	18,212,960.52	816,730.70	2,986,270.46	-	8,081,371.77	4,409,011.29	8,082,658.92	14,755,804.47
Total Unregulated - Asset Values	3,617,061.00	11,003,294.32	72,749.04	2,151,352.98	231,000.20	4,882,376.00	2,638,002.59	7,340,224.70	8,875,171.65

Regulated vs Unregulated Storage Assets Allocation

as at December 31, 2011
To be used for 2012 Maintenance Capital Projects

Storage Pools

Asset Class		Sombra X 155	Enniskillen X 156	Bentpath X 157	Terminus X 158	Rosedale X 159	Dawn 167 X 160	Oil Springs East X 162	Dawn 47 & 49 X 163	Dawn 59 & 85 X 164
Land	Reg	62.34%	62.34%	62.34%	N/A	N/A	80.14%	80.14%	62.34%	62.34%
	Nreg	37.66%	37.66%	37.66%	N/A	N/A	19.86%	19.86%	37.66%	37.66%
Land Rights	Reg	62.34%	62.34%	62.34%	N/A	62.34%	N/A	62.34%	N/A	62.34%
	Nreg	37.66%	37.66%	37.66%	N/A	37.66%	N/A	37.66%	N/A	37.66%
Structures & Improvements	Reg	62.34%	62.34%	62.34%	62.34%	N/A	80.14%	80.14%	62.34%	62.34%
	Nreg	37.66%	37.66%	37.66%	37.66%	N/A	19.86%	19.86%	37.66%	37.66%
Storage Wells	Reg	62.34%	50.60%	62.34%	62.34%	62.34%	62.34%	45.61%	62.34%	22.54%
	Nreg	37.66%	49.40%	37.66%	37.66%	37.66%	37.66%	54.39%	37.66%	77.46%
Field Lines	Reg	62.34%	62.34%	62.34%	62.34%	62.34%	62.34%	62.34%	62.34%	40.89%
	Nreg	37.66%	37.66%	37.66%	37.66%	37.66%	37.66%	37.66%	37.66%	59.11%
Compressor Equipment	Reg	62.34%	62.34%	62.34%	N/A	N/A	80.14%	80.14%	N/A	N/A
	Nreg	37.66%	37.66%	37.66%	N/A	N/A	19.86%	19.86%	N/A	N/A
Measuring & Regulating Equipment	Reg	62.34%	62.34%	62.34%	62.34%	N/A	90.06%	90.06%	62.34%	35.35%
	Nreg	37.66%	37.66%	37.66%	37.66%	N/A	9.94%	9.94%	37.66%	64.65%
Base Pressure Gas	Reg	62.34%	62.34%	62.34%	62.34%	62.34%	62.34%	62.34%	62.34%	62.34%
	Nreg	37.66%	37.66%	37.66%	37.66%	37.66%	37.66%	37.66%	37.66%	37.66%

	Sombra	Enniskillen	Bentpath	Terminus	Rosedale	Dawn 167	Oil Springs East	Dawn 47 & 49	Dawn 59 & 85
Total Regulated - %age	63%	59%	62%	62%	62%	69%	70%	62%	35%
Total Unregulated - %age	37%	41%	38%	38%	38%	31%	30%	38%	65%
Total Regulated - Asset Values	16,917,481.24	7,491,313.19	14,719,619.08	4,665,789.45	5,765,096.20	12,253,384.37	16,082,103.14	6,549,205.52	6,007,921.96
Total Unregulated - Asset Values	10,123,102.04	5,277,191.50	8,872,355.61	2,805,270.50	3,468,075.95	5,575,639.54	6,919,492.56	3,938,265.54	11,179,689.38

Regulated vs Unregulated Storage Assets Allocation

as at December 31, 2011
To be used for 2012 Maintenance Capital Projects

Storage Pools

		Dawn 156	Edys Mills	Booth Creek	Bentpath East	Dow A Plant	Black Creek	Heritage Pool	Jacob Pool	Head Office
Asset Class		X 165	X 167	X 168	X 169	X 170	X 171	X 173	X 174	X 050
Land	Reg	62.34%	80.14%	N/A	62.34%	80.14%	N/A	0.00%	0.00%	N/A
	Nreg	37.66%	19.86%	N/A	37.66%	19.86%	N/A	100.00%	100.00%	N/A
Land Rights	Reg	43.46%	62.34%	62.34%	62.34%	62.34%	62.34%	0.00%	0.00%	62.34%
	Nreg	56.54%	37.66%	37.66%	37.66%	37.66%	37.66%	100.00%	100.00%	37.66%
Structures & Improvements	Reg	62.34%	80.14%	62.34%	62.34%	80.14%	N/A	0.00%	0.00%	N/A
	Nreg	37.66%	19.86%	37.66%	37.66%	19.86%	N/A	100.00%	100.00%	N/A
Storage Wells	Reg	31.56%	52.11%	62.34%	54.56%	50.79%	N/A	0.00%	0.00%	N/A
	Nreg	68.44%	47.89%	37.66%	45.44%	49.21%	N/A	100.00%	100.00%	N/A
Field Lines	Reg	14.94%	62.34%	62.34%	62.34%	62.34%	N/A	0.00%	0.00%	62.34%
	Nreg	85.06%	37.66%	37.66%	37.66%	37.66%	N/A	100.00%	100.00%	37.66%
Compressor Equipment	Reg	35.75%	80.14%	N/A	N/A	75.14%	N/A	0.00%	0.00%	N/A
	Nreg	64.25%	19.86%	N/A	N/A	24.86%	N/A	100.00%	100.00%	N/A
Measuring & Regulating Equipment	Reg	26.42%	90.06%	62.34%	62.34%	90.06%	N/A	0.00%	0.00%	62.34%
	Nreg	73.58%	9.94%	37.66%	37.66%	9.94%	N/A	100.00%	100.00%	37.66%
Base Pressure Gas	Reg	62.34%	62.34%	62.34%	62.34%	62.34%	N/A	0.00%	0.00%	N/A
	Nreg	37.66%	37.66%	37.66%	37.66%	37.66%	N/A	100.00%	100.00%	N/A

Total Regulated - %age	32%	71%	62%	61%	68%	62%	0%	0%	62%
Total Unregulated - %age	68%	29%	38%	39%	32%	38%	100%	100%	38%
Total Regulated - Asset Values	19,462,268.08	11,280,769.31	2,199,134.68	9,684,855.15	20,168,652.40	1,005,670.95	-	-	9,799,320.58
Total Unregulated - Asset Values	41,964,923.16	4,623,163.17	1,326,234.13	6,216,271.82	9,571,293.74	607,577.00	13,329,709.52	-	5,919,637.00

Regulated vs Unregulated Storage Assets Allocation

as at December 31, 2011
To be used for 2012 Maintenance Capital Projects

Dawn Plant

		Dawn Plant Trans Non Mainline	Dawn Yard	Dawn J	Dawn Dehy Plant	Dawn Plant Trans Mainline	Dawn A Compressor	Dawn B Compressor	Dawn C Compressor	Dawn D Compressor
Asset Class		X 184	X 186	X 187	X 188	X 189	X 190	X 191	X 192	X 193
Land	Reg	100.00%	80.14%	N/A	N/A	100.00%	80.14%	N/A	N/A	80.14%
	Nreg	N/A	19.86%	N/A	N/A	N/A	19.86%	N/A	N/A	19.86%
Structures & Improvements	Reg	100.00%	80.14%	57.55%	66.35%	100.00%	80.14%	80.14%	80.14%	80.14%
	Nreg	N/A	19.86%	42.45%	33.65%	N/A	19.86%	19.86%	19.86%	19.86%
Compressor Equipment	Reg	100.00%	80.14%	57.55%	45.38%	100.00%	80.14%	80.14%	80.14%	80.14%
	Nreg	N/A	19.86%	42.45%	54.62%	N/A	19.86%	19.86%	19.86%	19.86%
Measuring & Regulating Equipment	Reg	100.00%	90.06%	57.55%	N/A	100.00%	90.06%	N/A	N/A	N/A
	Nreg	N/A	9.94%	42.45%	N/A	N/A	9.94%	N/A	N/A	N/A
		*See note below				*See note below				

	X 184	X 186	X 187	X 188	X 189	X 190	X 191	X 192	X 193
Total Regulated - %age	100%	80%	58%	47%	97%	84%	79%	80%	81%
Total Unregulated - %age	0%	20%	42%	53%	3%	16%	21%	20%	19%
Total Regulated - Asset Values	-	20,035.00	22,404,661.31	6,923,728.43	16,930,309.13	22,546,047.82	22,552,758.21	20,324,385.24	63,902,727.24
Total Unregulated - Asset Values	-	4,965.00	16,526,114.20	7,696,964.88	446,055.00	4,392,311.53	5,933,185.69	4,955,347.97	15,435,195.27

Regulated vs Unregulated Storage Assets Allocation

as at December 31, 2011
To be used for 2012 Maintenance Capital Projects

Dawn Plant

		Dawn E Compressor	Dawn F Compressor	Dawn G Compressor	Dawn I Compressor	Vector Interconnect @ Dawn
Asset Class		X 194	X 195	X 196	X 198	X 225
Land	Reg	N/A	N/A	N/A	N/A	N/A
	Nreg	N/A	N/A	N/A	N/A	N/A
Structures & Improvements	Reg	100.00%	80.14%	80.14%	N/A	100.00%
	Nreg	N/A	19.86%	19.86%	100.00%	N/A
Compressor Equipment	Reg	100.00%	80.14%	80.14%	N/A	100.00%
	Nreg	N/A	19.86%	19.86%	100.00%	N/A
Measuring & Regulating Equipment	Reg	N/A	N/A	N/A	N/A	100.00%
	Nreg	N/A	N/A	N/A	N/A	N/A

Total Regulated - %age	100%	80%	77%	0%	94%
Total Unregulated - %age	0%	20%	23%	100%	6%
Total Regulated - Asset Values	29,732,436.16	44,368,144.88	31,272,937.72	-	641,967.21
Total Unregulated - Asset Values	-	10,931,154.40	9,098,253.50	65,584,146.97	38,736.84

STORAGE COST ALLOCATION STUDY

PREPARED FOR

Enbridge Gas Distribution Inc.

1 MAY 2012

BLACK & VEATCH
Building a world of difference.

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INTRODUCTION AND SUMMARY

In the Natural Gas Electricity Interface Review ("NGEIR") Decision in EB-2005-0551[1], the Ontario Energy Board (the "Board") determined that the market for the ex-franchise storage services of Enbridge Gas Distribution Inc. ("Enbridge" or the "Company") and Union Gas Limited ("Union") was a competitive market and that Enbridge and Union would no longer be subject to rate regulation for those services. The Board stated that it would cease regulating the prices charged for the following storage services:

- All storage services offered by Union and Enbridge to customers outside their franchise areas;
- New storage services offered by Union and Enbridge to their in-franchise customers; and
- All storage services offered by other storage operators, including storage operators affiliated with Union and Enbridge.[2]

This decision permitted Enbridge to develop new storage services within the competitive market under rates and revenues that would not be regulated by the Board. The Board stated that Enbridge could develop new storage capacity to serve both its in-franchise and ex-franchise customers, however, the Board would not regulate the prices for any of the new storage services developed and offered by Enbridge.

A key element of the Board's decision was that it did not require Enbridge to functionally separate its regulated and unregulated storage operations. At page 73 of its Decision in EB-2005-0551, it was stated that:

> "The Board finds that functional separation is not necessary. The evidence before the Board is that it would be costly and difficult to establish a functional separation of utility and non-utility storage, and there was no evidence to suggest that there would be significant benefits from such a separation. To the extent there may be concerns regarding the integrated operations, these will be addressed through the reporting requirements set out in section 5.4."

Of particular note was that the Board also recognized that all of Enbridge's then existing storage investment was required to serve its in-franchise customers. Therefore, unlike the more complicated situation that existed at that time for Union, it was not necessary for Enbridge to undertake a study of the storage assets that it owned at the time of the NGEIR Decision to determine the portion of its integrated storage operations that was to be allocated to the unregulated storage business.

In response to the Board's Decision, Enbridge established a separate set of books, and implemented a specific accounting and cost allocation process to identify and separate costs between regulated and unregulated storage operations. Enbridge's separate books and cost allocation and accounting

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[1] EB-2005-0551 Decision With Reasons issued on November 7, 2006
[2] EB-2005-0551 Decision With Reasons, Page 3.

process accommodate all of the cost elements which support its integrated storage operation, including capital expenditures, Operating & Maintenance ("O&M") expenses, overhead expenses, fuel expenses, and the cost of lost and unaccounted for volumes.

In view of the relative complexities of the process, its level of detail, and its impact upon rate levels, the allocation of costs between Enbridge regulated and unregulated storage operations has been an issue in its recent regulatory proceedings before the Board. In accordance with the provisions of the Settlement Agreement in its 2009 Earnings Sharing Mechanism ("ESM") proceeding (EB-2010-0042), Enbridge agreed to submit as part of its 2010 ESM filing, "an analysis of the appropriate allocation of the costs of regulated and unregulated storage operations."[3] In EB-2011-0008, Enbridge submitted a narrative explanation of the allocation of costs for its regulated and unregulated storage activities.[4] Parties in that proceeding had the opportunity to review Enbridge's submission and to file interrogatories to better understand the nature of its cost allocation process and methods.

One of the provisions of Enbridge's ESM Settlement Agreement in its 2010 ESM proceeding was to address the allocation of costs between its regulated and unregulated storage operations. Specifically, part s, item 3 of the Agreement stated that:

> "For the purpose of reaching an overall settlement, no party opposes Enbridge's allocation of costs between regulated and unregulated storage activities for the purpose of determining the 2010 ESMDA amount. There is no agreement as to whether Enbridge's continued use of its current approach to allocating costs between regulated and unregulated storage is appropriate for future years. Enbridge agrees that, as part of the evidence in support of its 2013 application, it will file a study, prepared by an external expert, evaluating the appropriateness of the allocation of costs between Enbridge's regulated and unregulated storage activities. It is expected that the expert will provide a professional assessment of the methodologies used and recommendations for alternate approaches if, in their opinion, improvements can be made."[5]

Based on Enbridge's review of the proposals submitted in response to its Request for Proposal ("RFP"), Enbridge retained Black & Veatch Corporation ("Black & Veatch") to conduct the required study.

The purpose of this report is to present the results of Black & Veatch's review and evaluation of Enbridge's cost allocation process for its regulated and unregulated storage operations.

SCOPE OF THE REVIEW

Black & Veatch understands that Enbridge required a review of the cost allocation process and methods for its unregulated and regulated underground storage operations.

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[3] EB-2010-0042 Decision and Procedural Order, Settlement Agreement, Exhibit N1, Tab 1, Schedule 1, Page 9 of 14, dated July 10, 2010

[4] EB 2011-0008, Exhibit B, Tab 1, Schedule 6 and Appendices, filed on April 20, 2011

[5] EB-2011-0008, Decision and Order, Settlement Agreement, Exhibit N1, Tab 1, Schedule 1, Page 15 of 16, dated July 22, 2011.

Based on this requirement, Black & Veatch structured its review to include the following work tasks:

1. Review and evaluate Enbridge's current cost allocation methodology (and supporting accounting process) for its regulated and unregulated underground storage operations and make recommendations on any changes to the underlying assumptions and/or methodologies.
2. Prepare a written report which sets forth in detail the findings and recommendations of the review with respect to all material issues and methodologies, and which is structured in an appropriate format for submission to the Board and Enbridge's external stakeholders.

Finally, Black & Veatch's particular focus was on the level of storage-related costs that Enbridge incurred, and that were allocated to its two storage businesses, during 2011. This focus was taken because Enbridge's 2011 costs will be the subject of its 2011 ESM filing before the Board and because the allocation of costs presented by Enbridge in past ESM proceedings have already been accepted by the Board for ratemaking purposes. At the same time, however, Black & Veatch did review Enbridge's cost allocation methods and accounting results from prior years for continuity purposes and to better understand to what extent Enbridge's cost allocation treatment has evolved over time.

GUIDING CONSIDERATIONS AND AREAS OF CONCENTRATION

In conducting our review of Enbridge's cost allocation process for its unregulated and regulated storage operations, we were guided by the following considerations:

1. The fundamental and underlying philosophy applicable to every utility cost of service study pertains to the concept of cost causation for purposes of allocating costs to customer groups or service types.
2. Cost causation (or cost causality) addresses the question – *Which customer or groups of customers cause the utility to incur particular types of costs?* To answer this question, it is necessary to establish a linkage between a utility's customers and the particular costs incurred by the utility in serving those customers.
3. *A Key Consideration* – the ability to establish operating relationships between customer service requirements and the costs incurred by the utility in meeting those requirements (e.g., satisfying a customer's peak demand requirements through the incurrence of capacity-related costs to provide the required level of gas delivery service).
4. The three broad steps most often followed to perform utility cost of service studies: (1) cost functionalization; (2) cost classification; and (3) cost allocation will be utilized for this review as a framework for evaluating the various steps involved in Enbridge's current cost allocation process.
5. A utility's cost allocations should stand on their own objective merits (i.e., costs should be assigned to the classes or categories of service based on the design and operational considerations of the utility's system rather than on achieving results that support a desired outcome for the allocation of revenues to classes and/or rate design).
6. Consistency of structure, methodology, and computational details between Enbridge's cost allocation process used for separating its storage-related assets and expenses and the cost

allocation study it utilizes to evaluate the costs of serving its in-franchise customers and service offerings.

7. The Board's findings in the NGEIR Decision (EB-2005-0551).
8. The storage cost allocation methodology used by Union, and any decision made by the Board with respect to that methodology in the EB-2011-0038 proceeding.

We saw our primary roles and responsibilities in this project as follows:

- To understand the system planning, operation, and utilization of Enbridge's underground storage facilities to confirm that cost causation is properly reflected in its cost allocation and accounting processes;
- To understand the differences between the cost accounting for Enbridge's unregulated and regulated storage operations;
- To understand the cost transactions that comprise Enbridge's unregulated and regulated storage operations, including the allocation of costs of its current integrated storage system and its incremental storage facilities; and
- To provide sufficient commentary on our recommendations and supporting information pertaining to alternative cost allocation process and the related treatment of costs so that Enbridge can adequately evaluate our findings and decide whether or not to propose changes in its subsequent rate and regulatory filings with the Board.

These above-described elements defined the focus areas in which Black & Veatch concentrated its review and evaluation in this project. In our review of Enbridge's cost allocation process for its storage lines of business, Black & Veatch conducted its work in a manner so that it could determine:

- If Enbridge's cost allocation methodology for the allocation of costs between its regulated and unregulated storage operations had a conceptual basis that was grounded in sound and acceptable utility costing principles and the operational realities of its gas utility system.
- If there were certain regulatory precedents established by the Board that Enbridge recognized and incorporated into its cost allocation method.
- If Enbridge's cost allocation and accounting methods provided analytical and computational transparency (i.e., did it create a sufficient and verifiable audit trail - identification of input data sources, traceable information flows, identification of each computational step).

OVERALL ASSESSMENT

Based on the results of our review, Black & Veatch's overall assessment consists of the following observations:

1. The conceptual underpinnings and resulting methodologies upon which Enbridge's cost allocation process is based are generally well-conceived and reasonable in their treatment of storage-related plant and expenses. However, there are a few components of Enbridge's current cost allocation methods that Black & Veatch believes should be changed to better recognize the underlying cost causative factors of Enbridge's storage operations.

2. The manner in which Enbridge has presented its separation of costs between its regulated and unregulated storage operations in its past ESM Filings before the Board does not in all cases provide a sufficient level of detail and explanation to allow an outside party to understand, trace, and verify the underlying assumptions of the cost allocation methodology, computational processes, and to independently confirm the results.

RECOMMENDATIONS

Enbridge has considered Black & Veatch's discussions related to the first overall assessment item above and has proposed to revise certain of its current cost allocation methods for the following cost elements:

- **New General Storage Plant**
    1. Enbridge proposes to adopt the cost allocation treatment for new general plant depicted in Schedule 5 and to apply this method to the cost of its Sombra warehouse facility once it is completed and placed into service.

- **Storage Operations**
    1. Enbridge proposes to change its cost allocation factor for fixed storage costs to reflect a proper weighting of the cost drivers of annual capacity and deliverability, and has made minor modifications to the portion of costs it classifies as variable in nature.

    2. Enbridge proposes to eliminate from its current cost allocation process the use of an "Applicable Share" adjustment to certain costs included in the Storage Administration Cost Center (see page 2 of Schedule 6).

As a result of the second overall assessment item above, Black & Veatch recommends the following enhancements to Enbridge's computational process and evidentiary presentation:

1. Establish more robust documentation that readily allows the reader to clearly trace how Enbridge's regulated and unregulated storage costs are developed, which should include providing clear references for the cost allocation methods used in the calculation of the costs of Enbridge's unregulated storage operations. Black & Veatch believes that certain of the Schedules presented in this report should be incorporated into Enbridge's future evidentiary presentations before the Board on this subject.

2. Provide additional details to be able to trace Enbridge's elimination from its Utility Income of each particular expense item (e.g., gas costs, O&M expenses, property taxes, and depreciation expense) associated with Enbridge's unregulated storage operation, and the computational details to derive each eliminated amount.

3. The manner in which Enbridge splits the cost of new storage assets that replace existing storage assets with a capacity enhancement component between its regulated and unregulated storage operations (e.g., Enbridge's "Pool Metering Upgrades" project) should be detailed so that the basis for the determination of the cost split can be readily understood by an outside party.

BACKGROUND PERSPECTIVES

As a backdrop and to provide sufficient context to our subsequent detailed review of Enbridge's costing method for its storage lines of business, Black & Veatch initiated its work effort with a review of the operational characteristics and service offerings of Enbridge's integrated storage facilities. Specifically, our review addressed the following activities:

- The physical attributes and operations of Enbridge's Tecumseh storage facilities; and
- The nature and level of storage services available to Enbridge's ex-franchise customers.

In addition, we reviewed the relevant regulatory, ratemaking, and accounting aspects of Enbridge's regulated and unregulated storage operations to better understand the evolution of the issues, regulatory decisions, and implementation processes required to allocate costs to these activities and to account for them in Enbridge's financial statements and ratemaking filings before the Board.

OPERATIONAL

Enbridge's Tecumseh underground storage facilities are located in Southwestern Ontario, near the Dawn Hub, and have been in operation since the 1960s. Enbridge's storage operations consist of 11 storage pools with a total working capacity[6] of approximately 110 Bcf, with a peak deliverability of about 2.5 Bcf per day. In addition, Enbridge owns and operates the Crowland storage facility, which is a small gas storage field with a capacity of 0.4 Bcf located in the Niagara Region that is directly connected to Enbridge's gas distribution system. Included in the 110 Bcf capacity level, Enbridge also operates a 6.7 Bcf storage operation on behalf of, and for use by, Union (the Dow Moore and Black Creek storage pools). Enbridge's Tecumseh gas storage system is depicted in Figure 1. In addition, a summary listing of the operational characteristics of Enbridge's gas storage facilities is presented in Schedule 1.

Enbridge's storage facilities are directly connected to four (4) pipeline systems: the Vector Pipeline, Niagara Gas Transmission-Link Pipeline, TransCanada PipeLines Limited ("TCPL"), and Union. These pipeline interconnections enable Enbridge to provide gas storage services to markets in Eastern Canada, the Midwest U.S., and the Northeast U.S. Figure 2 shows the pipeline interconnections with Enbridge's Tecumseh storage operations. To reach Enbridge's gas utility franchise area in Central and Eastern Ontario, gas stored in the Tecumseh facilities flows over Union's Dawn-Trafalgar gas transmission system, and then through the TCPL system.

Regarding Enbridge's storage operations, its various storage pools are operated as an integrated system with each pool affecting the operation of the other pools throughout the injection and withdrawal periods.

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[6] Also referred to as storage space

Figure 1
Enbridge's Gas Storage Facilities

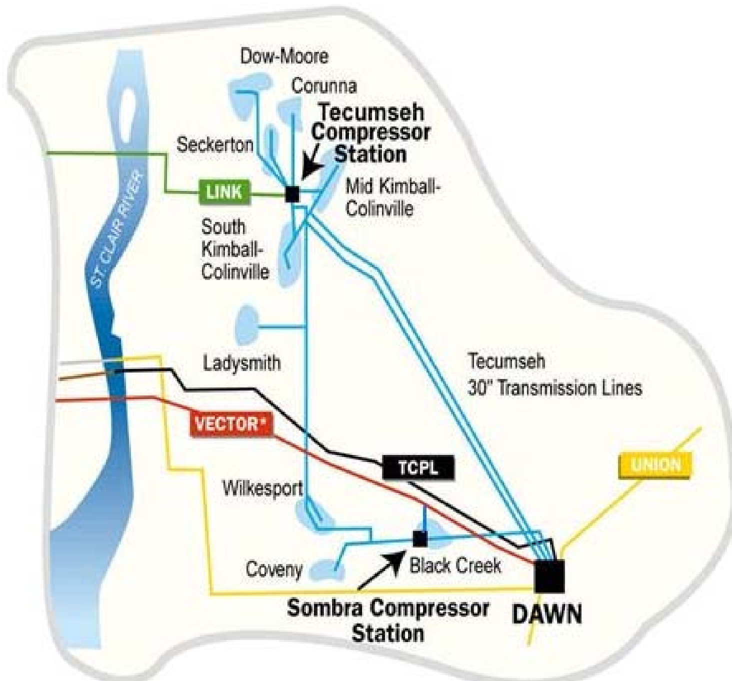
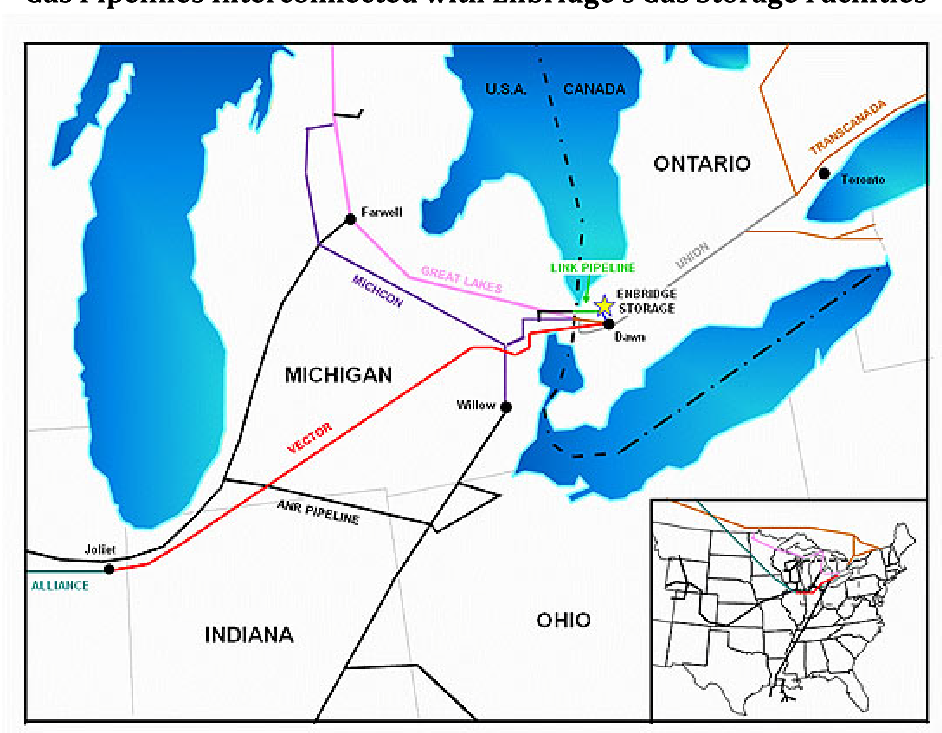


Figure 2
Gas Pipelines Interconnected with Enbridge's Gas Storage Facilities



STORAGE SERVICE CHARACTERISTICS

At the time of the NGEIR Decision, Enbridge required all of its owned storage capacity, in addition to approximately 20 Bcf of storage under multi-year contracts with Union, to serve its in-franchise customers (i.e., regulated utility customers) on a bundled basis. This situation continues to be the case today. In addition, Enbridge has certain larger customers who have chosen to opt out of bundled service by contracting with Enbridge for delivery and storage services on an unbundled basis. Due to the growth of these services over the years, Enbridge now requires approximately 21 Bcf of storage capacity from third-parties to meet its total in-franchise storage requirements.

Enbridge's in-franchise customers, and certain ex-franchise customers, are offered unbundled storage services under its Rates 315, 316, and 325, which are described below.

- Rate 315 – Gas Storage Service (for customers taking service under Rate 125 – Extra Large Firm Distribution Service and Rate 300 – Firm or Interruptible Distribution Service)
- Rate 316 – Gas Storage Service at Dawn (for customers taking service under Rates 125 and 300)
- Rate 325 – Transmission, Compression, and Pool Storage Service (with Union)

Enbridge also offers short-term storage services or Transactional Services ("TS") to third-party customers through the temporarily unused regulated utility storage assets that are considered surplus to its current in-franchise needs. These services have been offered in the marketplace by Enbridge since 1997. TS customers (who are typically more active in the gas market) have the ability to utilize Enbridge's storage services to create supply optimization opportunities premised upon the prevailing natural gas prices. Typical services consist of "park and loan" transactions that are of a short-term nature. "Parks" are services where a third-party injects gas into Enbridge's storage facilities through a TS arrangement for withdrawal at a later time, and "loans" are where the third-party first receives gas out of Enbridge's storage for redelivery to Enbridge at a future time.

To utilize Enbridge's storage resources in this manner, we understand that it is not uncommon for some of Enbridge's short-term storage service customers to cycle their storage inventory 2-3 times in one year (which results in storage transactional volumes equal to 4-6 times the physical storage space).[7] With such high cycling rates (i.e., high inventory turnover ratios), it is not unusual for Enbridge to experience volumetric activity levels for these customers that are much higher than the level of the underlying contracted storage space. In contrast, Enbridge' customers who contract for long-term storage services sometimes cycle their storage space less than once in a particular year (see Schedule 1 for Enbridge's storage turnover rates).

Based on the operational particulars of Enbridge's TS activities, the overall net impact of such transactions can act to offset the traditional seasonal operations of Enbridge's regulated storage activities. As a result, TS activities can serve to reduce the volume of gas that is physically injected into and withdrawn from storage which can generally increase the efficiency of Enbridge's

[7] A customer that contracts for 10 PJ of storage space would be expected to have about 20 PJ of activity to complete one full storage cycle (10 PJ of injections to fill the contracted storage space and 10 PJ of withdrawals to empty the space).

integrated storage operations. At the same time, Enbridge generates incremental revenue from these transactions which is shared between its utility customers and Enbridge's shareholders under a Board approved sharing arrangement.

Enbridge has also been offering competitive storage services at market-based prices since 2008 to gas utilities, wholesale market participants, and power generation customers. These customers comprise Enbridge's unregulated storage market. To accommodate the needs of these customers, Enbridge has been investing since that time in its existing storage operation at Tecumseh to add incremental storage capacity and deliverability beyond the level that existed at the time of the NGEIR Decision. Currently, Enbridge has 12.2 Bcf of unregulated storage capacity. Enbridge also has plans to expand its existing storage facilities based on market demand to take advantage of other market opportunities as they arise such as U.S. Shale gas and gas-fired power generation needs. The level of Enbridge's incremental capital investments in storage for its unregulated operations and the accounting treatment of these investments will be discussed in detail later in this report.

The characteristics of the unregulated storage services offered by Enbridge include:

- Services are offered on a firm and interruptible basis and range from high deliverability (10 or 20 day service)to seasonal storage;
- Customers pay a monthly demand charge, as well as variable charges including the gas commodity and fuel;
- Contract terms that range from 1 to 20 years;
- Customers have the option to cycle gas volumes within their contractual parameters and pay variable charges on the cycled volumes; and
- Overrun services are available on a request basis for an additional fee and must be authorized by Enbridge in advance.

Schedule 1 also provides the annual level of activity for Enbridge's unregulated storage services from 2008 through 2011.

ACCOUNTING FOR STORAGE

To implement a separation model for Enbridge's regulated and unregulated storage operations, as required by the NGEIR Decision, there were three options available to Enbridge: (1) a functional separation; (2) an accounting separation; or (3) an asset divestiture. As pointed out earlier, the Board found that functional separation of the storage assets of Enbridge and Union was not necessary, nor was an asset divestiture a desired alternative in light of their integrated storage operations. Therefore, implementation of an accounting separation process was the only viable alternative for Enbridge to consider.

While the adoption of that approach created the need for the establishment of cost allocation methods to be applied to Enbridge's storage assets, direct expenses, and other indirect costs, the same type of comprehensive process required by Union at that time was not required by Enbridge because: (1) Enbridge required all of its storage assets to satisfy the storage service needs of its in-franchise customers; and (2) Enbridge was not providing unregulated storage services to the natural gas marketplace. A one-time asset separation, therefore, was not required by Enbridge to implement the Boards' findings in the NGEIR Decision. In addition, Enbridge's cost allocation study[8] that it had conducted on or around the time of the NGEIR Decision did not have to be directly relied upon (as was required in Union's case) because there were no storage-related costs that had to be assigned to Enbridge's unregulated storage operations - since the operation did not exist in late 2006.

Enbridge was required, however, on a going forward basis to structure an operational process to identify storage-related investments that were required to support its unregulated storage operations, an accounting process to maintain separate plant records, and an allocation process to assign storage-related expenses to its regulated and unregulated storage operations. The various processes established by Enbridge that have evolved over time have, in our opinion, been greatly influenced by the fact that Enbridge did not have to initially separate by the end of 2007 any of its storage-related assets between regulated and unregulated storage operations.

It is apparent to Black & Veatch that Enbridge's unregulated storage operations has been created in recent years to function as an integral part of an integrated storage operation that served the entirety of its regulated storage requirements on a standalone basis at the time of the NGEIR Decision. On that basis, Enbridge has chosen to utilize an incremental costing approach as a foundation for its identification and assignment of new storage assets to either the regulated or unregulated storage operations. The appropriateness of utilizing this type of a costing approach (in light of Enbridge's specific business situation) compared to a fully allocated costing method that recognizes the common plant characteristics of an integrated utility operation in the derivation of cost allocation methods will be discussed in more detail later in this report.

[8] Used as a guide to evaluate and determine Enbridge's regulated utility revenues and rates for its in-franchise customers.

COST ALLOCATION FOR ENBRIDGE'S STORAGE OPERATIONS

The purpose of this section is to detail the findings and recommendations of Black & Veatch's review and evaluation of Enbridge's cost allocation methods for its regulated and unregulated storage operations. With a basic operational foundation established, a review of Enbridge's cost allocation process structure and framework was conducted. The following areas were reviewed in detail:

- Phases or steps included in the cost allocation process.
- Organizational layout of and interrelationship between filed information and schedules which present Enbridge's cost allocation results.
- Flow of data and sequencing of steps within the cost allocation process.
- Degree to which the cost allocation process is presented on a "self-contained" basis (i.e., analyses and supporting data are an integral part of Enbridge's evidentiary presentation).
- Basis for the total storage cost of service reflected in the cost allocation results.
- The interrelationship and methodological consistency between Enbridge's cost allocation process for its storage operations and its 2007 Board-approved cost allocation study to derive the cost of service for its in-franchise (rate regulated) customers.

Black & Veatch evaluated each element of Enbridge's cost allocation process to determine if its methods and underlying computations were: (1) reflective of how the costs were incurred; (2) fair and equitable; (3) transparent and replicable by an outside party; and (4) consistently applied to each of Enbridge's investment and expense components.

PURPOSE

Enbridge's cost allocation process for its storage operations is used for the following purposes:

1. To separate the costs of Enbridge's unregulated storage operations from its regulated utility operations to properly account for the unregulated operations and to identify regulated storage costs for the purpose of setting Enbridge's regulated utility rates.
2. To identify and compile the results of Enbridge's unregulated storage operations to determine standalone utility financial results for earnings sharing purposes.

The results of Enbridge's cost allocation process for its storage operations are presented each year in its ESM proceeding (e.g., EB-2011-0008), and it is expected that the results will also be submitted in its 2013 rates application, where Enbridge will re-compute the underlying costs of its in-franchise customers to rebase its regulated delivery rates under incentive regulation.

STRUCTURE

Schedule 2 presents a high-level view of the overall functional process Enbridge follows to separate its regulated and unregulated storage costs. Enbridge's overall cost allocation process addresses nine (9) separate cost elements related to its underground storage operations, including:

1. New storage assets;
2. New general plant;
3. Other plant-related costs
4. Operating & maintenance expenses
5. Corporate administrative and general overheads
6. Unregulated business development and administrative costs
7. Cost of gas (fuel gas expenses and lost and unaccounted for gas)
8. Depreciation expense
9. Property tax

Each of these elements requires Enbridge to identify and compile the required input cost data, to select the direct assignment and/or cost allocation methods that are to be applied to the relevant costs, and to derive the costs associated with Enbridge's unregulated storage operations. As will be discussed in the next section, certain of these cost elements are allocated to Enbridge's unregulated storage operations on a one-time basis (as each new storage asset is added) while other cost elements are allocated to that business line on a monthly or annual basis using allocation factors that are updated periodically.

DATA SOURCES AND THE TIMING OF ENBRIDGE'S COST ALLOCATION PROCESS

Enbridge's on-going allocation of costs to its unregulated storage operations is premised upon, for the most part, the same sources of data that it utilizes to derive its total cost of service for regulated operations.

The timing of Enbridge's cost allocation process is presented in Schedule 3. There are two categories reflected in this Schedule, with costs allocated on: (1) an annual or monthly basis; and (2) a periodic basis. Schedule 3 presents the particular cost elements that comprise Enbridge's unregulated storage cost of service grouped according to these two categories. Details of the timing associated with Enbridge's cost allocation process are discussed in subsequent sections of this report.

FOUNDATIONAL ASPECTS OF ENBRIDGE'S COST ALLOCATION METHODS

As discussed earlier, Enbridge's unregulated storage operation has been created in recent years to function as an integral part of an integrated storage operation that served the entirety of its regulated storage requirements on a standalone basis at the time of the NGEIR Decision. On that basis, Enbridge has chosen to utilize an incremental costing approach as a foundation for its identification and assignment of new storage assets to either the regulated or unregulated storage operations. Under this approach, Enbridge reviews each of its asset additions to determine the cost drivers that explain the need for the new asset. These costs drivers include replacement or enhancement of existing assets, development of incremental capacity and/or deliverability, or some combination of these costs drivers. Because Enbridge has the specific operational knowledge of its storage operation to make this type of project-specific determination for each of its asset additions, it is unnecessary for Enbridge to rely upon a more generalized cost allocation method, such as a fully allocated costing approach, that presumes such assets cannot be directly attributed to either one of Enbridge's storage operations. More generally, a fully allocated costing approach is regularly relied upon in utility cost allocation studies to allocate the costs of common or joint-used assets because the utility does not have the knowledge or data to identify which specific assets should be assigned to particular rate classes over the life of the utility's gas system.

If a fully allocated costing approach was applied to Enbridge's total storage assets (regulated and unregulated businesses), its unregulated storage operation would be allocated between approximately $32 million (using an Annual Capacity factor) and $49 million (using a Daily Deliverability factor), or about $41 million if those two allocation factors were weighted equally in the allocation process. However, Black & Veatch does not view this result as properly reflecting the cost causative factors associated with Enbridge's asset additions over the 2007-2011 timeframe. As will be discussed in greater detail later in this report, under Enbridge's current cost allocation method for its new storage assets, its unregulated storage operation has been assigned about $84.4 million in net storage plant through the end of 2011. In Black & Veatch's view, it is appropriate for Enbridge to utilize an incremental costing approach for its new storage assets because it best reflects the cost causative factors which drive the level of asset costs incurred by Enbridge to serve its unregulated storage market.

STORAGE-RELATED ASSETS

This section describes the evolution of Enbridge's storage operations since the NGEIR Decision and the treatment of Enbridge's new asset additions and asset retirements within its cost allocation process for storage operations.

Enbridge's Regulated Storage Assets

At the time of the NGEIR Decision, the 2007 gross value of the storage assets supporting Enbridge's existing regulated storage operation was approximately $261 million, with a net plant investment of about $175 million. Since 2007, Enbridge has made modest investments in its regulated storage operations primarily to replace or recondition facilities that have through age, use, or obsolescence, come to the end of their useful lives. In addition to these "maintenance-related" projects, Enbridge also has had to make capital expenditures for its regulated storage operations to ensure continued compliance with safety, environmental, and technical requirements. Examples of such expenditures recently made by Enbridge include: noise and exhaust emission enhancements to compressor facilities and improvements to its gas measurement and gas inventory observation facilities.

Table 1 below presents Enbridge's net plant in service for its regulated storage operations for the years 2007 through 2011.

Table 1
Enbridge Gas Storage Assets – Regulated Operation
Net Plant Balances at Year End
($ millions)

ASSET DESCRIPTION	PLANT ACCOUNT	2007	2008	2009	2010	2011
Land & Land Rights	450/451	22.5	21.4	20.4	21.1	20.2
Structures & Improvements	452	6.5	6.5	6.5	9.6	9.5
Wells	453	12.4	12.4	13.4	20.7	22.5
Well Equipment	454	3.8	4.0	4.3	4.6	4.3
Field Lines	455	27.6	26.8	26.7	25.9	38.4
Compressor Equipment	456	54.3	56.7	59.4	60.8	61.5
Measuring & Regulating Equipment	457	7.3	7.0	6.8	6.6	6.2
Base Pressure Gas	458	40.8	40.8	40.8	40.9	40.9
Total		$175.2	$175.6	$178.3	$190.2	$203.5

The costs of any other investments made by Enbridge over the 2007-2011 timeframe that were designed to add storage capacity and deliverability to its existing gas storage system were all assigned to Enbridge's unregulated storage operations.

Enbridge's Unregulated Storage Assets

In 2007, Enbridge began its investment program to add capacity and deliverability to support its newly created unregulated storage operation. From that time through 2011, Enbridge has invested approximately $88 million in gross plant additions in four major storage-related capital programs. These programs have included the drilling of additional wells into Enbridge's existing storage pools and the installation of additional pipelines, compression, gas dehydration, and measurement capacity. Some of the additional metering capacity has been added at the custody transfer point into Union's gas transmission system at Dawn and some has been created at a new custody point into the Vector pipeline system.

As a result of these capital programs, Enbridge has created new storage capacity and deliverability that it has offered to the competitive gas market. In total, these projects have resulted in the development of about 12.2 Bcf of total storage capacity and incremental withdrawal capability of 400 MMcfd at the end of 2011 (see Schedule 1). Without these capital investments made by Enbridge, none of its new storage capacity would be available to provide services to its unregulated storage market.

Table 2 below presents Enbridge's net plant in service for its unregulated storage operations for the years 2007 through 2011.

Table 2
Enbridge Gas Storage Assets – Unregulated Operation
Net Plant Balances at Year End
($ millions)

ASSET DESCRIPTION	PLANT ACCOUNT	2007	2008	2009	2010	2011
Land & Land Rights	450/451			0.4	1.1	1.1
Structures & Improvements	452			0.0	0.0	0.0
Wells	453		3.9	7.2	10.0	9.6
Well Equipment	454		0.0	0.0	0.0	0.0
Field Lines	455	1.3	8.5	14.6	14.6	14.2
Compressor Equipment	456	7.1	9.9	11.9	20.1	20.6
Measuring & Regulating Equipment	457		0.0	0.4	0.3	0.3
Plant Not Classified (1)	458		14.1	12.8	3.6	38.6
Total		$8.4	$36.4	$47.3	$49.7	$84.4

(1) 2011 amount related to the capitalization of Project Nexus – a gas storage expansion project

Based on Enbridge's cost allocation method and the results reflected in Tables 1 and 2, approximately 29% of Enbridge's total net storage plant (as of December 31, 2011) has been assigned to its unregulated storage operation.

To understand and verify the manner in which these plant account balances were derived, Black & Veatch reviewed Enbridge's detailed plant accounting data for its gross plant and accumulated depreciation reserve entries from 2007 through 2011. Schedule 4 presents the annual derivation of Enbridge's net plant balances for its unregulated storage operations. This analysis verified that Enbridge's net plant balances presented in Table 2 were accurate and that they could be replicated from the more detailed plant information.

New Storage Assets

Enbridge has developed and implemented a cost allocation process that assigns the cost of its storage investments to its regulated and unregulated storage operations. The method is premised upon the proper reflection of cost causative principles. Specifically, Enbridge has developed the following investment categories to facilitate the grouping of its storage-related investment according to the factors which cause each investment to be made:

1. Replacement of Existing Storage Assets
2. Development of Incremental Storage Capacity
3. Replacement of Existing Storage Assets with a Capacity Enhancement Component

4. General Storage Plant

Each of these investment categories are described in further detail below. It should be noted that the above-described process requires the allocation of individual assets in order for Enbridge to create and maintain on a going forward basis the proper plant accounting records at the individual asset level for its unregulated storage operations.

Replacement or Enhancement of Existing Storage Assets

These projects consist of storage-related assets that are installed to replace Enbridge's existing assets supporting its storage operations. The nature of these projects serve to maintain the facilities and service capabilities whether they completely replace the asset, recondition the asset, or bring the asset into regulatory or environmental compliance. In all cases, the capital costs of these new facilities are directly assigned to Enbridge's accounts and/or entity of the original assets.

Black & Veatch reviewed Enbridge's projects in this category and confirmed that the capital costs of each asset addition were treated in a manner consistent with its current cost allocation methods. As an example, Enbridge's "K708 Compressor Power Cylinder Liner Replacement" project was undertaken in 2011 to replace the cylinder liners on one of its compressor engines at Tecumseh. These liners deteriorate over time from wear and must be replaced, which means that this is a "maintenance capital" type project. Since this compressor engine was originally installed to meet the storage needs of Enbridge's regulated storage operation, Enbridge concluded that it was appropriate to directly assign the cost of this new asset to the regulated utility business.

Another example of an asset replacement or enhancement project is Enbridge's drilling of the Tecumseh Seckerton #20 pressure observation well in a location adjacent to the Seckerton storage pool. The drilling of this well, and others, was recommended by reservoir consultants to Enbridge. The well may confirm the presence of porous rock zones in proximity to the storage pool, and the presence of gas volumes in those zones that would indicate communication with the pool. The well enhances Enbridge's understanding of the Seckerton storage pool and helps to raise the quality of its gas inventory management to a standard that is consistent with storage industry practice. Because the well enhances Enbridge's understanding of the Seckerton storage pool, which is a regulated asset, its cost has been charged to the regulated storage operation.

Based on its review of these projects, Black & Veatch agrees with the costing treatment of these assets.

Development of Incremental Storage Capacity

These projects consist of storage-related assets that are installed to provide Enbridge with new storage capacity or deliverability. Since the storage needs of Enbridge's regulated utility business continue to be fully satisfied by the storage-related assets (and third-party storage) that existed at the time of the NGEIR Decision, the capital costs of these new facilities are directly assigned to Enbridge's unregulated storage operation.

Black & Veatch reviewed Enbridge's projects in this category and confirmed that the capital cost of each asset addition was treated in a manner consistent with its current cost allocation methods. As an example, Enbridge's "Drilling of TKC 61H" project was undertaken to drill a new storage injection/withdrawal well. This well was a relatively high cost, horizontal well drilled into

Enbridge's Mid-Kimball storage pool. Since this well was drilled to satisfy the incremental storage capacity needs of Enbridge's unregulated storage operation, Enbridge concluded that it was appropriate to directly assign the cost of this new asset to its unregulated storage business.

Another example is Enbridge's "Ladysmith Gathering Pipeline" project which was undertaken to provide greater gas flow capabilities into and out of the Ladysmith storage pool, while making available some capacity on the Wilkesport gathering pipeline. This project optimized Enbridge's storage system, thereby, creating a greater level of storage capacity at Enbridge's custody transfer points to serve its unregulated storage market. As a result, Enbridge concluded that it was appropriate to directly assign the cost of this new asset to its unregulated storage business.

Based on our review of these projects, Black & Veatch agrees with the costing treatment of these assets.

Replacement of Existing Assets with a Capacity Enhancement Component

These projects consist of storage-related assets that are installed to replace Enbridge's existing assets and to provide incremental storage capacity or deliverability. For example, it may be necessary for Enbridge to replace a utility asset at the end of its useful life, but where the replacement asset is sized to provide additional capacity beyond that of the original asset. Importantly, the replacement of the asset is driven by the fact that it is no longer technically capable of providing the service for which it was intended and that Enbridge needs to replace the asset to maintain the level of storage service required by its regulated utility customers.

Under this scenario, Enbridge's regulated utility operation would be charged the portion of the capital costs that it would have incurred if it were to have replaced the asset on a like-for-like basis. And, on that basis, its unregulated storage operation would be charged for the incremental costs that would have resulted from the higher capacity asset. This would include both the cost of the incremental capacity and the cost of any of the system design changes that might have been required to accommodate the different asset. In other words, the portion of the total asset cost that will be booked to Enbridge's regulated storage operation will be no more, and may be less, than would have been incurred had the replacement asset been sized simply to replace the original asset.

Conversely, in a scenario where the asset is not at the end of its useful life, but where its replacement is driven by the operational needs of Enbridge's unregulated storage operation, then it would be charged for the entire cost of the replacement. Finally, we understand that the relative proportions of the replacement assets will be noted by Enbridge in the asset accounts of both its storage operations.

Black & Veatch reviewed Enbridge's projects in this category and confirmed that the capital cost of each asset addition was treated in a manner consistent with its current cost allocation methods. As an example, Enbridge's "Replace Corunna and Seckerton Pool Gathering Pipelines" project was undertaken after a review of the existing wellhead and gathering line facilities of the Corunna and Seckerton storage pools to determine their appropriateness for the delta pressuring of the pools to create additional unregulated capacity. This review revealed that those facilities would have to be replaced to allow for the needs of Enbridge's higher pressure, unregulated storage service. Since this replacement would not have otherwise occurred because the existing facilities were suitable to continue to provide storage services to Enbridge's regulated utility customers, Enbridge concluded that the entire cost of this replacement should be assigned to its unregulated storage operation. Based on our review of this project, Black & Veatch agrees with the costing treatment of these assets.

Another example is Enbridge's "Pool Metering Upgrades" project which was undertaken to provide more accurate measurement of total pool volumes, energy content, and injection/withdrawal volumes. Enbridge was required to replace its older metering technology with current technology metering equipment. At the same time, certain gathering line changes were required to accommodate the storage capacity and deliverability needs of the unregulated storage operation, so the total cost of the project was much higher than if only the metering facilities were replaced.

To reflect the cost consequences of this configuration of facilities, Enbridge designed and estimated the cost of this project assuming two design scenarios – with and without the incremental asset requirements of the unregulated storage business. The incremental costs of the project were caused by higher pressure-rated materials, additional growth elements in the facilities design, and the different physical configuration of the gathering facilities supporting the unregulated storage operation. As a result, Enbridge concluded that it was appropriate to assign the replacement cost of the metering facilities to its regulated storage business, with all other costs of the project assigned to its unregulated storage operation.

Although there are still certain project costs that have yet to be incurred, the estimated cost at completion is expected to be about $36.2 million. Of this amount, approximately $21.0 million or 58% of the total project costs will be charged to Enbridge's regulated utility business with the balance of approximately $15.2 million or 42% of the total project costs to be assigned to its unregulated storage operation. Black & Veatch agrees with Enbridge's expected costing treatment of these assets.

General Storage Plant

General plant assets consist predominantly of structures such as office and utility buildings, warehouses, sheds, and parking lots that do not directly support the capacity and deliverability of Enbridge's storage operations. Under Enbridge's current cost allocation process, if the general storage plant asset is designed to meet an incremental need of either of its two storage operations, Enbridge will assign the entire cost of that asset addition to the particular operation that had the direct need for that asset. If the project is driven more by the general needs of its integrated storage operation, Enbridge will allocate the cost of that asset to both operations based on an allocation factor that best reflected the cost causative characteristics of the facility's design and intended purpose.

During the course of this project, Black & Veatch had a number of discussions with Enbridge staff who are involved in the day-to-day operations, asset investment evaluations and decisions, and accounting treatment of its unregulated storage operations. One of the discussion topics was the appropriate cost allocation treatment of Enbridge's general storage plant. Enbridge has not had an asset addition to its general storage plant since the NGEIR Decision so it did not have any real world examples to consider for cost allocation purposes. From our discussions, we were of the view initially that Enbridge would likely directly assign to its regulated storage operation the cost of any replacement of, or enhancement to, its general storage facilities simply because the original asset had existed previously to only support the regulated storage operations.

Our further discussions also indicated that Enbridge does have under construction currently a storage (warehouse) building located at its Sombra Compressor Station. The Sombra Storage Building project will support Enbridge's integrated storage operation and will be used to store Glycol, compressor parts, and other storage-related materials. Black & Veatch understands that this planned asset addition was originally viewed by Enbridge as a facility which solely supported its regulated storage operation. On that basis, Enbridge intended to assign the entire capital cost of this asset to its regulated storage operation. After further evaluation of the purpose and expected utilization of this facility, Enbridge has revisited the assignment of capital costs for this project. The Sombra facility is not an asset replacement project and it has been sized to provide some additional space to house certain materials that are required for the unregulated storage operation. As a result, the capital cost of this facility should be assigned to both storage businesses using an allocation basis that reflects the joint use of the facility.

More generally, the treatment of the Sombra facility for cost allocation purposes has caused Enbridge to consider revising its current cost allocation process for storage-related assets. One option would be to assign a portion of the asset to each of Enbridge's two storage businesses by developing an allocation factor which is based upon the amount of storage space required for each storage business. Another option would be to treat the capital costs as an overhead item and to allocate those costs on a corporate-wide basis as a function of each cost center's direct costs. Enbridge has proposed to treat such assets as "Corporate General Plant" as other similar assets are treated within the Enbridge organization. We understand that Enbridge normally treats Corporate General Plant as an overhead cost element and apportions such costs across its various cost centers through its A&G overhead factors. Under that method, Enbridge's unregulated storage operation would share in the cost of this facility in the same way it does for all of Enbridge's other general plant facilities. Based on our understanding of that process, Black & Veatch believes that Enbridge's proposed method is a reasonable basis for the cost allocation treatment of general storage plant.

Enbridge's Capital Project Assessment Process

Schedule 5 presents a flowchart of the assessment process that Enbridge follows to assign the costs of storage-related capital projects to its regulated and unregulated storage operations. The decision criteria in this flowchart reflects the cost attribution characteristics described above for each category of Enbridge's storage assets, including its proposed treatment of general storage plant. Black & Veatch recognizes that the process reflected in Schedule 5 has become more formalized in recent times as Enbridge has invested in each type of storage asset and gained greater insights into the factors causing the investments to be made in these assets. One proposed addition that Black & Veatch recommends to Enbridge's capital project assessment process is to include the gas storage characteristic of deliverability in the description of projects that should be charged directly to Enbridge's unregulated storage business.

Based on our review of individual new storage assets added by Enbridge since 2007 to support its regulated and unregulated storage operations, Black & Veatch concludes that Enbridge has applied its cost attribution process to new storage assets in a consistent manner. This conclusion was based upon our evaluation of the examples of storage assets presented above (and others) within the context of Enbridge's current capital project assessment process reflected in Schedule 5.

Other Plant-Related Costs

For each of its storage-related projects, Enbridge reflects a total cost level that includes all of the materials and third-party service costs that are incurred in the design, construction, and commissioning of the facility. In most cases, the project will also require time and effort from Enbridge staff, with much of that being provided from its Gas Storage Operations staff located near its Tecumseh storage operation. In addition to these costs, each project also is charged for Interest during Construction ("IDC") and administration and general corporate overheads.

These cost components are described below:

Internal Labor

All Enbridge staff members working directly on each capital project maintain time sheets that accumulate the time spent on the project. Those time sheets are processed on a regular basis, and the time is charged at the hourly equivalent rate for that staff member.

Corporate Administrative and General ("A&G") Overheads

Enbridge charges corporate A&G costs to the new storage assets of its unregulated storage operation in the same manner as it does for its O&M costs (as will be described later). The hourly salary rates for Enbridge staff working on those projects are grossed-up to include corporate A&G and an amount associated with the expected performance-based payout inherent in Enbridge's employee compensation plan. Together, these amounts result in an overhead factor of approximately 65% to 70% which is applied to each staff member's base salary level.

Contractor and Materials

All third-party services and materials costs related to Enbridge's unregulated storage projects are charged directly to its unregulated storage accounts.

Interest During Construction ("IDC")

Enbridge assesses an IDC charge to all unregulated storage projects in the same manner that it does for its utility capital projects.

STORAGE-RELATED EXPENSES

With the commencement of its unregulated storage operations, and the operation of its larger, integrated storage facilities, Enbridge's total O&M costs have increased over time as its unregulated storage operation has grown. There are additional storage-related facilities to operate and maintain, and more gas volumes being transacted. Some specific O&M costs have increased generally, more or less in proportion to the increase in storage activity; while others have increased only marginally, or not at all. As additional capacity and deliverability is added to Enbridge's integrated storage operations in the future, it is understood that these costs may increase in a stair step manner in recognition of the added manpower requirements that could be caused by Enbridge reaching a higher level of storage activity.

Table 3 below presents Enbridge's total storage O&M costs for its regulated storage operations for the years 2007 through 2011. Table 4 which follows presents Enbridge's total storage O&M costs for its unregulated storage operations for the years 2007 through 2011.

Table 3
Enbridge Gas Storage – O&M Costs
Regulated Storage Operation

EXPENSE CATEGORY (1)	2007	2008	2009	2010	2011
Labor	$3,361,251	$3,574,771	$3,607,253	$3,835,016	$4,299,598
Supplies	$1,061,065	$1,152,423	$1,022,099	$1,348,299	$1,365,079
Consulting Services	$1,480,086	$1,416,565	$1,468,205	$2,146,386	$1,482,801
Other Operating Expenses	$2,314,434	$2,223,109	$2,501,334	$2,653,088	$2,355,530
Property Taxes	$1,321,560	$1,180,933	$1,331,352	$1,425,708	$1,611,240
Labor Credits and Other	($1,044,216)	($1,279,375)	($1,400,056)	($2,036,650)	($2,358,964)
Total	$8,494,180	$8,268,426	$8,530,187	$9,371,847	$8,755,284

(1) Excludes A&G Overhead amounts

Table 4
Enbridge Gas Storage – O&M Costs
Unregulated Storage Operation

EXPENSE CATEGORY (1)	2007	2008	2009	2010	2011
Labor	$143,821	$117,253	$506,108	$491,619	$391,669
Supplies	$136	$483	$19,652	$165	$2,687
Consulting Services	$85,016	$19,413	$166,735	$183,663	$180,294
Employee Expenses	$10,058	$14,965	$27,785	$752	$29,314
Other Operating Expenses	$6,667	$41,593	$404,052	$1,083,138	$1,401,631
Property Taxes (1)		$156,000	$73,656		
Subtotal	$245,698	$349,707	$1,197,988	$1,759,337	$2,005,595
Labor Credits and Other	($8,895)	$10,995	($75,167)	($51,740)	($59,114)
Total	$236,803	$360,702	$1,122,821	$1,707,597	$1,946,481
Direct Assignment	$230,136	$319,109	$718,769	$624,459	$544,850
Allocated Amount	$6,667	$41,593	$404,052	$1,083,138	$1,401,631
Total	$236,803	$360,702	$1,122,821	$1,707,597	$1,946,481

(1) An allocated amount is included in Other Operating Expenses in 2010 and 2011

To determine an appropriate cost allocation basis for its O&M costs, Enbridge evaluated each of its cost categories to establish a relationship between the various service requirements of storage and the costs incurred by Enbridge in serving those requirements (i.e., what are the cost drivers?). Unlike the asset side of Enbridge's storage operations, where a clearer determination could be made of which of Enbridge's two storage operations caused the new asset addition, O&M expenses are more generalized in nature, and in many cases, they support the entirety of Enbridge's integrated storage operation. This fact makes it difficult to determine with certainty which of Enbridge's two storage operations cause these costs to be incurred. As a result, most of Enbridge's O&M expenses are allocated and shared on the basis of the relative proportions of the total storage capacities and, in some cases, the actual storage activity of its regulated and unregulated storage operations.

Enbridge derives storage-related expenses for its unregulated storage operations on a monthly basis to reflect the latest operating activity supporting that business. Enbridge first identifies the costs of certain storage-related activities that can be directly attributed or assigned to its unregulated storage operations. Enbridge's unregulated storage business has an Unregulated Storage Group that is dedicated to managing and administering all aspects of that business. All other activities and associated costs which support Enbridge's integrated storage operations must be allocated between its regulated and unregulated storage operations. An assessment of the appropriate costing treatment was made by Enbridge for each of the various cost elements that supports Enbridge's storage operations. Each of Enbridge's cost elements that support (either directly or indirectly) its unregulated storage operations, and the associated allocation methods, is described below.

Storage Operations

Enbridge incurs certain operating costs that can be directly identified with its unregulated storage operations. These activities consist of staff time and a variety of other expenses associated with Enbridge's Unregulated Storage Group described earlier. The costs of these activities are charged to a cost center that is specific to the unregulated storage business.[9]

For cost allocation purposes, Enbridge has determined that the costs of its storage operations can either be classified as fixed or variable in nature. Enbridge has defined fixed costs as those that do not vary with the levels of storage activity, and variable costs as those that do vary with activity. This approach is similar to the designation of demand and commodity costs as used in a utility's traditional cost allocation study. This cost classification process is dependent upon the degree to which the particular cost is observed to vary with Enbridge's storage activity. If a particular cost does not change materially with the level of actual storage activity, then Enbridge classifies that cost as 100% fixed. Conversely, for costs that do vary materially as the level of actual storage activity changes, Enbridge classifies these costs as 100% variable. Examples of variable costs are other materials such as compressor and crankcase oil, glycol, and outside services such as electricity.

Enbridge has evaluated each of its cost elements to determine how the particular cost should be classified. In most cases, it was a straightforward process for Enbridge to determine definitively

[9] Enbridge Gas Distribution - Cost Centre 25371 – Unregulated Storage

that the cost element was fixed in nature. For certain other cost elements, Enbridge was required to apply management judgment by those staff members closest to the underlying activities to determine the relative proportion of costs that were fixed and variable in nature.

The operating expenses that are deemed to be relatively fixed are allocated between Enbridge's regulated and unregulated storage operations based upon their relative share of Enbridge's total available storage capacity. This means that, as the unregulated storage business grows, the unregulated business will be charged for an increasing share of Enbridge's fixed storage operating costs.

For those operating costs that vary with the levels of storage activity, Enbridge allocates such costs using the actual costs incurred in each month, and the relative share of the total actual storage activity for the regulated and unregulated storage operations for that same month. In that way, Enbridge's unregulated storage business, which may exhibit a more volatile activity profile than the more traditional use of storage by the regulated utility customer, would pay a higher share of these variable costs in months when its customers required a disproportionately greater level of storage activity.

To better understand and verify how Enbridge conducts its above-described cost allocation process, Black & Veatch analyzed the storage-related expenses incurred by Enbridge each month during calendar year 2011 and the level of costs that was directly assigned or allocated to its unregulated storage operations. To illustrate the cost allocation process that Enbridge follows, Schedule 6 presents a series of detailed storage cost accounting sheets for calendar 2011 and for the month of November 2011 (which reflect expenses that are charged in December). Page 1 of Schedule 6 presents a summary of the allocation of O&M costs to Enbridge's unregulated storage operation for 2011. There are four Cost Centers associated with Enbridge's gas storage operations: (1) Storage Administration - 25121; (2) Storage Operations - 25122; (3) Storage Maintenance - 25123; and (4) Field Maintenance - 25124. The total allocated amount of $1,401,567 presented on page 1 of Schedule 6 is brought forward to Table 4 presented above.[10]

For each month, there are four (4) Operating Cost Reports by Cost Center that reflect the allocation of costs between Enbridge's regulated and unregulated storage operations (see Pages 2-5 of Schedule 6). Each sheet details the allocation of costs by individual cost element, the derivation of the fixed and variable allocation factors based on the shares of storage capacity and storage activity, respectively, and the resulting total costs to be charged to Enbridge's unregulated storage operation.

At the end of each month, Enbridge charges the total allocated costs for each of these Cost Centers to its unregulated storage operation through adjustments to its General Ledger Journal, which results in the inclusion of these costs in the December 2011 Operating Cost Report[11] for Enbridge's

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[10] An unexplained discrepancy of $64 exists between the amounts recorded in Enbridge's Monthly Operating Cost Reports for 2011 (see page 1 of Schedule 6) and the total amount recorded in the "Other Operating" line entry (70899) in its Operating Cost Report for 2011 for Cost Center 25371 – Unregulated Storage (see page 6 of Schedule 6).

[11] There is a one-month lag in the booking of the allocated storage costs in the Operating Cost Report of Enbridge's unregulated storage operation.

unregulated storage operation. Page 6 of Schedule 6 is a copy of the Operating Cost Report for December 2011 for Enbridge's unregulated storage operation, which shows the inclusion of the allocated storage costs for calendar 2011 in the line identified as "70899 Other Operating" under the column "Year to Date – Actual."

Black & Veatch believes that the manner in which Enbridge allocates costs in this category to its two storage operations should be reflective of the cost causative factors that give rise to these costs. While Black & Veatch agrees that storage capacity (or space) and storage activity are two important attributes of a utility's storage operations, storage deliverability also is an important cost driver. In its past filings, Enbridge has not explicitly recognized storage deliverability in its cost allocation methods. When Black & Veatch questioned Enbridge concerning why it did not classify storage-related O&M costs according to the cost classification categories of Deliverability and Space that were used in its Fully Allocated Cost Study, Enbridge responded as follows:

> "Because of the nature of the unregulated storage services, and the likelihood that gas volumes for unregulated customers would be cycled several times in a year, it was felt that activity was a fairer basis for cost allocation. A deliverability classification, as used for the more traditional, single cycle needs of the utility customers, would have recognized the higher deliverability characteristics of the current unregulated storage business but would not have recognized the multiple-cycling nature of the unregulated storage contracts. It is felt that basing the allocation on activity, and not deliverability, would capture both the higher deliverability and multiple-cycling cost implications of these services."

Black & Veatch understands Enbridge's response and agrees with the view that it is more appropriate to allocate certain of these costs using an allocation factor based on storage activity because it better reflects the storage requirements of its unregulated storage operations. However, Black & Veatch does not agree with the conclusion that storage activity also serves as a good proxy for storage deliverability. In Enbridge's most recent fully allocated cost study, it classified Tecumseh Gas' storage-related costs, and the costs based on contract arrangements with Union, according to three distinct types of service:

1. An annual component for space or capacity
2. A variable component (activity) for each unit of gas injected into or withdrawn from storage
3. A peak component (deliverability) for the maximum daily rate at which the gas may be withdrawn from storage.[12]

Enbridge classified approximately 40% of its total storage-related cost of service of Tecumseh Gas (excluding its commodity-related costs) as capacity ("Annual Demand") and 60% of these costs as deliverability ("Daily Demand").[13] Enbridge's subsequent allocation of these costs was performed recognizing the same 40/60 proportion of Annual Demand and Daily Demand. In contrast, Enbridge has allocated a much smaller percentage of costs to its unregulated storage operation

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[12] EB-2006-08-25, Exhibit G2, Tab 1, Schedule 1, Page 16 of 26.
[13] EB-2006-08-25, Exhibit G2, Tab 7, Schedule 3, page 1.

using an allocation factor based on actual monthly storage activity compared to the 60% of costs described above which are allocated on a daily deliverability basis. Referring to pages 2 through 5 of Schedule 6, the total costs in November 2011 allocated on the basis of actual monthly storage activity equaled only about 6%, while the remaining 94% of the total costs were allocated on storage capacity. In Black & Veatch's opinion, this comparison shows that Enbridge's current cost allocation method which assigns storage O&M costs to its unregulated storage operation underemphasizes the cost driver of storage deliverability and overemphasizes the cost driver of storage capacity. As a result, Black & Veatch believes that this allocation method does not reflect the cost causative factors that are relied upon by Enbridge when classifying and allocating these same costs in its fully cost allocation study. Based on this situation, Black & Veatch conveyed to Enbridge during our discussions related to this study that it should consider changing its allocation factor for fixed storage costs to reflect a proper weighting of the cost drivers of capacity and deliverability.

As a result of Black & Veatch's discussions on this subject, Enbridge has re-examined each of the operating and maintenance expense categories for the four cost centers reflected in Schedule 6 and has determined that certain allocation factors should be revised to recognize storage deliverability as a distinct cost driver. As part of this re-examination, Enbridge also made minor revisions to the allocation treatment for certain costs that it believed were impacted differently by storage activity based on the nature of the business activity and with the recognition of deliverability as a cost allocation factor. Schedule 7 presents Enbridge's detailed storage cost accounting sheets for the month of August 2011 (which reflect expenses that are charged in September) with the revised allocation factors it proposes to establish for the assignment of fixed and variable expenses incurred to support its regulated and unregulated storage operations.

Black & Veatch has reviewed the revised cost allocation methods established by Enbridge for its storage operating expenses and concludes that they are reasonable and appropriate. Enbridge's cost allocation methods and cost allocation factors are reflective of the manner in which similar types of costs are treated in its fully allocated cost of service study and the judgments of the staff who are regularly involved in the day-to-day management and operations of its gas storage businesses.

One additional minor issue that was identified by Black & Veatch pertained to Enbridge's use of an "Applicable Share" adjustment to certain costs included in the Storage Administration Cost Center (see page 2 of Schedule 6). Enbridge first reduces the actual total labor costs in this area by 5% (a 95% Applicable Share amount) to recognize that one FTE in the business group does not provide any services to the unregulated storage business. As discussed earlier, Enbridge's Unregulated Storage Group provides dedicated managerial and administrative support to the unregulated storage business. As such, Enbridge views an allocation of 100% of the labor costs of the Storage Administration Cost Center as creating an over-allocation of these costs to its unregulated storage operation.

Our concern is that if Enbridge relies upon a fully allocated costing basis to assign O&M costs to its unregulated storage operation, it is inappropriate to first eliminate certain costs from the allocation process. This is because the validity in utilizing a generalized allocation factor is premised upon it being applied to all costs being assigned. The application of the particular allocation factor (e.g., 11% for storage capacity) presumes that a portion of the time spent by all staff represents a fair allocation of total costs between the two storage businesses, irrespective of the specific activities on any one staff member. While Enbridge believes that a particular staff member does not spend 11% of the workday supporting its unregulated storage operation, its use of a fully allocated costing method also means that Enbridge has implicitly accepted the premise that staff may spend a greater or lesser amount of time than the 11% level inherent in the allocation factor, but that overall, each of the staff spends an average of 11% on unregulated storage activities.

While Black & Veatch understands that this particular element of Enbridge's current cost allocation process causes a slight reduction in the level of costs assigned to its unregulated storage operation, it does compromise the conceptual basis for adopting a fully allocated costing method for these costs. As a result, Black & Veatch believes that this minor exception to the cost allocation process should be addressed by Enbridge on a going-forward basis by eliminating its "Applicable Share" adjustment. Based on this situation, Black & Veatch conveyed to Enbridge during our discussions related to this study that its use of an "Applicable Share" adjustment to certain costs included in the Storage Administration Cost Center should be eliminated from its current cost allocation process on a going-forward basis.

We understand that Enbridge has reviewed our explanation of this situation and has proposed to eliminate this adjustment from its current allocation treatment of storage-related operating expenses. Schedule 7 shows that the "Applicable Share" adjustment will no longer appear in Enbridge's monthly Operating Cost Reports.

Corporate Administrative and General Overheads

Enbridge also allocates A&G overhead costs to its unregulated storage operations in the same way that it does for the operating costs incurred by its regulated storage activities. An hourly A&G overhead amount is determined for each Full-Time Equivalent ("FTE") staff member, with those costs treated as a premium to the hourly cost of the FTEs involved in Enbridge's unregulated storage activities.

These overhead costs include a broad range of corporate costs and services such as finance and business services, customer support, regulatory, legal and corporate services, human resources, and engineering, as well as a rate of return on, and the depreciation expenses for, buildings, office furniture and equipment, telecom equipment, and information technology/software assets. In addition to these overhead costs, Enbridge's cost allocation process also includes the expected cost of its performance-based pay incentive for storage operations staff.

The allocation of these overhead costs to Enbridge's unregulated storage operation has the effect of increasing the base labor costs by 65% to 70%, which is reflected on page 2 of Schedule 6 under the "Overhead Rate" column. The calculation and inclusion of these overhead amounts is an integral part of Enbridge's monthly allocation process for its Tecumseh storage operations.

Unregulated Business Development and Administration Costs

As a participant in the unregulated storage industry, Enbridge incurs other costs that are specific to the strategic development, management and operation of the business. These costs are charged directly to the set of accounts that are kept for the unregulated business. Among these is the cost of the dedicated management and staff of the unregulated storage business, the cost of Gas Control services in Edmonton and the cost of any professional services required, such as legal counsel and third party technical consultants.

These resources are necessary to stay current with gas storage markets, identify storage service opportunities and their feasibility and to manage the contractual relationships that underlie the commercial basis for the un-regulated storage business. These costs are charged directly to the accounts of the unregulated storage business through the normal payroll, financial and A/P systems of Enbridge. As such, there are no business development and administrative costs in this category that is incurred on behalf of Enbridge's regulated storage operations.

Fuel Gas

Enbridge assigns a portion of the cost of gas it incurs to operate its gas storage operations at Tecumseh to its unregulated storage operations. This is accomplished by determining the actual storage activity for Enbridge's unregulated storage operations and applying that amount to the previous October's Quarterly Rate Adjustment Mechanism ("QRAM") reference price of gas. Enbridge's current Fuel Ratio charged to its unregulated storage customers is 0.35%.

Lost and Unaccounted For Gas

Enbridge assigns the cost of Lost and Unaccounted for Gas ("LUF") to its unregulated storage operations by applying an "in-kind" charge to its unregulated storage customers' capacity and activity levels. This charge uses the same LUF replacement factor that has been approved by the Board for Enbridge's regulated utility customers. We understand that Enbridge maintains a separate LUF factor that is specific to its gas storage operations.

Schedule 8 summarizes the cost allocation treatment for Enbridge's cost of gas components.

Depreciation Expense

Annual depreciation rates for Enbridge's underground storage assets were approved by the Board in RP-2002-0133. Table 5 below presents the annual depreciation rates for Enbridge's unregulated underground storage operations.

Table 5
Enbridge's Annual Depreciation Rates for Unregulated Storage Assets

ACCOUNT NUMBER	ACCOUNT DESCRIPTION	ANNUAL DEPRECIATION RATE
451	Land Rights	2.10%
452	Structures & Improvements	2.60%
453	Wells	4.60%
454	Well Equipment	3.10%
455	Field Lines	2.60%
456	Compressor Equipment	2.20%
457	Regulating Equipment	3.60%

Depreciation expense (and the associated accumulated depreciation reserve) is calculated at the individual asset level using the annual rate that is applicable to the entire asset class. Enbridge's depreciation expense is posted to a separate general ledger account. The 2011 depreciation expense for Enbridge's unregulated storage assets was approximately $1.37 million.

Property Taxes

Enbridge currently assigns a portion of its storage-related property taxes to the unregulated storage business through the cost allocation process utilized in its Storage Administration Cost Center (25121). As shown on page 1 of Schedule 7, under the line "70701 – Property Taxes," Enbridge proposes to assign this cost element to its unregulated storage operation on the basis of its Annual Capacity allocation factor (40%) and its Deliverability allocation factor (60%).

Schedule 9 summarizes the cost allocation treatment for Enbridge's depreciation expense and property taxes.

FINDINGS AND RECOMMENDATIONS

Based upon Black & Veatch's review of Enbridge's storage allocation process, methodology, and results, the conceptual underpinnings and resulting methodologies upon which Enbridge's cost allocation process are generally well-conceived and reasonable in their treatment of storage-related plant and expenses. However, there are a few components of Enbridge's current cost allocation methods that Black & Veatch believes should be changed to better recognize the underlying cost causative factors of Enbridge's storage operations. As described previously, Enbridge has considered Black & Veatch's discussions on this topic and has proposed to revise certain of its current cost allocation methods for the following cost elements:

- **New General Storage Plant**
    1. Enbridge proposes to adopt the cost allocation treatment for new general plant depicted in Schedule 5 and to apply this method to the cost of its Sombra warehouse facility once it is completed and placed into service.

- **Storage Operations**
    1. Enbridge proposes to change its cost allocation factor for fixed storage costs to reflect a proper weighting of the cost drivers of annual capacity and deliverability, and has made minor modifications to the portion of costs it classifies as variable in nature.

    2. Enbridge proposes to eliminate from its current cost allocation process the use of an "Applicable Share" adjustment to certain costs included in the Storage Administration Cost Center (see page 2 of Schedule 6).

In addition, the manner in which Enbridge has presented its separation of costs between its regulated and unregulated storage operations in its past ESM Filings before the Board[14] does not in all cases provide a sufficient level of detail and explanation to allow an outside party to understand,

[14] See Enbridge's evidence filed in EB-2010-0042 and EB-2011-0008.

trace, and verify the underlying assumptions of the cost allocation methodology, computational processes, and to independently confirm the results.

As a result of this finding, Black & Veatch recommends the following enhancements to Enbridge's computational process and evidentiary presentation:

1. Establish more robust documentation that readily allows the reader to clearly trace how Enbridge's regulated and unregulated storage costs are developed, which should include providing clear references for the cost allocation methods used in the calculation of the costs of Enbridge's unregulated storage operations. Black & Veatch believes that certain of the Schedules presented in this report should be incorporated into Enbridge's future evidentiary presentations before the Board on this subject.

2. Provide additional details to be able to trace Enbridge's elimination from its Utility Income of each particular expense item (e.g., gas costs, O&M expenses, property taxes, and depreciation expense) associated with Enbridge's unregulated storage operation, and the computational details to derive each eliminated amount.[15]

3. The manner in which Enbridge splits the cost of new storage assets that replace existing storage assets with a capacity enhancement component between its regulated and unregulated storage operations (e.g., Enbridge's "Pool Metering Upgrades" project) should be detailed so that the basis for the determination of the cost split can be readily understood by an outside party.

[15] See EB-2011-0008, Exhibit B, Tab 1, Schedule 4, pages 1-4.

ENBRIDGE GAS DISTRIBUTION INC.

Underground Storage Facilities - Operational Characteristics (1)

	2007	2008	2009	2010	2011
Annual Capacity (Bcf)					
In-Franchise (2)	91.7	91.7	91.7	91.7	91.7
Ex-Franchise (3)	6.7	6.7	6.7	6.7	6.7
Subtotal	98.4	98.4	98.4	98.4	98.4
Unregulated	0.0	2.2	4.2	8.7	12.2
Total	98.4	100.6	102.6	107.1	110.6
Daily Withdrawal Commitments (Bcfd)					
In-Franchise (2)	1.74	1.74	1.74	1.74	1.74
Ex-Franchise (4)	0.19	0.19	0.19	0.19	0.19
Subtotal	1.93	1.93	1.93	1.93	1.93
Unregulated	0.0	0.157	0.269	0.359	0.401
Total	1.93	2.09	2.20	2.29	2.33
Injection/Withdrawal Activity (Bcf)					
Regulated	0	140.11	179.02	163.85	173.28
Unregulated	0.0	11.97	28.28	13.65	15.49
Total	0.00	152.08	207.30	177.50	188.77
Storage Turnover Rate (5)					
Regulated	0	1.4	1.8	1.7	1.8
Unregulated	0.0	5.4	6.7	1.6	1.3
Total	0.0	1.5	2.0	1.7	1.7

Notes:

(1) Includes Crowland Storage

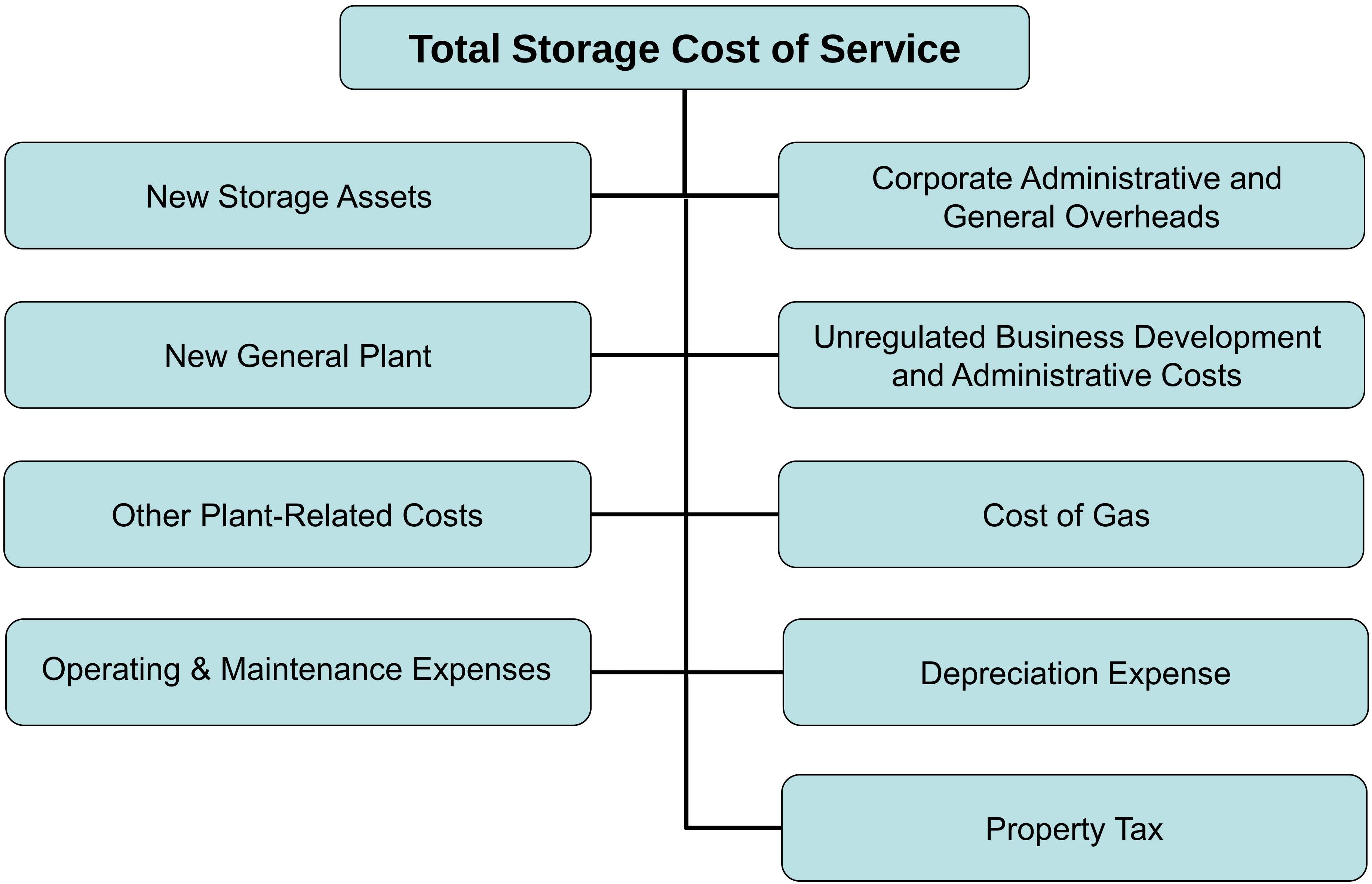
(2) Includes Transactional Services

(3) Regulated contract storage services for Union Gas Limited

(4) Regulated contract storage services for Union Gas Limited (0.11 Bcfd) and transmission deliverability services for Niagara Gas Transmission Ltd. (0.08 Bcfd)

(5) Unregulated storage operations started in May 2008

ENBRIDGE GAS DISTRIBUTION INC.
Allocation of Regulated and Unregulated Storage Costs
Functional Process Flowchart



ENBRIDGE GAS DISTRIBUTION INC.
Allocation of Regulated and Unregulated Storage Costs
Timing of the Cost Allocation Process

Monthly/Annual	Periodic
•Storage Asset Additions and Retirements –Direct Assignments –Allocations	•New Depreciation Rates
•General Plant Additions and Retirements –Direct Assignments –Allocations	
•Operating and Maintenance Expenses –Direct Assignments –Allocations	
•Corporate Administrative and General Overheads –Loading Rates	
•Unregulated Business Development and Administrative Costs –Direct Assignment	
•Cost of Gas –Lost and Unaccounted for Gas –Allocations	
•Property Tax –Allocations	

ENBRIDGE GAS DISTRIBUTION INC.
Unregulated Gas Storage Assets
Net Plant - Year End Balances

Asset Description	Plant Account	2007 Opening Balance	2007 Additions	2007 Provisions	2007 Ending Balance
Gross Plant					
Land & Land Rights	450/451				
Structures & Improvements	452				
Wells	453				
Field Lines	455		$1,307,846		$1,307,846
Compressor Equipment	456		$7,043,209		$7,043,209
Measuring & Regulating Equipment	457				
Plant Not Classified					
Totals			$8,351,055		$8,351,055
Accumulated Depreciation Reserve					
Land & Land Rights	450/451				
Structures & Improvements	452				
Wells	453				
Field Lines	455				
Compressor Equipment	456				
Measuring & Regulating Equipment	457				
Plant Not Classified					
Totals					
Net Plant					
Land & Land Rights	450/451				
Structures & Improvements	452				
Wells	453				
Field Lines	455		$1,307,846		$1,307,846
Compressor Equipment	456		$7,043,209		$7,043,209
Measuring & Regulating Equipment	457				
Plant Not Classified					
Totals			$8,351,055		**$8,351,055**

ENBRIDGE GAS DISTRIBUTION INC.
Unregulated Gas Storage Assets
Net Plant - Year End Balances

Asset Description	Plant Account	2008 Opening Balance	2008 Additions	2008 Provisions	2008 Ending Balance
Gross Plant					
Land & Land Rights	450/451				
Structures & Improvements	452				
Wells	453		$3,929,319		$3,929,319
Field Lines	455	$1,307,846	$7,230,279		$8,538,125
Compressor Equipment	456	$7,043,209	$2,878,383		$9,921,592
Measuring & Regulating Equipment	457				
Work-In-Progress			$14,152,941		$14,152,941
Plant Not Classified					
Totals		$8,351,055	$28,190,922		$36,541,977
Accumulated Depreciation Reserve					
Land & Land Rights	450/451				
Structures & Improvements	452				
Wells	453			($24,912)	($24,912)
Field Lines	455			($25,473)	($25,473)
Compressor Equipment	456			($53,053)	($53,053)
Measuring & Regulating Equipment	457				
Plant Not Classified					
Totals				($103,438)	($103,438)
Net Plant					
Land & Land Rights	450/451				
Structures & Improvements	452				
Wells	453		$3,929,319	($24,912)	$3,904,407
Field Lines	455	$1,307,846	$7,230,279	($25,473)	$8,512,652
Compressor Equipment	456	$7,043,209	$2,878,383	($53,053)	$9,868,539
Measuring & Regulating Equipment	457				
Work-In-Progress			$14,152,941		$14,152,941
Plant Not Classified		$8,351,055	$28,190,922	($103,438)	**$36,438,539**
Totals					

ENBRIDGE GAS DISTRIBUTION INC.
Unregulated Gas Storage Assets
Net Plant - Year End Balances

Asset Description	Plant Account	2009 Opening Balance	2009 Additions	2009 Provisions	2009 Ending Balance
Gross Plant					
Land & Land Rights	450/451		$405,933		$405,933
Structures & Improvements	452				
Wells	453	$3,929,319	$3,608,934		$7,538,253
Field Lines	455	$8,538,125	$6,452,305		$14,990,430
Compressor Equipment	456	$9,921,592	$2,279,289		$12,200,881
Measuring & Regulating Equipment	457		$368,439		$368,439
Work-In-Progress		$14,152,941	($4,917,233)		$9,235,708
Plant Not Classified			$3,801,257		$3,801,257
Totals		$36,541,977	$11,998,924		$48,540,901
Accumulated Depreciation Reserve					
Land & Land Rights	450/451				
Structures & Improvements	452				
Wells	453	($24,912)		($295,644)	($320,556)
Field Lines	455	($25,473)		($398,656)	($424,129)
Compressor Equipment	456	($53,053)		($287,662)	($340,715)
Measuring & Regulating Equipment	457			($13,264)	($13,264)
Plant Not Classified				($118,473)	($118,473)
Totals		($103,438)		($1,113,699)	($1,217,137)
Net Plant					
Land & Land Rights	450/451		$405,933		$405,933
Structures & Improvements	452				
Wells	453	$3,904,407	$3,608,934	($295,644)	$7,217,697
Field Lines	455	$8,512,652	$6,452,305	($398,656)	$14,566,301
Compressor Equipment	456	$9,868,539	$2,279,289	($287,662)	$11,860,166
Measuring & Regulating Equipment	457	$0	$368,439	($13,264)	$355,175
Work-In-Progress		$14,152,941	($4,917,233)		$9,235,708
Plant Not Classified			$3,801,257	($118,473)	$3,682,784
Totals		$36,438,539	$11,998,924	($1,113,699)	**$47,323,764**

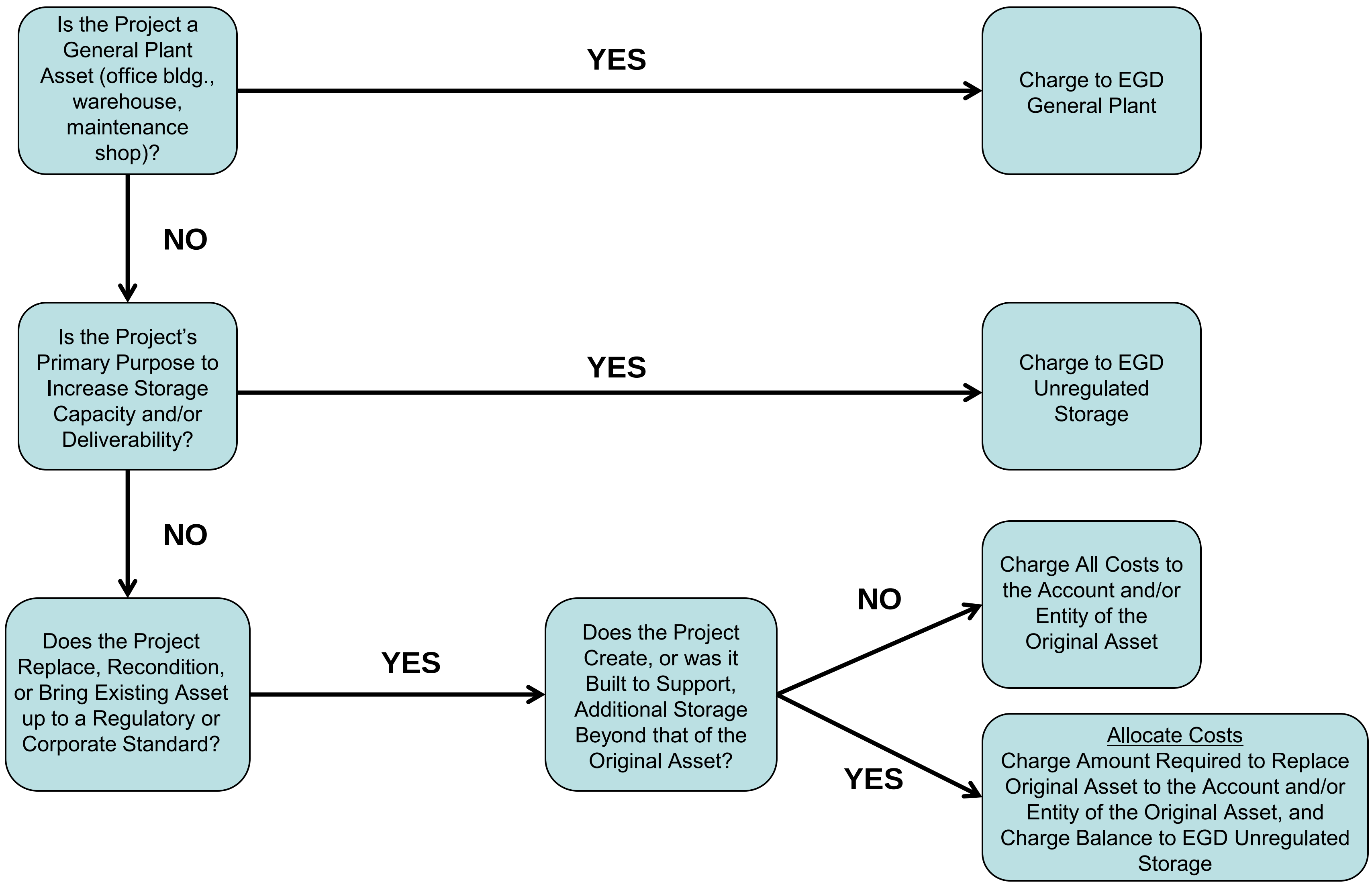
ENBRIDGE GAS DISTRIBUTION INC.
Unregulated Gas Storage Assets
Net Plant - Year End Balances

Asset Description	Plant Account	2010 Opening Balance	2010 Additions	2010 Provisions	2010 Ending Balance
Gross Plant					
Land & Land Rights	450/451	$405,933	$1,132,577	($411,207)	$1,127,303
Structures & Improvements	452				
Wells	453	$7,538,253	$3,071,174	$103,903	$10,713,330
Field Lines	455	$14,990,430	$89,821	$404,718	$15,484,969
Compressor Equipment	456	$12,200,881	$4,628,296	$4,072,396	$20,901,573
Measuring & Regulating Equipment	457	$368,439			$368,439
Work-In-Progress		$9,235,708	$8,574,447	($14,214,255)	$3,595,900
Plant Not Classified		$3,801,257		($3,801,257)	
Totals		$48,540,901	$17,496,315	($13,845,702)	$52,191,514
Accumulated Depreciation Reserve					
Land & Land Rights	450/451				
Structures & Improvements	452				
Wells	453	($320,556)	($438,062)		($758,618)
Field Lines	455	($424,129)	($410,897)		($835,026)
Compressor Equipment	456	($340,715)	($485,789)		($826,504)
Measuring & Regulating Equipment	457	($13,264)	($13,264)		($26,528)
Plant Not Classified		($118,473)		$118,473	
Totals		($1,217,137)	($1,348,012)		($2,446,676)
Net Plant					
Land & Land Rights	450/451	$405,933	$1,132,577	($411,207)	$1,127,303
Structures & Improvements	452				
Wells	453	$7,217,697	$2,633,112	$103,903	$9,954,712
Field Lines	455	$14,566,301	($321,076)	$404,718	$14,649,943
Compressor Equipment	456	$11,860,166	$4,142,507	$4,072,396	$20,075,069
Measuring & Regulating Equipment	457	$355,175	($13,264)		$341,911
Work-In-Progress		$9,235,708	$8,574,447	($14,214,255)	$3,595,900
Plant Not Classified		$3,682,784		($3,682,784)	
Totals		$47,323,764	$16,148,303	($13,727,229)	**$49,744,838**

ENBRIDGE GAS DISTRIBUTION INC.
Unregulated Gas Storage Assets
Net Plant - Year End Balances

Asset Description	Plant Account	2011 Opening Balance	2011 Additions	2011 Provisions	2011 Ending Balance
Gross Plant					
Land & Land Rights	450/451	$1,127,303			$1,127,303
Structures & Improvements	452				
Wells	453	$10,713,330		$129,191	$10,842,521
Field Lines	455	$15,484,969			$15,484,969
Compressor Equipment	456	$20,901,573	$13,275	$978,362	$21,893,210
Measuring & Regulating Equipment	457	$368,439			$368,439
Work-in-Progress		$3,595,900		($3,331,979)	$263,921
Plant Not Classified				$38,289,245	$38,289,245
Totals		$52,191,514	$13,275	$36,064,819	$88,269,608
Accumulated Depreciation Reserve					
Land & Land Rights	450/451				
Structures & Improvements	452				
Wells	453	($758,618)	($492,867)	($112)	($1,251,597)
Field Lines	455	($835,026)	($402,609)		($1,237,635)
Compressor Equipment	456	($826,504)	($465,330)	($40,190)	($1,332,024)
Measuring & Regulating Equipment	457	($26,528)	($13,264)		($39,792)
Plant Not Classified					
Totals		($2,446,676)	($1,374,070)	($40,302)	($3,861,048)
Net Plant					
Land & Land Rights	450/451	$1,127,303			$1,127,303
Structures & Improvements	452				
Wells	453	$9,954,712	($492,867)	$129,079	$9,590,924
Field Lines	455	$14,649,943	($402,609)		$14,247,334
Compressor Equipment	456	$20,075,069	($452,055)	$938,172	$20,561,186
Measuring & Regulating Equipment	457	$341,911	($13,264)		$328,647
Work-in-Progress		$3,595,900		($3,331,979)	$263,921
Plant Not Classified				$38,289,245	$38,289,245
Totals		$49,744,838	($1,360,795)	$36,024,517	**$84,408,560**

ENBRIDGE GAS DISTRIBUTION INC.
Allocation of Regulated and Unregulated Storage Costs
Capital Project Assessment Process



ENBRIDGE GAS DISTRIBUTION INC.
Unregulated Storage Operation
2011 Operating and Maintenance Costs - Allocated

Expense Category	January	February	March	April	May	June	July	August	September	October	November	December	Annual
Administration	$6,394	$23,453	$41,846	$44,704	$41,278	$62,262	$72,798	$42,707	$52,862	$54,260	$57,640	$107,571	$607,775
Storage Operations	$15,574	$10,841	$11,369	$25,164	$16,909	$32,057	$23,492	$35,151	$23,608	$40,176	$46,564	$50,204	$331,109
Storage Maintenance	$30,981	$14,098	$6,420	$21,465	$21,030	$20,072	$6,428	$24,152	$33,442	$23,738	$55,684	$63,499	$321,009
Field Maintenance	$42,183	($1,993)	$4,062	$21,132	$7,284	($17,655)	$438	$5,150	$36,041	$15,268	$16,108	$13,656	$141,674
Total	$95,132	$46,399	$63,697	$112,465	$86,501	$96,736	$103,156	$107,160	$145,953	$133,442	$175,996	$234,930	**$1,401,567**

OPERATING COST REPORT - DETAIL CADSEP

CADDEC
Period: NOV-11 Currency: CAD

	Annual Capacity Bcf	Annual Capacity % of Total	Commodity Bcf	Commodity % of Total
Regulated	98.00	88.93%	1.95	42.94%
Un-regulated	12.20	11.07%	2.59	57.06%
	110.2	100.00%	4.54	100.00%

COST CENTRE=25121 (STORAGE ADMINISTRATION)

	Actual	Applicable Share		Annual %	Annual $	Commodity %	Commodity $	Overhead Rate	
CONTROLLABLE COSTS									
60101 BASE PAY	150,645	95%	242,148	100%	242,148	0%	-	69.2%	
60109 TEMPORARY PAYRO	9,370	95%	15,061	100%	15,061	0%	-	69.2%	
60117 VACATION PAY	10,414	95%	16,740	100%	16,740	0%	-	69.2%	
60129 SCHEDULED OVERTIME	940	95%	1,511	100%	1,511	0%	-	69.2%	
60131 STATUTORY HOLID	0	95%	-	100%	-	0%	-	69.2%	
60133 SICK PAY	450	95%	723	100%	723	0%	-	69.2%	
60141 VACANCY CREDIT	0	95%	-	100%	-	0%	-	69.2%	
60145 OTHER SALARY EX	0	95%	-	100%	-	0%	-	69.2%	
TOTAL LABOUR	**171,819**		**276,183**		**276,183**		**0**		**30,576**
60401 EMPLOYEE TRAINI	12	95%	11	100%	11	0%	-		
60411 AWARDS AND ALLO	(446)	95%	(424)	100%	(424)	0%	-		
61105 COPIER AND OTHE	2,570	100%	2,570	100%	2,570	0%	-		
61116 COMPUTER SOFTWA	25,009	100%	25,009	100%	25,009	0%	-		
61511 PROFESSIONAL CO	0	100%	-	100%	-	0%	-		
61505 FILING FEES	725	100%	725	100%	725	0%	-		
61707 JANITORIAL SERVICES	9,496	100%	9,496	100%	9,496	0%	-		
61709 OFFICE REPAIRS	122	100%	122	100%	122	0%	-		
61715 POSTAGE COURIER	392	100%	392	100%	392	0%	-		
61717 REPRODUCTION SE	136	100%	136	100%	136	0%	-		
61910 SITE WORK	0	100%	-	100%	-	0%	-		
61999 OTHER OUTSIDE S	25,518	100%	25,518	100%	25,518	0%	-		
62301 VEHICLE / FLEET	10,193	100%	10,193	90%	9,174	10%	1,019		
70001 LAND LEASES	485,029	100%	485,029	100%	485,029	0%	-		
70409 OTHER TELECOM S	0	100%	-	100%	-	0%	-		
70501 AIRFARE	641	95%	609	100%	609	0%	-		
70503 GROUND TRANSPOR	1,278	95%	1,214	100%	1,214	0%	-		
70505 ACCOMMODATION	1,942	95%	1,845	100%	1,845	0%	-		
70507 MEALS AND ENTER	2,933	95%	2,786	100%	2,786	0%	-		
70509 OTHER TRAVEL EX	328	95%	312	100%	312	0%	-		
70511 CONFERENCE AND	421	95%	400	100%	400	0%	-		
70701 PROPERTY TAXES	128,706	100%	128,706	100%	128,706	0%	-		
70809 TRADE AND CIVIC	1,797	100%	1,797	100%	1,797	0%	-		
NON-LABOUR COST CENTRE COSTS	**696,802**		**696,446**		**695,427**		**1,019**		**77,571**
INTERNAL COST RECOVERIES									
79966 VARIABLE INTERN	(5,200)	100%	(5,200)	100%	(5,200)	0%	-		
79967 OTHER RECOVERIE CAPITAL	0	100%	0	100%	0	0%	-		
TOTAL COST RECOVERIES	**(5,200)**		**(5,200)**		**(5,200)**		**-**		**(576)**
TOTAL NET COST CENTRE COSTS	**863,420**		**967,429**		**966,410**		**1,019**		
				CHARGES TO UN-REGULATED	106,989		582		
							107,571		

OPERATING COST REPORT - DETAIL CADSEP

CADDEC
Period: NOV-11 Currency: CAD

	Annual Capacity Bcf	Annual Capacity % of Total	Commodity Bcf	Commodity % of Total
Regulated	98.00	88.93%	1.95	42.94%
Un-regulated	12.20	11.07%	2.59	57.06%
	110.2	100.00%	4.54	100.00%

COST CENTRE=25122 (STORAGE OPERATIONS)

	Actual	Applicable Share	Annual %	Annual $	Commodity %	Commodity $	Overhead Factoı
CONTROLLABLE COSTS							
60101 BASE PAY	14,057	100%	100%	23,204	0%	0	65.1%
60105 HOURLY PAYROLL	70,747	100%	100%	116,786	0%	0	65.1%
60117 VACATION PAY	5,570	100%	100%	9,195	0%	0	65.1%
60129 SCHEDULED OVERT	50,903	100%	80%	67,222	20%	16,806	65.1%
60131 STATUTORY HOLID	0	100%	100%	0	0%	0	65.1%
60133 SICK PAY	6,350	100%	100%	10,482	0%	0	65.1%
60145 OTHER SALARY EX	0	100%	100%	0	0%	0	65.1%
TOTAL LABOUR	**147,627**			**226,889**		**16,806**	
61009 SAFETY RELATED	4,995	100%	100%	4,995	0%	0	
61299 OTHER MATERIALS	7,504	100%	40%	3,002	60%	4,503	
61601 CONTRACT SERVIC	0	100%	100%	0	0%	0	
61805 ENVIRONMENTAL C	2,427	100%	100%	2,427	0%	0	
61999 OTHER OUTSIDE S	30,710	100%	40%	12,284	60%	18,426	
NON-LABOUR COST CENTRE COSTS	**45,635**			**22,707**		**22,929**	
INTERNAL COST RECOVERIES							
79966 VARIABLE INTERN	(906)	100%	100%	(906)	0%	0	100%
79967 OTHER RECOVERIE CAPITAL		100%	100%	0	0%	0	100%
TOTAL COST RECOVERIES	**(906)**			**(906)**		**0**	
TOTAL NET COST CENTRE COSTS	**192,356**			**248,690**		**39,734**	
CHARGES TO UN-REGULATED				**27,532**		**22,672**	
						50,204	

OPERATING COST REPORT - DETAIL CADSEP

CADDEC
Period: NOV-11 Currency: CAD

	Annual Capacity Bcf	Annual Capacity % of Total	Commodity Bcf	Commodity % of Total
Regulated	98.00	88.93%	1.95	42.94%
Un-regulated	12.20	11.07%	2.59	57.06%
	110.2	100.00%	4.54	100.00%

COST CENTRE=25123 (STORAGE MAINTENANCE)

	Actual	Applicable Share	Annual %	Annual $	Commodity %	Commodity $	Overhead Factor
CONTROLLABLE COSTS							
60101 BASE PAY	64,726	100%	100%	110,046	0%	0	70.0%
60105 HOURLY PAYROLL	0	100%	100%	0	0%	0	70.0%
60117 VACATION PAY	1,692	100%	100%	2,877	0%	0	70.0%
60129 SCHEDULED OVERT	8,419	100%	40%	5,726	60%	8,588	70.0%
60131 STATUTORY HOLID	0	100%	100%	0	0%	0	70.0%
60133 SICK PAY	9,839	100%	100%	16,728	0%	0	70.0%
60145 OTHER SALARY EX	0	100%	100%	0	0%	0	70.0%
TOTAL LABOUR	**84,676**			**135,376**		**8,588**	
60401 EMPLOYEE TRAINI	10,862	100%	40%	4,345	60%	6,517	
61299 OTHER MATERIALS	65,786	100%	40%	26,314	60%	39,472	
61601 CONTRACT SERVIC	40,964	100%	40%	16,385	60%	24,578	
NON-LABOUR COST CENTRE COSTS	**117,612**			**47,045**		**70,567**	
INTERNAL COST RECOVERIES							
79951 CAPITAL PROJECT	(12,022)	100%	100%	(12,022)	0%	0	100%
79966 VARIABLE INTERN	(4,800)	100%	100%	(4,800)	0%	0	100%
79967 OTHER RECOVERIE CAPITAL		100%	100%	0	0%	0	100%
TOTAL COST RECOVERIES	**(16,822)**			**(16,822)**		**0**	
TOTAL NET COST CENTRE COSTS	**185,466**			**165,599**		**79,155**	
CHARGES TO UN-REGULATED				**18,333**		**45,166**	
						63,499	

OPERATING COST REPORT - DETAIL CADSEP

CADDEC
Period: NOV-11 Currency: CAD

	Annual Capacity Bcf	Annual Capacity % of Total	Commodity Bcf	Commodity % of Total
Regulated	98.00	88.93%	1.95	42.94%
Un-regulated	12.20	11.07%	2.59	57.06%
	110.20	100.00%	4.54	100.00%

COST CENTRE=25124 (FIELD MAINTENANCE)

	Actual	Applicable Share	Annual %	Annual $	Commodity %	Commodity $
CONTROLLABLE COSTS						
61299 OTHER MATERIALS	0	100%	100%	0	0%	0
61511 PROFESSIONAL CO	2,060	100%	100%	2,060	0%	0
61601 CONTRACT SERVIC	112,493	100%	100%	112,493	0%	0
61805 ENVIRONMENTAL C	8,803	100%	100%	8,803	0%	0
DIRECT COST CENTRE COSTS	**123,356**			**123,356**		**0**
TOTAL NET COST CENTRE COSTS	**123,356**			**123,356**		**0**
			CHARGES TO UN-REGULATED	13,656		0
						13,656

ORACLE Applications

OPERATING COST REPORT - DETAIL CADSEP

CADDEC
Period: DEC-11 Currency: CAD
Submitted: 10-JAN-12 10:46:28

LOB=25104 (ENBRIDGE GAS DISTRIBUTION - UNREGULATED), COST CENTRE=25371 (UNREGULATED STORAGE)

	Current Month			Year To Date			Full Year
	Actual	Budget	Variance	Actual	Budget	Variance	Budget
CONTROLLABLE COSTS							
60101 BASE PAY	38,151.00	31,770.00	(6,381.00)	563,996.00	379,324.00	(184,672.00)	379,324.00
60109 TEMPORARY PAYRO	10,080.00	0.00	(10,080.00)	121,480.00	0.00	(121,480.00)	0.00
60117 VACATION PAY	9,328.00	0.00	(9,328.00)	45,571.00	0.00	(45,571.00)	0.00
60131 STATUTORY HOLID	4,261.00	0.00	(4,261.00)	27,143.00	0.00	(27,143.00)	0.00
60133 SICK PAY	0.00	0.00	0.00	3,139.00	0.00	(3,139.00)	0.00
60401 EMPLOYEE TRAINI	300.00	0.00	(300.00)	375.00	0.00	(375.00)	0.00
60412 EMPLOYEE RECOGN	0.00	0.00	0.00	179.00	0.00	(179.00)	0.00
61105 COPIER AND OTHE	0.00	50.00	50.00	285.00	600.00	315.00	600.00
61116 COMPUTER SOFTWA	0.00	3,000.00	3,000.00	0.00	36,000.00	36,000.00	36,000.00
61299 OTHER MATERIALS	0.00	0.00	0.00	496.00	0.00	(496.00)	0.00
61503 LEGAL FEES	149.00	0.00	(149.00)	1,885.00	0.00	(1,885.00)	0.00
61511 PROFESSIONAL CO	3,452.00	25,000.00	21,548.00	17,717.00	300,000.00	282,283.00	300,000.00
61601 CONTRACT SERVIC	(6,433.00)	21,550.00	27,983.00	40,692.00	258,600.00	217,908.00	258,600.00
61715 POSTAGE COURIER	0.00	25.00	25.00	278.00	300.00	22.00	300.00
61717 REPRODUCTION SE	0.00	0.00	0.00	1,540.00	2,500.00	960.00	2,500.00
61999 OTHER OUTSIDE S	10,000.00	280,000.00	270,000.00	120,000.00	1,360,000.00	1,240,000.00	1,360,000.00
70407 IT TELECOM SERV	0.00	0.00	0.00	88.00	0.00	(88.00)	0.00
70501 AIRFARE	(12,518.00)	1,250.00	13,768.00	8,066.00	15,000.00	6,934.00	15,000.00
70503 GROUND TRANSPOR	(4,242.00)	375.00	4,617.00	6,230.00	4,500.00	(1,730.00)	4,500.00
70505 ACCOMMODATION	4,274.00	1,000.00	(3,274.00)	10,258.00	12,000.00	1,742.00	12,000.00
70507 MEALS AND ENTER	(1,070.00)	500.00	1,570.00	2,261.00	6,000.00	3,739.00	6,000.00
70509 OTHER TRAVEL EX	0.00	200.00	200.00	0.00	2,400.00	2,400.00	2,400.00
70511 CONFERENCE AND	0.00	0.00	0.00	2,279.00	10,100.00	7,821.00	10,100.00
70809 TRADE AND CIVIC	0.00	0.00	0.00	220.00	0.00	(220.00)	0.00
70899 OTHER OPERATING	314,888.00	89,137.00	(225,751.00)	1,401,631.00	1,069,645.00	(331,986.00)	1,069,645.00
DIRECT COST CENTRE COSTS	370,620.00	453,857.00	83,238.00	2,375,809.00	3,456,969.00	1,081,160.00	3,456,969.00
ACCOUNTABLE COSTS							
74002 FIXED INTERNAL	11,561.00	19,127.00	7,566.00	138,732.00	229,522.00	90,790.00	229,522.00
74007 GENERAL EXPENSE	3,613.00	0.00	(3,613.00)	43,356.00	0.00	(43,356.00)	0.00
TOTAL ACCOUNTABLE COSTS	15,174.00	19,127.00	3,953.00	182,088.00	229,522.00	47,434.00	229,522.00
GROSS OPERATING COSTS	385,794.00	472,984.00	87,190.00	2,557,897.00	3,686,491.00	1,128,594.00	3,686,491.00
INTERNAL COST RECOVERIES							
79951 CAPITAL PROJECT	(46,145.00)	0.00	46,145.00	(552,302.00)	0.00	552,302.00	0.00
79966 VARIABLE INTERN	0.00	(2,490.00)	(2,490.00)	(59,114.00)	(29,880.00)	29,234.00	(29,880.00)
TOTAL INTERNAL COST RECOVERIES	(46,145.00)	(2,490.00)	43,655.00	(611,416.00)	(29,880.00)	581,536.00	(29,880.00)
TOTAL NET OPERATING COSTS	339,649.00	470,494.00	130,845.00	1,946,481.00	3,656,611.00	1,710,130.00	3,656,611.00

OPERATING COST REPORT - DETAIL CADSEP

CADDEC
Period: AUG-11 Currency: CAD

	Annual Capacity Bcf	Annual Capacity % of Total	Deliverability Bcf	Deliverability % of Total	Commodity Bcf	Commodity % of Total
Regulated	98.00	**88.93%**	1.94	**82.91%**	11.82	**95.51%**
Un-regulated	12.20	**11.07%**	0.40	**17.09%**	0.56	**4.49%**
	110.20	**100.00%**	2.34	**100.00%**	12.38	**100.00%**

COST CENTRE=25121 (STORAGE ADMINISTRATION)

	Actual	Applicable Share	Overhead Factor	Allocable Amount	Comm.	Split of the Balance Cap	Split of the Balance Deliv	Resulting Allocations Capacity %	Capacity $s	Deliverability %	Deliverability $s	Commodity %	Commodity $s
CONTROLLABLE COSTS													
60101 BASE PAY	137,178	100%	69.2%	232,107	5%	75%	25%	71%	165,376	24%	55,125	5%	11,605
60109 TEMPORARY PAYRO	9,767	100%	69.2%	16,526	5%	75%	25%	71%	11,775	24%	3,925	5%	826
60117 VACATION PAY	16,068	100%	69.2%	27,187	5%	75%	25%	71%	19,371	24%	6,457	5%	1,359
60129 SCHEDULED OVERTIME	2,860	100%	69.2%	4,839	5%	75%	25%	71%	3,448	24%	1,149	5%	242
60131 STATUTORY HOLID	7,331	100%	69.2%	12,404	5%	75%	25%	71%	8,838	24%	2,946	5%	620
60133 SICK PAY	0	100%	69.2%	-	5%	75%	25%	71%	-	24%	-	5%	-
60141 VACANCY CREDIT	0	100%	69.2%	-	5%	75%	25%	71%	-	24%	-	5%	-
60145 OTHER SALARY EX	0	100%	69.2%	-	5%	75%	25%	71%	-	24%	-	5%	-
TOTAL LABOUR	**173,204**			**293,063**									
60401 EMPLOYEE TRAINI	1,275	100%		1,275	5%	75%	25%	71%	908	24%	303	5%	64
60403 EXECUTIVE DEVELOPMENT	(1,275)	100%		(1,275)	5%	75%	25%	71%	(908)	24%	(303)	5%	(64)
60405 RECRUITMENT ADV	(1,155)	100%		(1,155)	5%	75%	25%	71%	(823)	24%	(274)	5%	(58)
60411 AWARDS AND ALLO	11	100%		11	5%	75%	25%	71%	8	24%	3	5%	1
61009 SAFETY RELATED	(942)	100%		(942)	5%	75%	25%	71%	(671)	24%	(224)	5%	(47)
61105 COPIER AND OTHE	1,477	100%		1,477	5%	75%	25%	71%	1,052	24%	351	5%	74
61116 COMPUTER SOFTWA	25,392	100%		25,392	0%	75%	25%	75%	19,044	25%	6,348	0%	-
61511 PROFESSIONAL CO	0	100%		-	0%	75%	25%	75%	-	25%	-	0%	-
61601 CONTRACT SERVICES	(8,925)	100%		(8,925)	0%	75%	25%	75%	(6,694)	25%	(2,231)	0%	-
61707 JANITORIAL SERVICES	4,854	100%		4,854	0%	75%	25%	75%	3,641	25%	1,214	0%	-
61709 OFFICE REPAIRS	252	100%		252	0%	75%	25%	75%	189	25%	63	0%	-
61715 POSTAGE COURIER	2,237	100%		2,237	0%	75%	25%	75%	1,678	25%	559	0%	-
61717 REPRODUCTION SE	1,952	100%		1,952	0%	75%	25%	75%	1,464	25%	488	0%	-
61910 SITE WORK	0	100%		-	0%	75%	25%	75%	-	25%	-	0%	-
61999 OTHER OUTSIDE S	23,305	100%		23,305	5%	75%	25%	71%	16,605	24%	5,535	5%	1,165
62301 VEHICLE / FLEET	7,726	100%		7,726	10%	75%	25%	68%	5,215	23%	1,738	10%	773
70001 LAND LEASES	14,558	100%		14,558	0%	90%	10%	90%	13,102	10%	1,456	0%	-
70409 OTHER TELECOM S	0	100%		-	0%	75%	25%	75%	-	25%	-	0%	-
70501 AIRFARE	1,301	100%		1,301	5%	75%	25%	71%	927	24%	309	5%	65
70503 GROUND TRANSPOR	1,613	100%		1,613	5%	75%	25%	71%	1,149	24%	383	5%	81
70505 ACCOMMODATION	1,134	100%		1,134	5%	75%	25%	71%	808	24%	269	5%	57
70507 MEALS AND ENTER	2,597	100%		2,597	5%	75%	25%	71%	1,850	24%	617	5%	130
70509 OTHER TRAVEL EX	38	100%		38	5%	75%	25%	71%	27	24%	9	5%	2
70511 CONFERENCE AND	3,377	100%		3,377	0%	75%	25%	75%	2,533	25%	844	0%	-
70701 PROPERTY TAXES	128,706	100%		128,706	0%	40%	60%	40%	51,482	60%	77,224	0%	-
70707 VEHICLE LICENSI	(11)	100%		(11)	0%	75%	25%	75%	(8)	25%	(3)	0%	-
70801 CORPORATE DONAT	0	100%		-	0%	75%	25%	75%	-	25%	-	0%	-
70807 SPONSORSHIPS	0	100%		-	0%	75%	25%	75%	-	25%	-	0%	-
70809 TRADE AND CIVIC	747	100%		747	0%	75%	25%	75%	560	25%	187	0%	-
NON-LABOUR COST CENTRE COSTS	**210,244**			**210,244**									
INTERNAL COST RECOVERIES													
79966 VARIABLE INTERN	(1,000)	100%		(1,000)	0%	75%	25%	75%	(750)	25%	(250)	0%	-
79967 OTHER RECOVERIE CAPITAL	(9,137)	100%		(9,137)	0%	75%	25%	75%	(6,853)	25%	(2,284)	0%	-
TOTAL COST RECOVERIES	**(10,137)**			**(10,137)**									
TOTAL NET COST CENTRE COSTS	**373,311**			**493,170**					**314,343**		**161,932**		**16,895**
									63.7%		32.8%		3.4%
									34,800		**27,681**		**759**
Allocation to Unregulated Storage													**63,240**

OPERATING COST REPORT - DETAIL CADSEP

CADDEC
Period: AUG-11 Currency: CAD

	Annual Capacity Bcf	Annual Capacity % of Total	Deliverability Bcf	Deliverability % of Total	Commodity Bcf	Commodity % of Total
Regulated	98.00	88.93%	1.94	82.91%	11.82	95.51%
Un-regulated	12.20	11.07%	0.40	17.09%	0.56	4.49%
	110.20	100.00%	2.34	100.00%	12.38	100.00%

COST CENTRE=25122 (STORAGE OPERATIONS)

	Actual	Applicable Share	Overhead Factor	Allocable Amount	Comm.	Split of the Balance Cap	Split of the Balance Deliv	Resulting Allocations Capacity %	Capacity $s	Deliverability %	Deliverability $s	Commodity %	Commodity $s
CONTROLLABLE COSTS													
60101 BASE PAY	11,566	100%	65.1%	19,093	0%	75%	25%	75%	14,319	25%	4,773	0%	0
60105 HOURLY PAYROLL	81,044	100%	65.1%	133,783	0%	75%	25%	75%	100,337	25%	33,446	0%	0
60117 VACATION PAY	3,155	100%	65.1%	5,208	0%	75%	25%	75%	3,906	25%	1,302	0%	0
60129 SCHEDULED OVERT	27,028	100%	65.1%	44,616	10%	75%	25%	68%	30,116	23%	10,039	10%	4,462
60131 STATUTORY HOLID	4,613	100%	65.1%	7,615	0%	75%	25%	75%	5,711	25%	1,904	0%	0
60133 SICK PAY	0	100%	65.1%	-	0%	75%	25%	75%	-	25%	-	0%	0
60145 OTHER SALARY EX	0	100%	65.1%	-	0%	75%	25%	75%	-	25%	-	0%	0
TOTAL LABOUR	**127,406**			**210,315**									
61009 SAFETY RELATED	1,929	100%		1,929	0%	75%	25%	75%	1,447	25%	482	0%	0
61299 OTHER MATERIALS	38,603	100%		38,603	60%	40%	60%	16%	6,176	24%	9,265	60%	23,162
61601 CONTRACT SERVIC	31,071	100%		31,071	0%	75%	25%	75%	23,303	25%	7,768	0%	0
61805 ENVIRONMENTAL C	646	100%		646	0%	40%	60%	40%	258	60%	388	0%	0
61999 OTHER OUTSIDE S	43,161	100%		43,161	60%	40%	60%	16%	6,906	24%	10,359	60%	25,897
NON-LABOUR COST CENTRE COSTS	**115,410**			**115,410**									
INTERNAL COST RECOVERIES				-									
79966 VARIABLE INTERN	(78,009)	100%		(78,009)	0%	75%	25%	75%	(58,507)	25%	(19,502)	0%	0
79967 OTHER RECOVERIE CAPITAL	0	100%		-	0%	75%	25%	75%	-	25%	-	0%	0
TOTAL COST RECOVERIES	**(78,009)**			**(78,009)**									
TOTAL NET COST CENTRE COSTS	**164,807**			**247,716**					**133,974**		**60,222**		**53,520**
									54.1%		24.3%		21.6%
									14,832		**10,294**		**2,404**
Allocation to Unregulated Storage													**27,530**

OPERATING COST REPORT - DETAIL CADSEP

CADDEC
Period: AUG-11 Currency: CAD

	Annual Capacity Bcf	Annual Capacity % of Total	Deliverability Bcf	Deliverability % of Total	Commodity Bcf	Commodity % of Total
Regulated	98.00	88.93%	1.94	82.91%	11.82	95.51%
Un-regulated	12.20	11.07%	0.40	17.09%	0.56	4.49%
	110.20	100.00%	2.34	100.00%	12.38	100.00%

COST CENTRE=25123 (STORAGE MAINTENANCE)

	Actual	Applicable Share	Overhead Factor	Allocable Amount	Comm.	Split of the Balance Cap	Split of the Balance Deliv	Resulting Allocations Capacity %	Capacity $s	Deliverability %	Deliverability $s	Commodity %	Commodity $s
CONTROLLABLE COSTS													
60101 BASE PAY	56,108	100%	70.0%	95,394	0%	75%	25%	75.0%	71,545	25%	23,848	0%	-
60105 HOURLY PAYROLL	0	100%	70.0%	-	0%	75%	25%	75.0%	-	25%	-	0%	-
60117 VACATION PAY	6,436	100%	70.0%	10,942	0%	75%	25%	75.0%	8,207	25%	2,736	0%	-
60129 SCHEDULED OVERT	692	100%	70.0%	1,177	60%	75%	25%	30.0%	353	10%	118	60%	706
60131 STATUTORY HOLID	2,597	100%	70.0%	4,415	0%	75%	25%	75.0%	3,312	25%	1,104	0%	-
60133 SICK PAY	0	100%	70.0%	-	0%	75%	25%	75.0%	-	25%	-	0%	-
60145 OTHER SALARY EX	0	100%	70.0%	-	0%	75%	25%	75.0%	-	25%	-	0%	-
TOTAL LABOUR	65,833			111,928									
60401 EMPLOYEE TRAINI	8,742	100%		8,742	60%	75%	25%	30.0%	2,623	10%	874	60%	5,245
61299 OTHER MATERIALS	110,429	100%		110,429	60%	40%	60%	16.0%	17,669	24%	26,503	60%	66,257
61601 CONTRACT SERVIC	70,091	100%		70,091	60%	40%	60%	16.0%	11,215	24%	16,822	60%	42,055
NON-LABOUR COST CENTRE COSTS	189,262			189,262									
INTERNAL COST RECOVERIES													
79951 CAPITAL PROJECT	(9,870)	100%		(9,870)	0%	75%	25%	75.0%	(7,403)	25%	(2,468)	0%	-
79966 VARIABLE INTERN	78,672	100%		78,672	0%	75%	25%	75.0%	59,004	25%	19,668	0%	-
79967 OTHER RECOVERIE CAPITAL	0	100%		-	0%	75%	25%	75.0%	-	25%	-	0%	-
TOTAL COST RECOVERIES	68,802			68,802									
TOTAL NET COST CENTRE COSTS	323,897			369,992					166,524		89,205		114,263
									45.0%		24.1%		30.9%
									18,435		15,249		5,132
										Allocation to Unregulated Storage			38,816

OPERATING COST REPORT - DETAIL CADSEP

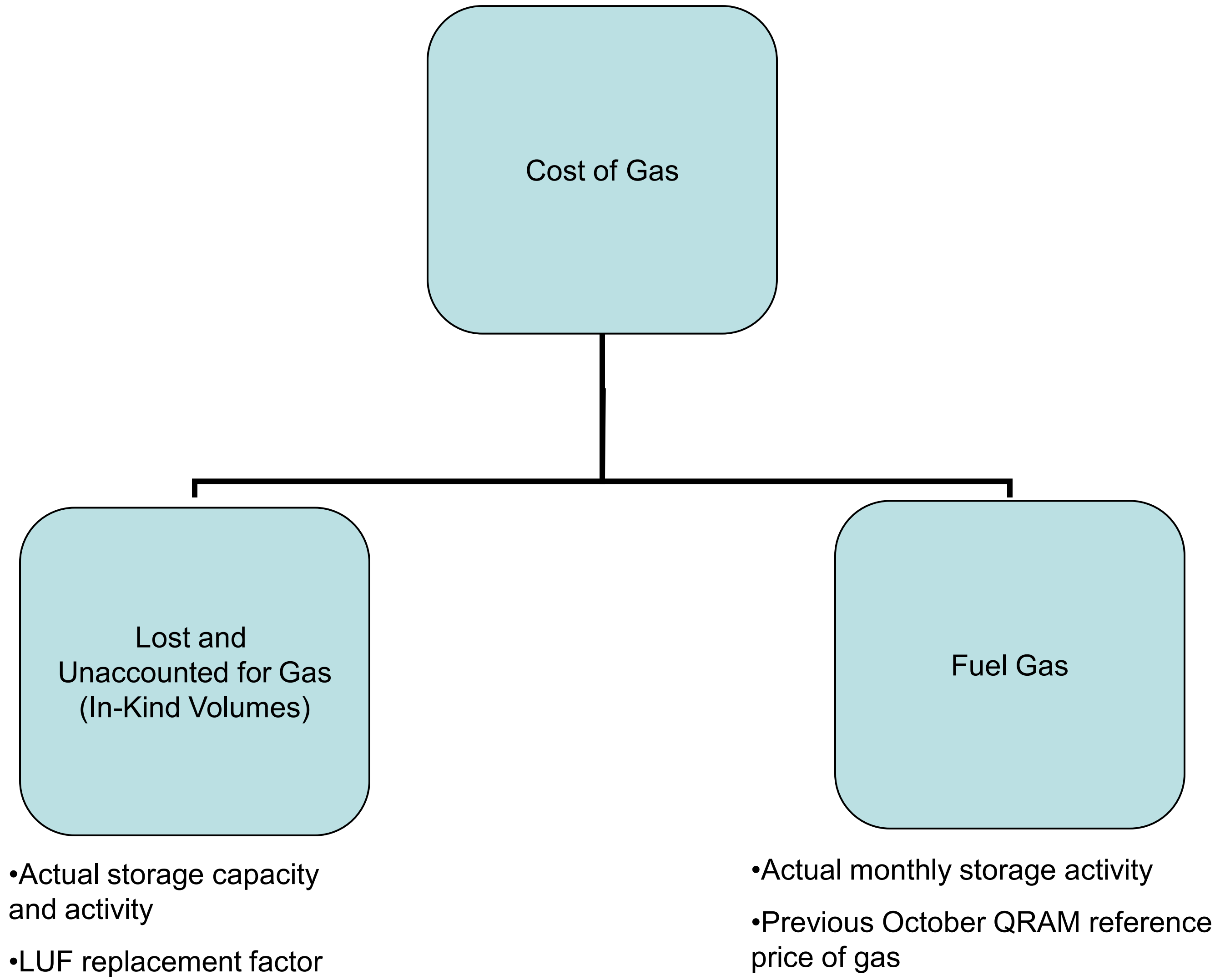
CADDEC
Period: AUG-11 Currency: CAD

	Annual Capacity Bcf	Annual Capacity % of Total	Deliverability Bcf	Deliverability % of Total	Commodity Bcf	Commodity % of Total
Regulated	98.00	**88.93%**	1.94	**82.91%**	11.82	**95.51%**
Un-regulated	12.20	**11.07%**	0.40	**17.09%**	0.56	**4.49%**
	110.20	100.00%	2.34	100.0%	12.38	100.00%

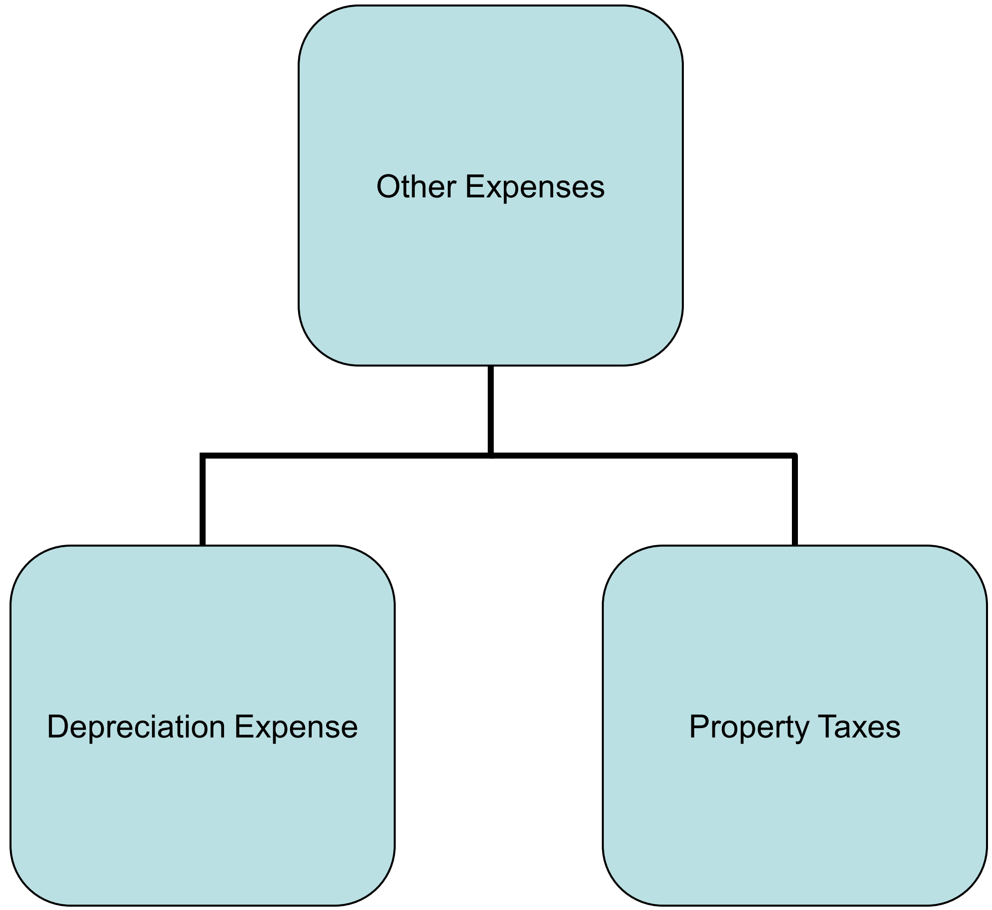
COST CENTRE=25124 (FIELD MAINTENANCE)

	Actual	Applicable Share	Overhead Factor	Allocable Amount	Comm.	Split of the Balance Cap	Split of the Balance Deliv	Resulting Allocations Capacity %	Capacity $s	Deliverability %	Deliverability $s	Commodity %	Commodity $s
CONTROLLABLE COSTS													
61299 OTHER MATERIALS	8,859	100%	0	8,859	0%	40%	60%	40.0%	3,544	60.0%	5,315	0.0%	-
61511 PROFESSIONAL CO	11,772	100%	0	11,772	0%	90%	10%	90.0%	10,595	10.0%	1,177	0.0%	-
61601 CONTRACT SERVIC	304,920	100%	0	304,920	0%	40%	60%	40.0%	121,968	60.0%	182,952	0.0%	-
61805 ENVIRONMENTAL C	0	100%	0	-	0%	40%	60%	40.0%	-	60.0%	-	0.0%	-
DIRECT COST CENTRE COSTS	**325,551**			**325,551**									
TOTAL NET COST CENTRE COSTS	**325,551**			**325,551**					**136,106**		**189,445**		**0**
									41.8%		58.2%		0.0%
									15,068		32,384		-
									Allocation to Unregulated Storage				**47,452**

ENBRIDGE GAS DISTRIBUTION INC.
Allocation of Regulated and Unregulated Storage Costs
Cost of Gas Components



ENBRIDGE GAS DISTRIBUTION INC.
Allocation of Regulated and Unregulated Storage Costs
Other Expenses



- Depreciation rates for Unregulated storage assets
- Actual property tax for storage assets – allocated between regulated and unregulated storage operations based on the annual storage capacity and deliverability of each storage operation

Ontario Energy Board | Commission de l'énergie de l'Ontario

DECISION AND ORDER

EB-2021-0248

ENBRIDGE GAS INC.

Coveny and Kimball-Colinville Well Drilling Project

BEFORE: Robert Dodds
Presiding Commissioner

David Sword
Commissioner

April 28, 2022

Ontario Energy Board | Commission de l'énergie de l'Ontario

TABLE OF CONTENTS

1 INTRODUCTION AND SUMMARY

This is the Decision and Order (Decision) of the Ontario Energy Board (OEB) regarding an application filed by Enbridge Gas Inc. (Enbridge Gas) on December 15, 2021 seeking approval for the Coveny and Kimball-Colinville Well Drilling Project (Project).

Enbridge Gas applied to the Minister of Natural Resources[1] (Minister) for licences to drill an A-1 observation well (TCV 7) in the Coveny storage pool and an injection/withdrawal well (TKC 68) in the Kimball-Colinville storage pool. The Minister referred the applications to the OEB pursuant to section 40(1) of the OEB Act. The OEB is required to report to the Minister before the Minister can issue a licence to drill a well. Enbridge Gas has requested a favourable report from the OEB to the Minister regarding its licence applications.

Enbridge Gas has also applied under section 91 of the OEB Act for the OEB's leave to construct a gathering pipeline to connect well TKC 68 to the existing Kimball-Colinville gathering pipeline.

The location and elements of the Project are shown on the Map of Project below.

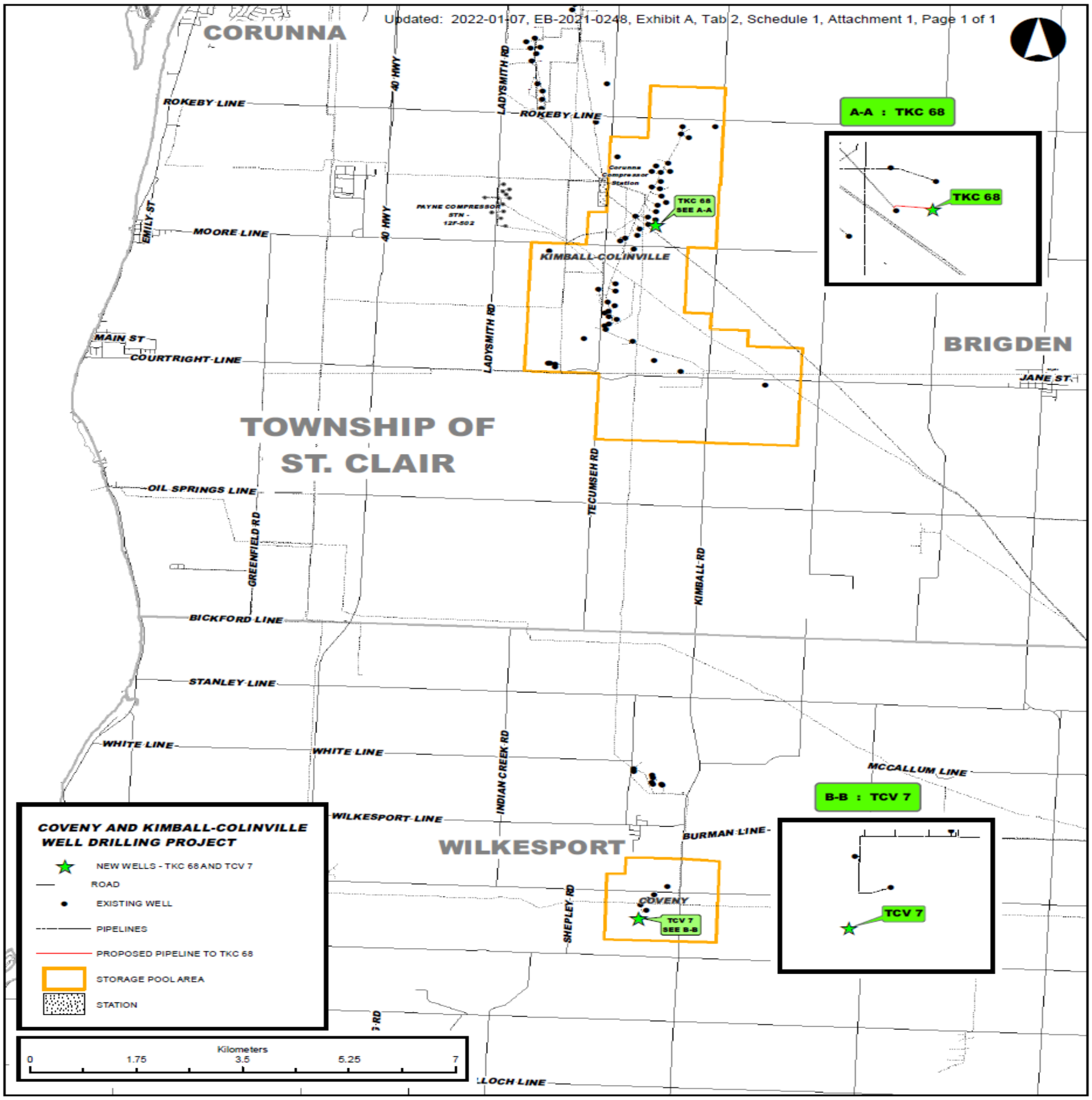
The OEB is satisfied that the Project proposed by Enbridge Gas is in the public interest and approves Enbridge Gas's application subject to certain conditions.

The OEB is issuing a favourable report to the Minister supporting the well licence applications. The Report is attached as Schedule 1 to this Decision and Order.

[1] Minister of Northern Development, Mines, Natural Resources and Forestry

1.1 MAP OF PROJECT

The general location of the Project is presented on the map below.



2 THE PROCESS AND STRUCTURE OF THE DECISION

2.1 The Process

The OEB issued a Notice of Application on January 18, 2022. The Chippewas of Kettle and Stony Point First Nation with Southwind Development Corporation (CKSPFN) and the Ministry of Northern Development, Mines, Natural Resources and Forestry (Ministry of Natural Resources) applied for intervenor status. CKSPFN also applied for cost eligibility. No objection was received from Enbridge Gas in relation to these requests.

On February 18, 2022, the OEB issued Procedural Order No. 1 approving CKSPFN and the Ministry of Natural Resources as intervenors and setting out dates for the filing of interrogatories and submissions.

OEB staff and the Ministry of Natural Resources filed written interrogatories on March 1, 2022 and CKSPFN filed its interrogatories on March 2, 2022. Enbridge Gas filed interrogatory responses on March 9, 2022. CKSPFN, the Ministry of Natural Resources and OEB staff filed submissions on March 18, 2022 and Enbridge Gas filed its reply submission on March 24, 2022.

On April 19, 2022, Enbridge Gas updated its evidence by filing the Letter of Opinion[2] from the Ministry of Energy confirming that the procedural aspects of Indigenous consultation undertaken by Enbridge Gas to date for the purposes of the OEB's Leave to Construct for the Project is satisfactory.

2.2 Structure of the Decision

The Decision is organized as follows:

Part A of the Decision addresses issues that are common to all components of the Project:

- Need for the Project
- Costs and potential impact on Enbridge Gas's customers
- Land matters
- Environmental matters
- Indigenous consultation

[2] More discussion related to the Letter of Opinion may be found in section 3.1.5 - Indigenous Consultation.

Part B addresses issues specific to the leave to construct application.

Schedule 1 contains the OEB’s Report to the Minister concerning matters that pertain to the well license applications.

3 DECISION

3.1 PART A: FINDINGS ON ISSUES COMMON TO ALL COMPONENTS OF THE PROJECT

Part A of the Decision outlines the evidence and submissions by the parties and the OEB's findings on issues common to all components of the Project.

3.1.1 Need

Enbridge Gas stated that the Project is needed: a) to replace deliverability lost through the recent abandonment of six gas storage wells by drilling a new injection/withdrawal well (TKC 68) in the Kimball-Colinville Storage Pool; and b) to address safety and compliance requirements by drilling an A-1 observation well (TCV 7) in the Coveny Storage Pool, in compliance with Section 5.5 of Canadian Standards Association (CSA) Standard Z341.1-18 *Storage of Hydrocarbons in Underground Formations* (CSA Z341.1-18).

The wells were abandoned due to integrity concerns. Abandonment of these wells resulted in a total deliverability loss of approximately 4,400 times 10^3 m^3/day. Enbridge Gas estimates that well TKC 68 will provide deliverability of between 700 - 2,800 times 10^3 m^3/day.

Enbridge Gas has proposed to drill well TCV 7 to comply with Section 5.5 of CSA Z341.1-18, which requires the installation of observation wells to monitor low-permeability zones or formations adjacent to and in communication with the storage zone. Enbridge Gas identified the need for this well in its Asset Management Plan, filed as part of Enbridge Gas's 2021 Rates proceeding.[3]

Upon completion of drilling well TKC 68, Enbridge Gas will need to construct approximately 120 metres of NPS 10-inch steel pipeline to connect the well to the existing Kimball-Colinville gathering pipeline.

Enbridge Gas stated that in its assessment of the need, it considered the following alternatives for well TKC 68:

1) Increasing the size of the pipelines within the Kimball-Colinville Storage Pool - Enbridge Gas stated this would take significantly longer to execute, have greater environmental impact and cost approximately $2 million more than drilling a new well;

[3] EB-2020-0181, Exhibit C, Tab 2, Schedule 1, p. 206

2) Purchasing natural gas for delivery to Enbridge Gas's system during peak periods - Enbridge Gas determined this was not optimal as the cost is expected to exceed the cost of drilling a new well after three years and is less reliable, as Enbridge Gas would need to rely on a third party to deliver supply according to a commercial agreement as opposed to being able to operate its own physical storage asset.

Enbridge Gas stated that the A-1 observation well is required by CSA Z341.1-18 and it is not aware of any comparable alternative facility or non-facility solution that would enable it to monitor the actual movement of natural gas between the Guelph Formation and the A-1 Formation.

Enbridge Gas has requested a decision from the OEB by the end of April 2022.[4] Enbridge Gas stated if the OEB decision is issued later than the end of April 2022, it may need to defer the Project to 2023.

OEB staff submitted that it has no concerns with Enbridge Gas's rationale that the Project is needed to replace deliverability lost and to comply with Section 5.5 of CSA Z341.1-18 as the Project is cost-effective, reliable, and minimizes the impact on landowners and the environment as compared to other alternatives considered by Enbridge Gas.

CKSPFN noted that as no non-gas alternatives were assessed, Enbridge Gas will continue to emit fugitive emissions from the proposed Project, contributing to cumulative impacts from fugitive emissions, and further costs to ratepayers. Enbridge Gas stated that it did not consider any non-gas options as there are no non-gas alternatives that meet the stated Project need. Further, non-gas alternatives such as electricity-based alternatives have been specifically excluded from alternatives for which Enbridge Gas may be able to receive funding to pursue per the OEB's Integrated Resource Planning Framework.[5]

[4] Exhibit I.STAFF.1, p. 2
[5] Exhibit I.CKSPFN.18, p. 2

Findings

The OEB finds that there is a need for the Project as there is an increase in storage capacity to compensate for the six Enbridge Gas storage wells that have been abandoned and are no longer available for use. The OEB finds that the approach proposed by Enbridge Gas to increase pressure in an existing storage pool (along with a companion observation well) represents the most efficient and cost-effective means of replacing the lost storage space.

The OEB accepts Enbridge Gas's position that there are no non-gas alternatives that meet the stated project need.

3.1.2 Costs and potential impact on Enbridge Gas's customers

The estimated cost of the Project is $5.08 million. Enbridge Gas stated that a discounted cash flow analysis was not completed as the Project is underpinned by integrity and compliance requirements.

Enbridge Gas stated that it is not seeking cost recovery of the Project as part of this application. Upon rebasing, Enbridge Gas expects the capital costs associated with the Project will be included in rate base, as the Project solely benefits Enbridge Gas's regulated storage business.

Enbridge Gas stated that the estimated impact of the Project on a typical residential customer's bill in the Enbridge Gas Distribution rate zone is less than $0.20 per year.[6]

Enbridge Gas provided comparable well drilling costs for its previously approved Dow-Moore Storage Pool Project[7], which encompassed the drilling of two injection/ withdrawal wells and two observation wells. OEB staff submitted that the cost estimates for the Project appear reasonable as the costs of the TCV 7 well of $1.5 million and TKC 68 well of $3 million are similar to the costs of the wells approved in the Dow-Moore Storage Pool Project.

OEB staff also submitted that the filing by Enbridge Gas of post-construction financial reports as proposed in the conditions for the well licence and leave to construct will ensure that the OEB has the information required to review the potential impact of actual capital costs on Enbridge Gas's ratepayers.

[6] Exhibit I, Staff 3, p. 2
[7] EB-2017-0354; Exhibit I, Staff 3, p. 2

Findings

The OEB finds the cost of the project to be reasonable and in keeping with the cost experience of similar and recent Enbridge Gas storage pool expansions.

The OEB notes that the interests of the ratepayer will be safeguarded by Enbridge Gas's filing of its post-construction financials, and that the cost recovery of the capital invested shall then be considered during its next re-basing application.

3.1.3 Land Matters

The Project requires the construction of gravel pads, temporary workspace, and permanent access lanes.

Enbridge Gas leases the land on which Project activities for well TKC 68 will occur and owns and operates the land on which Project activities for well TCV 7 will take place. Enbridge Gas stated that its land agents have notified the parties directly impacted by the Project. The party impacted by well TCV 7 is a tenant farmer. For well TKC 68 and the pipeline, the impacted party is a third-party farmer.

As part of the interrogatory responses, Enbridge Gas provided a letter of support for the Project from the third-party landowner and a copy of the Gas Storage Lease Agreement with the same landowner. Enbridge Gas confirmed that this Agreement provides it with the rights to drill the proposed well and confirmed that all required land rights have been acquired for the Project.[8]

OEB staff submitted that there are no outstanding land-related concerns arising from the Project.

Findings

The OEB is satisfied that the land matters have been adequately addressed by Enbridge Gas and also notes a letter it received and filed from the third-party landowner in support of the Project.

[8] Exhibit I, Staff 7, p. 2

3.1.4 Environmental Impacts

Enbridge Gas retained Stantec Consulting Ltd. to complete an environmental assessment of the Project and prepare an Environmental Report (ER), in accordance with the OEB's Environmental Guidelines.[9]

The ER states that with the implementation of the recommendations, ongoing communication and consultation, environmental and supplementary studies and adherence to permit, regulatory and legislative requirements, potential adverse residual environmental and socio-economic impacts of the Project are not anticipated to be significant.

The ER was provided to the Ontario Pipeline Coordinating Committee and other agencies. Enbridge Gas responded to comments received and provided an update on the status of the permits and approvals it requires for the Project.

OEB staff submitted that it has no concerns with the environmental aspects of the Project, given that Enbridge Gas is committed to implementing the proposed mitigation measures. OEB staff further submitted that Enbridge Gas's compliance with the conditions proposed for the well licence and leave to construct will ensure that impacts of well drilling and pipeline construction are mitigated and monitored.

CKSPFN made several submissions regarding the environmental impacts of the Project.

CKSPFN expressed concerns regarding the fugitive emissions and the associated cost to ratepayers resulting from the Project and Enbridge Gas's existing natural gas infrastructure within CKSPFN's treaty territory. CKSPFN requested that the OEB make its approval of the Project conditional upon Enbridge Gas undertaking an assessment of all fugitive emissions across its current and proposed natural gas infrastructure in CKSPFN treaty lands and development of an action plan to reduce these fugitive emissions.

CKSPFN submitted that it is concerned about the lack of an assessment of the cumulative impacts of Enbridge gas infrastructure across CKSPFN treaty lands. CKSPFN requested that the OEB make its approval of the Project conditional upon Enbridge Gas undertaking a comprehensive cumulative effects assessment on all historic, current and proposed natural gas infrastructure in CKSPFN treaty lands inclusive of effects on natural heritage at the local and landscape levels, Indigenous

[9] *Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines in Ontario* (7th edition), 2016

cultural landscapes, the climate impacts of greenhouse gas and fugitive emissions, and impacts on Indigenous rights and interests.[10]

CKSPFN also expressed concerns about Enbridge Gas's approach to managing potential impacts of the Project to amphibian habitat. CKSPFN requested that the OEB's approval of the Project be conditional upon Enbridge Gas being required to collaborate with CKSPFN on field investigations and mitigation/monitoring plans regarding impacts to amphibians, reptiles, and their habitat.

Enbridge Gas responded to CKSPFN's submissions as set out below.

Enbridge Gas stated that it has provided an estimate of the fugitive emissions arising from the two new wells to be drilled as part of the Project, noting that there will be no fugitive emissions associated with the six abandoned wells that this Project partially replaces. Enbridge Gas submitted that the estimated net impact on fugitive emissions is therefore negative at this time. Enbridge Gas further argued that CKSPFN has not provided any evidence to support the assertion that its request to make the OEB's approval of the Project conditional upon a broad assessment of fugitive emissions is in the best interests of ratepayers and stated that the evidence on the record in this proceeding suggests that it is not.

Enbridge Gas submitted that pursuant to the Environmental Guidelines, it has completed a cumulative effects assessment, the results of which are detailed in section 5.0 of the ER. Enbridge Gas further submitted that the cumulative effects assessment and the associated study area was delineated in accordance with Section 4.3.14 of the Environmental Guidelines and the methodologies used for the cumulative effects assessment are the same as those used in other Enbridge Gas projects approved by the OEB.

Enbridge Gas stated that it is committed to further engagement with CKSPFN regarding cumulative effects to better understand how CKSPFN's Aboriginal or treaty rights may be impacted by Enbridge Gas's ongoing development and operations in the Project area, how the Project may further contribute to this impact, and what may be done to avoid, offset, or minimize the impact.

Regarding CKSPFN's submissions on Enbridge Gas's approach to managing potential impacts of the Project to amphibian habitat, Enbridge Gas reiterated its interrogatory response[11] that amphibian breeding habitat was identified as *potentially* occurring in the wooded area near the TCV 7 Study Area but as the Project activities avoid direct

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[10] CKSPFN submission, p. 9
[11] Exhibit I.CKSPFN.9

interaction with this area, no field investigations will be undertaken. Enbridge Gas stated that potential indirect impacts of sensory disturbance and spills will be mitigated through the measures outlined in the ER. Enbridge Gas submitted that further field investigations are unnecessary and would not be a prudent use of resources, the cost of which will ultimately be borne by ratepayers.

Findings

The OEB is satisfied that the environmental impacts of the Project are being adequately addressed. This is supported by Enbridge Gas's commitment that potential indirect impacts of sensory disturbance and spills will be mitigated through the measures outlined in the Environmental Report.

CKSPFN raised issues with respect to environmental elements of the Project, specifically fugitive emissions and potential impacts on amphibians. The OEB finds as follows on these two issues:

1. The OEB accepts Enbridge Gas's explanation that any fugitive emissions associated with the Project will be offset by the full curtailment of any fugitive emissions associated with the six abandoned wells that this Project partially replaces.
2. Further field investigations for potential impact on amphibians beyond the Environmental Review completed by Stantec on behalf of Enbridge Gas are not necessary since the Project avoids any direct interaction with an area that was identified as having potential for an amphibian breeding habitat. The OEB notes Enbridge Gas's willingness to continue engagement with CKSPFN on this issue.

CKSPFN expressed concern about potential impacts of Enbridge Gas infrastructure across CKSPFN treaty lands and requested that the OEB make its approval of the Project conditional upon Enbridge Gas undertaking a comprehensive cumulative effects assessment on all historic, current and proposed natural gas infrastructure in CKSPFN treaty lands. The OEB denies the request for the following reasons:

1. CKSPFN did not provide evidence on how the Project and its activities specific to the Project location impact CKSPFN's treaty rights.
2. Consideration of impacts on land outside the Project location and zone of influence is outside the scope of this proceeding.

The OEB notes Enbridge Gas's commitment to further engagement with CKSPFN regarding cumulative effects to better understand how CKSPFN's Aboriginal or treaty rights may be impacted by Enbridge Gas's ongoing development and operations in the

Project area. The OEB also notes that there are various initiatives in policy making arenas that welcome public input and discussion that are well underway within the Government of Canada and the Government of Ontario that address emissions within the context of climate change and greenhouse gas emissions, with some examples footnoted. [12]

3.1.5 Indigenous Consultation

In accordance with the OEB's Environmental Guidelines, Enbridge Gas contacted the Ministry of Energy on May 5, 2021 in respect of the Crown's duty to consult related to the Project. By a letter dated June 1, 2021 (Delegation Letter), the Ministry of Energy delegated the procedural aspects of the Crown's Duty to Consult for the Project to Enbridge Gas. In the Delegation Letter, the Ministry of Energy identified five Indigenous communities with which Enbridge Gas should consult in relation to the Project:

- Aamjiwnaang First Nation
- Bkejwanong (Walpole Island First Nation)
- Chippewas of the Thames First Nation
- Chippewas of Kettle and Stony Point
- Oneida Nation of the Thames

Each of these five Indigenous communities and the Metis Nation of Ontario were served the Notice of Hearing for the Project, in accordance with the OEB's Letter of Direction.

Enbridge Gas provided the Ministry of Energy with its Indigenous Consultation Report for the Project. The Environmental Guidelines contemplate that the Ministry of Energy will provide a letter to an applicant expressing its view on the adequacy of the Indigenous consultation based on materials provided to the Ministry of Energy (Letter of Opinion).

At the time that submissions and reply submissions were filed in this proceeding, the Letter of Opinion had not been issued by the Ministry of Energy. OEB staff's submission suggested that the OEB should place this proceeding in abeyance until the Letter of Opinion is provided. In its reply submission, Enbridge Gas stated that it would accept the OEB imposing a requirement to file the Letter of Opinion as a condition of approval. Enbridge Gas submitted that placing the proceeding in abeyance is not necessary in

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[12] Discussion Paper: Reducing Methane Emissions from Canada's Oil and Gas Sector - https://www.canada.ca/en/environment-climate-change/services/canadian-environmental-protection-act-registry/consultation-reducing-methane-emissions-oil-gas-sector.html and Emissions Performance Standards program - https://www.ontario.ca/page/emissions-performance-standards-program

this case as it is recognized that the timing of the OEB's decision will be impacted by the filing date of the Letter of Opinion.

CKSPFN made several submissions regarding Indigenous consultation that Enbridge Gas responded to in its reply submissions.

CKSPFN submitted that Enbridge Gas has not complied with the Environmental Guidelines related to Indigenous consultation as it did not update the Indigenous consultation log for the Project beyond February 11, 2022 even though numerous email exchanges occurred between February 11 and March 9, including CKSPFN sharing meeting minutes with action items and emails to Enbridge with requests for information that are still outstanding.

In its reply submission, Enbridge Gas stated that, contrary to CKSPFN's submission, it did update the Indigenous consultation log to March 3, 2022 (including the period between February 11, 2022 and March 3, 2022) in response to an OEB staff interrogatory.[13] Enbridge Gas submitted that the information requests by CKSPFN were not specific to this Project. Enbridge Gas stated that it responded to the information requests on March 10, 2022, and that the only information shared with CKSPFN that is specific to this Project was the budget for the Project, which is already on the record in this proceeding. Enbridge Gas submitted that as all of the other content of this communication relates to matters that are not relevant to this Project, and in some cases pertain to commercially sensitive, unregulated business matters, Enbridge Gas does not intend to file this communication within this proceeding.

CKSPFN submitted that Enbridge Gas has not explained how the Project may adversely affect Aboriginal or treaty rights. Enbridge Gas explained in its response to an OEB staff interrogatory[14] that no Project-specific concerns or impacts on Aboriginal or treaty rights were identified during its consultation activities, aside from an ongoing land claim matter detailed in the second part of its response. Enbridge Gas noted that the Project is being constructed on land owned or leased by Enbridge Gas and farmed by third parties and CKSPFN has not provided any evidence that it uses this land to exercise its Aboriginal or treaty rights.

CKSPFN made submissions about the adequacy of Enbridge Gas's engagement activities with CKSPFN:

[13] Exhibit I.STAFF.8, Attachment 1
[14] Exhibit I.STAFF.8 part 5

- Despite CKSPFN's requests made as part of its interrogatories, Enbridge Gas did not provide maps of the Project during a February 11, 2022 meeting with CKSPFN.

- Stage 1 and 2 Archaeological Assessment was not shared by Enbridge Gas in time for CKSPFN to include any interrogatories on archaeological matters.

- Enbridge Gas offered capacity funding on March 10, 2022, which was too late to support any archaeological work on the Project.

- CKSPFN has yet to see the full Project application, including maps of Project infrastructure as they relate to CKSPFN treaty territory.

In its reply, Enbridge Gas stated that there have been unique circumstances related to CKSPFN's engagement on this Project and other Enbridge Gas projects[15] that have resulted in the current representatives of CKSPFN only beginning to engage with Enbridge Gas in early 2022. Enbridge Gas argued that while CKSPFN's current representatives were not present throughout all the engagement activities conducted for the Project, which date back to the summer of 2021, this does not mean that engagement has not occurred. Contrary to CKSPFN's submissions, Enbridge Gas submitted that it has (a) provided maps of the Project on several occasions dating back to the summer of 2021; (b) shared details of the ER, including archaeological assessment activities, on October 18, 2021, and (c) has offered capacity funding to CKSPFN on September 20, 2021, October 25, 2021, January 25, 2022, February 7, 2022, and February 11, 2022, all of which is indicated within the Indigenous consultation log.[16] Enbridge Gas also submitted that the full Project application has been available to CKSPFN since it was filed with the OEB in December 2021.

On April 19, 2022, Enbridge Gas filed the Letter of Opinion it received from the Ministry of Energy stating that "based on this review of materials and our outreach to Indigenous communities, [the Ministry of Energy] is of the opinion that the procedural aspects of consultation undertaken by Enbridge to date for the purposes of the OEB's Leave to Construct for the Coveny and Kimball-Colinville Project is satisfactory."

[15] As documented in CKSPFN's Intervention request in EB-2021-0078, Enbridge Gas 2022 Storage Enhancement Project
[16] Exhibit H, Tab 1, Schedule 1, Attachment 6 and Exhibit I.STAFF.8 Attachment 1

Findings

The OEB finds that Enbridge Gas has adequately consulted with the Indigenous communities identified by the Ministry of Energy and has satisfied the delegated procedural aspects of the Crown's duty to consult for the Project.

This finding is based on the following reasons:

1. Enbridge Gas filed an Indigenous Consultation report in accordance with the OEB's Environmental Guidelines.
2. Enbridge Gas carried out consultations with the five Indigenous groups identified by the Ministry of Energy and only CKSPFN identified issues or concerns which have been addressed in this proceeding.
3. Enbridge Gas has received a Letter of Opinion from the Ministry of Energy confirming that the procedural aspects of the consultation undertaken by Enbridge Gas are satisfactory.

3.2 PART B: DECISION ON THE LEAVE TO CONSTRUCT APPLICATION

Enbridge Gas has applied for leave to construct approximately 120 metres of NPS 10 steel pipeline to connect well TKC 68 to the existing Kimball-Colinville gathering line.

Enbridge Gas stated that all design, installation and testing of the proposed pipeline will be in accordance with the requirements of Ontario Regulation 210/01 – Oil and Gas Pipeline Systems (Regulation) under the *Technical Standards and Safety Act, 2000*. This Regulation governs the installation of pipelines in Ontario. As well, the design will meet the requirements of CSA Z662 Standard for Oil and Gas Pipeline Systems in accordance with the Code Adoption Document under the Regulation.

OEB staff supported Enbridge Gas's application for leave to construct, subject to proposed conditions of approval that are based on the OEB's standard conditions of approval for leave to construct applications.[17] Enbridge Gas stated that while it has no concerns with the conditions of approval proposed by OEB staff at this time, should a Project delay occur, Enbridge Gas would require a change to Condition 2(a) to provide for termination of the leave to construct authorization 18 months after the decision is issued instead of 12 months to accommodate a deferred Project schedule.[18]

The Ministry of Natural Resources submitted that it does not oppose the approval of the application, subject to the inclusion of conditions proposed by OEB staff. The Ministry of Natural Resources noted that Enbridge Gas has committed to developing a Project-specific Spill Response Plan prior to the start of well drilling operations and that following the installation of the Project facilities, the location of the facilities will be added to Enbridge Gas's Emergency Response Plan. Ministry of Natural Resources submitted that it would be appropriate to include these future actions in the conditions of approval.[19] Enbridge Gas responded that should the OEB determine that confirmation that these commitments have been honored is necessary to approve the Project, Enbridge Gas has no concerns with these additional conditions of approval suggested by the Ministry of Natural Resources.[20]

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[17] March 29, 2021 OEB letter Regarding Updates to Performance Standards and Other Process Improvements
[18] Exhibit I, Staff 10, p.3
[19] Ministry of Natural Resources submission, p.4,5
[20] EGI reply submission, para. 29, p. 16

As noted in Section 3.1.4 on Environmental Impacts, CKSPFN proposed that the OEB impose the following additional conditions of approval:[21]

1) Enbridge Gas undertake a comprehensive cumulative effects assessment on all historic, current, and proposed natural gas infrastructure in CKSPFN treaty lands.

2) Enbridge Gas collaborate with CKSPFN on field investigations and mitigation/monitoring plans regarding impacts to amphibians, reptiles, and their habitat.

3) Enbridge Gas collaborate with CKSPFN in undertaking an assessment of all fugitive emissions across its current and proposed natural gas infrastructure in CKSPFN treaty lands and develop an action plan to reduce fugitive emissions.

4) Enbridge Gas provide CKSPFN with a map and access to GIS shapefiles for all Enbridge Gas infrastructure west of London, Ontario.

Enbridge Gas submitted that it is opposed to each of CKSPFN's proposed conditions of approval, stating that the first three proposed conditions are not appropriate for the OEB's approval of the Project as set out in its arguments in the Environmental Impacts and Indigenous Consultation sections above.

Regarding CKSPFN's fourth proposed condition of approval, Enbridge Gas stated that maps of the proposed Project infrastructure have been provided throughout the evidence in this proceeding. Enbridge Gas indicated, however, that it is willing to engage in further discussions to assist with CKSPFN's understanding of the Enbridge Gas infrastructure in and around CKSPFN's treaty territory. Enbridge Gas argued that the information requested by CKSPFN extends far beyond the scope of the Project for which Enbridge Gas is seeking approval and therefore the conveyance of this information should not be included as a condition of approval.

Findings

The OEB finds that the proposed pipeline is in the public interest and grants Enbridge Gas leave to construct the pipeline as proposed in its application, subject to the conditions contained in this Decision and Order.

[21] CKSPFN submission, p. 9

4 ORDER

THE ONTARIO ENERGY BOARD ORDERS THAT:

1. Enbridge Gas is granted leave to construct the pipeline as proposed in Enbridge Gas's application, pursuant to subsection 91 of the Act, subject to the Conditions of Approval set forth in Appendix A to this Order.

2. The Chippewas of Kettle and Stony Point First Nation with Southwind Development Corporation (CKSPFN) shall file with the OEB and forward to Enbridge Gas its cost claim in accordance with the OEB's *Practice Direction on Cost Awards* on or before **May 5, 2022**.

3. Enbridge Gas shall file with the OEB and forward to intervenors any objection to the claimed costs of CKSPFN on or before **May 12, 2022**.

4. If Enbridge Gas objects to CKSPFN's cost claim, CKSPFN shall file with the OEB and forward to Enbridge Gas its response, if any, to the objection to its cost claim on or before **May 19, 2022**.

5. Enbridge Gas shall pay the OEB's costs incidental to this proceeding upon receipt of the OEB's invoice.

How to File Materials

Parties are responsible for ensuring that any documents they file with the OEB, such as applicant and intervenor evidence, interrogatories and responses to interrogatories or any other type of document, **do not include personal information** (as that phrase is defined in the *Freedom of Information and Protection of Privacy Act*), unless filed in accordance with rule 9A of the OEB's Rules of Practice and Procedure.

Please quote file number, **EB-2021-0248** for all materials filed and submit them in searchable/unrestricted PDF format with a digital signature through the OEB's online filing portal.

- Filings should clearly state the sender's name, postal address, telephone number and e-mail address.
- Please use the document naming conventions and document submission standards outlined in the Regulatory Electronic Submission System (RESS) Document Guidelines found at the File documents online page on the OEB's website.

- Parties are encouraged to use RESS. Those who have not yet set up an account, or require assistance using the online filing portal can contact registrar@oeb.ca for assistance.
- Cost claims are now filed through the OEB's online filing portal. Please visit the File documents online page of the OEB's website for more information. All participants shall download a copy of their submitted cost claim and serve it on all required parties as per the Practice Direction on Cost Awards.

All communications should be directed to the attention of the Registrar at the address below and be received by end of business, 4:45 p.m., on the required date.

With respect to distribution lists for all electronic correspondence and materials related to this proceeding, parties must include the Case Manager, Judith Fernandes at judith.fernandes@oeb.ca and OEB Counsel, James Sidlofsky at james.sidlofsky@oeb.ca

Email: registrar@oeb.ca
Tel: 1-877-632-2727 (Toll free)

DATED at Toronto April 28, 2022

ONTARIO ENERGY BOARD

Nancy Marconi
Registrar

Appendix A

to the EB-2021-0248

Order

Leave to Construct

Conditions of Approval

April 28, 2022

Application under Section 91 of the OEB Act

Enbridge Gas Inc. EB-2021-0248

CONDITIONS OF APPROVAL

1. Enbridge Gas Inc. (Enbridge Gas) shall construct the facilities and restore the land in accordance with the OEB's Decision and Order in EB-2021-0248 and these Conditions of Approval.

2. (a) Authorization for leave to construct shall terminate 12 months after the decision is issued, unless construction has commenced prior to that date.

   (b) Enbridge Gas shall give the OEB notice in writing:

      i. of the commencement of construction, at least 10 days prior to the date construction commences

      ii. of the planned in-service date, at least 10 days prior to the date the facilities go into service

      iii. of the date on which construction was completed, no later than 10 days following the completion of construction

      iv. of the in-service date, no later than 10 days after the facilities go into service

3. Enbridge Gas shall obtain all necessary approvals, permits, licences, certificates, agreements and rights required to construct, operate and maintain the Project.

4. Enbridge Gas shall implement all the recommendations of the Environmental Report filed in the proceeding, and all the recommendations and directives identified by the Ontario Pipeline Coordinating Committee review.

5. Enbridge Gas shall develop a Project-specific Spill Response Plan prior to the start of well drilling operations and following the installation of the Project facilities, the location of the facilities will be added to Enbridge Gas's Emergency Response Plan.

6. Enbridge Gas shall advise the OEB of any proposed change to OEB-approved construction or restoration procedures. Except in an emergency, Enbridge Gas shall not make any such change without prior notice to and written approval of the OEB. In the event of an emergency, the OEB shall be informed immediately after the fact.

7. Concurrent with the final monitoring report referred to in Condition 7(b), Enbridge Gas shall file a Post Construction Financial Report, which shall provide a variance

analysis of project cost, schedule and scope compared to the estimates filed in this proceeding, including the extent to which the project contingency was utilized. Enbridge Gas shall also file a copy of the Post Construction Financial Report in the proceeding where the actual capital costs of the project are proposed to be included in rate base or any proceeding where Enbridge Gas proposes to start collecting revenues associated with the Project, whichever is earlier.

8. Both during and after construction, Enbridge Gas shall monitor the impacts of construction, and shall file with the OEB one electronic (searchable PDF) version of each of the following reports:

   (a) A post construction report, within three months of the in-service date, which shall:

      i. provide a certification, by a senior executive of the company, of Enbridge Gas's adherence to Condition 1

      ii. describe any impacts and outstanding concerns identified during construction

      iii. describe the actions taken or planned to be taken to prevent or mitigate any identified impacts of construction

      iv. include a log of all complaints received by Enbridge Gas, including the date/time the complaint was received, a description of the complaint, any actions taken to address the complaint, the rationale for taking such actions

      v. provide a certification, by a senior executive of the company, that the company has obtained all other approvals, permits, licenses, and certificates required to construct, operate, and maintain the proposed project

   (b) A final monitoring report, no later than fifteen months after the in-service date, or, where the deadline falls between December 1 and May 31, the following June 1, which shall:

      i. provide a certification, by a senior executive of the company, of Enbridge Gas's adherence to Condition 4

      ii. describe the condition of any rehabilitated land

      iii. describe the effectiveness of any actions taken to prevent or mitigate any identified impacts of construction

      iv. include the results of analyses and monitoring programs and any recommendations arising therefrom

      v. include a log of all complaints received by Enbridge Gas, including the date/time the complaint was received; a description of the complaint; any actions taken to address the complaint; and the rationale for taking such actions

9. Enbridge Gas shall designate one of its employees as project manager who will be the point of contact for these conditions and shall provide the employee’s name and contact information to the OEB and to all affected landowners and shall clearly post the project manager’s contact information in a prominent place at the construction site.

SCHEDULE 1

REPORT TO THE MINISTER OF NORTHERN DEVELOPMENT, MINES, NATURAL RESOURCES AND FORESTRY ON WELL LICENCE APPLICATION

ENBRIDGE GAS INC.

EB-2021-0248

APRIL 28, 2022

Ontario Energy Board | Commission de l'énergie de l'Ontario

EB-2021-0248

REPORT OF THE ONTARIO ENERGY BOARD TO THE MINISTER OF NORTHERN DEVELOPMENT, MINES, NATURAL RESOURCES AND FORESTRY APPLICATION BY ENBRIDGE GAS INC. FOR LICENCES TO DRILL WELLS IN THE COVENY AND KIMBALL-COLINVILLE STORAGE POOLS

Before: Robert Dodds, Presiding Commissioner

David Sword, Commissioner

Date: April 28, 2022

1. INTRODUCTION AND SUMMARY

Enbridge Gas Inc. (Enbridge Gas) applied to the Minister of Northern Development, Mines, Natural Resources and Forestry (Minister) for licences to drill A-1 observation well (TCV 7) in the Coveny storage pool and an injection/withdrawal well (TKC 68) in the Kimball-Colinville storage pool. The Minister referred the applications to the OEB pursuant to section 40(1) of the *Ontario Energy Board Act, 1998* (OEB Act). The OEB is required to report to the Minister before the Minister can issue a licence to drill a well. Enbridge Gas has requested a favourable report from the OEB to the Minister regarding its licence applications.

The proposed wells are part of Enbridge Gas's Coveny and Kimball-Colinville Well Drilling Project (Project). As part of the Project, Enbridge Gas requested and was granted the OEB's approval[22] to construct a new pipeline to connect well TKC 68 to the existing Kimball-Colinville gathering pipeline, under section 91 of the OEB Act. This approval is set out in the OEB's Decision of today's date, to which this Report is Schedule 1.

The OEB reviewed the referred well licence applications and held a written hearing. The Chippewas of Kettle and Stony Point First Nation with Southwind Development Corporation (CKSPFN) and the Ministry of Northern Development, Mines, Natural Resources and Forestry (Ministry of Natural Resources) were registered intervenors and filed submissions in the proceeding.

Pursuant to section 40(1) of the OEB Act, the OEB issues this Report recommending that the Minister grant Enbridge Gas licences to drill well TCV 7 in the Coveny storage pool and well TKC 68 in the Kimball-Colinville storage pool.

The OEB's recommendation includes the conditions of licence in Attachment A to this Report.

2. ISSUES CONSIDERED

When reviewing and reporting to the Minister on a natural gas storage well drilling licence application, the OEB considers the following issues:

a) Need

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[22] OEB Decision and Order, EB-2021-0248

b) Costs and potential impact on Enbridge Gas's customers
c) Landowner matters
d) Environmental impacts
e) Indigenous consultation
f) Regulatory and legal requirements regarding storage wells
g) Well licence conditions

The OEB notes that all the issues listed above, except for issues f) and g) which relate solely to the well licence application, were addressed in Part A of the Decision to which this Report is Schedule 1, as these issues are common to all components of the Project.

The OEB's conclusions, with respect to each of the issues a) to e) are set out below:

a) The OEB finds that there is a need for the Project as there is an increase in storage capacity to compensate for the six Enbridge Gas storage wells that have been abandoned and are no longer available for use. The OEB finds that the approach proposed by Enbridge Gas to increase pressure in an existing storage pool (along with a companion observation well) represents the most efficient and cost-effective means of replacing the lost storage space.

b) The OEB finds the cost of the project to be reasonable and in keeping with the cost experience of similar and recent Enbridge Gas storage pool expansions. The OEB notes that the interests of the ratepayer will be safeguarded by Enbridge Gas's filing of its post-construction financials, and that the cost recovery of the capital invested shall then be considered during its next re-basing application.

c) The OEB is satisfied that the land matters have been adequately addressed by Enbridge Gas and also notes a letter it received and filed from the third-party landowner in support of the Project.

d) The OEB is satisfied that the environmental impacts of the Project are being adequately addressed.

e) The OEB finds that Enbridge Gas has adequately consulted with the Indigenous communities identified by the Ministry of Energy and has satisfied the delegated procedural aspects of the Crown's duty to consult for the Project. A letter of opinion from the Ministry of Energy was filed by Enbridge Gas with the OEB on April 19, 2022. This letter confirmed the Ministry of Energy's satisfaction with the procedural aspects of consultation undertaken by Enbridge Gas for the "Coveny and Kimball-Colinville Well Drilling Project".

In this Report, the OEB addresses in detail the issues that relate solely to the well licence application – those include adherence to legal and regulatory requirements relating to storage wells; and conditions of licence.

2.1 Regulatory and Legal Requirements for a Licence to Drill and Operate a Storage Well

In Ontario, the Ministry of Natural Resources is the provincial authority that oversees the geological, engineering, operational, technical and safety aspects of drilling, operation and modification works of storage wells in accordance with requirements of Canadian Standards Authority (CSA) Standard Z341 – Storage of Hydrocarbons in Underground Formations" (CSA Z341) and the Gas and Salt Resources of Ontario, Provincial Operating Standards (the Provincial Standards).

The Ministry of Natural Resources was an active participant in the proceeding, filing interrogatories and making submissions.

The drilling work is expected to take place from May to July 2022 when there will be no injection or withdrawal operations in the storage pools to avoid disruption to service from the pool, and when the reservoir pressure is less than 3,500 kPa to allow the wells to be safely drilled.

Enbridge Gas stated that it has provided the Ministry of Natural Resources with the following reports on the Pools for its review: (i) An Assessment of Neighbouring Activities for the Coveny storage pool, and the Kimball-Colinville storage pool as prescribed by Clause 5.2 of CSA Z341.1-18, assessing: a) wells within 1 kilometre; b) operations within 5 kilometre; and c) the integrity of all wells penetrating the storage zone; and (ii) "What If" Analysis of hazards and operability for each of the pools.

The Ministry of Natural Resources submitted that it is satisfied that the application is complete and that Enbridge Gas has offered a complete response to all interrogatories.[23]

2.2 Conditions of Licence

OEB staff proposed licence conditions with respect to the well licence that are similar to those approved by the OEB in past well drilling licence applications.[24]

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[23] Natural Resources submission, p.4
[24] EB-2020-0256 Decision and Order, Schedule 3

Enbridge Gas confirmed its intention to satisfy the conditions as described by OEB staff in its submission and stated that it will comply with the conditions of licence recommended by the OEB.[25]

The Ministry of Natural Resources noted that Enbridge Gas has committed to developing a Project-specific Spill Response Plan prior to the start of well drilling operations and that following the installation of the Project facilities, the location of the facilities will be added to Enbridge Gas's Emergency Response Plan. The Ministry of Natural Resources submitted that it would be appropriate to include these future actions as additional conditions.[26] Enbridge Gas responded that should the OEB determine that confirmation that these commitments have been honored is necessary to approve the Project, Enbridge Gas has no concerns with these additional conditions as suggested by Ministry of Natural Resources.[27]

OEB staff submitted that a favourable OEB Report, under subsection 40(1) of the Act, should be provided to the Minister, along with recommended licence conditions.

3. RECOMMENDATION

The OEB recommends that the Minister grant to Enbridge Gas licences to drill well TCV 7 in the Coveny storage pool and well TKC 68 in the Kimball-Colinville storage pool, subject to the conditions attached as Attachment A to this Report.

This recommendation shall expire twelve months from the date of this Report.

DATED at Toronto, April 28, 2022

ONTARIO ENERGY BOARD

Nancy Marconi
Registrar

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[25] Reply submission, p. 16
[26] Ministry of Natural Resources submission, p.4,5
[27] EGI reply submission, para. 29, p. 16

Attachment A

To the EB-2021-0248

REPORT OF THE OEB TO THE MINISTER

APPLICATION BY ENBRIDGE GAS INC. TO DRILL WELLS

IN THE COVENY AND KIMBALL-COLINVILLE STORAGE POOLS

Recommended Conditions of Licence

April 28, 2022

Application under Section 40 of the OEB Act

Enbridge Gas Inc.

EB-2021-0248

RECOMMENDED CONDITIONS OF LICENCE

1. Enbridge Gas Inc. (Enbridge Gas) shall rely on the evidence filed with the OEB in the EB-2021-0248 proceeding and comply with applicable laws, regulations and codes pertaining to the construction of the proposed wells.
2. The authority granted under this licence to Enbridge Gas is not transferable to another party without leave of the OEB. For the purpose of this condition, another party is any party except Enbridge Gas.
3. Enbridge Gas shall construct the facilities and restore the land in accordance with its application and evidence given to the OEB, except as modified by this licence and these Conditions.
4. Enbridge Gas shall implement all the recommendations of the Environmental Report filed in the proceeding.
5. Enbridge Gas shall develop a Project-specific Spill Response Plan prior to the start of well drilling operations and following the installation of the Project facilities, the location of the facilities will be added to Enbridge Gas's Emergency Response Plan.
6. Prior to commencement of construction of the proposed wells, Enbridge Gas shall obtain all necessary approvals, permits, licences, certificates, agreements and rights required to construct, operate and maintain the proposed wells.
7. Enbridge Gas shall ensure that the movement of equipment is carried out in compliance with all procedures filed with the OEB, and as follows:
    i. Enbridge Gas shall make reasonable efforts to keep the affected landowner(s) as well as adjacent landowners and their respective tenant farmers, or their designated representatives, informed of its plans and construction activities; and
    ii. The installation of facilities and construction shall be coordinated to minimize disruption of agricultural land and agricultural activities.
8. Enbridge Gas shall, subject to the recommendation by an independent tile contractor and subject to the landowner's approval, construct upstream and downstream drainage headers adjacent to the drilling area and access roads

that cross existing systematic drainage tiles, prior to the delivery of heavy equipment, so that continual drainage will be maintained.

9. Concurrent with the final monitoring report referred to in Condition 9(b), Enbridge Gas shall file a Post Construction Financial Report, which shall provide a variance analysis of project cost, schedule and scope compared to the estimates filed in this proceeding, including the extent to which the project contingency was utilized. Enbridge Gas shall also file a copy of the Post Construction Financial Report in the proceeding where the actual capital costs of the project are proposed to be included in rate base or any proceeding where Enbridge Gas proposes to start collecting revenues associated with the Project, whichever is earlier.

10. Both during and after construction, Enbridge Gas shall monitor the impacts of construction, and shall file with the OEB one electronic (searchable PDF) version of each of the following reports:

    a) A Post Construction Report, within three months of the in-service date, which shall:

        i. Provide a certification, by a senior executive of the company, of Enbridge Gas's adherence to Condition 1;

        ii. Describe any impacts and outstanding concerns identified during construction;

        iii. Describe the actions taken or planned to be taken to prevent or mitigate any identified impacts of construction;

        iv. Include a log of all complaints received by Enbridge Gas, including the date/time the complaint was received, a description of the complaint, any actions taken to address the complaint, the rationale for taking such actions; and

        v. Provide a certification, by a senior executive of the company, that the company has obtained all other approvals, permits, licences, and certificates required to construct, operate and maintain the proposed project.

    b) A Final Monitoring Report, no later than fifteen months after the in-service date, or, where the deadline falls between December 1 and May 31, the following June 1, which shall:

        i. Provide a certification, by a senior executive of the company, of Enbridge Gas's adherence to Condition 1;

ii. Describe the condition of any rehabilitated land;

iii. Describe the effectiveness of any actions taken to prevent or mitigate any identified impacts during construction;

iv. Include the results of analyses and monitoring programs and any recommendations arising therefrom; and

v. Include a log of all complaints received by Enbridge Gas, including the date/time the complaint was received, a description of the complaint, any actions taken to address the complaint, the rationale for taking such actions.

11. For the purposes of these conditions, Enbridge Gas shall conform with:

a) CSA Z341.1-18 “Storage of Hydrocarbons in Underground Formations” to the satisfaction of the Ministry of Northern Development, Mines, Natural Resources and Forestry (Natural Resources); and

b) The requirements for wells as specified in the *Oil, Gas and Salt Resources Act*, its Regulation 245/97, and the Provincial Operating Standards v.2 to the satisfaction of the Natural Resources.

12. Enbridge Gas shall designate one of its employees as project manager who will be the point of contact for these conditions, and shall provide the employee’s name and contact information to the Natural Resources, the OEB and to all affected landowners, and shall clearly post the project manager’s contact information in a prominent place at the construction site.