

**BEFORE THE PUBLIC SERVICE COMMISSION  
OF THE STATE OF MISSOURI**

In the Matter of the Empire District Gas	)	
Company's Purchased Gas Adjustment	)	<b><u>Case No. GR-2009-0397</u></b>
Tariff Filing.	)	

**STAFF RECOMMENDATION**

COMES NOW the Staff of the Missouri Public Service Commission (Staff) and for its Recommendation, states as follows:

1. On October 30, 2009, The Empire District Gas Company (EDG or Empire) filed three (3) tariff sheets for each of its three systems, Northern, Southern, and Northwest, bearing an effective date of November 13, 2009.

2. Case No. GR-2009-0397, under which these changes were filed, was established to track the company's PGA factors to be reviewed in its 2008-2009 ACA (Actual Cost Adjustment) filing.

3. Attached hereto as Appendix A and incorporated by reference is Staff's Memorandum containing its analyses and recommendations on Empire's 2008-2009 ACA filing for each of its three districts (Northern, Southern, and Northwest) that became effective November 13, 2009.

4. The Procurement Analysis Department (Staff) has reviewed Empire's ACA filing, analyzing the billed revenues and actual gas costs for this PGA period (September 2008 to August 2009). Staff also performed a prudence review of Empire's gas purchasing decisions.

5. As a result of its audit Staff recommends Empire be required to comply with all Staff recommendations and that Empire be required to adjust its balances in its 2008-2009 ACA filing to reflect the balances shown in the chart on page 7 of Staff's Memorandum.

**WHEREFORE**, for the reasons more fully explained in Staff's Memorandum, the Staff recommends that the Commission order Empire to comply with Staff's recommendations and to adjust its ACA balances in accordance with Staff's chart on page 7 of its Memorandum.

Respectfully submitted,

**/s/Robert S. Berlin**

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### **Certificate of Service**

I hereby certify that copies of the foregoing have been mailed, hand-delivered, or transmitted by facsimile or electronic mail to all counsel of record this 30<sup>th</sup> day of December 2010.

**/s/ Robert S. Berlin**

## MEMORANDUM

TO: Missouri Public Service Commission Official Case File  
Case No. GR-2009-0397, Empire District Gas Company

FROM: David M. Sommerer, Manager - Procurement Analysis Department  
Phil Lock, Regulatory Auditor - Procurement Analysis Department  
Lesa Jenkins, P.E., Regulatory Engineer - Procurement Analysis Department  
Derick Miles, Utility Engineering Specialist - Procurement Analysis Department  
Kwang Choe, Ph.D., Regulatory Economist - Procurement Analysis Department

/s/ David M. Sommerer 12/29/2010      /s/ Bob Berlin 12/29/2010  
Project Coordinator, Date                      General Counsel's Office, Date

SUBJECT: Staff Recommendation in Empire's 2008/2009 Actual Cost Adjustment Filing.

DATE: December 29, 2010

The Procurement Analysis Department (Staff) has reviewed the 2008/2009 Actual Cost Adjustment (ACA) filing of Empire District Gas Company (EDG). The 2008/2009 ACA filing became effective on November 13, 2009, and was docketed as Case No. GR-2009-0397. Staff's review consisted of an analysis of the billed revenues and actual gas costs for the period of September 2008 to August 2009. Staff performed an examination of the Company's gas purchasing practices to evaluate the prudence of the Company's purchasing decisions. The Company's recovery balances include the PGA, ACA, Take-or-Pay (TOP), Transition Cost (TC), and Refund balances (TOP and Refunds had no balances). Staff conducted a reliability analysis to determine if the Company had reasonable plans to meet its customer's needs on the coldest days. Staff's analysis included a review of estimated peak day requirements and the capacity levels needed to meet those requirements. Staff also conducted a review of the Company's hedging policy and implementation for the 2008/2009 ACA.

Empire separates its gas operations into a Southern System, a Northern System, and a Northwest System (formerly L&P). The larger communities served on the Southern System include Sedalia, Marshall, Higginsville, Lexington and Richmond in west-central Missouri and Platte City near Kansas City. On the Northern System, the larger communities include Chillicothe, Marceline and Trenton in north-central Missouri. The Northwest System includes Maryville, which is located in the northwestern part of the state. Southern Star Central Gas Pipeline (SSCGP) serves customers on the Southern System. Panhandle Eastern Pipeline Company (PEPL) serves customers on the Northern System while ANR Pipeline (ANR) serves customers on the Northwest System. In addition, Cheyenne Plains Gas Pipeline Company (CPGP) delivers gas, from Cheyenne Hub just south of Cheyenne, Wyoming to Greensburg, Kansas, to all of the interstate pipelines systems (SSCGP, PEPL and ANR) that serve Empire's customers. For the 2008/2009 ACA review period, there was an average of 29,113 sales customers on the Southern System, 9,415 on the Northern System, and 5,497 on the Northwest (NW) System.

## **INTERRUPTIBLE SALES**

During the 2008-2009 ACA, Empire had two customers on the Northern System Large Volume Interruptible Gas Service (LVI) class. On November 2010, Empire filed a relatively low PGA factor for the Northern System LVI customer class. Therefore, Staff recommends that Empire should re-evaluate its cost components used in calculating its annual PGA factor for this customer class.

## **PROPERTY TAXES**

During March 2008, Empire included property taxes of \$8,075 as storage injections in its Southern System storage inventory balance. The property taxes were assessed by Grant County in Oklahoma for gas in storage. The property taxes should not be included in storage inventory as these costs do not qualify as purchased gas expenses. (In Empire's most recent rate case, GR-2009-0434, Empire sought an Accounting Authority Order to include Kansas property taxes as a deferral in Account 186). Staff recommends that these costs should be removed from the Southern System storage inventory costs.

During January 2008, Empire included property taxes of \$6,355 as storage injections in its Northern System storage inventory balance. These property taxes are assessed on gas held in PEPL storage. As indicated previously, the property taxes should not be included in storage inventory. Staff recommends that these costs should be removed from the Northern System storage inventory costs.

No adjustment was required by Staff in the 2007-2008 ACA case as the property taxes (for both Northern and Southern Systems) were included as storage injections and were not included as a cost of gas. However, during the 2008-2009 ACA, these property taxes were recovered as a cost of gas upon withdrawal from storage. Therefore, Staff proposes that the cost of gas should be reduced for firm sales customers by \$8,075 on the Southern System and by \$6,355 on the Northern System.

## **CASH-OUTS**

### All Systems

During the month of September 2008 discrepancies were found with Empire's posting of cash-out totals for the Large Volume and Pool Aggregation customers to the Company's ACA filing. The pipeline index rates used by the Company were found to be incorrect for all three systems. Staff calculated the monthly cash-out totals using the proper pipeline index rate for each system.

As a result, Staff proposes a gas cost increase of \$3,565 (\$2,268 + \$1,297) to the Southern System firm sales customers, a gas cost decrease of \$47 (\$154 - \$201) for the Northern System firm sales customers and a gas cost decrease of \$2,620 (\$476 - \$3,096) to the NW System firm sales customers.

### Northern System

Monthly deliveries to Large Volume and Pool Aggregation transport customers exceeded monthly receipts (nominations) during the month of August 2009. Tariff sheet 51 of the Company's

transportation tariffs states that all monthly deliveries that exceed monthly receipts result in an amount due the Company (Empire). In contrast to the tariff provisions, the Company's Northern System filing reflects a \$5,021 and \$869 gas cost increase for firm sales customers as a result of these cash-outs. Therefore, Staff proposes that these amounts should be reversed, resulting in a gas cost reduction of \$10,042 ( $(\$5021) - \$5,021$ ) and a reduction of \$1,738 ( $(\$869) - \$869$ ) for firm sales customers. (\$10,042 is the result of Large Volume cash-out transactions and \$1,738 is the result of Pool Aggregation cash-out transactions). Staff's proposed adjustment reduces the cost of gas to the Northern System firm sales customers by \$11,780 ( $\$10,042 + \$1,738$ ).

## **HEDGING**

The 2008/2009 winter weather was mild overall so actual delivered volumes to customers were less than expected for normal weather. The Company has individual gas supply portfolios for each of its three systems. Staff's comments are provided for each service area.

For the Southern System, EDG hedged about 80% of the normal winter requirements through a combination of storage and financial instruments. For the Northern and Northwest Systems, EDG depended mostly on storage for its hedging strategies. For the Northern System, EDG hedged about 92% of the normal requirements by using storage and financial instruments, while about 75% of the Northwest System's normal requirements came from storage.

EDG's overall hedging planned target was at 77% while actual coverage was 82% based on the 2008/2009 normal winter volumes. While Staff is concerned with the negative financial impacts Empire's hedging had in this ACA period, Staff reviews the prudence of a Company's decision-making based on what the Company knew at the time it made its decisions. Empire has explained that the natural gas market price volatility during the 2008-2009 ACA was a factor. Market prices continued to spike in the first half of 2008 followed by precipitous drops between the second half of 2008 and the early part of 2009. Market prices went from above \$13/MMBtu in July 2008 to below \$4/MMBtu in March 2009. Thus, most of the financial hedges placed prior to the second half of the year 2008 in preparation for the winter heating season of November 2008 through March 2009, in particular, resulted in substantial losses as market prices declined from late August 2008 and into the early part of 2009. In response to Staff's data requests pertaining to the hedging evaluation, Empire did not, based on the market information available at the time the financial hedges were placed, expect that the natural gas market prices would collapse in the second half of 2008 and continue into 2009. In fact, Empire discussed with Staff, in July 2008, to accelerate some of the hedge purchases in order to further avoid potentially damaging price spikes late in the summer.

Staff recommends the Company continue to assess and document the effectiveness of its hedges for the 2009-2010 ACA and beyond. The analysis should include, but not be limited to, whether the hedging implementation was consistent with the hedging plan, identifying the benefits/costs based on the outcomes from the hedging strategy, and thus evaluating any potential improvements on the future hedging plan and its implementation. Additionally, the Company should carefully continue to evaluate its hedging strategy in response to changing market dynamics to balance the cost of hedging

against the goal of price stabilization. Although Staff is not suggesting that the Company should or could design its hedging strategy in order to beat the market, its planning should continue to be flexible enough to incorporate changing market circumstances. EDG should also consider longer term horizons in its hedging strategy, given the increased impact of natural gas summer market price volatility. Consideration should be given to dollar cost averaging concepts when hedging. In addition, Staff recommends the Company evaluate whether the hedging plan for each of the three systems has operational implications for warm and cold weather conditions.

## **RELIABILITY ANALYSIS AND GAS SUPPLY PLANNING**

As a gas corporation providing natural gas service to Missouri customers, Empire District Gas is responsible for conducting reasonable long-range supply planning to meet its customer needs. EDG must make prudent decisions based on that planning. One purpose of the ACA process is to examine the reliability of the Local Distribution Company's (LDC) gas supply, transportation, and storage capabilities. For this analysis, Staff reviews the LDCs' plans and decisions regarding estimated peak-day requirements and the LDC's pipeline capacity levels to meet those requirements, peak day reserve margin and the rationale for this reserve margin, and natural gas supply plans for various weather conditions.

Staff has the following comments and concerns regarding the reliability analysis:

### **1. Regression Models**

#### **Interruptible Load:**

The Company included the Large Volume Interruptible Gas Service volumes in its Peak Day Estimate. The Company's justification for including these volumes is the small load of the class. A historic peak day estimate is used to establish needed capacity on each respective pipeline for firm sales customers. Of the three interruptible sales customers during this ACA period, only one remains in that class, while the other two customers are currently transportation customers. All three customers currently possess electronic metering, thus it should not be difficult for the Company to remove the interruptible loads, either prior to or after conducting the regression. The Company's review should show whether such loads are immaterial. However, Staff's review reveals 62 HDD as the coldest day for this ACA period occurring on January 15, 2009 with the highest system load at 70,044 dth, compared to a Company peak day estimate of 63,083 for 81 HDD (66,212 if consider 95% confidence interval factors). Thus, on a day that is 10 degrees warmer than the peak day, the load was 11% above the peak day estimate. Such data should cause the Company to further review its peak day estimate and the load caused by interruptible customers.

Staff recommends that the Company calculate the peak day estimate on a going forward basis to exclude interruptible customers. Thus a change would be expected for the Company's planning for the 2011/2012 ACA. In addition, interruptible customer data should be provided for the 2009/2010 ACA period and future ACA's, for Staff's review.

**Estimates of Monthly, Seasonal, and Baseload usage:**

Staff recommends Empire expand its usage of its regression models to estimate monthly, seasonal, and baseload usage for the Company's three systems to aid in its gas supply planning. The same recommendation was made in the 2007/2008 ACA, GR-2008-0368, and in its response, the Company agreed. Because of the lag in the PGA/ACA process, such a review would be expected beginning with the 2010/2011 supply planning. The Company states that its regression models are used for establishing monthly budgeted volumes; however, Staff could not identify any models or other indicators that the Company is using its regression models to establish normal, colder, and warmer weather requirements. Prior to the change for 2010/2011, Staff will continue to monitor the Company's methodology on how the monthly and seasonal requirements are established.

**2. Reserve Margin**

**Reserve Margin All Systems:**

The Company's peak day estimates do not consider variation, such as inclusion of the standard error of the regression or the 95% confidence interval factors of the regression analysis. Staff recommends the Company consider variation in its peak day estimates and consider this in its reserve margin estimates.

**Southern System Reserve Margin:**

In the 2007/2008 ACA, Staff recommended the Company evaluate the Southern System peak day requirements for the four different line segments on SSC, unless EDG can demonstrate the capacity can be moved from one line segment to another, such as for a central delivery point. EDG's response to the 2007/2008 ACA Staff recommendation indicated it was in the process of analyzing the Southern system on a city gate and line segment basis. It also stated that there were the following complicating factors: (a) the capacity needed to retain storage withdrawal rights, and (b) daily imbalances from transportation customers. EDG further stated the Daily Balancing Fee on Large Volume Transportation customers was addressed in the recent rate case.

The Company recently indicated its line segment analysis will be available to Staff for review in the 2009/2010 ACA period. Staff will review how the Company addresses the complicating factors it has identified.

**SUMMARY**

The Staff has addressed the following concerns regarding Case No. GR-2009-0397 for Empire:

1. Details of EDG's hedging activity are described in the "Hedging" section of this recommendation. The Staff recommends the Company continue to assess and document the effectiveness of its hedges for the 2009-2010 ACA and beyond. The analysis should include but not be limited to whether the hedging implementation was consistent with the hedging plan, identifying the benefits/costs based on the outcomes

from the hedging strategy, and thus evaluating any potential improvements on the future hedging plan and its implementation. Additionally, the Company should carefully continue to evaluate its hedging strategy in response to changing market dynamics to balance the cost of hedging against the goal of price stabilization. Staff also recommends that EDG should continue to pursue longer term horizons given the impact of summer market price volatility. Consideration should be given to dollar cost averaging concepts. In addition, Staff recommends the Company evaluate whether the hedging plan for each of the three systems has operational implications for warm and cold weather conditions.

2. There is no financial adjustment related to the section, Reliability Analysis and Gas Supply Planning, but Staff has provided comments and concerns.
3. Staff recommends that Empire should re-evaluate its cost components used in calculating its PGA factor for the Northern System LVI customer class.
4. Property taxes were assessed on Empire's Northern and Southern System storage inventory, (\$6,355) and (\$8,075) respectively, and included as storage withdrawal costs in Empire's storage inventory balances. These costs should be excluded from storage inventory as they do not qualify as purchased gas expenses.
5. Cash-out amounts posted to the Company's filing (North, South and NW) during the month of September 2008 were found to be incorrect. Staff proposes a \$47 decrease to the Northern System, a \$3,565 increase to the Southern System and a \$2,620 decrease to the NW System.

The Company's Northern System filing reflects a \$5,021 and \$869 gas cost increase from cash-out transactions during August 2009. Staff believes these amounts should be reversed resulting in a total gas cost reduction of \$11,780 for Northern System firm sales customers (\$10,042 for Large Volume cash-outs and \$1,738 for Pool Aggregation cash-outs).

## **RECOMMENDATIONS**

The Staff recommends that the Commission issue an order requiring EDG to:

1. Adjust the balances in its 2008/2009 ACA filing to reflect the ending (over)/under recovery balances for the ACA, TOP, TC, and Refund accounts per the following table:



**TABLE 1**

Description (+) Under-recovery (-) Over-recovery	8-31-09 Ending Balances Per Filing	Commission Approved Adjustments prior to 2008-2009 ACA (A1)	Staff Adjustments For 2008-2009 ACA	Staff Recommended 8-31-09 Ending Balances
Southern System: Firm ACA	\$1,166,886	\$0	(\$8,075) (A) \$3,565 (B)	\$1,162,376
Interruptible ACA	(\$33,443)	\$0	\$0	(\$33,443)
Take-or-Pay	\$0	\$0	\$0	\$0
Transition Cost	\$0	\$0	\$0	\$0
Refund	\$0	\$0	\$0	\$0
Northern System: Firm ACA	(\$786,980)	\$0	(\$6,355) (A) (\$47) (B) (\$11,780) (C)	(\$805,162)
Interruptible ACA	\$57,167	\$0	\$0	\$57,167
Take-or-Pay	\$0	\$0	\$0	\$0
Transition Cost	\$0	\$0	\$0	\$0
Refund	\$0	\$0	\$0	\$0
Northwest System: Firm ACA	(\$162,322)	\$0	(\$2,620) (B)	(\$164,942)
Interruptible ACA	\$0	\$0	\$0	\$0
Take-or-Pay	\$0	\$0	\$0	\$0
Transition Cost	(\$2,586)	\$0	\$0	(\$2,586)
Refund	\$0	\$0	\$0	\$0

A1) All Commission approved adjustments prior to Case GR-2009-0397  
(Case GR-2008-0368 and GR-2008-0123) have been adopted by the Company.

A) Property Taxes

B) Cashout – September 2008

C) Cashout – August 2009 (\$10,042) + (\$1,738)

2. Address the Staff recommendations in the summary section related to hedging.
3. Respond to the Staff recommendations in the section, Reliability Analysis and Gas Supply Planning.
4. Respond to recommendations included herein within 30 days.

**BEFORE THE PUBLIC SERVICE COMMISSION**

**OF THE STATE OF MISSOURI**

In the Matter of The Empire District Gas )  
Company's Purchased Gas Adjustment (PGA) )  
Tariff Filing. )

Case No. GR-2009-0397

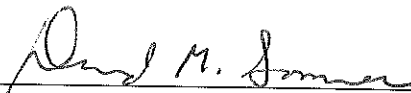
**AFFIDAVIT OF DAVID M. SOMMERER**

STATE OF MISSOURI )  
 ) ss.  
COUNTY OF COLE )

David M. Sommerer, being of lawful age, on his oath states: that as a utility Regulatory Manager in the Procurement Analysis Department of the Utility Services Division, he has participated in the preparation of the foregoing report, consisting of 7 pages to be presented in the above case; that he has verified that the following Staff Memorandum was prepared by himself and Staff of the Commission that have knowledge of the matters set forth as described below; that he has verified with each of the Staff members listed below that the matters set forth in the Staff Memorandum are true and correct to the best of his knowledge and belief,

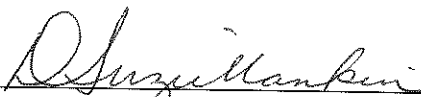
Phil Lock, Regulatory Auditor – Purchased Gas Costs & Billed Revenues  
Lesa Jenkins, P.E., Regulatory Engineer – Reliability Analysis & Gas Supply Planning  
Derick Miles, Utility Engineering Specialist - Reliability Analysis & Gas Supply Planning  
Kwang Choe, Ph.D., Regulatory Economist - Hedging

that he has knowledge of the matters set forth in such report and that such matters are true to the best of his knowledge and belief.

  
David M. Sommerer

Subscribed and sworn to before me this 29<sup>th</sup> day of December, 2010.

D. SUZIE MANKIN  
Notary Public - Notary Seal  
State of Missouri  
Commissioned for Cole County  
My Commission Expires: December 08, 2012  
Commission Number: 08412071

  
Notary Public