## PUB/Centra I-001(a)

Reference: Section 3.0 p. 2, 3
(a) Please provide a more fulsome narrative that explains the causes of the $\$ 46.7$ million Supplemental Gas PGVA balance.


#### Abstract

ANSWER:

Section 3.0, page 4 of the Application, describes the $\$ 3.2$ million and $\$ 42.3$ million balances owing to Centra relating to the 2012/13 and 2013/14 Supplemental Gas PGVA's respectively, for a total Supplemental Gas PGVA balance owing to Centra of $\$ 45.5$ million. The remaining $\$ 1.2$ million balance owing to Centra pertains to the Supplemental Gas component of the remaining residual balance in the July 31, 2013 Prior Period Gas Deferrals Account, that itself was comprised of balances accumulated prior to the 2012/13 gas year, where the associated rate riders were removed effective August 1, 2014.


The 2012/13 Supplemental Gas PGVA balance of $\$ 3.2$ million owing from customers was almost exclusively the result of higher than forecast Supplemental Gas purchases made during October 2013 as a result of colder than normal weather.

Due to extremely cold weather conditions during the January through March 2014 period, Centra purchased approximately 10.9 million GJ of Supplemental Gas supplies to serve its customers' needs (not including Alternate Supply Service for curtailed Interruptible customers). The overall average unit cost of these supplies was $\$ 8.04 / \mathrm{GJ}$. The approved Weighted Average Cost of Gas ("WACOG") embedded in Centra’s approved Firm Supplemental Gas base rate during this period was $\$ 4.21 / G J$. This difference between the January through March 2014 average unit cost of Centra's Supplemental Gas purchases and the WACOG embedded in Centra's Firm Supplemental Gas base rate (i.e., \$8.04/GJ - \$4.21/GJ = \$3.83/GJ), times the approximately 10.9 million GJ's of Supplemental gas purchases for customers (i.e., $\$ 3.83 / \mathrm{GJ}$ x $10,900,000$ ), accounts for virtually the entirety of the $\$ 42.3$ million projected Supplemental PGVA balance owing to Centra at October 31, 2014.

The accumulation of the 2013/14 Supplemental Gas PGVA balance was predominantly the result of dramatic increases in winter natural gas prices at market hubs served either directly or indirectly by the TCPL Mainline, which were driven to a significant degree by TransCanada Pipeline's ("TCPL") exercise of the unfettered pricing discretion granted to it by the National

Energy Board ("NEB") beginning on July 1, 2013. During the months of January through March 2014, TCPL set its minimum IT bid floors as high as 55 times its daily equivalent firm Mainline transportation tolls. These high IT bid floors contributed to high prices at Mainline hubs such as Emerson, as well as other hubs in the region including MichCon and Chicago.

Centra has provided the following chart that illustrates the accumulation of the various supplemental PGVA balances discussed above through to October 31, 2014. Centra notes that the 2013/14 Supplemental Gas PGVA account balance at the end of January 2014 was only an amount of $\$ 5.1$ million recoverable from customers. The chart illustrates the fact that the majority of the net amount in question was accumulated in the two-month February through March 2014 period.


## PUB/Centra INT-001(e)-(g)

## Reference: $\quad$ Section 3.0 p. 2, 3

(e) Please explain why Centra did not file a Cost of Gas application prior to June 12, 2014 in light of the escalating Supplemental PGVA inflows in January and February.
(f) Please explain why Centra did not advise the Board of the escalating Supplemental Gas PGVA inflows in January and February prior to June 12, 2014.
(g) Please explain why Centra did not update its gas cost forecast with a more up to date futures price strip prior to sending the January 29, 2014 letter to the Board.

## ANSWER:

Response to parts (e) to (g):

The majority of the Supplemental Gas PGVA balance in question was accumulated in February and March 2014. The 2013/14 Supplemental Gas PGVA account balance at the end of January 2014 was of $\$ 5.1$ million recoverable from customers. In the past, Centra’s Cost of Gas Applications have been filed in December or January timeframe and are based on a futures prices strip taken early in November, the beginning of the respective gas year.

In the normal course, when Centra files a Cost of Gas Application it requests approval to implement new Sales and Transportation Rates including new base rates reflecting the forecast non-Primary Gas costs for the Gas Year in question, as well as new rate riders to reflect the disposition of the actual balances in the non-Primary Gas deferral accounts for prior gas years. Centra typically requests approval to implement new rate riders to dispose of the balance in its non-Primary Gas PGVAs following the conclusion of the gas year, once actual final balances are known.

Given the extreme weather conditions and unusual market circumstances experienced by Centra in the winter of 2014 that resulted in the large Supplemental PGVA balance, Centra
determined that it was appropriate to request approval to dispose of the deferral account balances through rate riders prior to the conclusion of the 2014/15 Gas Year.

## PUB/Centra INT-002(a)

## Reference: Section 3.0 p. 3 - Billing Percentages

(a) Please explain Centra's billing percentage approach and how Centra determines the appropriate Primary Gas/Supplemental Gas billing percentage.

## ANSWER:

Please see the attachment to this response, which provides Centra's letter to the PUB dated July 18, 2011 describing Centra's policy with respect to establishing Primary and Supplemental Gas Billing Percentages.

PO Box 815 - Winnipeg Manitoba Canada • R3C 2P4<br>Street Location for DELIVERY: $22^{\text {rd }}$ floor -360 Portage Avenue<br>Telephone / $\mathrm{N}^{0}$ de téléphone: (204) 360-3257 • Fax / $\mathrm{N}^{\circ}$ de télécopieur: (204) 360-6147<br>baczarnecki@hydro.mb.ca

July 18, 2011

THE PUBLIC UTILITIES BOARD OF MANITOBA
400-330 Portage Avenue
Winnipeg, Manitoba
R3C 0C4

ATTENTION: Mr. H. M. Singh, Board Secretary and Executive Director
Dear Mr. Singh:

## RE: CENTRA GAS MANITOBA Inc. ("Centra")

Re: Public Utilities Board of Manitoba - Letter of June 2, 2011
Centra is in receipt of the Public Utilities Board of Manitoba's ("PUB") correspondence of June 2, 2011, with respect to the Primary and Supplemental Gas billing percentages and customer bill impacts reflected in Centra's revised schedules flowing from Board Order 65/11. Please find enclosed the information requested by the PUB in its letter.

Should you have any questions regarding this filing, or require a paper copy, please contact the writer at $360-3257$ or Greg Barnlund at 360-5243.

Yours truly,
MANITOBA HYDRO LAW DEPARTMENT
Per:


Brent A. Czarnecki
Barrister \& Solicitor

Att.

Cc: Mr. B. Peters, Fillmore Riley
Mr. R. Cathcart, Cathcart Advisors Inc.
Mr. B. Ryall, Energy Consultants Inc.

# CENTRA GAS MANITOBA INC. <br> PRIMARY AND SUPPLEMENTAL GAS DEFINITIONS AND BILLING PERCENTAGES 

## INDEX

$1 \quad 1.0$ Introduction121.1 Bill Impact Calculations ..... 2
3 1.2 Adjustments to Billing Percentages ..... 5
4 1.3 Definition of "Primary" and "Supplemental" Gas ..... 9
51.4 Interruptible Class ..... 11

## CENTRA GAS MANITOBA INC.

PRIMARY AND SUPPLEMENTAL GAS DEFINITIONS AND BILLING PERCENTAGES

### 1.0 Introduction

On April 28, 2011, the Public Utilities Board of Manitoba ("PUB") issued Order 65/11 with respect to Centra Gas Manitoba Inc's ("Centra") 2011/12 Cost of Gas Application and May 1, 2011 Primary Gas Quarterly Rate Application. On April 29, 2011, Centra filed revised rate schedules and customer bill impacts to reflect the directives of Board Order 65/11. The Primary Gas billing percentages reflected in the revised schedules were 81\% Primary Gas and 19\% Supplemental Gas for Firm customers and 67\% Primary Gas and 33\% Supplemental Gas for Interruptible customers. These billing percentages were reflective of the annual forecast billing percentage for Firm and Interruptible customers for the 2010/11. On May 2, 2011, the PUB issued Order 66/11 approving, on an interim basis, the new rate schedules effective May 1, 2011.

By way of letter to Centra dated June 2, 2011, the PUB noted that Centra had adjusted its Primary Gas billing percentages to $90 \%$ Primary Gas and $10 \%$ Supplemental Gas for Firm customers and 45\% Primary Gas and 55\% Supplemental Gas for Interruptible customers in May 2011. The PUB expressed concern that these adjustments were not reflected in the customer bill impact schedules filed by Centra on April 29 and that Centra's bill insert informing
customers of the change in their Primary Gas Rate may contain inaccurate bill impacts. The PUB further requested information and clarification of several points regarding the definition of "Primary" and "Supplemental" supplies and the application of billing percentage changes.

### 1.1 Bill Impact Calculations

In its letter of June 2, 2011, the PUB stated:
" Assuming these changes were not incorporated in the calculations, bill impact schedules flowing from Order 65/11, as filed by Centra on April 29 2011, would not be reflective of the actual supply percentages between Primary Gas and Supplemental Gas that came into effect May 1, 2011. Centra's bill insert informing customers of the change in their Primary Gas rate would also contain inaccurate bill impacts. Bill impacts are potentially even more significant for Interruptible customers."

Centra would like to take this opportunity to clarify an apparent misconception with regard to the preparation of bill impact information. The following section will describe the purpose of bill impact information and will discuss the assumptions associated with the bill impact calculation presented with each rate application.

Centra provides bill impact calculations to inform customers about the direction and magnitude of a rate change. Centra's goal is to provide customers with information that is simple and easy to understand and reflective of the nature of
the rate change. Centra provides this bill impact information for ranges of customers in various customer classes recognizing that, as usage will vary from customer to customer, it is not possible to reflect actual bill impacts for each and every one of its customers.

Centra references a "typical" residential customer as the benchmark in its customer communications, in order to provide customers with a simple and consistent message regarding the impact of rate changes. A typical residential customer is considered to be an SGS Residential customer that consumes an amount of natural gas equal to the average weather normalized annual consumption forecast for all SGS Residential customers. Bill impacts for larger volume customers are determined for a range of customer consumption levels (and load factors where applicable) in each customer class, as there is significant variation in consumption and usage patterns between large volume customers.

Bill impact calculations are determined by comparing the annualized bill amount calculated with the proposed rates to the annualized bill amount calculated with current rates. Annualized bill amounts and therefore the resulting bill impacts are calculated using a forecast of twelve months of weather normalized usage in order to eliminate seasonal fluctuations that would otherwise be inherent if a shorter time period was used.

Centra Gas Manitoba Inc.<br>Primary and Supplemental Gas<br>Definitions and Billing Percentages

This method enables a consistent comparison of the magnitude and direction of the rate change regardless of the time of year that the rate change occurs (i.e. May or August when customer consumption is lower, or November or February when customer consumption is higher) and regardless of actual weather conditions (i.e. if weather is colder or warmer than normal). In calculating this annual bill amount, Primary Gas and Supplemental Gas charges are assumed based upon the annual billing percentage that was forecast at the beginning of each Gas Year (November 1) for each category of commodity to be supplied.

The intent of bill impact calculations is to provide a customer with an approximate impact to their bill over the next twelve months, based on normal weather and therefore it is appropriate to reflect the annualized billing percentages for Primary and Supplemental Gas as determined at the beginning of the Gas Year. This approach provides a consistent comparison for rate changes regardless of the time of year or actual weather or consumption, and illustrates the direction and magnitude of the rate change in a consistent, meaningful and understandable manner. Conversely, it would be inappropriate to reflect billing percentages that have been adjusted to reflect actual weather conditions as the bill impact calculation assumes an annualized level of customer consumption.

In its letter, the PUB asked for:
"An explanation as to why such adjustments in the Primary and
Supplemental Gas percentages were not communicated to the Board in
light of the recent Cost of Gas proceeding and why such changes were not reflected in Centra's April 29, 2011 filing of revised rate schedules and bill impacts."

Centra described why an annualized bill calculation is appropriate to convey the rate change information to customers. Given the basis by which annualized bill amounts and therefore annualized bill impacts are determined, Centra does not communicate the operational changes in its billing percentages to the PUB in conjunction with its rate applications. As the PUB noted in its letter, these operational changes are short term adjustments required to balance Primary Gas and Supplemental Gas billings throughout the year. As noted, operational billing percentage changes are not relevant to the calculation of annualized bill impacts and therefore they are not considered insofar as the bill impact calculations are concerned.

### 1.2 Adjustments to Billing Percentages

In its letter of June 2, 2011, the PUB requested that Centra provide:
"A description of Centra's policy as to when adjustments in the portion of Primary and Supplemental gas are made and how such portions are determined"

In its letter, the PUB acknowledges that Centra makes adjustments to its billing percentages from time-to-time to reconcile the gas purchases made from various
supply components with the sales billed to both system supplied and marketer supplied customers. The following section describes the process that Centra follows throughout the course of the Gas Year to adjust and balance Primary Gas and Supplemental Gas billings to customers.

At the outset of each new Gas Year (effective November 1st), the daily gas purchase requirements needed to serve the Firm and Interruptible groups of customers for the coming year are forecast for each group under normal weather conditions. A forecast daily gas dispatch analysis is then performed that details how each individual component of the gas supply portfolio is expected to be utilized in order to satisfy the daily forecast Firm and Interruptible load requirements.


13

Once the Gas Year has been forecast as described above, the average portioning of purchases between Primary Gas and Supplemental Gas supplies for both the Firm and Interruptible groups of customers is forecast for each month and the entire year. The annual proportions are used to set the respective Firm and Interruptible billing percentages each November $1^{\text {st }}$ for the coming Gas Year.

As the Gas Year progresses, each month's forecast data is replaced with actual data and the daily load dispatch analysis described above is re-calculated on an actual basis. Annual results are then re-forecast to the end of the Gas Year. Each month, a determination is made as to whether the billing percentages

Centra Gas Manitoba Inc.<br>Primary and Supplemental Gas<br>Definitions and Billing Percentages

Page 8 of 13
July 18, 2011
currently in place will be sufficient to balance the ratios of Primary and
Supplemental Gas billed to Firm and Interruptible customers with the underlying ratios of purchases required to meet their respective load requirements over the course of the entire Gas Year. If they are not, Centra adjusts these billing percentages at the commencement of the next gas quarter to values that will result in a balancing of annualized billing ratios with underlying purchase ratios by the end of the Gas Year (October $31^{\text {st }}$ ).

In addition, as the Gas Year progresses, changes may be made to forecast assumptions regarding the utilization of the different components of Centra's overall supply portfolio. When changes in these forecast supply assumptions are made, the daily forecast load dispatch analysis described above is reperformed for the forecast months affected by the changes in supply assumptions.

Centra Gas Manitoba Inc.
Page 9 of 13
Primary and Supplemental Gas
July 18, 2011 Definitions and Billing Percentages

1 1.3 Definition of "Primary" and "Supplemental" Gas
2 In its letter, the PUB requested that Centra provide its "perspective as to what
3 constitutes Primary Gas and Supplemental Gas."
4

5 Primary Gas is the natural gas received from western Canadian sources at the Alberta border (Empress), whether supplied by Centra or a marketer.


10
11 Supplemental Gas constitutes all other supply sources than Primary Gas.
12 Supplemental Gas typically includes U.S. supplies from both the Oklahoma and
13 Louisiana supply basins and Delivered Service supplies.

Centra Gas Manitoba Inc.
Primary and Supplemental Gas

$\square$
21

Centra Gas Manitoba Inc.
$1 \quad 1.4$ Interruptible Class
2 In its letter, the PUB requested that Centra provide:

6 service for Interruptible customers."

7
"An explanation as to why Primary and Supplementary Gas percentages appear to have shifted so significantly for Interruptible customers and whether there are any implications for the cost and reliability of gas



14


The adjustment to Interruptible billing percentages on May 1, 2011 was typical to the adjustments experienced in recent colder than normal winters. For example, Interruptible billing percentages on May 1, 2009 were adjusted to $40 \%$ Primary Gas and 60\% Supplemental Gas, and on May 1, 2008 they were adjusted to 59\% Primary Gas and $41 \%$ Supplemental Gas.

The cost implications for Interruptible customers resulting from billing percentage adjustments are dependent upon the direction of the adjustment, combined with the relative difference between Primary Gas and Supplemental Gas rates over the time period during which the adjustment is in effect. For example, a decrease in the Primary Gas billing percentage combined with an increase in the Supplemental Gas percentage would positively impact Interruptible customers if Primary Gas rates are higher than Supplemental Gas rates. The reverse would be true if Primary Gas rates are lower than Supplemental rates.

In the case of the May 1, 2011 billing percentage adjustment, the billed Primary Gas rate is higher than the Supplemental Gas rate and therefore a cost reduction exists for Interruptible customers

Centra Gas Manitoba Inc.
Primary and Supplemental Gas
Definitions and Billing Percentages
1 There are no reliability impacts on Interruptible customers as a result of 2 adjustments to their Primary and Supplemental billing percentages.

Page 13 of 13
July 18, 2011

## PUB/Centra INT-002(b)

## Reference: Section 3.0 p. 3 - Billing Percentages

(b) Please provide the quarterly Primary Gas/Supplemental Gas billing percentages for the past five years.

## ANSWER:

The following table details the billing percentages as requested:

|  | Firm Service |  | Interruptible Service |  |
| :---: | :---: | :---: | :---: | :---: |
| Effective Date of Bill Percentage Implementation | Primary Gas | Supplemental Gas | Primary Gas | Supplemental Gas |
| February 1, 2015 | 89\% | 11\% | 79\% | 21\% |
| November 1, 2014 | 92\% | 8\% | 84\% | 16\% |
| August 1, 2014 | 54\% | 46\% | 99\% | 1\% |
| May 1, 2014 | 53\% | 47\% | 100\% | 0\% |
| March 1, 2014 | 81\% | 19\% | 99\% | 1\% |
| February 1, 2014 | 81\% | 19\% | 64\% | 36\% |
| November 1, 2013 | 87\% | 13\% | 77\% | 23\% |
| August 1, 2013 | 71\% | 29\% | 70\% | 30\% |
| May 1, 2013 | 78\% | 22\% | 76\% | 24\% |
| February 1, 2013 | 90\% | 10\% | 88\% | 12\% |
| November 1, 2012 | 90\% | 10\% | 88\% | 12\% |
| August 1, 2012 | 94\% | 6\% | 89\% | 11\% |
| May 1, 2012 | 98\% | 2\% | 89\% | 11\% |
| February 1, 2012 | 99\% | 1\% | 95\% | 5\% |
| November 1, 2011 | 97\% | 3\% | 95\% | 5\% |
| August 1, 2011 | 89\% | 11\% | 37\% | 63\% |
| May 1, 2011 | 90\% | 10\% | 45\% | 55\% |
| February 1, 2011 | 81\% | 19\% | 67\% | 33\% |
| November 1, 2010 | 81\% | 19\% | 67\% | 33\% |
| August 1, 2010 | 100\% | 0\% | 74\% | 26\% |
| May 1, 2010 | 100\% | 0\% | 74\% | 26\% |
| April 1, 2010 | 100\% | 0\% | 74\% | 26\% |


| February 1,2010 | $94 \%$ | $6 \%$ | $67 \%$ | $33 \%$ |
| :--- | :--- | :--- | :--- | :--- |
| November 1,2009 | $96 \%$ | $4 \%$ | $67 \%$ | $33 \%$ |

## PUB/Centra I-004(c)

Reference: Section 3.0 p. 3 - Storage Levels and Costs
(c) Please explain how Centra determines the cost of Supplemental Gas in storage if additional injections are made during the winter season.


#### Abstract

ANSWER:

The volume-weighted average unit value of Supplemental Gas in storage is calculated on a monthly basis. If injections are made in a given month of the winter season, both the financial cost inflows and the associated injection volumes will be included in the calculation of a revised average inventory value conducted at month-end, which also takes into account the opening average inventory value calculated at the end of the previous month, less the storage inventory withdrawals made that month (both dollars and volumes). Storage withdrawals in the following month of the winter will then be costed at the revised volume-weighted average inventory value calculated at the end of the previous month.


## PUB/Centra INT-006(a)

## Reference: Section 4.0 p. 6

(a) Please provide a more detailed explanation of the process of allocating deferral account balances to individual customer classes, explaining how the cost responsibility of each class and the amounts paid by each class are determined.


#### Abstract

ANSWER:

Each PGVA is the net result of actual gas costs incurred compared with actual revenues collected. For purposes of determining rate riders, a Cost Allocation Study is prepared reflecting actual historical gas costs incurred (inflows), customer volumes and demand data from the gas years 2012/13 and 2013/14 (actual and outlook).


All gas costs incurred are functionalized, classified and allocated to customer classes using actual volumes and peak data during the PGVA period. Each class’ cost responsibility (inflows) is compared to WACOG outflows (recorded actual billings for each class), the net difference of which is each class' PGVA responsibility (that is, refund or recovery). Cost responsibility (inflows) and WACOG outflow, or each class' PGVA responsibility is driven by upstream market conditions, weather, changes in load, and the movement of customers between customer classes or services.

For the Transportation PGVA, the actual gas costs incurred are largely related to Transportation Tolls and Storage costs and are classified as demand related and allocated to each class on the basis of the peak and average allocator. These allocated costs are compared to each class’ WACOG outflows. The WACOG outflows will be influenced largely by weather for the SGS and LGS customer classes whose Transportation rate (base and rate rider) is volumetric based. Larger volume customer classes with 3-part rates, Transportation WACOG inflows will be less weather sensitive. Residual Capacity Management revenues are allocated to each customer class based on their allocated portion of the Transportation PGVA since these revenues represent an offset to the fixed transportation costs originally incurred. Volume and demand related to T-Service customers are excluded from the allocation of Transportation related costs and Capacity Management revenues as these customers do not participate in this service.

The actual Unaccounted for Gas (UFG) and Minell costs flow into the Distribution PGVA. UFG costs are allocated to customer classes using the percentage allocation established in Order 131/04. Minell costs are allocated on the basis of the each class' allocation of demand-related transmission plant as established through Centra's last General Rate Application.

For the Supplemental PGVA, the actual costs (inflows) are segregated between Firm and Interruptible service based on actual daily load distribution. The segregated actual costs are compared to WACOG outflows based on actual billings for Firm and Interruptible service. Inflows are influenced by upstream market conditions and the utilization of Centra's supply sources, both of which can be significantly influenced by weather.

The purpose of the heating value deferral is to record the variance in gross margin collected from customers as a result of differences between the actual heat content of gas delivered compared to a baseline of $37.8 \mathrm{GJ} / 103 \mathrm{~m} 3$. This deferral is allocated to each customer class based on volumes for each customer class since this deferral is entirely volume related.

Prior period residual balances represent remaining amounts to be refunded or collected from customers for rate riders that have expired. The Distribution and Supplemental component balances of these prior period residuals are allocated to customer classes based on volumes. The Transportation component of prior period residual balances is allocated based on percentage of fixed transportation costs allocated to each of the customer classes.

## PUB/Centra INT-006(b)

Reference: Section 4.0 p. 6
(b) Please provide schedules showing the results of the functionalization, classification, and allocation of actual gas costs to the customer classes and the allocation of WACOG outflows to the customer classes.

## ANSWER:

Please refer to the attached schedules.

| functionalzation: |  |  |  | Production |  |  | Transmission | Distribution | Onsite | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | ${ }_{201415}^{\text {Acual }}$ | Direct | $\xrightarrow{\text { Ization }}$ Alocator |  |  |  |  |  |  |  |
| A. FiXed costs |  |  |  |  |  |  |  |  |  |  |
| TCPL CD Demand | ${ }_{\substack{41,464.567 \\ 3.518,42}}$ |  | PPPE STOR |  | 41,46,567 |  |  |  |  |  |
| Storage Capacaity | ${ }_{\text {coser }}^{\text {10,662,394 }}$ |  |  |  |  |  |  |  |  | (1.662,394 |
| US Pipeilines Demand Load Balancing Chares \& | ${ }_{\text {c }}^{6,977,254}$ | $\bigcirc$ | Stor |  |  | 6,977,254 |  |  |  | $6.277,254$ <br> 26,379 |
| Load Balancing Charges \& M Misc. | ${ }^{265,379}$ | \% | ${ }_{\substack{\text { PIPE } \\ \text { PPE }}}^{\text {Pem }}$ |  | ${ }^{265,379}{ }_{0}$ |  |  |  |  | 265,379 |
|  | $\begin{array}{r}198,444 \\ \hline 63.06 .459 \\ \hline\end{array}$ | 0 | tran |  | $41.711,97$ | 21,158,068 | 198,444 |  |  |  |
| B. Variable transportation |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| US Pipelines Trassorataion | ${ }_{\substack{1,1795,127 \\ 1,554}}$ | $\bigcirc$ | STOR STor |  |  | ${ }_{\text {1,995,654 }}^{1.17,127}$ |  |  |  | ${ }_{\text {1,995,554 }}^{1.17 .127}$ |
| Other Subtotal - variable transportation | $\begin{array}{\|} 3.181 .096 \\ \hline, .033 \\ \hline \end{array}$ | $\begin{array}{r} 0 \\ \hline 0 \\ \hline \end{array}$ |  |  |  | 3,171.780 |  | 0 | 0 | 3,181.036 |
| Gas Available - Sales \& Transortaion |  |  |  |  |  |  |  |  |  |  |
| c. commootr cost |  |  |  |  |  |  |  |  |  |  |
| ${ }_{1}^{1}$ Western canamadian Supplies | 147,638,406 | ${ }^{145,572,323}$ |  |  |  |  | 2,066,084 |  |  | 2,066,084 |
|  | ${ }^{\text {9,347,092 }}$ | 9,937,092 |  |  |  |  |  |  |  |  |
| Suplemenala supply Sutoral - CoMMoity cost | $\underline{\substack{\text { 20,204,04 } \\ \hline 17,100,023}}$ | $\frac{19}{174,753,40680}$ |  | $\stackrel{0}{0}$ | 0 |  |  | 0 | 0 | 2,439,382 |
| total cost of gas | 243,439,695 | 174,750.820 |  | 0 | 41,721,200 | 24,329.849 | 2,637,826 | 0 | 0 | 68,68,875 |


|  | Classsication |  |  |
| :---: | :---: | :---: | :---: |
|  | \$ Allocated | Allocator | \$ Direct |
| A. FIXED Costs |  |  |  |
| TCPL CD Demand | 41,446,567 | demand | 0 |
| TCPL STS Demand | 3,518,421 | demand | 0 |
| Storage Capacity | 10,662,394 | demand | 0 |
| US Pipelines Demand | 6,977,254 | demand | 0 |
| Load Balancing Charges | 265,379 | demand | 0 |
| Capacity Management Revenues |  | DEMAND | 0 |
| Other (Minnell \& Baseload Incr.) | 198,444 | DEMAND | 0 |
| Subtotal - FIXED COSTS | $\underline{\text { 63,068,459 }}$ |  | 0 |
| B. VARIABLE TRANSPORTATION |  |  |  |
| TCPL Transportation | 8.547 | Energy |  |
| US Pipelines Transportation | 1,176,127 | ENERGY | 0 |
| Storage Withrawal | 1,995,654 | ENERGY | 0 |
| Other | 706 | ENERGY | 0 |
| Subtotal - VARIABLE TRANSPORTATION | 3,181,033 |  | 0 |




Gas Available - Sales \& Transportation

| 2,066,084 | ENERGY | 0 |
| :---: | :---: | :---: |
|  | ENERGY | 0 |
| 0 | ENERGY | 0 |
| 373,299 | ENERGY | 0 |
| 2,439,382 |  | 0 |
| 68,688,875 |  | 0 |









TCPL CD Demand
TCLL STS D Demand
Storage Capacity
US Pipelinas Demand
Load Balancing Char
Load Balancing Charges
Capacity Management Revenues
Other (Minell \& Baceload ncr.)
Other (Minnell \&e Basesload Incr

TCPL Transportation
TCPL Transportation
US Pipelines
Transportation
US Pipelines Trans
Storage Withdrawal
Other
Subtotal - VARIABLE TRANSPORTATION

| 0 |  |
| ---: | ---: |
| 0 |  |
| 0 |  |
| 0 |  |
| 0 |  |
| 0 |  |
| 198,444 | TRANPT-D |



$\square$

Gas Available - Sales \& Transportation Gas Available - Sales \& Transportation

$$
\begin{array}{r}
0 \\
0 \\
0 \\
0 \\
\hline 0 \\
\hline 198,444 \\
\hline
\end{array}
$$



## PUB/Centra INT-007(b)

## Reference: $\quad$ Section 4.0 - p.7, 8; Schedules 4.1.0 and 4.1.1 - Supplemental Gas Rider

(b) Please explain Centra's proposed course of action if the amortization of the Supplemental Gas PGVA balance is significantly greater than or less than the forecasted amortization at October 31, 2015 (i.e. does Centra propose to reset the rider after 12 months?).

## ANSWER:

At the time of the Interim Application for November 1, 2014 rates, Centra intended to monitor and review the balance outstanding at the end of the first year, and if necessary evaluate potential rate rider options.

Subsequent to the asking of this IR, the PUB determined in Order $12 / 15$ that the recovery period for the Supplemental Gas rate rider would be accelerated to a nine month period from February 1, 2015 to October 31, 2015 and that the treatment of the remaining $50 \%$ of the balance would be determined as part of this Application.

## PUB/Centra I-007(c)

Reference: $\quad$ Section 4.0 - p.7, 8; Schedules 4.1.0 and 4.1.1 - Supplemental Gas Rider
(c) Please explain how Centra would address a similarly large Supplemental Gas PGVA balance accrual in the $2014 / 15$ gas year in terms of overlapping and additive Supplemental Gas rate riders and the resulting impacts on customers.

## ANSWER:

Accumulations on account of Supplemental Gas subsequent to November 1, 2014, the start of the new gas year, will be held in a separate PGVA which will allow for separate and distinct treatment. In the event that an extraordinarily large PGVA balance was experienced, Centra would consider and propose what it views to be the appropriate disposition period to mitigate the impacts to customers.

## PUB/Centra I-007(d)

Reference: $\quad$ Section 4.0 - p.7, 8; Schedules 4.1.0 and 4.1.1-Supplemental Gas Rider
(d) Centra proposes special treatment for Interruptible customers who switch customer classes to firm service (Large General Service or High Volume Firm). Please explain whether Centra proposes special treatment for T-service customers who did not contribute to the large Supplemental Gas PGVA balance but who switch to system supply or Western Transportation Service and thus would otherwise pay the firm Supplemental Gas rate rider.


#### Abstract

ANSWER:

In the event that a T-service customer elects to migrate to WTS or System Supply during the 24 month period, Centra will apply the same rate rider treatment as proposed for Interruptible customers that switch to firm service.

It is also Centra's intention that large volume sales or WTS customers who contributed to the build up in the Supplemental Gas PGVA and who wish to switch to T-service be required to contribute to the recovery of the balance. Currently, one Mainline customer is contemplating Tservice and has been made aware of the requested rate change. Centra understands that this customer may consider a lump sum payment to settle the deferral amount owing to Centra. Lump sum settlements have been utilized in deferral account dispositions with the Special Contract and Power Station classes in the past. Alternatively, should the customer elect to pay over the $24-$ month period through a rate rider, Centra will reflect this election on the customer's bill by including the Supplemental Gas firm rate rider of $\$ 0.0174 / \mathrm{m}^{3}$ as per Schedule 4.1.1.


## PUB/Centra INT-007(e)

## Reference: $\quad$ Section 4.0 - p.7, 8; Schedules 4.1.0 and 4.1.1 - Supplemental Gas Rider

(e) Please identify and describe previous instances where Centra applied for approval or the Board directed Centra to recover PGVA balances over a period longer than 12 months (including the Primary Gas PGVA).


#### Abstract

ANSWER:

Order 99/01 approved Centra's request to dispose of the Primary Gas PGVA over a 24 month period. The Primary Gas PGVA accumulated to over $\$ 100$ million (owing to Centra) due to unprecedented increases in natural gas costs during the winter of 2000/2001.


## PUB/Centra INT-007(f)

Reference: $\quad$ Section 4.0 - p.7, 8; Schedules 4.1.0 and 4.1.1 - Supplemental Gas Rider
(f) Please confirm whether Centra intends to charge firm service (LGS or HVF) customers that switch to the Interruptible class on or after May 1, 2014 the firm Supplemental Gas rate rider until October 31, 2016.

## ANSWER:

Confirmed.

## PUB/Centra I-008(c)

## Reference: Section 4.0 p. 9 - Bill Impacts

(c) Please explain why the bill impact of $\$ 871,132$ for a single Mainline customer consuming $41,000,000 \mathrm{~m} 3$ exceeds the total Supplemental Gas PGVA balance attributable to the Mainline class of $\$ 570,600$.

## ANSWER:

Centra clarifies that the $\$ 570,600$ represents the balance in all of the non-Primary Gas deferral accounts allocated to the Mainline class, which includes the allocation of the Supplemental Gas PGVA.

The Bill Impact Schedule 4.2.0 represents a range of possible impacts in each of the rate classes. The comparisons shown reflect a range of customer consumption and load factor information derived from actual data and assume that commodity is supplied by Sales Service (i.e. system or WTS supply).

In the case of the Mainline Class, 6 of the 8 customers are T-Service whose bill impacts are minimal flowing from this Application given they procure and transport their own natural gas and did not contribute to the majority of the accumulated balances.

Schedule 4.2.0 showed a bill impact of $\$ 871,132$ for Mainline customers that consume 41,000,000 $\mathrm{m}^{3}$, which assumed that they would purchase their gas by Sales Service. However, the Mainline customers at that volume level are T-service customers that did not contribute to the Supplemental Gas balance and will not be required to contribute to the recovery of the balance. The Bill Impact Schedule 4.2.0 attached to this response now separates the Mainline Class impacts between T-Service and Sales Service customers.

This does not impact the allocation of cost to the Mainline Class of approximately $\$ 570,000$. This balance will be recovered primarily from the two Sales Service customers in this Class. TService customers will only be responsible for residuals related to unaccounted for gas and heating value which for purposes of this Application are in a net refund position (owing to customers).


## PUB/Centra INT-008(d)

## Reference: Section 4.0 p. 9 - Bill Impacts

(d) Please prepare a schedule showing the year-over-year bill impacts resulting from the proposed November 1, 2014 rates compared to the approved rates for November 1, 2013, including the impact of the Primary Gas rate change approved for August 1, 2014.

## ANSWER:

Please see the attachment to this response.


# Centra Gas Manitoba Inc 

## BASE VS. BASE

NOV 1/13 APPROVED BASE RATES
NOV 1/14 APPROVED BASE RATES
BASE IMPACTS
$\begin{array}{cc}\text { Annual Use } & \underline{\text { Basic Chg }} \text { Demand } \\ \underline{103} \mathrm{~m}^{3} & \underline{\text { Commodity }} \text { Annual }\end{array}$
Basic Chg
Demand
Commodity
Annual
\$

Small General Service

| 1.00 | 35 |
| ---: | ---: |
| 1.98 | 70 |
| 2.37 | 84 |
| 2.80 | 99 |
| 3.20 | 113 |
| 3.68 | 130 |
| 11.33 | 400 |
|  |  |
| 11.33 | 400 |
| 59.49 | 2,100 |
| 679.87 | 24,000 |
|  |  |
| 850 | 30,000 |
| 850 | 30,001 |
| 1,416 | 50,000 |
| 2,833 | 100,000 |
| 6,200 | 218,866 |
| 12,600 | 444,792 |
| 685 | 24,181 |
| 850 | 30,000 |
| 1,416 | 50,000 |
| 2,833 | 100,000 |
| 6,200 | 218,866 |
| 12,600 | 444,792 |
|  |  |
| 250 | 8,825 |
| 350 | 12,355 |
| 500 | 17,650 |
|  |  |
| 2,833 | 100,000 |
| 14,164 | 500,000 |
| 28,328 | $1,000,000$ |
| 2,833 | 100,000 |
| 14,164 | 500,000 |
| 28,328 | $1,000,000$ |
| 41,000 | $1,447,339$ |
|  |  |
| 421,289 | $14,871,900$ |

$\$ 168$
$\$ 168$

| 8 | Small General Service |  | 1.00 | 35 |
| :---: | :---: | :---: | :---: | :---: |
| 9 |  |  | 1.98 | 70 |
| 10 | (Typical Residential Customer) |  | 2.37 | 84 |
| 11 |  |  | 2.80 | 99 |
| 12 |  |  | 3.20 | 113 |
| 13 |  |  | 3.68 | 130 |
| 14 |  |  | 11.33 | 400 |
| 15 |  |  |  |  |
| 16 | Large General Serv |  | 11.33 | 400 |
| 17 |  |  | 59.49 | 2,100 |
| 18 |  |  | 679.87 | 24,000 |
| 19 |  |  |  |  |
| 20 | High Volume Firm | 25\% | 850 | 30,000 |
| 21 |  | 40\% | 850 | 30,001 |
| 22 |  | 40\% | 1,416 | 50,000 |
| 23 |  | 40\% | 2,833 | 100,000 |
| 24 |  | 40\% | 6,200 | 218,866 |
| 25 |  | 40\% | 12,600 | 444,792 |
| 26 |  | 75\% | 685 | 24,181 |
| 27 |  | 75\% | 850 | 30,000 |
| 28 |  | 75\% | 1,416 | 50,000 |
| 29 |  | 75\% | 2,833 | 100,000 |
| 30 |  | 75\% | 6,200 | 218,866 |
| 31 |  | 75\% | 12,600 | 444,792 |
| 32 |  |  |  |  |
| 33 | Cooperative | 35\% | 250 | 8,825 |
| 34 |  | 35\% | 350 | 12,355 |
| 35 |  | 35\% | 500 | 17,650 |
| 36 |  |  |  |  |
| 37 | Mainline Firm | 40\% | 2,833 | 100,000 |
| 38 |  | 40\% | 14,164 | 500,000 |
| 39 |  | 40\% | 28,328 | 1,000,000 |
| 40 |  | 75\% | 2,833 | 100,000 |
| 41 |  | 75\% | 14,164 | 500,000 |
| 42 |  | 75\% | 28,328 | 1,000,000 |
| 43 |  | 75\% | 41,000 | 1,447,339 |
| 44 |  |  |  |  |
| 45 | Special Contract | 89\% | 421,289 | 14,871,900 |

## Interruptible Sales

$16 \%$
$25 \%$
$40 \%$
$40 \%$
$75 \%$
$75 \%$
$75 \%$

## PUB/Centra INT-009(b)

## Reference: $\quad$ Schedules 3.1.1 and 3.3.1 - Cost of Supply by Source

(b) Please provide the monthly index prices since November 1, 2012 and the daily index prices since November 1, 2013 for each of the following hubs,:

## i. AECO

ii. Emerson
iii. NYMEX
iv. Michigan city gate
v. Chicago

## ANSWER:

Please see Attachment 1 for monthly index prices for the period from November 1, 2012 through February 28, 2015. Attachment 2 provides daily index prices for the period of November 1, 2013 through February 28, 2015.

In response to information requested in CAC/Centra INT-002(c), pricing for both the Empress/AECO transportation differential and the Dawn hub have also been included in this response.

| 1 | Monthly Index Prices | Nov-12 | Dec-12 | Jan-13 | Feb-13 | Mar-13 | Apr-13 | May-13 | Jun-13 | Jul-13 | Aug-13 | Sep-13 | Oct-13 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | AECO | \$3.1047 | \$3.2483 | \$2.9612 | \$2.8798 | \$2.9181 | \$3.2837 | \$3.4867 | \$3.4442 | \$3.0689 | \$2.5924 | \$2.3534 | \$2.4527 |
| 3 | Emerson | \$3.5301 | \$3.8474 | \$3.4284 | \$3.4411 | \$3.4750 | \$3.8186 | \$4.1060 | \$4.1846 | \$3.6953 | \$3.7038 | \$3.6654 | \$3.5783 |
| 4 | NYMEX - Henry Hub | \$3.2675 | \$3.4853 | \$3.1764 | \$3.1448 | \$3.3422 | \$3.7957 | \$4.0687 | \$4.1328 | \$3.6144 | \$3.4532 | \$3.4772 | \$3.4528 |
| 5 | Michigan City Gate | \$3.5019 | \$3.7154 | \$3.3336 | \$3.3144 | \$3.4365 | \$3.9999 | \$4.3118 | \$4.3939 | \$3.7831 | \$3.7038 | \$3.6751 | \$3.6475 |
| 6 | Chicago | \$3.4548 | \$3.7059 | \$3.3431 | \$3.3827 | \$3.4365 | \$3.9809 | \$4.2530 | \$4.2046 | \$3.6563 | \$3.5441 | \$3.5874 | \$3.6079 |
| 7 | Dawn | \$3.7655 | \$3.9134 | \$3.5325 | \$3.4022 | \$3.6579 | \$4.1336 | \$4.4294 | \$4.5234 | \$3.9586 | \$3.9734 | \$3.9676 | \$3.7562 |
| $\begin{aligned} & 8 \\ & 9 \end{aligned}$ | Empress/Aeco Transportation Differential | (\$0.1685) | (\$0.1021) | (\$0.1346) | (\$0.0471) | (\$0.0659) | (\$0.1534) | (\$0.0930) | (\$0.0840) | (\$0.1008) | (\$0.0807) | (\$0.0922) | (\$0.0702) |
| 10 |  | \$CDN/GJ |  |  |  |  |  |  |  |  |  |  |  |
| 11 | Monthly Index Prices | Nov-13 | Dec-13 | Jan-14 | Feb-14 | Mar-14 | Apr-14 | May-14 | Jun-14 | Jul-14 | Aug-14 | Sep-14 | Oct-14 |
| 12 | AECO | \$3.3129 | \$3.2040 | \$3.6599 | \$4.2266 | \$5.6386 | \$4.4675 | \$4.4905 | \$4.3454 | \$4.3751 | \$3.7968 | \$3.8310 | \$3.8674 |
| 13 | Emerson | \$3.7170 | \$3.9921 | \$5.0133 | \$6.2563 | \$10.6857 | \$5.3069 | \$4.9337 | \$4.5940 | \$4.6654 | \$3.9931 | \$4.2811 | \$4.3388 |
| 14 | NYMEX - Henry Hub | \$3.5131 | \$3.8489 | \$4.6415 | \$5.8332 | \$4.7059 | \$4.7606 | \$4.9388 | \$4.6739 | \$4.5416 | \$3.9190 | \$4.2036 | \$4.2576 |
| 15 | Michigan City Gate | \$3.6768 | \$3.9215 | \$4.9290 | \$7.2640 | \$11.9010 | \$5.4003 | \$5.0882 | \$4.8975 | \$4.7996 | \$4.0548 | \$4.3045 | \$4.4061 |
| 16 | Chicago | \$3.7270 | \$3.9316 | \$5.0764 | \$8.8280 | \$12.2572 | \$5.2861 | \$5.0058 | \$4.7458 | \$4.7377 | \$4.0239 | \$4.2705 | \$4.3815 |
| 17 | Dawn | \$3.8074 | \$4.0223 | \$5.1396 | \$8.3242 | \$12.4458 | \$5.5249 | \$5.1088 | \$4.9178 | \$4.8099 | \$4.0651 | \$4.3342 | \$4.3922 |
| $\begin{aligned} & 18 \\ & 19 \end{aligned}$ | Empress/Aeco Transportation Differential | (\$0.0927) | \$0.0644 | \$0.1451 | \$0.1751 | \$0.1694 | \$0.4505 | \$0.0837 | \$0.0827 | \$0.0023 | (\$0.0531) | (\$0.0249) | (\$0.0586) |
| 20 |  | \$CDN/GJ |  |  |  |  |  |  |  |  |  |  |  |
| 21 | Monthly Index Prices | Nov-14 | Dec-14 | Jan-15 | Feb-15 |  |  |  |  |  |  |  |  |
| 22 | AECO | \$3.5913 | \$3.9419 | \$3.1896 | \$2.6044 |  |  |  |  |  |  |  |  |
| 23 | Emerson | \$4.2023 | \$5.5858 | \$4.2790 | \$3.5922 |  |  |  |  |  |  |  |  |
| 24 | NYMEX - Henry Hub | \$4.0377 | \$4.7083 | \$3.8438 | \$3.3977 |  |  |  |  |  |  |  |  |
| 25 | Michigan City Gate | \$4.1915 | \$5.1097 | \$3.6654 | \$3.2152 |  |  |  |  |  |  |  |  |
| 26 | Chicago | \$4.1157 | \$5.7287 | \$4.4477 | \$3.6159 |  |  |  |  |  |  |  |  |
| 27 | Dawn | \$4.2890 | \$5.5638 | \$4.2307 | \$3.5922 |  |  |  |  |  |  |  |  |
| 28 | Empress/Aeco Transportation Differential | \$0.0750 | \$0.2577 | \$0.4126 | \$0.3281 |  |  |  |  |  |  |  |  |


|  | Daily Index Prices | $\begin{gathered} \text { AECO } \\ \text { (\$CDN/GJ) } \end{gathered}$ | Emerson (SUS/MMBTU) | NYMEX - Henry Hub (\$US/MMBTU) | Michigan City Gate (\$US/MMBTU) | Chicago (\$US/MMBTU) | $\begin{gathered} \text { Empress/Aeco } \\ \text { Transportation } \\ \text { Differential (\$CDN/GJ) } \\ \hline \end{gathered}$ | Dawn (\$US/MMBTU) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 11/1/2013 | \$3.2694 | \$3.6908 | \$3.5680 | \$3.7620 | \$3.7430 | (\$0.0733) | \$3.7785 |
| 2 | 11/2/2013 | \$3.1873 | \$3.5705 | \$3.4530 | \$3.5540 | \$3.5490 | (\$0.0554) | \$3.6668 |
| 3 | 11/3/2013 | \$3.1873 | \$3.5705 | \$3.4530 | \$3.5540 | \$3.5490 | (\$0.0554) | \$3.6668 |
| 4 | 11/4/2013 | \$3.1873 | \$3.5705 | \$3.4530 | \$3.5540 | \$3.5490 | (\$0.0554) | \$3.6668 |
| 5 | 11/5/2013 | \$3.1334 | \$3.5064 | \$3.3780 | \$3.5040 | \$3.4980 | (\$0.0676) | \$3.5883 |
| 6 | 11/6/2013 | \$3.1352 | \$3.5355 | \$3.3690 | \$3.5390 | \$3.5260 | (\$0.0819) | \$3.6040 |
| 7 | 11/7/2013 | \$3.1770 | \$3.6277 | \$3.4640 | \$3.6290 | \$3.6740 | (\$0.0627) | \$3.6741 |
| 8 | 11/8/2013 | \$3.2623 | \$3.7169 | \$3.5850 | \$3.7350 | \$3.7450 | (\$0.0319) | \$3.7773 |
| 9 | 11/9/2013 | \$3.2001 | \$3.6461 | \$3.5440 | \$3.6560 | \$3.6540 | (\$0.0241) | \$3.7067 |
| 10 | 11/10/2013 | \$3.2001 | \$3.6461 | \$3.5440 | \$3.6560 | \$3.6540 | (\$0.0241) | \$3.7067 |
| 11 | 11/11/2013 | \$3.2001 | \$3.6461 | \$3.5440 | \$3.6560 | \$3.6540 | (\$0.0241) | \$3.7067 |
| 12 | 11/12/2013 | \$3.2206 | \$3.7281 | \$3.6240 | \$3.7280 | \$3.7580 | (\$0.0125) | \$3.7832 |
| 13 | 11/13/2013 | \$3.2489 | \$3.7835 | \$3.6940 | \$3.7660 | \$3.8200 | (\$0.0154) | \$3.8266 |
| 14 | 11/14/2013 | \$3.1778 | \$3.7181 | \$3.6860 | \$3.7180 | \$3.7250 | (\$0.0198) | \$3.7620 |
| 15 | 11/15/2013 | \$3.0800 | \$3.5249 | \$3.5230 | \$3.5660 | \$3.5680 | (\$0.0077) | \$3.6105 |
| 16 | 11/16/2013 | \$3.2325 | \$3.6877 | \$3.5590 | \$3.6210 | \$3.6240 | \$0.0085 | \$3.7197 |
| 17 | 11/17/2013 | \$3.2325 | \$3.6877 | \$3.5590 | \$3.6210 | \$3.6240 | \$0.0085 | \$3.7197 |
| 18 | 11/18/2013 | \$3.2325 | \$3.6877 | \$3.5590 | \$3.6210 | \$3.6240 | \$0.0085 | \$3.7197 |
| 19 | 11/19/2013 | \$3.2475 | \$3.7365 | \$3.7090 | \$3.7490 | \$3.7370 | \$0.0312 | \$3.7909 |
| 20 | 11/20/2013 | \$3.1413 | \$3.6472 | \$3.6310 | \$3.6690 | \$3.6600 | \$0.0465 | \$3.7346 |
| 21 | 11/21/2013 | \$3.1850 | \$3.7132 | \$3.6250 | \$3.6800 | \$3.6920 | \$0.0798 | \$3.7487 |
| 22 | 11/22/2013 | \$3.2516 | \$3.7663 | \$3.6800 | \$3.7550 | \$3.7540 | \$0.0994 | \$3.8210 |
| 23 | 11/23/2013 | \$3.2959 | \$3.9177 | \$3.7750 | \$3.8550 | \$3.8920 | \$0.1742 | \$3.9199 |
| 24 | 11/24/2013 | \$3.2959 | \$3.9177 | \$3.7750 | \$3.8550 | \$3.8920 | \$0.1742 | \$3.9199 |
| 25 | 11/25/2013 | \$3.2959 | \$3.9177 | \$3.7750 | \$3.8550 | \$3.8920 | \$0.1742 | \$3.9199 |
| 26 | 11/26/2013 | \$3.3662 | \$4.0159 | \$3.8520 | \$3.9270 | \$4.0680 | \$0.1800 | \$3.9869 |
| 27 | 11/27/2013 | \$3.3592 | \$3.9412 | \$3.8710 | \$3.8990 | \$3.9320 | \$0.1473 | \$3.9864 |
| 28 | 11/28/2013 | \$3.3592 | \$3.9412 | \$3.8710 | \$3.8990 | \$3.9320 | \$0.1473 | \$3.9864 |
| 29 | 11/29/2013 | \$3.3592 | \$3.9412 | \$3.8710 | \$3.8990 | \$3.9320 | \$0.1473 | \$3.9864 |
| 30 | 11/30/2013 | \$3.3592 | \$3.9412 | \$3.8400 | \$3.8990 | \$3.9320 | \$0.1473 | \$3.9864 |
| 31 | 12/1/2013 | \$3.4153 | \$3.9083 | \$3.8400 | \$3.9090 | \$3.8830 | \$0.1313 | \$4.0185 |
| 32 | 12/2/2013 | \$3.4153 | \$3.9083 | \$3.8400 | \$3.9090 | \$3.8830 | \$0.1313 | \$4.0185 |
| 33 | 12/3/2013 | \$3.4917 | \$3.9600 | \$3.8530 | \$3.9680 | \$3.9120 | \$0.1625 | \$4.1062 |
| 34 | 12/4/2013 | \$3.5501 | \$4.0741 | \$3.8410 | \$3.9930 | \$4.0230 | \$0.1720 | \$4.1724 |
| 35 | 12/5/2013 | \$3.5719 | \$4.2011 | \$3.8930 | \$4.1280 | \$4.1220 | \$0.1782 | \$4.2287 |
| 36 | 12/6/2013 | \$3.6463 | \$4.2897 | \$3.9680 | \$4.1870 | \$4.2640 | \$0.1811 | \$4.2800 |
| 37 | 12/7/2013 | \$3.8266 | \$4.4838 | \$4.1450 | \$4.3610 | \$4.5660 | \$0.1852 | \$4.4260 |
| 38 | 12/8/2013 | \$3.8266 | \$4.4838 | \$4.1450 | \$4.3610 | \$4.5660 | \$0.1852 | \$4.4260 |
| 39 | 12/9/2013 | \$3.8266 | \$4.4838 | \$4.1450 | \$4.3610 | \$4.5660 | \$0.1852 | \$4.4260 |
| 40 | 12/10/2013 | \$3.7262 | \$4.5995 | \$4.2420 | \$4.4180 | \$4.8270 | \$0.1879 | \$4.4856 |
| 41 | 12/11/2013 | \$3.7651 | \$4.7401 | \$4.3250 | \$4.5040 | \$5.0730 | \$0.1864 | \$4.5782 |
| 42 | 12/12/2013 | \$3.6957 | \$4.6180 | \$4.2360 | \$4.4120 | \$4.5830 | \$0.1752 | \$4.5073 |
| 43 | 12/13/2013 | \$3.7885 | \$4.6465 | \$4.4010 | \$4.5630 | \$4.6520 | \$0.1733 | \$4.6816 |
| 44 | 12/14/2013 | \$3.6801 | \$4.6205 | \$4.4430 | \$4.5400 | \$4.6230 | \$0.1741 | \$4.7026 |
| 45 | 12/15/2013 | \$3.6801 | \$4.6205 | \$4.4430 | \$4.5400 | \$4.6230 | \$0.1741 | \$4.7026 |
| 46 | 12/16/2013 | \$3.6801 | \$4.6205 | \$4.4430 | \$4.5400 | \$4.6230 | \$0.1741 | \$4.7026 |
| 47 | 12/17/2013 | \$3.5419 | \$4.5236 | \$4.2060 | \$4.4290 | \$4.4910 | \$0.1779 | \$4.6086 |
| 48 | 12/18/2013 | \$3.5399 | \$4.4070 | \$4.2000 | \$4.4090 | \$4.3970 | \$0.1766 | \$4.5600 |
| 49 | 12/19/2013 | \$3.6727 | \$4.5228 | \$4.2500 | \$4.4630 | \$4.4970 | \$0.1767 | \$4.6304 |
| 50 | 12/20/2013 | \$3.7600 | \$4.5637 | \$4.2470 | \$4.5300 | \$4.5230 | \$0.1752 | \$4.6911 |
| 51 | 12/21/2013 | \$3.7605 | \$4.6624 | \$4.3510 | \$4.6580 | \$4.7530 | \$0.1872 | \$4.8250 |
| 52 | 12/22/2013 | \$3.7605 | \$4.6624 | \$4.3510 | \$4.6580 | \$4.7530 | \$0.1872 | \$4.8250 |
| 53 | 12/23/2013 | \$3.7605 | \$4.6624 | \$4.3510 | \$4.6580 | \$4.7530 | \$0.1872 | \$4.8250 |
| 54 | 12/24/2013 | \$3.7894 | \$4.8118 | \$4.5240 | \$4.7790 | \$4.9190 | \$0.1847 | \$4.9414 |
| 55 | 12/25/2013 | \$3.6740 | \$4.8063 | \$4.4770 | \$4.7400 | \$4.8290 | \$0.1958 | \$4.9322 |
| 56 | 12/26/2013 | \$3.6740 | \$4.8063 | \$4.4770 | \$4.7400 | \$4.8290 | \$0.1958 | \$4.9322 |
| 57 | 12/27/2013 | \$3.7099 | \$4.7086 | \$4.4010 | \$4.6750 | \$4.6960 | \$0.1918 | \$4.8784 |
| 58 | 12/28/2013 | \$3.7196 | \$4.7473 | \$4.3440 | \$4.6960 | \$4.7510 | \$0.1936 | \$4.8585 |
| 59 | 12/29/2013 | \$3.7196 | \$4.7473 | \$4.3440 | \$4.6960 | \$4.7510 | \$0.1936 | \$4.8585 |
| 60 | 12/30/2013 | \$3.7196 | \$4.7473 | \$4.3440 | \$4.6960 | \$4.7510 | \$0.1936 | \$4.8585 |
| 61 | 12/31/2013 | \$3.8815 | \$4.9215 | \$4.4120 | \$4.7710 | \$4.8470 | \$0.1952 | \$4.9232 |
| 62 | 1/1/2014 | \$3.8060 | \$4.7502 | \$4.3070 | \$4.6820 | \$4.7560 | \$0.1717 | \$4.8352 |
| 63 | 1/2/2014 | \$3.8060 | \$4.7502 | \$4.3070 | \$4.6820 | \$4.7560 | \$0.1717 | \$4.8352 |
| 64 | 1/3/2014 | \$3.8489 | \$4.8801 | \$4.3210 | \$4.7330 | \$4.8420 | \$0.1738 | \$4.8516 |
| 65 | 1/4/2014 | \$3.8939 | \$5.0475 | \$4.3910 | \$4.7990 | \$12.8010 | \$0.1807 | \$4.9504 |
| 66 | 1/5/2014 | \$3.8939 | \$5.0475 | \$4.3910 | \$4.7990 | \$12.8010 | \$0.1807 | \$4.9504 |
| 67 | 1/6/2014 | \$3.8939 | \$5.0475 | \$4.3910 | \$4.7990 | \$12.8010 | \$0.1807 | \$4.9504 |
| 68 | 1/7/2014 | \$4.1288 | \$6.4765 | \$4.4990 | \$5.9450 | \$7.2900 | \$0.1848 | \$7.1180 |
| 69 | 1/8/2014 | \$4.0508 | \$5.4353 | \$4.5830 | \$5.0720 | \$5.4020 | \$0.1814 | \$5.3655 |
| 70 | 1/9/2014 | \$3.9519 | \$4.8611 | \$4.3590 | \$4.7530 | \$4.6940 | \$0.1789 | \$4.9818 |
| 71 | 1/10/2014 | \$3.7352 | \$4.5178 | \$4.1510 | \$4.4660 | \$4.4170 | \$0.1751 | \$4.7779 |
| 72 | 1/11/2014 | \$3.6573 | \$4.3256 | \$4.0851 | \$4.3260 | \$4.2630 | \$0.1687 | \$4.5464 |
| 73 | 1/12/2014 | \$3.6573 | \$4.3256 | \$4.0851 | \$4.3260 | \$4.2630 | \$0.1687 | \$4.5464 |
| 74 | 1/13/2014 | \$3.6573 | \$4.3256 | \$4.0851 | \$4.3260 | \$4.2630 | \$0.1687 | \$4.5464 |
| 75 | 1/14/2014 | \$3.8133 | \$4.5881 | \$4.1940 | \$4.5590 | \$4.5510 | \$0.1776 | \$4.7591 |
| 76 | 1/15/2014 | \$3.8746 | \$4.7323 | \$4.3610 | \$4.7640 | \$4.7580 | \$0.1767 | \$4.9594 |
| 77 | 1/16/2014 | \$3.9820 | \$4.8489 | \$4.4530 | \$4.8280 | \$4.8080 | \$0.1785 | \$5.0859 |
| 78 | 1/17/2014 | \$4.0716 | \$5.1075 | \$4.5460 | \$5.1090 | \$5.1200 | \$0.1776 | \$5.3230 |
| 79 | 1/18/2014 | \$3.8841 | \$5.3747 | \$4.3900 | \$5.0940 | \$5.1810 | \$0.1785 | \$5.4329 |
| 80 | 1/19/2014 | \$3.8841 | \$5.3747 | \$4.3900 | \$5.0940 | \$5.1810 | \$0.1785 | \$5.4329 |


|  | $\begin{gathered} \text { Daily Index } \\ \text { Prices } \\ \hline \end{gathered}$ | $\begin{gathered} \text { AECO } \\ (\$ C D N / G J) \end{gathered}$ | Emerson (\$US/MMBTU) | NYMEX - Henry Hub (\$US/MMBTU) | Michigan City Gate (\$US/MMBTU) | Chicago (\$US/MMBTU) | Empress/Aeco <br> Transportation Differential (\$CDN/GJ) | Dawn (\$US/MMBTU) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 81 | 1/20/2014 | \$3.8841 | \$5.3747 | \$4.3900 | \$5.0940 | \$5.1810 | \$0.1785 | \$5.4329 |
| 82 | 1/21/2014 | \$3.8841 | \$5.3747 | \$4.3900 | \$5.0940 | \$5.1810 | \$0.1785 | \$5.4329 |
| 83 | 1/22/2014 | \$4.0504 | \$6.7027 | \$4.6080 | \$5.8720 | \$6.7440 | \$0.1865 | \$6.7538 |
| 84 | 1/23/2014 | \$4.2082 | \$8.4462 | \$4.9220 | \$7.3250 | \$9.0280 | \$0.1961 | \$9.1213 |
| 85 | 1/24/2014 | \$4.3259 | \$6.5436 | \$5.6370 | \$5.9570 | \$6.2800 | \$0.1904 | \$8.2316 |
| 86 | 1/25/2014 | \$4.2609 | \$9.4999 | \$5.1650 | \$9.4910 | \$10.1970 | \$0.1940 | \$9.6811 |
| 87 | 1/26/2014 | \$4.2609 | \$9.4999 | \$5.1650 | \$9.4910 | \$10.1970 | \$0.1940 | \$9.6811 |
| 88 | 1/27/2014 | \$4.2609 | \$9.4999 | \$5.1650 | \$9.4910 | \$10.1970 | \$0.1940 | \$9.6811 |
| 89 | 1/28/2014 | \$4.3796 | \$26.5053 | \$5.6590 | \$37.1550 | \$33.2300 | \$0.1853 | \$25.5365 |
| 90 | 1/29/2014 | \$4.4663 | \$8.1854 | \$5.2510 | \$6.7250 | \$6.6220 | \$0.1912 | \$8.2356 |
| 91 | 1/30/2014 | \$4.6959 | \$6.7796 | \$5.2260 | \$6.6010 | \$6.4460 | \$0.1874 | \$7.5148 |
| 92 | 1/31/2014 | \$4.7901 | \$6.8939 | \$5.2720 | \$6.7350 | \$6.7140 | \$0.1900 | \$7.7084 |
| 93 | 2/1/2014 | \$4.6986 | \$6.8358 | \$5.0400 | \$6.9520 | \$7.1150 | \$0.1784 | \$7.6211 |
| 94 | 2/2/2014 | \$4.6986 | \$6.8358 | \$5.0400 | \$6.9520 | \$7.1150 | \$0.1784 | \$7.6211 |
| 95 | 2/3/2014 | \$4.6986 | \$6.8358 | \$5.0400 | \$6.9520 | \$7.1150 | \$0.1784 | \$7.6211 |
| 96 | 2/4/2014 | \$5.7449 | \$7.6962 | \$5.0390 | \$7.0560 | \$6.9220 | \$0.1533 | \$8.3058 |
| 97 | 2/5/2014 | \$8.1527 | \$9.0771 | \$5.7750 | \$8.5760 | \$8.5840 | \$0.0308 | \$9.1603 |
| 98 | 2/6/2014 | \$18.3305 | \$20.5535 | \$8.1150 | \$22.5420 | \$22.8060 | \$0.0902 | \$22.2500 |
| 99 | 2/7/2014 | \$8.4313 | \$8.9917 | \$6.8990 | \$8.7280 | \$8.9660 | \$0.1450 | \$9.5173 |
| 100 | 2/8/2014 | \$7.6420 | \$13.3227 | \$5.9200 | \$9.6140 | \$13.5610 | \$0.1828 | \$14.2301 |
| 101 | 2/9/2014 | \$7.6420 | \$13.3227 | \$5.9200 | \$9.6140 | \$13.5610 | \$0.1828 | \$14.2301 |
| 102 | 2/10/2014 | \$7.6420 | \$13.3227 | \$5.9200 | \$9.6140 | \$13.5610 | \$0.1828 | \$14.2301 |
| 103 | 2/11/2014 | \$7.5851 | \$17.6341 | \$8.1470 | \$13.5730 | \$15.6870 | \$0.1835 | \$19.6865 |
| 104 | 2/12/2014 | \$6.0863 | \$11.1435 | \$7.7540 | \$8.3730 | \$8.2360 | \$0.1838 | \$13.3161 |
| 105 | 2/13/2014 | \$5.2111 | \$10.1348 | \$5.9550 | \$8.0460 | \$6.1350 | \$0.1834 | \$12.9725 |
| 106 | 2/14/2014 | \$5.1032 | \$9.8828 | \$5.3360 | \$8.3650 | \$5.9430 | \$0.1595 | \$11.4671 |
| 107 | 2/15/2014 | \$5.0640 | \$10.3525 | \$5.5420 | \$8.2740 | \$6.6160 | \$0.1386 | \$12.4580 |
| 108 | 2/16/2014 | \$5.0640 | \$10.3525 | \$5.5420 | \$8.2740 | \$6.6160 | \$0.1386 | \$12.4580 |
| 109 | 2/17/2014 | \$5.0640 | \$10.3525 | \$5.5420 | \$8.2740 | \$6.6160 | \$0.1386 | \$12.4580 |
| 110 | 2/18/2014 | \$5.0640 | \$10.3525 | \$5.5420 | \$8.2740 | \$6.6160 | \$0.1386 | \$12.4580 |
| 111 | 2/19/2014 | \$4.9476 | \$9.6275 | \$5.8000 | \$9.6410 | \$7.0670 | \$0.1802 | \$14.5037 |
| 112 | 2/20/2014 | \$5.5479 | \$11.5981 | \$6.0000 | \$10.1600 | \$9.6030 | \$0.1877 | \$15.2430 |
| 113 | 2/21/2014 | \$6.6992 | \$13.3822 | \$5.9570 | \$13.6520 | \$9.4410 | \$0.1956 | \$15.6774 |
| 114 | 2/22/2014 | \$8.2103 | \$26.1384 | \$6.2380 | \$26.4350 | \$18.1880 | \$0.1954 | \$28.9136 |
| 115 | 2/23/2014 | \$8.2103 | \$26.1384 | \$6.2380 | \$26.4350 | \$18.1880 | \$0.1954 | \$28.9136 |
| 116 | 2/24/2014 | \$8.2103 | \$26.1384 | \$6.2380 | \$26.4350 | \$18.1880 | \$0.1954 | \$28.9136 |
| 117 | 2/25/2014 | \$7.2967 | \$25.5390 | \$6.0750 | \$27.5330 | \$17.3820 | \$0.2000 | \$28.3835 |
| 118 | 2/26/2014 | \$5.2618 | \$20.4603 | \$5.2060 | \$18.6400 | \$17.0560 | \$0.2122 | \$22.2249 |
| 119 | 2/27/2014 | \$5.3677 | \$24.4445 | \$4.8080 | \$24.7890 | \$19.7580 | \$0.2149 | \$24.8435 |
| 120 | 2/28/2014 | \$7.0551 | \$24.5416 | \$4.6140 | \$23.0770 | \$17.7090 | \$0.3479 | \$25.5399 |
| 121 | 3/1/2014 | \$7.5743 | \$42.8790 | \$4.8040 | \$37.3670 | \$33.9970 | \$24.7755 | \$44.5661 |
| 122 | 3/2/2014 | \$7.5743 | \$42.8790 | \$4.8040 | \$37.3670 | \$33.9970 | \$24.7755 | \$44.5661 |
| 123 | 3/3/2014 | \$7.5743 | \$42.8790 | \$4.8040 | \$37.3670 | \$33.9970 | \$24.7755 | \$44.5661 |
| 124 | 3/4/2014 | \$8.0276 | \$35.7362 | \$7.0920 | \$37.5470 | \$25.3940 | \$19.2489 | \$36.5986 |
| 125 | 3/5/2014 | \$6.9393 | \$17.8369 | \$7.9830 | \$16.1760 | \$11.0400 | \$2.3186 | \$21.2197 |
| 126 | 3/6/2014 | \$5.3399 | \$12.2411 | \$6.4570 | \$12.1140 | \$8.5810 | \$2.8804 | \$13.5956 |
| 127 | 3/7/2014 | \$4.8770 | \$9.2444 | \$4.8850 | \$9.2270 | \$6.8760 | \$1.8896 | \$10.8654 |
| 128 | 3/8/2014 | \$4.5198 | \$14.1502 | \$4.7750 | \$13.4300 | \$8.5050 | \$10.7973 | \$15.8322 |
| 129 | 3/9/2014 | \$4.5198 | \$14.1502 | \$4.7750 | \$13.4300 | \$8.5050 | \$10.7973 | \$15.8322 |
| 130 | 3/10/2014 | \$4.5198 | \$14.1502 | \$4.7750 | \$13.4300 | \$8.5050 | \$10.7973 | \$15.8322 |
| 131 | 3/11/2014 | \$4.3711 | \$6.5536 | \$4.6710 | \$6.7010 | \$5.1920 | \$2.6824 | \$7.4893 |
| 132 | 3/12/2014 | \$4.4750 | \$7.1044 | \$4.6710 | \$7.1420 | \$5.7050 | \$2.6860 | \$8.1755 |
| 133 | 3/13/2014 | \$4.5258 | \$6.7626 | \$4.7210 | \$6.6980 | \$5.5120 | \$2.0440 | \$7.8322 |
| 134 | 3/14/2014 | \$4.3742 | \$4.9262 | \$4.4100 | \$5.0460 | \$4.6900 | \$0.5725 | \$5.4233 |
| 135 | 3/15/2014 | \$4.3140 | \$5.4303 | \$4.4030 | \$5.3340 | \$5.0280 | \$0.8327 | \$6.1320 |
| 136 | 3/16/2014 | \$4.3140 | \$5.4303 | \$4.4030 | \$5.3340 | \$5.0280 | \$0.8327 | \$6.1320 |
| 137 | 3/17/2014 | \$4.3140 | \$5.4303 | \$4.4030 | \$5.3340 | \$5.0280 | \$0.8327 | \$6.1320 |
| 138 | 3/18/2014 | \$4.5191 | \$5.2765 | \$4.5740 | \$5.5250 | \$4.8980 | \$0.9045 | \$5.9941 |
| 139 | 3/19/2014 | \$4.4893 | \$5.1582 | \$4.4220 | \$5.3080 | \$4.8940 | \$0.7228 | \$5.8176 |
| 140 | 3/20/2014 | \$4.4769 | \$5.0585 | \$4.4280 | \$5.2720 | \$4.9110 | \$0.5150 | \$5.5418 |
| 141 | 3/21/2014 | \$4.6024 | \$4.8304 | \$4.3900 | \$5.0340 | \$4.5900 | \$0.3047 | \$5.2140 |
| 142 | 3/22/2014 | \$4.5368 | \$6.2189 | \$4.3270 | \$6.2130 | \$5.0390 | \$1.3995 | \$6.5990 |
| 143 | 3/23/2014 | \$4.5368 | \$6.2189 | \$4.3270 | \$6.2130 | \$5.0390 | \$1.3995 | \$6.5990 |
| 144 | 3/24/2014 | \$4.5368 | \$6.2189 | \$4.3270 | \$6.2130 | \$5.0390 | \$1.3995 | \$6.5990 |
| 145 | 3/25/2014 | \$4.6458 | \$6.6369 | \$4.4160 | \$6.6640 | \$5.6480 | \$1.3890 | \$7.1173 |
| 146 | 3/26/2014 | \$5.1664 | \$7.4515 | \$4.5290 | \$7.5640 | \$5.3020 | \$1.3403 | \$8.1714 |
| 147 | 3/27/2014 | \$4.7893 | \$5.5760 | \$4.4430 | \$5.8440 | \$4.6190 | \$0.5243 | \$6.1269 |
| 148 | 3/28/2014 | \$4.5653 | \$4.8583 | \$4.3940 | \$5.0140 | \$4.7470 | \$0.3065 | \$5.1422 |
| 149 | 3/29/2014 | \$4.5638 | \$4.7550 | \$4.4960 | \$4.8890 | \$4.6320 | \$0.2666 | \$5.0408 |
| 150 | 3/30/2014 | \$4.5638 | \$4.7550 | \$4.4960 | \$4.8890 | \$4.6320 | \$0.2666 | \$5.0408 |
| 151 | 3/31/2014 | \$4.5638 | \$4.7550 | \$4.4960 | \$4.8890 | \$4.6320 | \$0.2666 | \$5.0408 |
| 152 | 4/1/2014 | \$4.4639 | \$5.0138 | \$4.4800 | \$4.9710 | \$4.7910 | \$0.2306 | \$5.1495 |
| 153 | 4/2/2014 | \$4.4252 | \$4.7932 | \$4.3870 | \$4.7920 | \$4.7280 | \$0.0629 | \$5.0516 |
| 154 | 4/3/2014 | \$4.4113 | \$4.7782 | \$4.3850 | \$4.8000 | \$4.7130 | (\$0.0057) | \$4.9911 |
| 155 | 4/4/2014 | \$4.4657 | \$4.8544 | \$4.5120 | \$4.8240 | \$4.7900 | \$0.0218 | \$5.0650 |
| 156 | 4/5/2014 | \$4.4266 | \$4.6436 | \$4.4910 | \$4.7740 | \$4.6890 | (\$0.0012) | \$4.9129 |
| 157 | 4/6/2014 | \$4.4266 | \$4.6436 | \$4.4910 | \$4.7740 | \$4.6890 | (\$0.0012) | \$4.9129 |
| 158 | 4/7/2014 | \$4.4266 | \$4.6436 | \$4.4910 | \$4.7740 | \$4.6890 | (\$0.0012) | \$4.9129 |
| 159 | 4/8/2014 | \$4.3850 | \$4.6409 | \$4.5780 | \$4.7800 | \$4.6940 | \$0.0021 | \$4.8390 |
| 160 | 4/9/2014 | \$4.3840 | \$4.6671 | \$4.5730 | \$4.8570 | \$4.7320 | \$0.0165 | \$4.9887 |


|  | Daily Index Prices | $\begin{gathered} \text { AECO } \\ \text { (\$CDN/GJ) } \end{gathered}$ | Emerson (\$US/MMBTU) | NYMEX - Henry Hub (\$US/MMBTU) | Michigan City Gate (\$US/MMBTU) | Chicago (\$US/MMBTU) | Empress/Aeco Transportation Differential (\$CDN/GJ) | Dawn (\$US/MMBTU) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 161 | 4/10/2014 | \$4.4619 | \$4.6528 | \$4.6650 | \$4.8160 | \$4.6380 | \$0.0270 | \$4.9678 |
| 162 | 4/11/2014 | \$4.5509 | \$4.6471 | \$4.5650 | \$4.7310 | \$4.6060 | (\$0.0009) | \$4.8095 |
| 163 | 4/12/2014 | \$4.5912 | \$4.7551 | \$4.6740 | \$4.8310 | \$4.7340 | \$0.0133 | \$4.8620 |
| 164 | 4/13/2014 | \$4.5912 | \$4.7551 | \$4.6740 | \$4.8310 | \$4.7340 | \$0.0133 | \$4.8620 |
| 165 | 4/14/2014 | \$4.5912 | \$4.7551 | \$4.6740 | \$4.8310 | \$4.7340 | \$0.0133 | \$4.8620 |
| 166 | 4/15/2014 | \$4.5686 | \$4.8623 | \$4.6430 | \$4.9130 | \$4.8650 | \$0.0454 | \$5.0096 |
| 167 | 4/16/2014 | \$4.5806 | \$4.9866 | \$4.6920 | \$4.9260 | \$4.9090 | \$0.0696 | \$5.0926 |
| 168 | 4/17/2014 | \$4.5663 | \$4.8715 | \$4.6400 | \$4.8610 | \$4.8040 | \$0.0517 | \$5.0100 |
| 169 | 4/18/2014 | \$4.4584 | \$4.6031 | \$4.5870 | \$4.7070 | \$4.5930 | \$0.0031 | \$4.7563 |
| 170 | 4/19/2014 | \$4.4584 | \$4.6031 | \$4.5870 | \$4.7070 | \$4.5930 | \$0.0031 | \$4.7563 |
| 171 | 4/20/2014 | \$4.4584 | \$4.6031 | \$4.5870 | \$4.7070 | \$4.5930 | \$0.0031 | \$4.7563 |
| 172 | 4/21/2014 | \$4.4584 | \$4.6031 | \$4.5870 | \$4.7070 | \$4.5930 | \$0.0031 | \$4.7563 |
| 173 | 4/22/2014 | \$4.6117 | \$4.7675 | \$4.7620 | \$4.8700 | \$4.8000 | \$0.0159 | \$4.9228 |
| 174 | 4/23/2014 | \$4.6064 | \$4.7722 | \$4.7560 | \$4.8580 | \$4.7700 | \$0.0053 | \$4.8890 |
| 175 | 4/24/2014 | \$4.6480 | \$4.7573 | \$4.8130 | \$4.8920 | \$4.7970 | (\$0.0048) | \$4.9458 |
| 176 | 4/25/2014 | \$4.7353 | \$4.7973 | \$4.8270 | \$4.9030 | \$4.8080 | (\$0.0018) | \$4.9342 |
| 177 | 4/26/2014 | \$4.5383 | \$4.5935 | \$4.7160 | \$4.8070 | \$4.6890 | (\$0.0043) | \$4.8303 |
| 178 | 4/27/2014 | \$4.5383 | \$4.5935 | \$4.7160 | \$4.8070 | \$4.6890 | (\$0.0043) | \$4.8303 |
| 179 | 4/28/2014 | \$4.5383 | \$4.5935 | \$4.7160 | \$4.8070 | \$4.6890 | (\$0.0043) | \$4.8303 |
| 180 | 4/29/2014 | \$4.6031 | \$4.8034 | \$4.7810 | \$4.8840 | \$4.8040 | \$0.0358 | \$4.9190 |
| 181 | 4/30/2014 | \$4.6081 | \$4.8440 | \$4.8360 | \$4.9280 | \$4.8850 | \$0.0326 | \$4.9580 |
| 182 | 5/1/2014 | \$4.6084 | \$4.7332 | \$4.7940 | \$4.9330 | \$4.9080 | \$0.1695 | \$4.9486 |
| 183 | 5/2/2014 | \$4.6042 | \$4.7425 | \$4.7920 | \$4.9480 | \$4.8820 | \$0.1730 | \$4.9478 |
| 184 | 5/3/2014 | \$4.5282 | \$4.6802 | \$4.7250 | \$4.8990 | \$4.7890 | \$0.1636 | \$4.8922 |
| 185 | 5/4/2014 | \$4.5282 | \$4.6802 | \$4.7250 | \$4.8990 | \$4.7890 | \$0.1636 | \$4.8922 |
| 186 | 5/5/2014 | \$4.5282 | \$4.6802 | \$4.7250 | \$4.8990 | \$4.7890 | \$0.1636 | \$4.8922 |
| 187 | 5/6/2014 | \$4.5408 | \$4.6537 | \$4.9103 | \$4.8860 | \$4.7840 | \$0.1256 | \$4.8881 |
| 188 | 5/7/2014 | \$4.5630 | \$4.6708 | \$4.7990 | \$4.9320 | \$4.8010 | \$0.0825 | \$4.9287 |
| 189 | 5/8/2014 | \$4.5487 | \$4.5797 | \$4.8230 | \$4.9520 | \$4.7660 | \$0.0587 | \$4.9282 |
| 190 | 5/9/2014 | \$4.4762 | \$4.5129 | \$4.7670 | \$4.8600 | \$4.7090 | \$0.0463 | \$4.8357 |
| 191 | 5/10/2014 | \$4.3219 | \$4.3372 | \$4.5870 | \$4.6950 | \$4.5400 | \$0.0383 | \$4.6849 |
| 192 | 5/11/2014 | \$4.3219 | \$4.3372 | \$4.5870 | \$4.6950 | \$4.5400 | \$0.0383 | \$4.6849 |
| 193 | 5/12/2014 | \$4.3219 | \$4.3372 | \$4.5870 | \$4.6950 | \$4.5400 | \$0.0383 | \$4.6849 |
| 194 | 5/13/2014 | \$4.3037 | \$4.4269 | \$4.5150 | \$4.6220 | \$4.5440 | \$0.0605 | \$4.6249 |
| 195 | 5/14/2014 | \$4.2522 | \$4.4932 | \$4.4690 | \$4.5970 | \$4.5410 | \$0.0642 | \$4.5962 |
| 196 | 5/15/2014 | \$4.2173 | \$4.4883 | \$4.4290 | \$4.5850 | \$4.5100 | \$0.0579 | \$4.5749 |
| 197 | 5/16/2014 | \$4.2014 | \$4.4335 | \$4.4200 | \$4.5520 | \$4.5030 | \$0.0496 | \$4.5508 |
| 198 | 5/17/2014 | \$4.2566 | \$4.3877 | \$4.4710 | \$4.6040 | \$4.4670 | \$0.0413 | \$4.5935 |
| 199 | 5/18/2014 | \$4.2566 | \$4.3877 | \$4.4710 | \$4.6040 | \$4.4670 | \$0.0413 | \$4.5935 |
| 200 | 5/19/2014 | \$4.2566 | \$4.3877 | \$4.4710 | \$4.6040 | \$4.4670 | \$0.0413 | \$4.5935 |
| 201 | 5/20/2014 | \$4.2667 | \$4.3806 | \$4.5360 | \$4.6610 | \$4.5050 | \$0.0503 | \$4.6515 |
| 202 | 5/21/2014 | \$4.2763 | \$4.4140 | \$4.5290 | \$4.6540 | \$4.5110 | \$0.0370 | \$4.6400 |
| 203 | 5/22/2014 | \$4.3705 | \$4.4533 | \$4.5730 | \$4.6830 | \$4.5690 | \$0.0425 | \$4.6741 |
| 204 | 5/23/2014 | \$4.3105 | \$4.4215 | \$4.5290 | \$4.6240 | \$4.5110 | \$0.0421 | \$4.6154 |
| 205 | 5/24/2014 | \$4.2051 | \$4.2749 | \$4.4020 | \$4.5770 | \$4.3860 | \$0.0471 | \$4.5695 |
| 206 | 5/25/2014 | \$4.2051 | \$4.2749 | \$4.4020 | \$4.5770 | \$4.3860 | \$0.0471 | \$4.5695 |
| 207 | 5/26/2014 | \$4.2051 | \$4.2749 | \$4.4020 | \$4.5770 | \$4.3860 | \$0.0471 | \$4.5695 |
| 208 | 5/27/2014 | \$4.2051 | \$4.2749 | \$4.4020 | \$4.5770 | \$4.3860 | \$0.0471 | \$4.5695 |
| 209 | 5/28/2014 | \$4.2664 | \$4.3003 | \$4.4270 | \$4.6650 | \$4.5140 | \$0.0325 | \$4.6514 |
| 210 | 5/29/2014 | \$4.3870 | \$4.4612 | \$4.5590 | \$4.7920 | \$4.6080 | \$0.0410 | \$4.7805 |
| 211 | 5/30/2014 | \$4.4595 | \$4.5352 | \$4.6270 | \$4.8450 | \$4.6050 | \$0.0370 | \$4.8437 |
| 212 | 5/31/2014 | \$4.4595 | \$4.5352 | \$4.4880 | \$4.7380 | \$4.5280 | \$0.0370 | \$4.8437 |
| 213 | 6/1/2014 | \$4.3536 | \$4.4386 | \$4.4880 | \$4.7380 | \$4.5280 | \$0.0766 | \$4.7444 |
| 214 | 6/2/2014 | \$4.3536 | \$4.4386 | \$4.4880 | \$4.7380 | \$4.5280 | \$0.0766 | \$4.7444 |
| 215 | 6/3/2014 | \$4.5126 | \$4.5596 | \$4.5350 | \$4.7690 | \$4.6470 | \$0.0444 | \$4.7921 |
| 216 | 6/4/2014 | \$4.6317 | \$4.6616 | \$4.6200 | \$4.8940 | \$4.7370 | \$0.0436 | \$4.9032 |
| 217 | 6/5/2014 | \$4.5781 | \$4.6209 | \$4.5800 | \$4.8630 | \$4.7230 | \$0.0456 | \$4.8829 |
| 218 | 6/6/2014 | \$4.6362 | \$4.6758 | \$4.6570 | \$4.9110 | \$4.7340 | \$0.0320 | \$4.9423 |
| 219 | 6/7/2014 | \$4.6118 | \$4.6206 | \$4.6580 | \$4.9230 | \$4.7330 | \$0.0270 | \$4.9440 |
| 220 | 6/8/2014 | \$4.6118 | \$4.6206 | \$4.6580 | \$4.9230 | \$4.7330 | \$0.0270 | \$4.9440 |
| 221 | 6/9/2014 | \$4.6118 | \$4.6206 | \$4.6580 | \$4.9230 | \$4.7330 | \$0.0270 | \$4.9440 |
| 222 | 6/10/2014 | \$4.5719 | \$4.6285 | \$4.6730 | \$4.8870 | \$4.7090 | \$0.0223 | \$4.9164 |
| 223 | 6/11/2014 | \$4.4890 | \$4.5581 | \$4.6180 | \$4.7990 | \$4.6290 | \$0.0189 | \$4.8228 |
| 224 | 6/12/2014 | \$4.4570 | \$4.5779 | \$4.5120 | \$4.7640 | \$4.5650 | \$0.0189 | \$4.7752 |
| 225 | 6/13/2014 | \$4.4836 | \$4.5173 | \$4.5070 | \$4.7600 | \$4.5770 | \$0.0111 | \$4.7731 |
| 226 | 6/14/2014 | \$4.6064 | \$4.6413 | \$4.6960 | \$4.9490 | \$4.7030 | \$0.0039 | \$4.9519 |
| 227 | 6/15/2014 | \$4.6064 | \$4.6413 | \$4.6960 | \$4.9490 | \$4.7030 | \$0.0039 | \$4.9519 |
| 228 | 6/16/2014 | \$4.6064 | \$4.6413 | \$4.6960 | \$4.9490 | \$4.7030 | \$0.0039 | \$4.9519 |
| 229 | 6/17/2014 | \$4.5663 | \$4.6487 | \$4.7140 | \$4.9790 | \$4.7520 | \$0.0218 | \$4.9729 |
| 230 | 6/18/2014 | \$4.5599 | \$4.6564 | \$4.6800 | \$4.9330 | \$4.8120 | \$0.0379 | \$4.9484 |
| 231 | 6/19/2014 | \$4.6267 | \$4.7640 | \$4.7250 | \$4.9580 | \$4.8340 | \$0.0230 | \$4.9772 |
| 232 | 6/20/2014 | \$4.5423 | \$4.6512 | \$4.6680 | \$4.8760 | \$4.7510 | \$0.0024 | \$4.8893 |
| 233 | 6/21/2014 | \$4.3958 | \$4.4928 | \$4.5330 | \$4.7470 | \$4.5910 | \$0.0081 | \$4.7539 |
| 234 | 6/22/2014 | \$4.3958 | \$4.4928 | \$4.5330 | \$4.7470 | \$4.5910 | \$0.0081 | \$4.7539 |
| 235 | 6/23/2014 | \$4.3958 | \$4.4928 | \$4.5330 | \$4.7470 | \$4.5910 | \$0.0081 | \$4.7539 |
| 236 | 6/24/2014 | \$4.3347 | \$4.4228 | \$4.4880 | \$4.7090 | \$4.5450 | \$0.0118 | \$4.7142 |
| 237 | 6/25/2014 | \$4.3829 | \$4.4973 | \$4.5020 | \$4.7200 | \$4.5660 | \$0.0151 | \$4.7432 |
| 238 | 6/26/2014 | \$4.4394 | \$4.5925 | \$4.5840 | \$4.7970 | \$4.6600 | \$0.0025 | \$4.8173 |
| 239 | 6/27/2014 | \$4.3827 | \$4.5493 | \$4.5670 | \$4.7570 | \$4.5910 | \$0.0146 | \$4.7752 |
| 240 | 6/28/2014 | \$4.1874 | \$4.3064 | \$4.3890 | \$4.5970 | \$4.4160 | \$0.0098 | \$4.6109 |
| 241 | 6/29/2014 | \$4.1874 | \$4.3064 | \$4.3890 | \$4.5970 | \$4.4160 | \$0.0098 | \$4.6109 |


|  | Daily Index Prices | $\begin{gathered} \text { AECO } \\ \text { (\$CDN/GJ) } \end{gathered}$ | Emerson (\$US/MMBTU) | NYMEX - Henry Hub (\$US/MMBTU) | Michigan City Gate (\$US/MMBTU) | Chicago (\$US/MMBTU) | Empress/Aeco <br> Transportation Differential (\$CDN/GJ) | Dawn (\$US/MMBTU) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 242 | 6/30/2014 | \$4.1874 | \$4.3064 | \$4.3890 | \$4.5970 | \$4.4160 | \$0.0098 | \$4.6109 |
| 243 | 7/1/2014 | \$4.1939 | \$4.3179 | \$4.4270 | \$4.6090 | \$4.4900 | \$0.0050 | \$4.6220 |
| 244 | 7/2/2014 | \$4.2048 | \$4.2650 | \$4.4660 | \$4.5890 | \$4.4810 | \$0.0066 | \$4.6147 |
| 245 | 7/3/2014 | \$4.1936 | \$4.2550 | \$4.4260 | \$4.5360 | \$4.4240 | \$0.0136 | \$4.5522 |
| 246 | 7/4/2014 | \$4.1257 | \$4.1452 | \$4.3060 | \$4.5070 | \$4.3380 | (\$0.0175) | \$4.5107 |
| 247 | 7/5/2014 | \$4.1257 | \$4.1452 | \$4.3060 | \$4.5070 | \$4.3380 | (\$0.0175) | \$4.5107 |
| 248 | 7/6/2014 | \$4.1257 | \$4.1452 | \$4.3060 | \$4.5070 | \$4.3380 | (\$0.0175) | \$4.5107 |
| 249 | 7/7/2014 | \$4.1257 | \$4.1452 | \$4.3060 | \$4.5070 | \$4.3380 | (\$0.0175) | \$4.5107 |
| 250 | 7/8/2014 | \$4.0616 | \$4.1297 | \$4.2840 | \$4.4410 | \$4.3480 | (\$0.0030) | \$4.4483 |
| 251 | 7/9/2014 | \$4.0229 | \$4.0279 | \$4.1800 | \$4.3400 | \$4.2530 | (\$0.0092) | \$4.3461 |
| 252 | 7/10/2014 | \$4.0697 | \$4.1987 | \$4.1660 | \$4.3380 | \$4.2600 | (\$0.0386) | \$4.3547 |
| 253 | 7/11/2014 | \$4.0467 | \$4.1446 | \$4.1520 | \$4.3310 | \$4.2170 | (\$0.0164) | \$4.3408 |
| 254 | 7/12/2014 | \$3.9908 | \$4.0687 | \$4.1270 | \$4.2690 | \$4.1660 | (\$0.0182) | \$4.2899 |
| 255 | 7/13/2014 | \$3.9908 | \$4.0687 | \$4.1270 | \$4.2690 | \$4.1660 | (\$0.0182) | \$4.2899 |
| 256 | 7/14/2014 | \$3.9908 | \$4.0687 | \$4.1270 | \$4.2690 | \$4.1660 | (\$0.0182) | \$4.2899 |
| 257 | 7/15/2014 | \$4.0748 | \$4.1685 | \$4.1250 | \$4.2900 | \$4.2020 | (\$0.0283) | \$4.3270 |
| 258 | 7/16/2014 | \$4.0754 | \$4.1974 | \$4.1340 | \$4.3120 | \$4.1600 | (\$0.0503) | \$4.3319 |
| 259 | 7/17/2014 | \$4.0524 | \$4.1830 | \$4.1570 | \$4.3060 | \$4.1720 | (\$0.0620) | \$4.3283 |
| 260 | 7/18/2014 | \$3.9425 | \$4.0115 | \$4.0430 | \$4.2050 | \$4.0860 | (\$0.0602) | \$4.2289 |
| 261 | 7/19/2014 | \$3.8412 | \$3.8801 | \$4.0800 | \$4.1140 | \$3.9710 | (\$0.0437) | \$4.1324 |
| 262 | 7/20/2014 | \$3.8412 | \$3.8801 | \$4.0800 | \$4.1140 | \$3.9710 | (\$0.0437) | \$4.1324 |
| 263 | 7/21/2014 | \$3.8412 | \$3.8801 | \$4.0800 | \$4.1140 | \$3.9710 | (\$0.0437) | \$4.1324 |
| 264 | 7/22/2014 | \$3.7598 | \$3.9250 | \$3.8670 | \$4.0310 | \$3.9430 | \$0.0236 | \$4.0466 |
| 265 | 7/23/2014 | \$3.7244 | \$3.9417 | \$3.8130 | \$3.9950 | \$3.9100 | (\$0.0191) | \$4.0075 |
| 266 | 7/24/2014 | \$3.6973 | \$3.8967 | \$3.8260 | \$3.9770 | \$3.9340 | (\$0.0271) | \$3.9913 |
| 267 | 7/25/2014 | \$3.6892 | \$3.9085 | \$3.8260 | \$3.9670 | \$3.8690 | (\$0.0332) | \$3.9893 |
| 268 | 7/26/2014 | \$3.6418 | \$3.8653 | \$3.8580 | \$3.9620 | \$3.8290 | (\$0.0451) | \$3.9502 |
| 269 | 7/27/2014 | \$3.6418 | \$3.8653 | \$3.8580 | \$3.9620 | \$3.8290 | (\$0.0451) | \$3.9502 |
| 270 | 7/28/2014 | \$3.6418 | \$3.8653 | \$3.8580 | \$3.9620 | \$3.8290 | (\$0.0451) | \$3.9502 |
| 271 | 7/29/2014 | \$3.6940 | \$3.8791 | \$3.8440 | \$3.9470 | \$3.8570 | (\$0.0428) | \$3.9630 |
| 272 | 7/30/2014 | \$3.6278 | \$3.8183 | \$3.7850 | \$3.8660 | \$3.7860 | (\$0.0442) | \$3.8798 |
| 273 | 7/31/2014 | \$3.6539 | \$3.7824 | \$3.7760 | \$3.8600 | \$3.7650 | (\$0.0467) | \$3.8789 |
| 274 | 8/1/2014 | \$3.7057 | \$3.7219 | \$3.8130 | \$3.8510 | \$3.7620 | (\$0.0298) | \$3.8670 |
| 275 | 8/2/2014 | \$3.6692 | \$3.6592 | \$3.7700 | \$3.8490 | \$3.7840 | (\$0.0068) | \$3.8578 |
| 276 | 8/3/2014 | \$3.6692 | \$3.6592 | \$3.7700 | \$3.8490 | \$3.7840 | (\$0.0068) | \$3.8578 |
| 277 | 8/4/2014 | \$3.6692 | \$3.6592 | \$3.7700 | \$3.8490 | \$3.7840 | (\$0.0068) | \$3.8578 |
| 278 | 8/5/2014 | \$3.7012 | \$3.7813 | \$3.8710 | \$3.8740 | \$3.8690 | \$0.0245 | \$3.9125 |
| 279 | 8/6/2014 | \$3.7875 | \$3.9290 | \$3.9230 | \$3.9750 | \$3.9550 | \$0.0086 | \$4.0086 |
| 280 | 8/7/2014 | \$3.8250 | \$3.9100 | \$3.9160 | \$4.0010 | \$3.9600 | (\$0.0002) | \$4.0176 |
| 281 | 8/8/2014 | \$3.8629 | \$3.9266 | \$3.9910 | \$4.0410 | \$4.0080 | (\$0.0012) | \$4.0663 |
| 282 | 8/9/2014 | \$3.8014 | \$3.8021 | \$3.9400 | \$3.9960 | \$3.9390 | (\$0.0029) | \$4.0148 |
| 283 | 8/10/2014 | \$3.8014 | \$3.8021 | \$3.9400 | \$3.9960 | \$3.9390 | (\$0.0029) | \$4.0148 |
| 284 | 8/11/2014 | \$3.8014 | \$3.8021 | \$3.9400 | \$3.9960 | \$3.9390 | (\$0.0029) | \$4.0148 |
| 285 | 8/12/2014 | \$3.8438 | \$3.9252 | \$4.0010 | \$4.0660 | \$4.0050 | (\$0.0188) | \$4.0838 |
| 286 | 8/13/2014 | \$3.8550 | \$3.8722 | \$3.9410 | \$4.0310 | \$3.9860 | (\$0.0198) | \$4.0689 |
| 287 | 8/14/2014 | \$3.7943 | \$3.9092 | \$3.8950 | \$3.9630 | \$3.9150 | (\$0.0078) | \$3.9841 |
| 288 | 8/15/2014 | \$3.7983 | \$3.8716 | \$3.8540 | \$3.9260 | \$3.8910 | (\$0.0089) | \$3.9613 |
| 289 | 8/16/2014 | \$3.6975 | \$3.8035 | \$3.7980 | \$3.8810 | \$3.8230 | (\$0.0077) | \$3.8900 |
| 290 | 8/17/2014 | \$3.6975 | \$3.8035 | \$3.7980 | \$3.8810 | \$3.8230 | (\$0.0077) | \$3.8900 |
| 291 | 8/18/2014 | \$3.6975 | \$3.8035 | \$3.7980 | \$3.8810 | \$3.8230 | (\$0.0077) | \$3.8900 |
| 292 | 8/19/2014 | \$3.6826 | \$3.8135 | \$3.7750 | \$3.8840 | \$3.8410 | (\$0.0027) | \$3.8864 |
| 293 | 8/20/2014 | \$3.7784 | \$3.8983 | \$3.8370 | \$3.9580 | \$3.9500 | (\$0.0152) | \$3.9703 |
| 294 | 8/21/2014 | \$3.7583 | \$3.8849 | \$3.8810 | \$3.9620 | \$3.9350 | (\$0.0192) | \$3.9650 |
| 295 | 8/22/2014 | \$3.7584 | \$3.9305 | \$3.8820 | \$3.9890 | \$3.9680 | (\$0.0127) | \$3.9905 |
| 296 | 8/23/2014 | \$3.7538 | \$3.8915 | \$3.8950 | \$3.9860 | \$3.9610 | (\$0.0216) | \$3.9930 |
| 297 | 8/24/2014 | \$3.7538 | \$3.8915 | \$3.8950 | \$3.9860 | \$3.9610 | (\$0.0216) | \$3.9930 |
| 298 | 8/25/2014 | \$3.7538 | \$3.8915 | \$3.8950 | \$3.9860 | \$3.9610 | (\$0.0216) | \$3.9930 |
| 299 | 8/26/2014 | \$3.7778 | \$3.9744 | \$3.9400 | \$4.0240 | \$3.9600 | (\$0.0189) | \$4.0482 |
| 300 | 8/27/2014 | \$3.8011 | \$4.0297 | \$3.9900 | \$4.0320 | \$3.9980 | (\$0.0103) | \$4.0801 |
| 301 | 8/28/2014 | \$3.8319 | \$4.0195 | \$4.0220 | \$4.0570 | \$4.0120 | (\$0.0059) | \$4.0783 |
| 302 | 8/29/2014 | \$3.8276 | \$3.9920 | \$4.0570 | \$4.0480 | \$4.0080 | (\$0.0006) | \$4.0800 |
| 303 | 8/30/2014 | \$3.8276 | \$3.9920 | \$4.0430 | \$4.0520 | \$4.0260 | (\$0.0006) | \$4.0800 |
| 304 | 8/31/2014 | \$3.8276 | \$3.9920 | \$4.0430 | \$4.0520 | \$4.0260 | (\$0.0006) | \$4.0800 |
| 305 | 9/1/2014 | \$3.7663 | \$4.0238 | \$4.0430 | \$4.0520 | \$4.0260 | \$0.0110 | \$4.0860 |
| 306 | 9/2/2014 | \$3.7663 | \$4.0238 | \$4.0430 | \$4.0520 | \$4.0260 | \$0.0110 | \$4.0860 |
| 307 | 9/3/2014 | \$3.7272 | \$4.0109 | \$4.0080 | \$4.0480 | \$3.9940 | (\$0.0037) | \$4.0961 |
| 308 | 9/4/2014 | \$3.6594 | \$3.9310 | \$3.9380 | \$3.9630 | \$3.9250 | (\$0.0007) | \$4.0187 |
| 309 | 9/5/2014 | \$3.6427 | \$3.9125 | \$3.9090 | \$3.9580 | \$3.9150 | (\$0.0075) | \$3.9935 |
| 310 | 9/6/2014 | \$3.6126 | \$3.8479 | \$3.8610 | \$3.8990 | \$3.8550 | (\$0.0109) | \$3.9344 |
| 311 | 9/7/2014 | \$3.6126 | \$3.8479 | \$3.8610 | \$3.8990 | \$3.8550 | (\$0.0109) | \$3.9344 |
| 312 | 9/8/2014 | \$3.6126 | \$3.8479 | \$3.8610 | \$3.8990 | \$3.8550 | (\$0.0109) | \$3.9344 |
| 313 | 9/9/2014 | \$3.7126 | \$3.8762 | \$3.8640 | \$3.9300 | \$3.9020 | (\$0.0145) | \$3.9567 |
| 314 | 9/10/2014 | \$3.9809 | \$4.0470 | \$3.9320 | \$4.1130 | \$4.0500 | (\$0.0610) | \$4.1231 |
| 315 | 9/11/2014 | \$3.9113 | \$4.0205 | \$3.9840 | \$4.0690 | \$4.0370 | (\$0.0583) | \$4.0844 |
| 316 | 9/12/2014 | \$3.8292 | \$3.9469 | \$3.9380 | \$3.9840 | \$3.9530 | (\$0.0369) | \$4.0202 |
| 317 | 9/13/2014 | \$3.8001 | \$3.8475 | \$3.8230 | \$3.9000 | \$3.8610 | (\$0.0506) | \$3.9264 |
| 318 | 9/14/2014 | \$3.8001 | \$3.8475 | \$3.8230 | \$3.9000 | \$3.8610 | (\$0.0506) | \$3.9264 |
| 319 | 9/15/2014 | \$3.8001 | \$3.8475 | \$3.8230 | \$3.9000 | \$3.8610 | (\$0.0506) | \$3.9264 |
| 320 | 9/16/2014 | \$3.9903 | \$3.9818 | \$3.9200 | \$4.0510 | \$3.9930 | (\$0.0824) | \$4.0561 |
| 321 | 9/17/2014 | \$3.9021 | \$3.9256 | \$3.8540 | \$3.9760 | \$3.9320 | (\$0.0846) | \$4.0144 |
| 322 | 9/18/2014 | \$3.9842 | \$4.0718 | \$3.9740 | \$4.1150 | \$4.0730 | (\$0.0539) | \$4.1501 |


|  | $\begin{gathered} \text { Daily Index } \\ \text { Prices } \\ \hline \end{gathered}$ | $\begin{gathered} \text { AECO } \\ \text { (\$CDN/GJ) } \end{gathered}$ | Emerson (\$US/MMBTU) | NYMEX - Henry Hub (\$US/MMBTU) | Michigan City Gate (\$US/MMBTU) | Chicago (\$US/MMBTU) | Empress/Aeco <br> Transportation Differential (\$CDN/GJ) | Dawn (\$US/MMBTU) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 323 | 9/19/2014 | \$3.9537 | \$4.0404 | \$3.9910 | \$4.1020 | \$4.0380 | (\$0.0520) | \$4.1294 |
| 324 | 9/20/2014 | \$3.7723 | \$3.8928 | \$3.8750 | \$3.9690 | \$3.9070 | (\$0.0278) | \$3.9838 |
| 325 | 9/21/2014 | \$3.7723 | \$3.8928 | \$3.8750 | \$3.9690 | \$3.9070 | (\$0.0278) | \$3.9838 |
| 326 | 9/22/2014 | \$3.7723 | \$3.8928 | \$3.8750 | \$3.9690 | \$3.9070 | (\$0.0278) | \$3.9838 |
| 327 | 9/23/2014 | \$3.7838 | \$3.9395 | \$3.8790 | \$3.9720 | \$3.9540 | (\$0.0313) | \$4.0079 |
| 328 | 9/24/2014 | \$3.7347 | \$3.9266 | \$3.8950 | \$3.9960 | \$3.9700 | (\$0.0269) | \$4.0210 |
| 329 | 9/25/2014 | \$3.7012 | \$3.8827 | \$3.8390 | \$3.9400 | \$3.9020 | (\$0.0197) | \$3.9635 |
| 330 | 9/26/2014 | \$3.7133 | \$3.8946 | \$3.8910 | \$3.9500 | \$3.8810 | (\$0.0182) | \$3.9853 |
| 331 | 9/27/2014 | \$3.7633 | \$3.9447 | \$3.9210 | \$3.9840 | \$3.9210 | (\$0.0293) | \$4.0403 |
| 332 | 9/28/2014 | \$3.7633 | \$3.9447 | \$3.9210 | \$3.9840 | \$3.9210 | (\$0.0293) | \$4.0403 |
| 333 | 9/29/2014 | \$3.7633 | \$3.9447 | \$3.9210 | \$3.9840 | \$3.9210 | (\$0.0293) | \$4.0403 |
| 334 | 9/30/2014 | \$3.8715 | \$4.0365 | \$4.0210 | \$4.0900 | \$4.0610 | (\$0.0535) | \$4.1193 |
| 335 | 10/1/2014 | \$3.9441 | \$4.0623 | \$4.1410 | \$4.1230 | \$4.0860 | (\$0.0498) | \$4.1382 |
| 336 | 10/2/2014 | \$3.9390 | \$4.0666 | \$4.1400 | \$4.1300 | \$4.0930 | (\$0.0373) | \$4.1466 |
| 337 | 10/3/2014 | \$3.7422 | \$3.9328 | \$3.9950 | \$3.9830 | \$3.9780 | (\$0.0068) | \$4.0045 |
| 338 | 10/4/2014 | \$3.7150 | \$3.8995 | \$3.9380 | \$3.9370 | \$3.9590 | \$0.0265 | \$3.9921 |
| 339 | 10/5/2014 | \$3.7150 | \$3.8995 | \$3.9380 | \$3.9370 | \$3.9590 | \$0.0265 | \$3.9921 |
| 340 | 10/6/2014 | \$3.7150 | \$3.8995 | \$3.9380 | \$3.9370 | \$3.9590 | \$0.0265 | \$3.9921 |
| 341 | 10/7/2014 | \$3.6482 | \$3.8850 | \$3.8880 | \$3.9350 | \$3.9260 | \$0.0027 | \$3.9490 |
| 342 | 10/8/2014 | \$3.6409 | \$3.8910 | \$3.8790 | \$3.9590 | \$3.9310 | \$0.0031 | \$3.9707 |
| 343 | 10/9/2014 | \$3.5979 | \$3.9300 | \$3.8840 | \$3.9910 | \$3.9540 | \$0.0251 | \$3.9929 |
| 344 | 10/10/2014 | \$3.4864 | \$3.9141 | \$3.8700 | \$3.9610 | \$3.9530 | \$0.0313 | \$3.9774 |
| 345 | 10/11/2014 | \$3.4688 | \$3.8455 | \$3.8560 | \$3.9630 | \$3.9210 | \$0.0414 | \$3.9245 |
| 346 | 10/12/2014 | \$3.4688 | \$3.8455 | \$3.8560 | \$3.9630 | \$3.9210 | \$0.0414 | \$3.9245 |
| 347 | 10/13/2014 | \$3.4688 | \$3.8455 | \$3.8560 | \$3.9630 | \$3.9210 | \$0.0414 | \$3.9245 |
| 348 | 10/14/2014 | \$3.5667 | \$3.8248 | \$3.8720 | \$3.8840 | \$3.8430 | \$0.0289 | \$3.8876 |
| 349 | 10/15/2014 | \$3.6302 | \$3.8566 | \$3.9120 | \$3.9230 | \$3.8890 | \$0.0364 | \$3.9201 |
| 350 | 10/16/2014 | \$3.5679 | \$3.6804 | \$3.8130 | \$3.8120 | \$3.7820 | \$0.0456 | \$3.8252 |
| 351 | 10/17/2014 | \$3.5724 | \$3.7646 | \$3.7980 | \$3.8110 | \$3.8080 | \$0.0460 | \$3.8592 |
| 352 | 10/18/2014 | \$3.4744 | \$3.7088 | \$3.7250 | \$3.7770 | \$3.7660 | \$0.0453 | \$3.7963 |
| 353 | 10/19/2014 | \$3.4744 | \$3.7088 | \$3.7250 | \$3.7770 | \$3.7660 | \$0.0453 | \$3.7963 |
| 354 | 10/20/2014 | \$3.4744 | \$3.7088 | \$3.7250 | \$3.7770 | \$3.7660 | \$0.0453 | \$3.7963 |
| 355 | 10/21/2014 | \$3.3490 | \$3.6485 | \$3.6940 | \$3.7830 | \$3.7680 | \$0.0605 | \$3.8126 |
| 356 | 10/22/2014 | \$3.3047 | \$3.6759 | \$3.6170 | \$3.7450 | \$3.7820 | \$0.1103 | \$3.8056 |
| 357 | 10/23/2014 | \$3.3830 | \$3.7341 | \$3.6900 | \$3.7690 | \$3.7810 | \$0.1259 | \$3.8209 |
| 358 | 10/24/2014 | \$3.2658 | \$3.6204 | \$3.6010 | \$3.6280 | \$3.6290 | \$0.1373 | \$3.7074 |
| 359 | 10/25/2014 | \$3.1573 | \$3.4930 | \$3.5270 | \$3.5110 | \$3.4940 | \$0.0713 | \$3.5958 |
| 360 | 10/26/2014 | \$3.1573 | \$3.4930 | \$3.5270 | \$3.5110 | \$3.4940 | \$0.0713 | \$3.5958 |
| 361 | 10/27/2014 | \$3.1573 | \$3.4930 | \$3.5270 | \$3.5110 | \$3.4940 | \$0.0713 | \$3.5958 |
| 362 | 10/28/2014 | \$3.2701 | \$3.6170 | \$3.5550 | \$3.6030 | \$3.6170 | \$0.0749 | \$3.6778 |
| 363 | 10/29/2014 | \$3.2980 | \$3.6846 | \$3.5260 | \$3.6410 | \$3.7000 | \$0.0832 | \$3.7418 |
| 364 | 10/30/2014 | \$3.4593 | \$3.8588 | \$3.6010 | \$3.8090 | \$3.8730 | \$0.1478 | \$3.9046 |
| 365 | 10/31/2014 | \$3.5646 | \$4.0757 | \$3.7550 | \$4.0630 | \$4.1000 | \$0.1596 | \$4.0926 |
| 366 | 11/1/2014 | \$3.6159 | \$3.8875 | \$3.8230 | \$3.8700 | \$3.8710 | \$0.0614 | \$3.9952 |
| 367 | 11/2/2014 | \$3.6159 | \$3.8875 | \$3.8230 | \$3.8700 | \$3.8710 | \$0.0614 | \$3.9952 |
| 368 | 11/3/2014 | \$3.6159 | \$3.8875 | \$3.8230 | \$3.8700 | \$3.8710 | \$0.0614 | \$3.9952 |
| 369 | 11/4/2014 | \$3.2279 | \$3.7218 | \$3.7440 | \$3.7660 | \$3.7970 | \$0.0750 | \$3.8439 |
| 370 | 11/5/2014 | \$3.3525 | \$3.7299 | \$3.6670 | \$3.7430 | \$3.6980 | \$0.0620 | \$3.8033 |
| 371 | 11/6/2014 | \$3.4961 | \$4.0565 | \$3.8320 | \$4.0330 | \$4.0460 | \$0.0859 | \$4.1504 |
| 372 | 11/7/2014 | \$3.4950 | \$4.2657 | \$3.9240 | \$4.2940 | \$4.1110 | \$0.1020 | \$4.4286 |
| 373 | 11/8/2014 | \$3.6226 | \$4.1803 | \$4.0300 | \$4.1150 | \$4.0960 | \$0.0933 | \$4.5235 |
| 374 | 11/9/2014 | \$3.6226 | \$4.1803 | \$4.0300 | \$4.1150 | \$4.0960 | \$0.0933 | \$4.5235 |
| 375 | 11/10/2014 | \$3.6226 | \$4.1803 | \$4.0300 | \$4.1150 | \$4.0960 | \$0.0933 | \$4.5235 |
| 376 | 11/11/2014 | \$4.2255 | \$4.5634 | \$4.1840 | \$4.4130 | \$4.4230 | \$0.0935 | \$4.6723 |
| 377 | 11/12/2014 | \$4.0459 | \$4.5419 | \$4.1030 | \$4.5340 | \$4.5620 | \$0.1040 | \$4.6544 |
| 378 | 11/13/2014 | \$3.9448 | \$4.4924 | \$4.1970 | \$4.4390 | \$4.4500 | \$0.1466 | \$4.5706 |
| 379 | 11/14/2014 | \$3.8557 | \$4.3968 | \$4.1660 | \$4.3850 | \$4.4100 | \$0.1617 | \$4.5171 |
| 380 | 11/15/2014 | \$3.6739 | \$4.3241 | \$4.0500 | \$4.3500 | \$4.3340 | \$0.1498 | \$4.4370 |
| 381 | 11/16/2014 | \$3.6739 | \$4.3241 | \$4.0500 | \$4.3500 | \$4.3340 | \$0.1498 | \$4.4370 |
| 382 | 11/17/2014 | \$3.6739 | \$4.3241 | \$4.0500 | \$4.3500 | \$4.3340 | \$0.1498 | \$4.4370 |
| 383 | 11/18/2014 | \$3.8833 | \$4.6891 | \$4.2590 | \$4.6830 | \$4.7780 | \$0.1601 | \$4.7442 |
| 384 | 11/19/2014 | \$3.8823 | \$4.7314 | \$4.3310 | \$4.6770 | \$4.8010 | \$0.1436 | \$4.8155 |
| 385 | 11/20/2014 | \$4.0368 | \$4.9591 | \$4.4070 | \$4.9490 | \$5.0390 | \$0.1280 | \$5.0787 |
| 386 | 11/21/2014 | \$3.9421 | \$4.9702 | \$4.4280 | \$4.9350 | \$5.0010 | \$0.1082 | \$5.1137 |
| 387 | 11/22/2014 | \$3.6798 | \$4.7520 | \$4.3150 | \$4.7830 | \$4.8010 | \$0.1080 | \$4.9459 |
| 388 | 11/23/2014 | \$3.6798 | \$4.7520 | \$4.3150 | \$4.7830 | \$4.8010 | \$0.1080 | \$4.9459 |
| 389 | 11/24/2014 | \$3.6798 | \$4.7520 | \$4.3150 | \$4.7830 | \$4.8010 | \$0.1080 | \$4.9459 |
| 390 | 11/25/2014 | \$3.5882 | \$4.5883 | \$4.0870 | \$4.5430 | \$4.5510 | \$0.1582 | \$4.7032 |
| 391 | 11/26/2014 | \$3.7542 | \$4.5665 | \$4.1510 | \$4.5340 | \$4.4580 | \$0.1580 | \$4.6896 |
| 392 | 11/27/2014 | \$3.7542 | \$4.5665 | \$4.1490 | \$4.5340 | \$4.4580 | \$0.1580 | \$4.6896 |
| 393 | 11/28/2014 | \$3.7542 | \$4.5665 | \$4.1490 | \$4.5340 | \$4.4580 | \$0.1580 | \$4.6896 |
| 394 | 11/29/2014 | \$3.7542 | \$4.5665 | \$4.1490 | \$4.5340 | \$4.4580 | \$0.1580 | \$4.6896 |
| 395 | 11/30/2014 | \$3.7542 | \$4.5665 | \$4.1490 | \$4.5340 | \$4.4580 | \$0.1580 | \$4.6896 |
| 396 | 12/1/2014 | \$3.9753 | \$4.6003 | \$4.3000 | \$4.6470 | \$4.6010 | \$0.2012 | \$4.7442 |
| 397 | 12/2/2014 | \$3.6392 | \$4.1657 | \$3.8950 | \$4.2060 | \$4.0930 | \$0.1961 | \$4.2894 |
| 398 | 12/3/2014 | \$3.4456 | \$3.9568 | \$3.7710 | \$4.0220 | \$3.9200 | \$0.1813 | \$4.0909 |
| 399 | 12/4/2014 | \$3.3396 | \$3.7618 | \$3.6330 | \$3.8120 | \$3.7250 | \$0.1716 | \$3.8926 |
| 400 | 12/5/2014 | \$3.2038 | \$3.6747 | \$3.5370 | \$3.7310 | \$3.6070 | \$0.1658 | \$3.7930 |


|  | Daily Index Prices | $\begin{gathered} \text { AECO } \\ \text { (\$CDN/GJ) } \end{gathered}$ | Emerson (\$US/MMBTU) | NYMEX - Henry Hub (\$US/MMBTU) | Michigan City Gate (\$US/MMBTU) | Chicago (\$US/MMBTU) | Empress/Aeco Transportation Differential (\$CDN/GJ) | Dawn (\$US/MMBTU) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 401 | 12/6/2014 | \$3.1466 | \$3.6583 | \$3.4190 | \$3.6740 | \$3.5850 | \$0.1691 | \$3.7639 |
| 402 | 12/7/2014 | \$3.1466 | \$3.6583 | \$3.4190 | \$3.6740 | \$3.5850 | \$0.1691 | \$3.7639 |
| 403 | 12/8/2014 | \$3.1466 | \$3.6583 | \$3.4190 | \$3.6740 | \$3.5850 | \$0.1691 | \$3.7639 |
| 404 | 12/9/2014 | \$3.1056 | \$3.7080 | \$3.5340 | \$3.8160 | \$3.6680 | \$0.1836 | \$3.8436 |
| 405 | 12/10/2014 | \$3.0685 | \$3.8451 | \$3.6320 | \$3.9100 | \$3.8400 | \$0.2083 | \$3.9649 |
| 406 | 12/11/2014 | \$3.1140 | \$3.8559 | \$3.6500 | \$3.8580 | \$3.7800 | \$0.1890 | \$3.9912 |
| 407 | 12/12/2014 | \$3.1144 | \$3.7317 | \$3.6830 | \$3.8250 | \$3.7140 | \$0.1900 | \$3.8964 |
| 408 | 12/13/2014 | \$3.1645 | \$3.7357 | \$3.5710 | \$3.7740 | \$3.7020 | \$0.1883 | \$3.9128 |
| 409 | 12/14/2014 | \$3.1645 | \$3.7357 | \$3.5710 | \$3.7740 | \$3.7020 | \$0.1883 | \$3.9128 |
| 410 | 12/15/2014 | \$3.1645 | \$3.7357 | \$3.5710 | \$3.7740 | \$3.7020 | \$0.1883 | \$3.9128 |
| 411 | 12/16/2014 | \$3.2635 | \$3.8570 | \$3.7150 | \$3.9060 | \$3.8430 | \$0.1918 | \$3.9900 |
| 412 | 12/17/2014 | \$3.1561 | \$3.7324 | \$3.5790 | \$3.8270 | \$3.7490 | \$0.1903 | \$3.8536 |
| 413 | 12/18/2014 | \$3.2195 | \$3.8331 | \$3.7210 | \$3.9150 | \$3.8960 | \$0.1852 | \$3.9420 |
| 414 | 12/19/2014 | \$3.2770 | \$3.8634 | \$3.7120 | \$3.9250 | \$3.8290 | \$0.1863 | \$3.9916 |
| 415 | 12/20/2014 | \$3.0389 | \$3.5771 | \$3.4640 | \$3.5970 | \$3.5110 | \$0.2104 | \$3.6999 |
| 416 | 12/21/2014 | \$3.0389 | \$3.5771 | \$3.4640 | \$3.5970 | \$3.5110 | \$0.2104 | \$3.6999 |
| 417 | 12/22/2014 | \$3.0389 | \$3.5771 | \$3.4640 | \$3.5970 | \$3.5110 | \$0.2104 | \$3.6999 |
| 418 | 12/23/2014 | \$2.6260 | \$3.0371 | \$3.0540 | \$3.0850 | \$3.0100 | \$0.1916 | \$3.1449 |
| 419 | 12/24/2014 | \$2.6433 | \$2.9731 | \$2.9910 | \$3.0330 | \$2.9270 | \$0.1766 | \$3.0786 |
| 420 | 12/25/2014 | \$2.6600 | \$2.9229 | \$2.7350 | \$3.0470 | \$2.8770 | \$0.1706 | \$2.9932 |
| 421 | 12/26/2014 | \$2.6600 | \$2.9229 | \$2.7350 | \$3.0470 | \$2.8770 | \$0.1706 | \$2.9932 |
| 422 | 12/27/2014 | \$2.6600 | \$2.9229 | \$2.7350 | \$3.0470 | \$2.8770 | \$0.1706 | \$2.9932 |
| 423 | 12/28/2014 | \$2.6600 | \$2.9229 | \$2.7350 | \$3.0470 | \$2.8770 | \$0.1706 | \$2.9932 |
| 424 | 12/29/2014 | \$2.6600 | \$2.9229 | \$2.7350 | \$3.0470 | \$2.8770 | \$0.1706 | \$2.9932 |
| 425 | 12/30/2014 | \$2.8408 | \$3.6052 | \$3.0650 | \$3.3980 | \$3.5510 | \$0.1980 | \$3.4820 |
| 426 | 12/31/2014 | \$2.8710 | \$3.4213 | \$3.1370 | \$3.3270 | \$3.3370 | \$0.1809 | \$3.4000 |
| 427 | 1/1/2015 | \$2.7004 | \$3.0614 | \$3.0310 | \$3.0410 | \$3.0600 | \$0.1762 | \$3.1041 |
| 428 | 1/2/2015 | \$2.7004 | \$3.0614 | \$3.0310 | \$3.0410 | \$3.0600 | \$0.1762 | \$3.1041 |
| 429 | 1/3/2015 | \$2.7282 | \$3.2530 | \$3.0060 | \$3.1040 | \$3.2100 | \$0.1757 | \$3.1843 |
| 430 | 1/4/2015 | \$2.7282 | \$3.2530 | \$3.0060 | \$3.1040 | \$3.2100 | \$0.1757 | \$3.1843 |
| 431 | 1/5/2015 | \$2.7282 | \$3.2530 | \$3.0060 | \$3.1040 | \$3.2100 | \$0.1757 | \$3.1843 |
| 432 | 1/6/2015 | \$2.9050 | \$3.4645 | \$3.2170 | \$3.1670 | \$3.2940 | \$0.1933 | \$3.2363 |
| 433 | 1/7/2015 | \$2.5591 | \$3.7511 | \$2.9840 | \$2.9740 | \$3.4610 | \$0.1880 | \$3.0577 |
| 434 | 1/8/2015 | \$2.6584 | \$3.4897 | \$3.0800 | \$3.0400 | \$3.2820 | \$0.1884 | \$3.0906 |
| 435 | 1/9/2015 | \$2.6049 | \$3.1016 | \$2.9200 | \$2.9500 | \$3.1100 | \$0.1738 | \$2.9972 |
| 436 | 1/10/2015 | \$2.6286 | \$3.0731 | \$2.9630 | \$3.0440 | \$3.0160 | \$0.1735 | \$3.0966 |
| 437 | 1/11/2015 | \$2.6286 | \$3.0731 | \$2.9630 | \$3.0440 | \$3.0160 | \$0.1735 | \$3.0966 |
| 438 | 1/12/2015 | \$2.6286 | \$3.0731 | \$2.9630 | \$3.0440 | \$3.0160 | \$0.1735 | \$3.0966 |
| 439 | 1/13/2015 | \$2.5043 | \$3.0593 | \$2.8980 | \$2.9540 | \$2.9790 | \$0.1788 | \$3.0261 |
| 440 | 1/14/2015 | \$2.5066 | \$2.9282 | \$2.9180 | \$2.9440 | \$2.9500 | \$0.1797 | \$3.0017 |
| 441 | 1/15/2015 | \$2.7028 | \$3.1472 | \$3.1490 | \$3.1650 | \$3.1180 | \$0.1878 | \$3.2476 |
| 442 | 1/16/2015 | \$2.8717 | \$3.2704 | \$3.3210 | \$3.3310 | \$3.3210 | \$0.2023 | \$3.4563 |
| 443 | 1/17/2015 | \$2.6274 | \$3.0323 | \$3.1050 | \$3.0850 | \$3.0160 | \$0.1990 | \$3.2135 |
| 444 | 1/18/2015 | \$2.6274 | \$3.0323 | \$3.1050 | \$3.0850 | \$3.0160 | \$0.1990 | \$3.2135 |
| 445 | 1/19/2015 | \$2.6274 | \$3.0323 | \$3.1050 | \$3.0850 | \$3.0160 | \$0.1990 | \$3.2135 |
| 446 | 1/20/2015 | \$2.6274 | \$3.0323 | \$3.1050 | \$3.0850 | \$3.0160 | \$0.1990 | \$3.2135 |
| 447 | 1/21/2015 | \$2.4927 | \$2.9057 | \$2.9440 | \$2.9380 | \$2.8740 | \$0.1999 | \$3.0615 |
| 448 | 1/22/2015 | \$2.5669 | \$2.9103 | \$2.9530 | \$2.9520 | \$2.8940 | \$0.2074 | \$3.0719 |
| 449 | 1/23/2015 | \$2.5705 | \$2.8936 | \$2.9470 | \$2.9270 | \$2.8600 | \$0.2121 | \$3.0357 |
| 450 | 1/24/2015 | \$2.5683 | \$2.9297 | \$2.9550 | \$2.9480 | \$2.8850 | \$0.3275 | \$3.0924 |
| 451 | 1/25/2015 | \$2.5683 | \$2.9297 | \$2.9550 | \$2.9480 | \$2.8850 | \$0.3275 | \$3.0924 |
| 452 | 1/26/2015 | \$2.5683 | \$2.9297 | \$2.9550 | \$2.9480 | \$2.8850 | \$0.3275 | \$3.0924 |
| 453 | 1/27/2015 | \$2.5720 | \$2.9319 | \$2.9210 | \$2.9420 | \$2.8340 | \$0.3115 | \$3.0801 |
| 454 | 1/28/2015 | \$2.6190 | \$2.9254 | \$2.9600 | \$2.9600 | \$2.8650 | \$0.2506 | \$3.0910 |
| 455 | 1/29/2015 | \$2.5720 | \$2.8951 | \$2.8900 | \$2.9120 | \$2.8440 | \$0.2042 | \$3.0172 |
| 456 | 1/30/2015 | \$2.6216 | \$2.8738 | \$2.8780 | \$2.8650 | \$2.7680 | \$0.2691 | \$2.9588 |
| 457 | 1/31/2015 | \$2.6216 | \$2.8738 | \$2.6940 | \$2.7840 | \$2.7780 | \$0.2691 | \$2.9588 |
| 458 | 2/1/2015 | \$2.4783 | \$2.9008 | \$2.6940 | \$2.7840 | \$2.7780 | \$0.2854 | \$2.8528 |
| 459 | 2/2/2015 | \$2.4783 | \$2.9008 | \$2.6940 | \$2.7840 | \$2.7780 | \$0.2854 | \$2.8528 |
| 460 | 2/3/2015 | \$2.4796 | \$2.8659 | \$2.6580 | \$2.7120 | \$2.6590 | \$0.1920 | \$2.8088 |
| 461 | 2/4/2015 | \$2.4720 | \$2.8228 | \$2.6680 | \$2.7750 | \$2.7840 | \$0.0989 | \$2.8465 |
| 462 | 2/5/2015 | \$2.5217 | \$2.8971 | \$2.7310 | \$2.8650 | \$2.8350 | \$0.0909 | \$2.9384 |
| 463 | 2/6/2015 | \$2.4188 | \$2.6723 | \$2.6560 | \$2.6930 | \$2.6180 | \$0.0881 | \$2.7897 |
| 464 | 2/7/2015 | \$2.3837 | \$2.6551 | \$2.5630 | \$2.6930 | \$2.6170 | \$0.0699 | \$2.8084 |
| 465 | 2/8/2015 | \$2.3837 | \$2.6551 | \$2.5630 | \$2.6930 | \$2.6170 | \$0.0699 | \$2.8084 |
| 466 | 2/9/2015 | \$2.3837 | \$2.6551 | \$2.5630 | \$2.6930 | \$2.6170 | \$0.0699 | \$2.8084 |
| 467 | 2/10/2015 | \$2.4486 | \$2.6960 | \$2.6180 | \$2.7150 | \$2.5990 | \$0.0731 | \$2.8454 |
| 468 | 2/11/2015 | \$2.5622 | \$3.0222 | \$2.6660 | \$2.8500 | \$2.7680 | \$0.0659 | \$3.0244 |
| 469 | 2/12/2015 | \$2.6998 | \$3.2801 | \$2.8630 | \$3.1620 | \$3.1660 | \$0.0697 | \$3.3560 |
| 470 | 2/13/2015 | \$2.6224 | \$3.1727 | \$2.8610 | \$3.0800 | \$3.0300 | \$0.0981 | \$3.3428 |
| 471 | 2/14/2015 | \$2.4790 | \$3.1620 | \$2.7460 | \$2.9010 | \$3.0410 | \$0.1076 | \$3.2002 |
| 472 | 2/15/2015 | \$2.4790 | \$3.1620 | \$2.7460 | \$2.9010 | \$3.0410 | \$0.1076 | \$3.2002 |
| 473 | 2/16/2015 | \$2.4790 | \$3.1620 | \$2.7460 | \$2.9010 | \$3.0410 | \$0.1076 | \$3.2002 |
| 474 | 2/17/2015 | \$2.4790 | \$3.1620 | \$2.7460 | \$2.9010 | \$3.0410 | \$0.1076 | \$3.2002 |
| 475 | 2/18/2015 | \$2.5949 | \$3.9590 | \$2.9570 | \$3.5070 | \$3.8900 | \$0.2050 | \$4.0128 |
| 476 | 2/19/2015 | \$2.6316 | \$11.2712 | \$2.9230 | \$8.4040 | \$10.2040 | \$2.1424 | \$11.2004 |
| 477 | 2/20/2015 | \$2.7398 | \$7.7236 | \$2.7920 | \$5.3230 | \$5.8670 | \$0.6433 | \$7.8986 |
| 478 | 2/21/2015 | \$2.8538 | \$6.5281 | \$3.0160 | \$6.2190 | \$7.0820 | \$0.5348 | \$7.4021 |
| 479 | 2/22/2015 | \$2.8538 | \$6.5281 | \$3.0160 | \$6.2190 | \$7.0820 | \$0.5348 | \$7.4021 |
| 480 | 2/23/2015 | \$2.8538 | \$6.5281 | \$3.0160 | \$6.2190 | \$7.0820 | \$0.5348 | \$7.4021 |
| 481 | 2/24/2015 | \$2.9029 | \$5.2692 | \$3.2150 | \$5.2870 | \$4.8350 | \$0.4848 | \$6.9404 |
| 482 | 2/25/2015 | \$2.7723 | \$5.1922 | \$3.1260 | \$5.1330 | \$4.6440 | \$0.3070 | \$5.8143 |
| 483 | 2/26/2015 | \$2.7775 | \$4.8445 | \$3.2090 | \$4.5960 | \$4.6190 | \$0.2619 | \$5.4920 |
| 484 | 2/27/2015 | \$2.6730 | \$4.1117 | \$3.1100 | \$3.7860 | \$3.9050 | \$0.2285 | \$4.5283 |
| 485 | 2/28/2015 | \$2.6730 | \$4.1117 | \$2.7850 | \$2.8730 | \$2.7840 | \$0.2285 | \$4.5283 |

PUB/Centra INT-009(c)

Reference: $\quad$ Schedules 3.1.1 and 3.3.1 - Cost of Supply by Source
(c). Please graphically present the monthly and daily index prices in (b). Please plot the monthly and daily prices separately.

## ANSWER:

Please see Attachment 1 and Attachment 2 to this response.



## PUB/Centra I-009(f)

## Reference: $\quad$ Schedules 3.1.1 and 3.3.1-Cost of Supply by Source

## (f) Please explain the pricing calculations for Centra's Supplemental Gas purchases in 2012/13 and 2013/14 (i.e. based on daily or monthly index prices, how transportation costs for delivered services are determined, and all premiums paid).

## ANSWER:

Supplemental Gas may be acquired as:
a) Monthly or seasonal purchases based on a monthly index, plus or minus a premium or discount;
b) Daily purchases based on a daily index, plus or minus a premium or discount - these purchases are generally made under pre-contracted arrangements for variable swing and/or peaking supplies; or
c) Daily fixed price purchases - these purchases are made in the daily spot market.

In all cases of purchasing Supplemental Gas, Centra engages in a competitive bidding process with multiple counterparties at multiple supply points to determine the most cost-effective means of serving the Manitoba load.

The range of premiums paid by Centra is commercially sensitive and will remain so regardless of the outcome of the RH-001-2014 proceeding. Public disclosure of this information would harm Centra's competitive position and expose its ratepayers to additional costs.

However, to illustrate the range of premiums paid on Supplemental Gas purchases, and recognizing the challenges and limitations in comparing supply arrangements that are indexed to different supply hubs, premiums or discounts paid in the 2012/13 Gas Year ranged from discounts of less than $\$ 0.05$ USD/Dth to premiums of less than $\$ 0.05$ USD/Dth at US supply hubs, and premiums of approximately $\$ 0.55 \mathrm{CAD} / \mathrm{GJ}$ to premiums of less than $\$ 0.75 \mathrm{CAD} / \mathrm{GJ}$ for AECO-indexed delivered services to the MDA (which included the flexibility of intra-day nominations).

Recognizing the same challenges and limitations noted in the paragraph above, premiums or discounts paid in the 2013/14 Gas Year to the end of April 2014 ranged from index flat (i.e. no premium or discount) to premiums of less than $\$ 0.70$ USD/Dth [Emerson indexed to Empress] at US supply hubs, and premiums of less than $\$ 0.25$ USD/Dth to less than $\$ 0.65$ CAD/GJ for delivered services to the MDA indexed to MichCon and Empress, respectively.

As described in the response to PUB/Centra I-017(b), the landed cost of supply associated with a delivered service includes both the market value of the commodity and the embedded transport cost associated with delivering that gas to Centra’s delivery areas. However, Centra is not privy to the particular transportation services that a counterparty may be using to effect a delivered service.

## PUB/Centra I-009(g)

## Reference: $\quad$ Schedules 3.1.1 and 3.3.1 - Cost of Supply by Source

(g) Please explain any transportation constraints that affected Centra's ability to purchase Supplemental Gas from the lowest-cost hub in 2012/13 and 2013/14.

## ANSWER:

For the 2012/13 Gas Year, there were no physical transportation constraints that affected Centra’s ability to purchase Supplemental Gas.

During the 2013/14 winter, the most notable physical transportation constraint occurred between the AECO hub and the East Gate (the interconnect between the Nova Gas Transmission Limited ("NGTL") System and the Canadian Mainline at Empress and the Foothills System at McNeill) during the month of March 2014.

NGTL had firm delivery capability of approximately $4.5 \mathrm{Bcf} /$ day to the East Gate during the 2013/14 winter. Firm take-away transportation contracts (FT \& STFT) for March 2014 at Empress totaled approximately $3.9 \mathrm{Bcf} / \mathrm{day}$ (in part due to TCPL's exercise of its pricing discretion) and 2.0 Bcf/day at McNeill. In order for interruptible transportation on NGTL to flow to the East Gate while firm flows are maximized, NGTL requires higher pressures on its southern system from gas withdrawals out of Alberta storage, as well as adequate pressure from production fields across Alberta to the East Gate. Because of low storage inventory levels (due to the colder than normal winter) and high take-away demands on both the Mainline and Foothills, interruptible transportation to the East Gate was restricted in March 2014. These IT restrictions on the AECO-Empress path caused the AECO-Empress daily basis differential to climb to more than $\$ 24 / \mathrm{GJ}$ at the beginning of March 2014, resulting in extraordinarily high gas prices at Empress. The high prices at Empress, coupled with high-priced Mainline discretionary IT and STFT services to points downstream of Empress, caused delivered service and downstream commodity prices to rise to an even greater extent, with individual trades reported at Emerson in excess of $\$ 60 / \mathrm{GJ}$ in early March. While day prices at the AECO hub ranged from approximately $\$ 4 / G J$ to $\$ 8 / G J$ during March 2014, the price of supply at hubs such as Empress and Emerson and delivered services traded at multiples of these price levels, at times, throughout the month.

## PUB/Centra INT-010(c)

## Reference: Schedules 3.1.1 and 3.3.1 Interruptible Curtailments

(c) Please explain how Centra determines when to curtail Interruptible customers for operational or economic reasons.

## ANSWER:

Centra only curtails Interruptible customers for operational reasons, either to conserve storage gas for the firm load (i.e., curtailment due to a seasonal constraint) or to ensure that the firm load is met during colder than normal weather (i.e., curtailment due to a daily constraint).

## PUB/Centra INT-010(d)

## Reference: Schedules 3.1.1 and 3.3.1 Interruptible Curtailments

(d) In the event of a curtailment, please confirm whether Centra curtails $100 \%$ of the gas supply to Interruptible customers or whether only a portion of the supply may be curtailed. If a portion of the supply is curtailed, please explain how the amount to be curtailed for each customer is determined.

## ANSWER:

In the event of a curtailment or provision of Alternate Supply Service, Centra curtails 100\% of the gas supply to Interruptible customers.

## PUB/Centra INT-011(a)

## Reference: Schedule 3.1.1-Carrying Costs

(a) Please provide the source used to establish the $2.15 \%$ interest rate used for carrying costs.

## ANSWER:

The interest rate used for the carrying cost rate is based on the forecast 2014/15 T-Bill rate of $1.15 \%$, from the Corporation's 2013 Economic Outlook (fall update), plus the 1\% Provincial Guarantee Fee.

## PUB/Centra INT-011(b)

## Reference: Schedule 3.1.1-Carrying Costs

(b) Please provide actual incurred carrying cost interest rates for May, June, and July and an updated forecast to October 2014.

## ANSWER:

Please see the following table, which shows actual carrying cost rates for the months of May through October 2014.

|  | Actual | Actual | Actual | Actual | Actual | Actual |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Carrying Cost Rate | May-14 | Jun-14 | Jul-14 | Aug-14 | Sep-14 | Oct-14 |
|  | $1.92 \%$ | $1.93 \%$ | $1.94 \%$ | $1.94 \%$ | $1.92 \%$ | $1.89 \%$ |

## PUB/Centra I-012(a)

## Reference: Schedule 3.2.0

(a) Please explain the nature of the variable TCPL transportation costs for the 2013/14 Current Outlook.

## ANSWER:

The variable TCPL transportation costs noted are costs incurred when Centra utilized its diversion rights on its Empress to SSDA contract in order to divert gas to the MDA. TCPL charges a variable rate when capacity is diverted to an alternate delivery location based on the differential in daily demand tolls.

## PUB/Centra I-017(c)

Reference: Section 3.0 p. 3 - TCPL
(c) Please identify which discretionary services TCPL priced at 55 times the equivalent firm toll and their corresponding dates and receipt or delivery points.


#### Abstract

ANSWER:

Interruptible Transportation (IT) service was priced by TCPL at 55 times the equivalent daily Firm Transportation (FT) toll. TCPL set IT bid floors at $5500 \%$ of the equivalent daily FT toll for the February 22, 23, 24, and 25, 2014 gas days for all 1,600 plus paths on the Mainline with the exception of the following:


- Western points to the Union SWDA (1600\%)
- Western points to the Union SSMDA (1800\%)
- Western points to Emerson1 and Emerson2 (3200\%)


## PUB/Centra INT-018(a)

## Reference: SENDOUT Model

(a) Please confirm whether Centra continues to use the software tool SENDOUT to assist with seasonal planning and optimization of Centra's supply, storage, and transportation portfolio.

## ANSWER:

Confirmed.

## PUB/Centra INT-018(b)

## Reference: SENDOUT Model

(b) Please confirm whether SENDOUT is or was used to plan daily or monthly gas purchases.

## ANSWER:

Daily purchase decisions are made using current market information, thus SENDOUT is not used for daily dispatch. Centra uses SENDOUT to assist with the determination of potential market requirements in its seasonal and monthly planning.

## PUB/Centra INT-018(d)

## Reference: SENDOUT Model

(d) Please indicate to what extent Centra back-tests the results it receives from SENDOUT with market actual prices.

## ANSWER:

Centra does not back-test the results it receives from SENDOUT with actual historical market prices. To do so and then rely on the results of the back-testing, would result in Centra designing a forward-looking supply plan that would be optimized to a unique combination of historical market conditions and prices that occurred in the past and are highly unlikely to reoccur again in the future, while the number of possible permutations of market conditions and prices that could occur in the future are essentially infinite.

## CAC/Centra INT-001(c)

Reference: Application, page 2 of 10, lines 1-20

Preamble: In Board Order 85/13, the Board ordered in Directive 17 that Centra is to file an application to amend its cost of gas by January 31, 2014. Centra declined to do so, with its explanation set out in a letter to the Board dated January 29, 2014. Subsequently, Central filed a letter on June 12, 2014 forecasting a net balance on the Non-Primary Gas cost deferral accounts at October 31, 2014 to be approximately $\$ 45.7$ million owing to Centra.
(c). Why were actuals not used in the forecasts in the January 29, 2014 letter to the extent they were known?

## ANSWER:

At the time that the materials discussed in Centra’s January 29, 2014 letter were prepared, no actual results for the 2013/14 gas year were known.

## CAC/Centra INT-002(a)(i)

## Reference: Application, page 3, lines 1-11

Preamble: In the referenced paragraph Centra indicates that gas prices during the January-March 2014 winter period were unusually high and volatile. Centra attributes this to cold weather, declining storage inventories, and extraordinarily high TransCanada Mainline short term transportation tolls related to the effective deregulation of those tolls by the NEB in the RH-003-2011 Decision.
(a)(i) Please explain why "extraordinarily high TCPL discretionary transportation services tolls" (line 5) resulted in high gas commodity prices at hubs served directly or indirectly off of the TransCanada Mainline system.

## ANSWER:

The NEB’s RH-003-2011 Decision provided TCPL with unlimited discretion in the pricing of Mainline IT and STFT services. In its Decision, the NEB stated the following:

Moreover, we are of the view that the ability of TransCanada to charge for discretionary services at whatever level will be constrained. All shippers purchasing FT service at recourse rates may resell capacity in the secondary market to mitigate demand charges. And, as indicated by ANE, it is unlikely there will be many days when TransCanada will be able to achieve pricing for IT and STFT service over a pricing level of 300 per cent for the FT toll. (p. 127)

Due to the very cold weather experienced during the 2013/14 winter, combined with the resulting high demand for natural gas and declining storage inventories in North America, the secondary market was unable to constrain TCPL's pricing discretion from contributing to unprecedented high prices at Mainline hubs and other nearby hubs in the US Upper Midwest. The secondary market includes holders of FT contracts on the Mainline who can either re-sell transportation capacity to hubs such as Emerson or Dawn on the Mainline, or use the capacity to sell gas at these hubs to downstream buyers (i.e., the two activities are direct substitutes for one another). Under the high demand conditions of the 2013/14 winter, rather than the secondary market constraining TCPL's IT bid floor pricing to Mainline hubs,

TCPL's IT bid floors raised the price ceiling at which secondary market participants could sell gas at these hubs. This occurred despite historically high FT contract levels held to Emerson on the Mainline during the 2013/14 winter, which could reasonably have been expected to increase competition in the selling of gas at Emerson and/or the selling of transportation capacity to Emerson. TCPL was ultimately able to sell Mainline IT at exceptionally high prices to Emerson and Dawn during the 2013/14 winter, at 4500\% and $5500 \%$ of the daily equivalent FT toll to these hubs, respectively.

TCPL's pricing discretion also contributed to unprecedented high gas prices in the US Upper Midwest. This region also experienced very cold weather during the 2013/14 winter, resulting in high demand for natural gas. Gas flowing on the Mainline to Emerson serves markets in this region and is a contributor to the region's overall natural gas supply. High Emerson prices therefore influenced U.S. Upper Midwest gas prices at hubs in Chicago and Michigan during high demand conditions. High demand and gas prices at the nearby Dawn hub, also placed upward price pressure on gas supplies in the region.

## CAC/Centra INT-002(c)

Reference: Application, page 3, lines 1-11

Preamble: In the referenced paragraph Centra indicates that gas prices during the January-March 2014 winter period were unusually high and volatile. Centra attributes this to cold weather, declining storage inventories, and extraordinarily high TransCanada Mainline short term transportation tolls related to the effective deregulation of those tolls by the NEB in the RH-003-2011 Decision.
(c). 5BFor each month during the 2013/14 gas year, please provide actual and, where applicable, forecast monthly gas price index values for the following points:
(i)AECO/NIT
(ii)Empress (or an Empress/AECO transportation differential)
(iii)Emerson
(iv)Chicago
(v) Dawn

## ANSWER:

Please see the response to PUB/Centra INT-009(b).

## CAC/Centra INT-002(d)

Reference: Application, page 3, lines 1-11

Preamble: In the referenced paragraph Centra indicates that gas prices during the January-March 2014 winter period were unusually high and volatile. Centra attributes this to cold weather, declining storage inventories, and extraordinarily high TransCanada Mainline short term transportation tolls related to the effective deregulation of those tolls by the NEB in the RH-003-2011 Decision.
(d). For the months of January, February, and March 2014 please provide the observed daily index values for the points referred to in (a).

## ANSWER:

Please see the response to PUB/Centra INT-009(b).

## CAC/Centra INT-002(e)

## Reference: Application, page 3, lines 1-11

Preamble: In the referenced paragraph Centra indicates that gas prices during the January-March 2014 winter period were unusually high and volatile. Centra attributes this to cold weather, declining storage inventories, and extraordinarily high TransCanada Mainline short term transportation tolls related to the effective deregulation of those tolls by the NEB in the RH-003-2011 Decision.
(e). Does Centra believe that the NEB's policy of allowing TransCanada to set short term transportation tolls for the Mainline on a discretionary basis as provided for in the NEB's RH-003-2011Decision results is just and reasonable short term tolls? Why or why not?

## ANSWER:

Centra is not in a position to comment on whether any particular tolls are just and reasonable. Centra has ongoing concerns about the impact of Mainline pricing discretion on downstream commodity prices and other potential market impacts.

## CAC/Centra INT-002(f)-(g)

## Reference: Application, page 3, lines 1-11

Preamble: In the referenced paragraph Centra indicates that gas prices during the January-March 2014 winter period were unusually high and volatile. Centra attributes this to cold weather, declining storage inventories, and extraordinarily high TransCanada Mainline short term transportation tolls related to the effective deregulation of those tolls by the NEB in the RH-003-2011 Decision.
(f) What position has Centra taken, or does it intend to take, on the appropriateness of TransCanada's unlimited pricing discretion for discretionary services in the RH-001-2014 proceeding before the NEB? Please also summarize Centra's position in that case on the other issues that are before the NEB.
(g) Please provide a copy of any evidence or any written submission or other filings Centra has filed or intends to file in the $\mathbf{R H}-001-2014$ proceeding.


#### Abstract

ANSWER:

Centra's position with respect to TransCanada's pricing discretion was placed on the record of the RH-001-2014 proceeding. Please find the evidence filed by Centra with the National Energy Board in the RH-001-2014 proceeding at the link below: https://docs.neb-one.gc.ca/ll- eng/llisapi.dll?func=ll\&objId=2456580\&objAction=browse\&viewType=1 https://docs.neb-one.gc.ca/ll-eng/llisapi.dll?func=ll\&objId=2456580\&objAction=browse\&viewType=1


## CAC/Centra INT-002(i)

## Reference: Application, page 3, lines 1-11

Preamble: In the referenced paragraph Centra indicates that gas prices during the January-March 2014 winter period were unusually high and volatile. Centra attributes this to cold weather, declining storage inventories, and extraordinarily high TransCanada Mainline short term transportation tolls related to the effective deregulation of those tolls by the NEB in the RH-003-2011 Decision.
(i). Has Centra or any shipper or pipeline to Centra's knowledge contacted or lodged a complaint with the Canadian Federal Competition Tribunal concerning TransCanada's abuse of its monopoly power in the setting of short term transportation tolls during the 2013/14 winter? If not, is that, or a similar, course of action being contemplated by Centra?

## ANSWER:

Centra is not aware of any shipper or pipeline company lodging a complaint with the Canadian Federal Competition Tribunal with respect to TCPL's pricing discretion.

Centra pursued this matter vigorously through its intervention before the NEB.

## CAC/Centra INT-002(i)

Reference: Application, page 3, lines 1-11

Preamble: In the referenced paragraph Centra indicates that gas prices during the January-March 2014 winter period were unusually high and volatile. Centra attributes this to cold weather, declining storage inventories, and extraordinarily high TransCanada Mainline short term transportation tolls related to the effective deregulation of those tolls by the NEB in the RH-003-2011 Decision.
(j). Please confirm that the majority of the balance in the Supplemental Gas PGVA is attributable to price effects, i.e. actual purchase prices being much higher than forecast, rather than volume effects, as Centra has already recovered higher costs driven by higher volumes through rates, i.e. through higher "WACOG outflows". If not confirmed, please explain.

ANSWER:

Confirmed.

## CAC/Centra INT-004(f)

Reference: Schedule 3.3.1, 2013/14 Supplemental Gas PGVA, at line 2, "Storage Gas - Supplemental Supply"

Preamble: The referenced line in the Schedule summarizes by month Centra's use of Supplemental Gas held in storage.
(f). Please provide Centra's best current estimate of the embedded Primary Gas and Supplemental Gas storage WACOG's going into the 2014/15 withdrawal season at November 30, 2014.

## ANSWER:

As at October 31, 2014 (i.e., the end of Centra's injection season), Centra's storage WACOGs were as follow:

- Primary Gas
- Supplemental Gas
- Storage Transportation
\$3.9920 CAD/GJ
\$4.7389 CAD/GJ
\$0.1631 CAD/GJ


## CAC/Centra INT-005(a)

Reference: $\quad$ Schedule 3.3.1, 2013/14 Supplemental Gas PGVA, at line 3, "Supplemental Gas Peaking Delivered Service"; Schedule 3.3.2, 2013/14 Transportation PGVA, at line 18, "Supplemental Gas Peaking Delivered Service Imputed Transportation Cost"; Schedule 3.1.2, 2012/13 Transportation PGVA, at line 18, "Primary Gas Delivered Service Imputed Transportation Cost".

Preamble: The referenced line in Schedule 3.3.1 summarizes by month Centra's use of Supplemental Gas Peaking Delivered Service, while the referenced line in Schedule 3.3.2 sets out "imputed transportation costs" for those volumes. Line 18 in Schedule 3.1.2 sets out imputed transportation costs for Primary Gas Delivered Service for the 2012/13 gas year.
(a). Please provide a description of "imputed transportation costs".


#### Abstract

ANSWER:

Supplemental Gas Peaking Delivered Service Imputed Transportation Costs are the amount remaining after deducting estimated embedded commodity costs based on the AECO Monthly 7A Index Price and the Monthly AECO to Empress Transportation Basis Differential Index Price from the fully loaded unit cost of Supplemental Gas Peaking Delivered Service supplies.

Primary Gas Delivered Service Imputed Transportation Costs are the amount remaining after the deduction of estimated embedded commodity and upstream compressor fuel costs based on the AECO Monthly 7A Index Price and the monthly AECO to Empress Transportation Basis Differential Index Price from the fully loaded cost of Primary Gas Delivered Service supplies. Estimated upstream compressor fuel costs are included in commodity cost calculation when determining Imputed Transportation Costs for Primary Gas Delivered Services in order to maintain consistency with the principles underlying the design of the Quarterly Variable Primary Gas Rate. This rate reflects the costs of Primary Gas delivered at the Empress receipt point, plus TCPL Mainline compressor fuel to deliver these supplies to Centra's distribution system in Manitoba, which are reflected in the rates charged to customers for all Primary Gas products in Manitoba, whether supplied by Centra or natural gas marketers.


## CAC/Centra INT-005(d)

Reference: $\quad$ Schedule 3.3.1, 2013/14 Supplemental Gas PGVA, at line 3, "Supplemental Gas Peaking Delivered Service"; Schedule 3.3.2, 2013/14 Transportation PGVA, at line 18, "Supplemental Gas Peaking Delivered Service Imputed Transportation Cost"; Schedule 3.1.2, 2012/13 Transportation PGVA, at line 18, "Primary Gas Delivered Service Imputed Transportation Cost".

Preamble: The referenced line in Schedule 3.3.1 summarizes by month Centra's use of Supplemental Gas Peaking Delivered Service, while the referenced line in Schedule 3.3.2 sets out "imputed transportation costs" for those volumes. Line 18 in Schedule 3.1.2 sets out imputed transportation costs for Primary Gas Delivered Service for the 2012/13 gas year.
(d). Please confirm that the delivery point for Supplemental Gas Peaking Delivered Service is Centra's system. If not confirmed, please explain.

## ANSWER:

Confirmed. Centra receives delivered services either at the Centram MDA or Centram SSDA.

## CAC/Centra INT-008(b)

## Reference: Application, page 8

Preamble: In the referenced paragraph Centra indicates that it has \"...adjusted the volume and demand forecast for rate rider determination purposes in order to reflect the migration of eight former Interruptible customers to Firm service as of November 1, 2013.\" At lines 17 - 32, Centra also indicates that it is proposing a special lower rate rider for customers who convert from Interruptible to Firm service on or after May 1, 2014, since those customers did not contribute to the accumulation of the large Supplemental Gas PGVA balances.
(b). At lines 24 - 32, Centra indicates that without special treatment of converting Interruptible customers those customers could be significantly impacted by the proposed interim rate riders. Please explain in more detail how that impact would arise and provide actual or illustrative calculations showing the impact and how large that impact would be expected to be.

## ANSWER:

In absence of a temporary rate rider treatment, Interruptible customers who migrated or will migrate to firm service would otherwise be required to contribute to the approximate $\$ 45.9$ million balance compared to the approximate $\$ 0.8$ million residual that accumulated on behalf of Interruptible customers.

These Interruptible customers were largely curtailed during the run up in the Supplemental Gas PGVA and purchased Alternate Supply Service at the prevailing market price through that period of time at a total cost of approximately $\$ 6.5$ million.

JEMLP/Centra INT-001

Will the proposed Non- Primary Gas Rate Rider increase be equal/equivalent for all Direct Purchase, System Supply and Centra customers on a Fixed Price Offering in the same rate class?

## ANSWER:

Yes.

JEMLP/Centra INT-002

Will there be a rate impact to Primary gas commodity customers who have opted to receive commodity service through system supply or Fixed Price offerings by the utility that is effective November 2014?

## ANSWER:

The Non-Primary Gas rate changes proposed in this Application are applicable to all of Centra's customers regardless of their choice of gas supplier. There are no proposed changes to Centra's quarterly Primary Gas rates or Centra's rates for FRPGS offerings in this Application.

## JEMLP/Centra INT-003

Please explain how the amount in the Non-Primary Gas Rate Rider deferral account got to such a significant dollar amount and why the appropriate action was not taken when the balance was deemed material.

## ANSWER:

In Centra's view, the appropriate action was taken as is noted in Centra's response to PUB/Centra INT-001(e)-(g), which provides a discussion regarding Centra’s actions to dispose of the non-Primary Gas deferral account balances accumulated during this period.

Please see Centra's response to PUB/Centra INT-001(a) for a discussion of the circumstances that resulted in the accumulation of the Supplemental deferral account balance during the January through March 2014 period.

JEMLP/Centra INT-004

Please explain why the deferral account was not adjusted in a timelier manner in order for to allow consumer the opportunity to better view and reflect on the actual gas cost experience?

## ANSWER:

Please see Centra’s responses to PUB/Centra INT-001(e)-(g).

JEMLP/Centra INT-005

Does Centra believe that the company acted prudently with respect to the NonPrimary Gas deferral account clearing request? Did the company have a responsibility to bring the deferral account balance issue forward at the time the company deemed it to be material in nature?

## ANSWER:

Yes, Centra acted prudently with respect to the timing and treatment of the non-Primary Gas deferral accounts.

Please see Centra’s responses to PUB/Centra INT-001(e)-(g).

