MEMORANDUM

TO: Missouri Public Service Commission Official Case File, Case No. GR-2010-0372
Missouri Gas Energy, a Division of Southern Union Company

FROM: David M. Sommerer, Manager - Procurement Analysis
Anne Allee, Regulatory Auditor - Procurement Analysis
Lesa A. Jenkins, PE, Regulatory Engineer - Procurement Analysis
Kwang Choe, PhD, Regulatory Economist

/s/ David M. Sommerer 12/21/2011	/s/ Jennifer Hernandez 12/21/2011
Project Coordinator / Date	Staff Counsel's Office / Date

SUBJECT: Staff's Recommendation in Missouri Gas Energy's 2009-2010 Actual Cost Adjustment Filing

DATE: December 21, 2011

I. EXECUTIVE SUMMARY

On October 13, 2010, Missouri Gas Energy (MGE or Company) filed its Actual Cost Adjustment (ACA) for the 2009-2010 period. The filing, in case GR-2010-0372, contains the Company's ACA account balance calculation.

The Commission's Procurement Analysis Unit (Staff) reviewed and evaluated MGE's billed revenues and actual gas costs for the period of July 1, 2009, to June 30, 2010. The Staff examined MGE's gas purchasing practices to determine the prudence of the Company's purchasing and operating decisions, including:

(1) a reliability analysis of estimated peak cold day requirements and the capacity levels needed to meet those requirements,

(2) the Company's rationale for its reserve margin for a peak cold day,

(3) a review of normal, warm and cold weather requirements and the gas supply plans for meeting these requirements, and

(4) a review of MGE's hedging for the period to determine the reasonableness of the Company's hedging plans.

This ACA Memorandum is organized into the following sections:

Staff has proposed a $66,399.64 adjustment to the Company's filed June 30, 2010 ACA account balances related to the Stipulation from Case No. GM-2003-0238 and provides recommendations to the gas purchasing practices.

STAFF'S TECHNICAL DISCUSSION AND ANALYSIS

II. BACKGROUND

MGE served an average of 510,032 customers in the Kansas City, Joplin and St. Joseph areas during the 2009-2010 ACA period. MGE transports its gas supply over Panhandle Eastern Pipe Line (PEPL), Southern Star Central Gas Pipeline (SSC), Kinder Morgan Interstate Gas Transmission (KM), and Quest Pipeline, previously known as Kansas Pipeline Company (KPC).

III. CASE GM-2003-0238 STIPULATION

Southern Union d/b/a MGE filed an Application with the Commission to acquire Panhandle Eastern Pipeline Company in Case No. GM-2003-0238. The Commission approved the Company's application and the Stipulation and Agreement (Stipulation) filed in that case. One of the conditions contained in the Stipulation was for PGA/ACA purposes the Company would maintain at least the same percentage of discounts it had prior to the acquisition. In this ACA case the Company made an adjustment to its ACA balance in order to comply with the

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Stipulation. Staff found a miscalculation in the amount of the Company's adjustment. Therefore the Staff recommends the Company increase its ACA balance by $66,399.64 in order to correct the error.

IV. ACA BALANCE

Staff is concerned with the level of the ACA balance in this case. The balance in this case produced an ACA rate of $.10897/Ccf. The ACA rate impacts the customers' overall PGA rate. The ACA rate is based upon the ACA balance and is changed once a year at the same time the Company makes its required Winter PGA filing. In addition to its Winter PGA filing, MGE is permitted to make up to three (3) additional PGA filings each year. Staff recommends the Company monitor its ACA balance throughout the year and make adjustments to its PGA rate to prevent its ACA balance from reaching an unreasonable level.

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VI. RELIABILITY ANALYSIS AND GAS SUPPLY PLANNING IMPROVEMENT

As a regulated gas corporation providing natural gas service to Missouri customers, the Local Distribution Company (LDC) is responsible for: 1) conducting reasonable long-range supply planning and 2) the decisions resulting from that planning. One purpose of the ACA process is to review the Company's planning for gas supply, transportation, and storage to meet its customers' needs. For this analysis, Staff reviewed the LDC's plans and decisions regarding estimated peak day requirements and the 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 no proposed financial adjustments to the 2009/2010 ACA period related to Reliability Analysis and Gas Supply Planning section.

MGE's primary service areas are: Kansas City, St. Joseph and Joplin. MGE has approximately 400,400 firm customers in the Kansas City area, 28,200 in St. Joseph, and 79,400 in Joplin, for a total of 508,000 firm customers (MGE Demand/Capacity Analysis, November 2009). For the 2009/2010 ACA, MGE reports an average of 444,654 residential customers, 63,956 commercial customers, 298 industrial customers, and 1,124 transport customers, for an average total of 510,032 customers. To assure that each area has sufficient transportation capacity, MGE must consider the capacity available for each area. In its Demand/Capacity Analysis dated November 30, 2009 (November 2009 Analysis), received by the Staff on December 14, 2009, MGE plans its capacity by service area.

Although Staff has proposed no financial adjustments, Staff has comments and concerns. The following is a list of those comments and concerns regarding reliability analysis and gas supply planning:

A. CAPACITY PLANNING

1. Demand/Capacity Analysis for MGE's Three Service Areas

For its short term and long-term monthly gas requirements and peak day requirements planning, the Company refers to its November 2009 Analysis.

Staff's concerns with the MGE methodology in calculating peak day requirements are documented in prior ACA recommendations and in testimony in GR-2003-0330. Staff's concerns for the November 2009 Analysis include the following:

- MGE's methodology for subtracting a differing baseload each winter based on average July/August usage is not reasonably supported. MGE does not support why it would expect usage in July and August to represent baseload usage in the winter months. Customer habits could change for winter months. MGE subtracts the average July/August baseload, a different value each year, and then determines whether it believes another baseload amount (y-intercept) is significant. It treats the y-intercept like a variable, but does not include the variable in the data set considered in its regression analysis. It considers other factors as variables, such as HDD, Trend, and Day-of-Week, and each of these variables has a value in the data considered in the regression analysis.

- MGE relies on a few data points over a 10 year period. Exclusion of older data would consider that customer habits and systems may have changed. MGE should consider additional data points for more recent years. The more recent data could still be limited, such as by including only data with temperatures below a specified temperature. A chart of more recent data may assist MGE in determining a reasonable break point for the data to include in the analysis.

- In its regression analysis MGE sets the y-intercept to zero and reports a high r-squared. Literature on regression analysis notes problems with the R-Square calculation when the intercept is set to zero[1].

- MGE's methodology considers usage for cold days during 1999/2000 through 2008/2009. It applies no growth (positive or negative growth) in 2009/2010, the first year of its estimate. It applies a growth factor to the 2009/2010 peak day estimate to obtain the estimate for 2010/2011. MGE should review why it is not adding any growth (positive or negative growth) in 2009/2010, the first year of its estimate.

- MGE compares the peak day estimates in the November 2009 Analysis to those in its prior two Demand/Capacity Analysis reports. MGE's estimates in the prior MGE Demand/Capacity Analysis reports are specific to that year, not for the 2009/2010 winter. MGE has not factored in the growth or trend estimates to update the information for 2009/2010. MGE should review estimates for similar time periods before it draws conclusions on whether the estimates are consistent or are of concern.

MGE should continue to evaluate whether its peak day methodology is reasonable and revise its planning as necessary to adequately prepare for peak day requirements.

2. Other MGE Capacity Studies

In addition to the peak day studies and capacity available to meet those requirements for each of its three service areas, MGE conducts studies in other areas of its service area that are potentially constrained. MGE also evaluates requirements related to a specific pipeline.

a. Panhandle Eastern Pipeline (PEPL) Capacity

MGE provided an updated August 2009 Peak Day and Demand/Capacity Analysis for its area that is served by Panhandle Eastern Pipeline. Staff concerns with the study methodology are similar to those expressed in Section V.A. 1., above for the overall MGE Demand/Capacity analyses, the November 2009 Analysis.

b. Capacity for North Kansas City

MGE provided its 2009 North Kansas City study and provided work papers for the 2008 and 2009 North Kansas City studies in the 2007/2008 ACA, GR-2008-0367. Staff's concerns with the peak day estimates and

[1] Eisenhauer, Joseph. (2003). Regression through the Origin. *Teaching Statistics*, Volume 25, Number 3

the documentation of its capacity planning for North Kansas City are the same as those documented in the Staff recommendation in GR-2008-0367, filed 12/30/2009 (pages 6-7).

3. Capacity Evaluation and Documentation Requirements

Staff reminds MGE of its evaluation and documentation requirements for interstate and intrastate transportation and storage costs in GM-2003-0238. These are noted in the Stipulation and Agreement filed March 25, 2003, Section III, 6.

B. SUPPLY PLANNING FOR WARM WEATHER

MGE's Monthly Supply/Demand Summaries also contain daily estimates for "Average Ultimate Warm" and "Average Ultimate Cold," which MGE did not support in the work papers provided. These estimates are different from the warm and cold estimates in MGE's November 2009 Analysis. Reviewing its daily supply plans for a warm day is appropriate because MGE could have much lower supply requirements for a warm day compared to that needed for a <u>warm</u> month. It is reasonable for MGE to consider daily extremes for each month, but the derivation should be supported.

VII. HEDGING

In its review of MGE's purchasing practices, the Staff reviewed the Company's hedging transactions. The Staff also reviewed the Company's natural gas hedging policy, natural gas trading procedures, and 2009 – 2010 hedging strategy.

The Company executed the hedging transactions for the 2009-2010 ACA period based on the 24-month hedging plan. MGE combined storage and financial instruments to hedge portions of the volumes needed for the winter heating season, November 2009 through March 2010. MGE utilized swaps for its financial instruments and the Company started placing the financial hedges from fall 2007 and continued purchasing them through fall 2009. MGE hedged 66% of normal winter requirements with storage and swaps. The Company employed both time-based as well as discretionary approaches to execute its financial hedging transactions. Nevertheless, the discretionary purchases contained the larger portion of the financial hedging transactions.

Staff is concerned about the continued negative financial impacts from the hedging transactions in this ACA period. Although Staff is not suggesting that the Company should or could design its hedging strategy to beat the market, the Company's hedging plan should be flexible enough to incorporate changing market circumstances. The Company should continually evaluate its hedging strategy in response to changing market dynamics to balance the cost of hedging against the goal of price stabilization. For example, the Company should continue to evaluate whether the volumes and the types of the hedging instruments are appropriate under the current market.

A part of the Company's hedging strategy was based on price view, that is, where the Company executed some of its hedging transactions when the Company viewed the prices were relatively low. Staff recommends the Company be aware of any fundamental shifts in the market dynamics, while being cautious on the market views. The Company should also regularly examine the balance between storage and other financial hedging instruments in the overall hedging portfolio for a warmer weather scenario as well as for normal load. The Staff also recommends the Company continue to update its price risk management planning in order to be able to make informed hedging decisions. The Staff further recommends the Company continue to document its hedging decisions and provide the documentation to the Staff during each ACA review. This documentation should include an overall hedging plan that addresses hedging goals, objectives, and strategies for each month of each ACA review and the circumstances under which certain hedging transactions occurred. The hedging plan should be updated, documented and completed well in advance of each approaching winter season. The Company should also continue to carefully evaluate longer-term time horizons for placing hedges as it extends the forward purchasing window. Finally, the Staff recommends the Company continue to assess and document the effectiveness of its hedges for the 2010-2011 ACA period and beyond. The analysis should include, but not be limited to, whether the hedging implementation was consistent with the hedging plan, testing in detail for hedge effectiveness for any financial instruments that attempt to hedge the physical price risk exposure, 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. If the Company plans to change hedging strategies, the Company should provide the Staff with copies of all analyses, including any and all documents regarding changes to the Company's hedging policy / plan.

VIII. RECOMMENDATIONS

The Staff recommends that MGE:

1. Increase its ACA balance by $66,399.64 in order to correct an error it made when adjusting its ACA balance to comply with the Stipulation in Case No. GM-2003-0238.

2. Establish the following ACA and Refund account balances shown in the table below to reflect the (over)/under-recovery balances as of June 30, 2010. An over-recovery reflects the amount that is owed to the customer by the Company and is shown in the table below as a negative number. An under-recovery is an amount that is owed to the Company by the customers and is shown in the table below as a positive number.

Account	6-30-10 Ending Balances per MGE Filing	Current ACA Staff Adjustments	6-30-10 Staff Recommended Ending Balances
ACA Balance	$ 61,140,192.78	$ 66,399.64	$ 61,206,592.42
Large Volume Refund	$ (530,624.12)	$ 0	$ (530,624.12)

3. Monitor its ACA balance throughout the year and make adjustments to its PGA rate as appropriate.

4. Respond to the concerns expressed by Staff in the Reliability Analysis and Gas Supply Planning Improvement section related to capacity planning and supply planning.

5. Respond to the concerns / comments expressed by Staff in the Hedging Section.

6. File a written response to all recommendations included herein within 30 days.

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Missouri Gas Energy's PGA/ACA	)))	File No. GR-2010-0372

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 Unit of the Utility Services Department, he has participated in the preparation of the foregoing report, consisting of 8 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,

Anne Allee, Utility Regulatory Auditor IV:	Billed Revenues and Actual Gas Costs
Lesa A. Jenkins, P.E., Regulatory Engineer:	Reliability Analysis and Gas Supply Planning
Kwang Choe, PhD, Regulatory Economist II:	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

David M. Sommerer

Subscribed and sworn to before me this 21st day of December, 2011.

D. Suzie Mankin

Notary Public

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