MEMORANDUM

TO: Missouri Public Service Commission Official Case File, Case No. GR-2008-0367, Missouri Gas Energy, a Division of Southern Union Company

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

/s/ David M. Sommerer 12/30/2009	/s/ Lera L. Shemwell 12/30/2009
Project Coordinator / Date	General Counsel's Office / Date

SUBJECT: Staff's Recommendation in Missouri Gas Energy's 2007-2008 Actual Cost Adjustment Filing

DATE: December 30, 2009

I. BACKGROUND

The Commission's Procurement Analysis Department (Staff) has reviewed the Missouri Gas Energy's (MGE or Company) October 17, 2008 Actual Cost Adjustment (ACA) filing for the 2007-2008 period. The filing, in case GR-2008-0367, contains the Company's ACA account balance calculation.

MGE served an average of 514,700 customers in the Kansas City, Joplin and St. Joseph areas during the 2007-2008 ACA (Data Request No. 70). MGE transports its gas supply over Panhandle Eastern Pipe Line (PEPL), Southern Star Central Gas Pipeline (SSC), Kinder Morgan Interstate Gas Transmission (KM), and Enbridge Pipeline commonly known as Kansas Pipeline Company (KPC).

Staff reviewed and evaluated MGE's billed revenues and actual gas costs for the period of July 1, 2007, to June 30, 2008. 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 consists of the following sections for which the Staff makes recommendations:

** Denotes Highly Confidential Information **

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Appendix A

Staff has not proposed any dollar adjustments to the Company's filed June 30, 2008 ACA account balances, but provides recommendations to the gas purchasing practices.

II. BILLING ERROR

In the prior ACA case, GR-2007-0256 Staff recommended an adjustment to the Company's ACA balance due to the Company's incorrect computer coding which led to an MGE's transportation customer being underbilled. The Company has indicated the billing error occurred through June 2008 which is the last month of the ACA period under this review. Thus the issue of under-collection from this customer continues into this current ACA period.

This error originated when MGE replaced the meters of one of its transportation customers, but failed to revise its computer system to adjust for the new type of meter installed. As a result of this error, the billing system began recording one half (½) of the actual metered volumes, so the transportation bills for this customer were understated. Since the transportation customer was using more gas than it was putting into MGE's distribution system, and because the customer was not billed by MGE for the additional supply it burned, the cost of this supply was passed through to MGE's firm sales customers through the PGA/ACA process.

In the prior ACA case, Staff has proposed a total adjustment of ** _____ ** to the Company's ACA balance. This error carried over into the ACA period under review and affects the ACA balance of this case as well. The Staff recommends, therefore, the Commission hold this case open pending resolution of the prior ACA case GR-2007-0256. Direct testimony has been filed in the previous ACA Case GR-2007-0256 and a status report or procedural schedule is due by 1/22/10.

III. OFF-SYSTEM SALES TRANSACTIONS

MGE's tariff contains a gas-cost incentive mechanism, which allows the Company to keep, or "share," a portion of the capacity release and off-system sales revenues it generates, depending upon the level of revenues achieved within an ACA period. Any portion MGE does not keep goes back to customers via the PGA/ACA process and reduces the customers' total gas costs.

Off-system sales are defined as sales MGE makes outside of its service area. MGE holds firm capacity (as opposed to interruptible capacity) on its supply pipelines. A capacity release occurs when MGE releases, or assigns, its firm pipeline transportation rights to another party for a specified time period. MGE receives a credit on its interstate-pipeline-company bill for the capacity it releases.

The Staff has concerns with MGE matching its gas supply purchases with its off-system sales commitments. In this ACA period, Staff found an instance where MGE purchased gas supply for either an off-system sale or for its own system supply, but did not have an off-system sale arranged at the time the supply was purchased. In this case, the gas was used by its on-system customers. However, if MGE regularly purchases supply with no certainty that it either has an off-system market in which to sell that supply or that its firm customers will need the gas, then the gas costs of the on-system customers potentially could be increased by MGE making such a purchase for off-system sales activities. The Staff recommends that MGE evaluate the process it uses in matching its off-system sales natural gas purchases with its sales commitments.

IV. RELIABILITY ANALYSIS AND GAS SUPPLY PLANNING IMPROVEMENT

As a regulated gas corporation and a Local Distribution Company (LDC) providing natural gas service to Missouri customers, assuring reliability of supply is an essential company function. The Company is responsible for conducting reasonable long-range supply planning and for the decisions resulting from that planning. One purpose of the ACA process is to examine the Company's analysis and decisions to assure reliability of its gas supply, transportation, and storage capabilities. For this analysis, Staff reviews: the LDC's plans, methods of calculating, and decisions regarding its estimated peak day requirements and the capacity levels to meet those requirements, the LDC's peak day reserve margin and its rationale for this reserve margin, and the Company's natural gas supply plans for various weather conditions.

MGE's primary service areas are: Kansas City, St. Joseph and Joplin. MGE has approximately 402,500 firm customers in the Kansas City area, 29,000 in St. Joseph, and 80,200 in Joplin, for a total of 511,700 firm customers (MGE Demand/Capacity Analysis, November 2007). For the 2007/2008 ACA MGE reports an average of 446,805 residential customers, 66,503 commercial customers, 302 industrial customers, and 1,055 transport customers, for an average total of 514,665 customers. To assure that each area has sufficient transportation capacity, MGE must consider the capacity available for each area. In its Demand/Capacity Analyses dated January 2006 and November 2007, MGE plans its capacity by service area.

Staff's review of MGE's reliability and gas supply plans for the 2007/2008 ACA period produced the following comments and concerns.

A. CAPACITY PLANNING

1. General

Staff continues to have concerns with MGE's methodology for estimating peak cold day requirements.[1] Even though peak cold days occur only occasionally, an LDC must plan for the estimated peak or maximum natural gas usage requirements of its system to ensure reliability.

Some of Staff's comments in prior cases pertained to MGE's calculation of base-load to be used in its peak day and monthly estimates for each service area. It appears MGE attempted to address some of these concerns in its November 2007 Demand/Capacity Analysis by adding a trend analysis to the summer base-load estimate by conducting a regression, but on only nine data points, the average of the July/August usage each year for nine years. MGE did not conduct a regression analysis on the more variable daily usage for July and August. Although MGE attempts to address the situation of decreasing base-load over time, and such an evaluation of the daily data should be a consideration for the summer months, it does not address whether the average of the July and August values produces a reasonable estimate for the winter month base-load requirements.

Staff has additional concerns with the most recent MGE study for its St. Joseph service area peak day (design day) estimate, where MGE reports a low R-squared of 0.61. The R-squared value is an indication of the interdependence between the factor(s) considered and the estimated result (requirements or usage in this case). A value of zero would indicate no relationship between the factor(s) and estimated usage. A value of one would indicate a perfect relationship between the factor(s) and estimated usage. Such a low R-squared requires more scrutiny of the data and the Company's methodology to develop a better model for estimating peak day requirements for the St. Joseph service area.

MGE compares the peak day estimates in the November 2007 Analysis to those in the prior two reports, as summarized in the table below.

[1] Staff has documented concerns with the Company's peak day planning/ reliability analysis in the previous eight cases (2006/2007 ACA, GR-2007-0256, 2005/2006 ACA, GR-2006-0291, 2004/2005 ACA, GR-2005-0169, 2003/2004 ACA, GR-2005-0169, 2002/2003 ACA, GR-2003-0330, 2001/2002 ACA, GR-2002-348, 2000/2001 ACA, GR-2001-382, and 1999/2000 ACA, GR-2000-425).

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MGE notes that for Kansas City and St. Joseph the current design day results (November 2007 Analysis) are slightly below the results of prior two reports. MGE expresses concern that current design day demand may be understated for Kansas City and St. Joseph and MGE will continue to monitor, yet it expresses no such concern for Joplin. If MGE were to compare peak day estimates for the same period, the 2007/2008 period, it would note that both the Kansas City and Joplin estimates are ** ___ ** lower than the October 2004 Analysis estimate for 2007/2008. 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.

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.

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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 or to evaluate requirements related to a specific pipeline. At Staff's request in follow-up data requests, MGE provided its 2009 North Kansas City study and provided work papers for the 2008 and 2009 North Kansas City studies.

MGE evaluates capacity and demand for North Kansas City. ** _____ _____ _____ _____ _____ _____ **

- ** _____ _____ _____ _____ _____ _____ _____ _____ . **
- ** _____ _____ _____ _____ _____ _____ _____ _____ **

Using Excel, there are two methods to evaluate the data to obtain a line estimate. Using a plot of the actual data, the HDD on the x-axis and the Sales or Usage on the Y-axis, a Trend Line can be added along with a display of the R-squared and the trend line equation (in the form of Y= mx + b, where m is the line slope coefficient and b is the intercept or a constant factor).

The other Excel feature that can be used is a Regression Analysis of the same data that will display the regression statistics such as the R-squared and list the intercept and line slope coefficients – the same as the trend line equation.

In both these Excel methods, the trend line equation is the same and the R-Squared is the same, unless the intercept is forced to zero. When the intercept is set/forced to zero, the line slope coefficient will be the same for both methods, but the R-squared will be much different.

The trend line for the plotted data shows the same HDD coefficient identified by MGE, but shows the R-square as negative 0.100 instead of the 0.98 R-Square reported by MGE.

Because of the poor R-Square for the trend line, Staff recommends MGE re-evaluate its peak day estimate for the North Kansas City area.

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Staff recommends MGE re-evaluate its peak day estimates for North Kansas City and more fully explain how the various pipeline contracts are planned to meet the needs of all the MGE service areas over the next 10-20 years, along with the rationale for contract terms and the costs to customers over that timeframe. MGE must maintain and make documentation available to Staff in the ACA review for the period in which MGE makes capacity decisions including the following documentation: all contract negotiations; peak day estimates for each service area and constrained areas to be addressed in its capacity planning; MGE's rationale for any reliance on supply to be transported on any capacity that is not under firm contract; its evaluation for appropriate length of the pipeline contract terms; annual costs to customers for its pipeline reservation charges; and how MGE's capacity release provisions (e.g. recallable versus non-recallable) may vary in the near term versus 5, 10, 15, or 20 years out as the peak day requirements change.

B. SUPPLY PLANNING

1. Supply for Peak Day

   MGE's plans rely on recall of capacity release volumes it terms as a "Virtual Call" for its peak day requirements (DR No. 14). However, there are no contractual assurances that the gas flowing on a capacity release deal would include firm supply that would be flowing every day. Thus, the supply could be interruptible or the shipper may not nominate the full volume each day, which could leave MGE short of supply on a peak day. For example, there are no assurances that ** _____ ** would have flowing supplies during the winter months that would provide firm supply up to the maximum capacity of MGE's release and thus, Staff does not include the "Virtual Call" volumes in the peak day coverage. The removal of this "Virtual Call" is not material for this ACA period, but MGE's reliance on this type of contract is of concern for reliability of supply on a cold day.

2. Monthly Supply Planning

   For its monthly supply planning, MGE refers to its Demand/Capacity Analysis dated November 2007 (November 2007 Analysis) (DR Nos. 1 and 5), the Monthly Supply/Demand Summaries (DR Nos. 14 and 14.1) and the MGE Dealsheets (DR52). MGE's monthly planning contains estimated requirements for normal weather and various estimates of requirements for warm and cold weather.

   Base load for monthly planning is the same as that for peak day planning, and the concerns with MGE's methodology are documented in prior cases. MGE estimates an average warm winter (November 2007 Analysis) by using the normal month HDD minus one standard deviation, which does not adequately consider the monthly warm HDD extremes. MGE's average warm estimates are 80% of normal, and this is reasonable for the seasonal November through March warmest weather, but not the monthly extremes when considering actual daily HDD for 30 years. MGE's Monthly Supply/Demand Summaries do not utilize the warm and cold estimates from the November 2007 Analysis, but provide different estimates for "Average Ultimate Warm" and "Average Ultimate Cold" which were not supported in the work papers provided. It is reasonable for MGE to consider daily extremes for each month. Additionally, MGE does not provide estimates of warm, normal or cold month requirements for future years.

   MGE's Monthly Supply/Demand Summaries use of the "Average Ultimate Warm" is not an estimate of warm usage for the warmest day for the month. Staff is not suggesting that MGE must plan for the one warmest day each month that occurred in the last 30-years, but MGE must evaluate and support its choice of warm weather considerations and the financial impacts on its customers if MGE has too much supply to be used and it cannot inject all of the excess natural gas into storage.

Staff evaluated the average HDD each month less one and two standard deviations. When only one standard deviation was subtracted there were a large number of days that were actually warmer. For example, the shoulder months of November and March had 16% to 19% of the days that were warmer. Using the same methodology as in MGE's Response to DR14.1 for "Average Ultimate Warm", Staff evaluated MGE's supply plans for warm days each month, using MGE's monthly planning factors, where appropriate, with the average HDD each month less two standard deviations. MGE's supply plan would exceed the flowing requirements for this Staff scenario and would exceed its storage injection limits for each month of November, December, February and March. The early winter months are of great concern because if the weather is warm and storage is full or nearly full, MGE risks selling natural gas into the market for less than it paid for the gas.

Staff recommends MGE review its warm weather supply plans and the possible cost to customers for excess gas for warmer days in those months. Staff recommends MGE document the purpose of the cold and warm estimate in the Demand/Capacity Analysis. Staff further recommends MGE include an explanation and work papers for warm and cold estimates it uses in its monthly supply planning documents, the Monthly Supply/Demand Summaries. Staff recommends MGE's future Demand/Capacity Analysis include and explain monthly estimates for a three to five-year period for the warm, normal and cold weather supply requirement.

MGE's Monthly Supply/Demand Summaries (DR No. 14), its supply plan, did not initially include the volumes that could be "Put" to it for December 2007 through March 2008; these are volumes from a supply agreement that allows a Seller an option to place or sell additional volumes to MGE during these months. MGE's revised DR No. 14-1 included these volumes, but this information was provided only after Staff questioned the Supply/Demand Summaries provided in DR No. 14. Staff recommends MGE review on a going forward basis, its procedures for the Monthly Supply/Demand summaries to consider "Put" volumes.

C. STORAGE PLANNING

MGE's supply plans for normal weather (Supply/Demand Summaries, DR Nos. 14 and 14.1) do not have the same storage plans as those in its summer injection and winter withdrawal plans (DR 14: "Original Plan" or "Typical Plan" and "Updated Plan"). The summer injection and winter withdrawal storage plans are consistent with those from 2000/2001 through 2006/2007 in which MGE plans to have the largest planned withdrawal in November.

Staff commented about MGE's large planned withdrawals from storage for the month of November in the past seven ACA cases. However, MGE's Supply/Demand Summaries for the 2007/2008 winter show that MGE does not plan to withdraw from storage in November 2007 at the originally planned high level as stated in its "Original Plan" or

"Typical Plan". In the June 25, 2009 conference call regarding the 2006/2007 ACA, MGE informed Staff it does not use the "Original" or "Typical" Plans. Thus, Staff does not know what plans MGE uses for managing storage injections and withdrawals, other than the first of month plans, one month at a time as the winter progresses. Staff recommends MGE provide plans for storage utilization as part of its supply plans for the summer and winter months for weather that is warm, cold, or normal.

V. 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 2007 - 2008 hedging strategy. While the Staff has concern with a certain type of instrument used by MGE to hedge its price risk, the Staff's conclusion is that, overall, MGE's hedging for this ACA period was reasonable and adequate.

Weather was near normal in November, December 2007, January 2008, and colder than normal in February, and March 2008. MGE combined storage, financial instruments, and fixed prices to hedge portions of the volumes needed for the winter heating season November 2007 through March 2008. MGE utilized swaps and call options for its financial instruments and the Company started placing the financial hedges from spring 2006 and continued purchasing them through summer 2007. The Company employed both disciplined as well as discretionary approaches to execute its hedging transactions. MGE hedged 69% of normal winter requirements with storage, and financial instruments.

The Staff has concern for some of the hedging instruments that were intended for the two winter months November 2007 and March 2008. MGE utilized daily spot market prices, albeit not substantial, during the winter months for the fixed-price contracts. Although it may have been economically efficient for the Company to purchase the daily spot prices for the winter months November 2007, and also March 2008 when the market prices were relatively low, the Staff does not consider these winter daily spot purchases for hedging because the purchases are made after the winter has begun and there is no guarantee that low daily prices will occur after the winter has begun.

Although the Company used a diversified portfolio approach to hedge against market risks for the winter heating season November 2007 through March 2008, Staff recommends the Company analyze its hedging risk for each winter month under normal conditions and cold weather conditions, including cold weather that may occur late in the winter season. This analysis should include a review of the volumes hedged and the associated cost. In addition, MGE should analyze each month where price exposure exists, to evaluate the costs and risks of not covering, or minimally covering, the unhedged price volatility for that particular month. The Staff also recommends the Company continue to update its price risk management in order to be able to make informed hedging decisions. For example, a part of the Company's hedging strategy was based on the historical price pattern where the Company executed some of its hedging

transactions when the prices were typically low in the past. However, staff recommends that the Company be aware of any fundamental shifts in the market dynamics while being cautious on market views. 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. 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 extended the forward purchasing window and thus some of financial hedges for the winter months November 2007 through March 2008 were placed in spring and fall of 2006. The Staff's concern is increased summer price volatility could subject the Company to market risk during the summer prior to the winter under consideration. Finally, the Staff recommends the Company continue to assess and document the effectiveness of its hedges for the 2008-2009 ACA 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.

VI. RECOMMENDATIONS

It is Staff's opinion that the Company should do the following:

1. The Staff has not proposed any dollar adjustments to the Company's filed June 30, 2008 ACA account balances shown in the table below. However Staff recommends the Commission hold this ACA case open pending resolution of the prior ACA Case GR-2007-0256. 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	6-30-08 Ending Balances per MGE Filing	Prior ACA Case Staff Adjustments Case GR-2007-0256	Current ACA Staff Adjustments	6-30-08 Staff Recommended Ending Balances
ACA Balance	$ (5,707,049)	** _____ **	$ 0	** _____ **
Large Volume Refund	$ (530,046)	$ 0	$ 0	$ (530,046)

2. Evaluate the process it uses in matching its off-system sales natural gas purchases with its sales commitments.

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

4. Carefully consider the risk of placing reliance on winter hedges that are placed during the same winter periods that are intended to be protected, and are actually underway. The Company should analyze its hedging risk for each winter month under normal conditions and cold weather conditions, including cold weather that may occur late in the winter season. This analysis should include a review of the volumes hedged and the associated cost. MGE should analyze each month where price exposure exists, to evaluate the costs and risks of not covering, or minimally covering, the unhedged price volatility for that particular month. The Staff also recommends that the Company continue to update its price risk management and hedging decisions reflecting in part on any fundamental shifts in the market dynamics while being cautious on market views, document, 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. The hedging plan should be updated, documented and completed well in advance of each approaching winter season. The Company should also continue to evaluate longer-term time horizons for placing hedges. Finally, the Staff recommends the Company continue to assess and document the effectiveness of its hedges for the 2008-2009 ACA 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.

5. Respond 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 Co. PGA/ACA Filing.	))	Case No. GR-2008-0367

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 12 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, Regulatory Auditor – Billed Revenues and Actual Gas Costs
Lesa A. Jenkins, PE, Regulatory Engineer – Reliability Analysis and Gas Supply Planning
Kwang Choe, PhD, 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 30th day of December, 2009.

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