Exhibit No.:	17
Issue:	Gas storage inventory; Capacity release/off-system sales revenues
Witness:	John Hayes
Exhibit Type:	Rebuttal Testimony
Sponsoring Party:	Missouri Gas Energy
Case No.:	GR-2004-0209
Date Filed:	May 24, 2004

MISSOURI PUBLIC SERVICE COMMISSION

MISSOURI GAS ENERGY

CASE NO. GR-2004-0209

REBUTTAL TESTIMONY

OF

JOHN HAYES

ON BEHALF OF MISSOURI GAS ENERGY

Jefferson City, Missouri

May 2004

REBUTTAL TESTIMONY OF JOHN HAYES
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MISSOURI GAS ENERGY

INDEX TO TESTIMONY

REBUTTAL TESTIMONY OF JOHN HAYES
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Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is John Hayes and my business address is 3420 Broadway, Kansas City, Missouri.

Q. FOR WHOM DO YOU WORK AND IN WHAT CAPACITY?

A. I am a Senior Gas Supply Analyst for Missouri Gas Energy, a division of Southern Union Company.

Q. WHAT ARE YOUR RESPONSIBILITIES AS SENIOR GAS SUPPLY ANALYST FOR MISSOURI GAS ENERGY?

A. I prepare and execute the monthly natural gas supply plan for Missouri Gas Energy. Preparation includes evaluating historical data, weather trends, and storage balances to ensure the correct amount of gas supplies are on hand for our customers. Execution includes purchasing natural gas from our suppliers and selling any unused pipeline capacity in the open market.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL EXPERIENCE AND YOUR EMPLOYMENT EXPERIENCE PRIOR TO COMING TO WORK FOR MISSOURI GAS ENERGY.

A. I have a Bachelor of Science in Business Administration with an Accounting emphasis from the University of Nebraska - Lincoln. I have over ten years experience in the natural gas

world from the wellhead to the burner tip during my time at Aquila Energy Resources. Highlights include time spent as the Gulf Coast Operations Manager where I coordinated efficiencies between the marketing, storage and transportation groups. I also headed up the Virtual Storage group providing peaking services to utilities in areas where there was a shortage of physical storage and worked back-up for a 20 billion cubic feet ("BCF"; 1 BCF is roughly equivalent to 1,000,000 decatherms [dth]; 1 dth is equal to 1 MMBtu which is roughly equivalent to 1,000 cubic feet of natural gas) storage facility in Texas.

Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

A. In relation to the issues of bad debt expense and gas storage inventory, I will offer testimony regarding future pricing expectations for natural gas. In relation to the issue of capacity release/off-system sales revenues, I will offer testimony about significant ongoing changes in the pipeline markets causing uncertainty in the future level of revenues MGE may be able to generate from capacity release transactions.

Future Pricing Expectations for Natural Gas

Q. DO YOU, AS A PART OF YOUR JOB, EVER ATTEMPT TO ESTIMATE WHAT THE PRICE OF NATURAL GAS WILL BE AT VARIOUS TIMES IN THE FUTURE?

A. Yes. Missouri Gas Energy controls approximately 17.5 BCF of storage. We seek to use all of the information available to us to inject gas at times of lower prices and then to withdraw gas when the prices are more expensive. Missouri Gas Energy also has access to Mid-Continent

supplies as well as Rocky Mountain supplies. Purchases are made based upon which region provides the best value for Missouri Gas Energy's operational needs.

Q. WHAT MARKET INFORMATION IS AVAILABLE REGARDING FUTURE PRICING EXPECTATIONS FOR NATURAL GAS?

A. Missouri Gas Energy has a subscription to Platt's Gas Daily. This provides useful industry articles and information. MGE has view-only access to the Intercontinental Exchange, which is the industry's leading electronic trading platform. This allows MGE to view live trades in the marketplace to see what kind of pricing MGE should expect on its own trades. MGE uses the consulting services of Gelber & Associates and any information or opinions we can gain from any of our contacts. MGE can also contact Bank One to get future financial derivative quotes at any time.

Q. DOES ANY OF THE MARKET INFORMATION AVAILABLE TO YOU INDICATE THAT MGE WILL BE ABLE TO PURCHASE NATURAL GAS FOR INJECTION INTO STORAGE IN THE NEXT INJECTION SEASON AT A WEIGHTED AVERAGE COST OF $4.59/MMBTU, WHICH IS THE PRICE RECOMMENDED FOR GAS STORAGE INVENTORY BY STAFF WITNESS ALLEE IN HER DIRECT TESTIMONY?

A. No. Southern Star Central First of the Month Index pricing has been higher than $4.59 for all of 2004. Since MGE has approximately 16 BCF of Storage on Southern Star Central, most purchases to go into this facility are based upon First of the Month Southern Star Central

Index pricing. Current price indicators are showing prices will be above $6.00 for the rest of the injection season.

Q. DOES ANY MARKET INFORMATION PRESENTLY INDICATE THAT THE PRICE WILL BE $4.59/MMBTU FOR APPROXIMATELY THE NEXT THREE YEARS SINCE THAT SEEMS TO BE AN ASSUMED INTERVAL FOR MGE RATE CASES?

A. No. Based upon the May 13, 2004 close of the NYMEX, MGE may be able to buy $4.59 gas in the 2007 refill season. All of 2005 and 2006 is priced above $4.59.

Q. WHAT DOES THIS MARKET INFORMATION SHOW REGARDING FUTURE PRICING EXPECTATIONS FOR NATURAL GAS?

A. As of May 13, 2004 closing, the NYMEX strip for the June-October 2004 injection season is $6.5404/MMBtu; for the April-October 2005 injection season it is $5.746/MMBtu; and for the April-October 2006 injection season, it is $5.2903/MMBtu. The two-year average forward price is $6.1643/MMBtu and the three-year average forward price is $5.8988/MMBtu. Since Missouri Gas Energy buys its gas physically in the Mid Continent region, there is a discount to the above quoted NYMEX rates. This discount is called the basis difference. The Mid Continent average basis difference for the calendar year 2003 was a minus $0.32. The Mid Continent average basis difference for the calendar year 2002 was a minus $0.20. Basis trading is not as liquid as NYMEX trading in the far future months. It

does appear that currently the Mid Continent basis is continuing in the minus $0.35 to minus $0.40 range. Even with the Mid Continent basis discount, we do not come close to $4.59 gas.

Q. CAN YOU EXPLAIN IN SIMPLE TERMS WHAT "STRIP PRICES" REPRESENT?

A. Natural Gas Futures are traded on a monthly time frame through the New York Mercantile Exchange ("NYMEX"). The NYMEX shows prices applicable to future months and is an objective indication of what willing buyers and willing sellers have agreed to pay for natural gas at different times in the future. A strip price is the average price for more than one month. A strip price can be for a year, which would be the average of 12 months, or it can be for a season. The November-March strip would be an average price for 5 months. When the months are purchased separately January would typically be more expensive than November. When purchasing a strip, the cost is evened out among the entire package.

Q. HOW RELIABLE ARE THE STRIP PRICES WHEN IT COMES TO PREDICTING WHAT ACTUAL PRICES WILL BE?

A. Strip prices reflect the cost of gas in the future based upon today's marketplace. No one can predict the future. Economic growth, natural gas storage levels, and weather patterns are always changing. The strip price will change with these current events going higher or lower in price.

Q. WOULD YOU PLEASE DESCRIBE, IN GENERAL TERMS, HOW MGE FILLS AND MAKES USE OF ITS GAS STORAGE INVENTORY?

A. MGE typically fills (or injects into) storage facilities during the traditional injection months of April through October. The total volumes which may be injected in a given month can be affected by the physical ability of the storage facility to absorb the gas as may be generally reflected in what are called "ratchet" provisions in pipeline company tariffs. For example, pursuant to these "ratchet" provisions, MGE may inject up to 120,000 MMBtu per day into the Southern Star Central TSS storage facility until the storage level reaches 62.5% of MGE's contracted capacity, then MGE can inject no more than 100,000 MMBtu per day until the storage level reaches 75% of MGE's contracted capacity, and so on. As a result, MGE typically purchases storage gas throughout the traditional injection season.

MGE typically makes use of (or withdraws from) gas in storage facilities during the traditional withdrawal months of November through March.

Q. HAS MGE MADE ANY ADVANCE PURCHASES OF NATURAL GAS FOR INJECTION INTO STORAGE IN THE MONTHS WHEN THE RATES TO BE SET IN THIS CASE WILL BE IN EFFECT?

A. Yes. MGE has 6,343,029dth in storage as of April 30, 2004 with a weighted average cost of $5.4001. Therefore, as of April 30, 2004, it was expected that MGE would need to purchase approximately 11,000,000 dth in additional storage gas during the 2004 injection season.

Capacity Release/Off-system Sales

Q. WHAT ARE CAPACITY RELEASE TRANSACTIONS?

A. A capacity release transaction is when an entity that owns firm space on a natural gas pipeline, elects to sell the space to a third party rather than use the space for themselves.

Q. HOW DOES MGE GO ABOUT SEEKING TO GENERATE CAPACITY RELEASE TRANSACTIONS?

A. MGE will determine how much capacity it will need for a particular time period, usually by month. MGE will then try to market the unused capacity to interested third parties. Depending upon the market on a given pipeline, these capacity release transactions can be completed using a pipeline bulletin board on-line bidding system, or the deals can be completed over the telephone.

Q. WHAT ARE OFF-SYSTEM SALES?

A. Off-system sales are physical sales of gas made prior to the entry of the gas into the distribution system. Off-system sales may be made at the wellhead prior to the introduction of the gas into the interstate pipeline system or off the interstate pipeline system. Typically, MGE has made off-system sales for "system protection" purposes. "System protection" sales are made for operational or reliability reasons, typically due to issues arising on an interstate pipeline.

Q. DO YOU BELIEVE MGE'S PAST PERFORMANCE IN GENERATING CAPACITY RELEASE REVENUES IS A RELIABLE INDICATOR OF MGE'S ABILITY TO GENERATE CAPACITY RELEASE REVENUES IN THE FUTURE?

A. No. Significant changes in the relevant markets have occurred or will occur introducing a greater degree of uncertainty in the level of capacity release revenues MGE will be able to generate in the future.

Q. WHAT MARKET CHANGES HAVE ALREADY OCCURRED?

A. Kern River pipeline had a 900,000dth capacity expansion in May of 2003. This took supplies of gas from the Rocky Mountains and moved it to California. An analysis of prices between the Rocky Mountains and the Mid Continent shows that in the thirteen months prior to the Kern River expansion the average price difference was $1.33. This is the value that MGE can attempt to capture in its Kinder Morgan capacity release. In the thirteen months following the expansion the average price difference was $.22. This information is shown in Schedule JH-1.

Q. WHAT MARKET CHANGES ARE EXPECTED TO OCCUR IN THE NEAR FUTURE?

A. On or about January 1, 2005, Cheyenne Plains Pipeline will be placed into service. The capacity of this pipeline will be 560,000dth per day with an option to expand to higher volumes with increased compression. This pipe will also take supplies of gas from the Rocky

Mountains and is scheduled to interconnect with the same exact pipes as Kinder Morgan Pony Express with the addition of ANR Pipeline.

Q. WHAT IMPACT WILL THIS HAVE ON THE KINDER MORGAN PONY EXPRESS PIPELINE?

A. It is reasonable to expect that the pricing differential between Rocky Mountain gas and Mid-Continent gas will continue to be reduced with the addition of the Cheyenne Plains pipe similar to what occurred with the addition of take-away capacity in the form of the Kern River pipeline I discussed earlier. In addition, the Kinder Morgan capacity release will do poorly versus Cheyenne Plains since Cheyenne Plains will have a considerably lower variable cost than Kinder Morgan to transport natural gas. Kinder Morgan has a fuel cost component of 3.3 % and Cheyenne Plains is scheduled to have a fuel cost component of around 1%. I have prepared a schedule, which I have attached as Schedule JH-2 which shows these costs. In simple terms, this means that purchasers of released capacity would demand a reduction in the capacity cost on the Kinder Morgan system equivalent to the amount by which the Kinder Morgan fuel cost exceeds the Cheyenne Plains fuel cost in order to achieve equivalent total costs because the fuel cost cannot be discounted under FERC requirements.

Q. IS THERE ANYTHING ELSE BESIDES CHEYENNE PLAINS THAT CAN IMPACT THE CAPACITY RELEASE REVENUES THAT MGE MAY BE ABLE TO OBTAIN IN THE FUTURE?

A. Yes. New pipelines and more expansions are being planned to take more natural gas supplies away from the Rocky Mountains. Kinder Morgan has a planned pipeline called Advantage that will move gas from the Rocky Mountains out into the Mid Continent. Kern River is planning another possible expansion to California, and Southern Star has plans for a Rocky Mountain to Mid Continent pipeline called Western Frontier.

Q. PLEASE EXPLAIN THE TERM FUEL COST.

A. Fuel is a variable cost charged by the pipelines to transport your gas to its destination. Pipelines burn natural gas at compressor stations to transport natural gas. In practical terms applicable to this situation, it means you will need to buy more gas at the supply points on Kinder Morgan than you will need to buy on Cheyenne Plains to have the same amount of natural gas delivered to your market due to fuel. That naturally makes Kinder Morgan a less attractive alternative for someone looking to purchase capacity MGE is trying to release.

Q. IN THE FUTURE DOES MGE EXPECT TO HAVE DIFFICULTY GETTING VALUE FOR RELEASES ON KINDER MORGAN?

A. Yes.

Q. WHY?

A. Unfortunately natural gas supply cannot be turned on like a light switch. Someone has to go out and drill natural gas wells, which takes time. When Cheyenne Plains goes into service, there will be 560,000 dth per day in additional capacity into the Mid-Continent region that was not there before. Shippers who once purchased capacity release from MGE on Kinder Morgan will now logically seek to obtain released capacity first on Cheyenne Plains since it has a cheaper variable (e.g., fuel) cost. When all capacity available for release on Cheyenne Plains is sold (i.e., all available capacity is taken), only then will third party shippers have interest in capacity available for release on Kinder Morgan. In addition, the capacity that MGE owns on Kinder Morgan has a limited number of delivery locations that it can go to. Only two of these locations are actually "End User" points and they are Missouri Gas Energy and Kansas Gas Service. All other delivery points for MGE's capacity on Kinder Morgan are into a Mid-Continent pipeline. All of MGE's capacity release revenues on Kinder Morgan come by way of deliveries into a Mid-Continent pipeline; this means that a shipper cannot use MGE's Kinder Morgan capacity to deliver gas into MGE's market area absent making arrangements for such delivery on another pipeline (e.g., Southern Star Central).

Q. CAN KINDER MORGAN CAPACITY BE RELEASED TO THIRD PARTY MARKERTERS LIKE MGE HAS BEEN ABLE TO DO ON SOUTHERN STAR CENTRAL?

A. No. The Kinder Morgan delivery point into MGE's market in the Kansas City metro area has a limited operational take away capability from the pipeline. Since the Cheyenne Hub

supplies are typically cheaper than Mid Continent supplies, MGE typically flows maximum volumes to this delivery point for the benefit of MGE system sales customers. Any unused space on Kinder Morgan is sold to parties who are interested in moving Cheyenne Hub gas into another Mid-Continent pipeline.

Q. WHAT CONCLUSIONS DO YOU REACH ON THE BASIS OF ALL OF THIS INFORMATION?

A. Capacity release revenue levels MGE has been able to generate in the past are not a reasonable or reliable indicator of capacity release revenues that MGE may be able to generate in the future.

Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

A. Yes, at this time.

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Missouri Gas Energy's Tariff Sheets Designed to Increase Rates for Gas Service in the Company's Missouri Service Area.	))))	Case No. GR-2004-0209

AFFIDAVIT OF JOHN HAYES

STATE OF MISSOURI)
) ss.
COUNTY OF JACKSON)

John Hayes, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Rebuttal Testimony in question and answer form, to be presented in the above case; that the answers in the foregoing Rebuttal Testimony were given by him; that he has knowledge of the matters set forth in such answers; and that such matters are true and correct to the best of his knowledge and belief.

John Hayes
JOHN HAYES

Subscribed and sworn to before me this 20th day of MAY 2004.

Kim W. Henzi
Notary Public

My Commission Expires: Feb. 3, 2007

Kim W. Henzi
Notary Public - Notary Seal
State of Missouri
Jackson County
My Commission Expires Feb. 3, 2007

Impact to CIG/Midcon Basis After Kern Expansion - May 2003

		CIG Index	PEPL Index	NYMEX LDS	CIG vs. NYMEX	PEPL vs. NYMEX	CIG vs. PEPL	Commodity Fuel & Trans	CIG Premium vs. Cheyenne Hub	Net
1	Apr-02	$2.71	$3.29	$3.472	($0.76)	($0.18)	($0.58)	$0.11	$0.10	($0.37)
2	May-02	$2.18	$3.18	$3.319	($1.14)	($0.14)	($1.00)	$0.09	$0.10	($0.81)
3	Jun-02	$1.56	$3.02	$3.420	($1.86)	($0.40)	($1.46)	$0.07	$0.10	($1.29)
4	Jul-02	$1.20	$3.00	$3.278	($2.08)	($0.28)	($1.80)	$0.06	$0.10	($1.64)
5	Aug-02	$1.59	$2.70	$2.976	($1.39)	($0.28)	($1.11)	$0.07	$0.10	($0.94)
6	Sep-02	$1.09	$2.97	$3.288	($2.20)	($0.32)	($1.88)	$0.06	$0.10	($1.72)
7	Oct-02	$1.20	$3.34	$3.686	($2.49)	($0.35)	($2.14)	$0.06	$0.10	($1.98)
8	Nov-02	$2.96	$4.05	$4.126	($1.17)	($0.08)	($1.09)	$0.12	$0.10	($0.87)
9	Dec-02	$3.33	$3.97	$4.140	($0.81)	($0.17)	($0.64)	$0.13	$0.10	($0.41)
10	Jan-03	$3.14	$4.58	$4.988	($1.85)	($0.41)	($1.44)	$0.12	$0.10	($1.22)
11	Feb-03	$3.20	$5.07	$5.660	($2.46)	($0.59)	($1.87)	$0.13	$0.10	($1.64)
12	Mar-03	$5.01	$8.55	$9.133	($4.12)	($0.58)	($3.54)	$0.19	$0.10	($3.25)
13	Apr-03	$3.21	$4.64	$5.146	($1.94)	($0.51)	($1.43)	$0.13	$0.10	($1.20)
									13 month total	**($17.35)**
									13 Month Basis Average	**($1.33)**

Kern River Expansion - May 2003 add 900,000mcfd of capacity

1	May-03	$3.85	$4.81	$5.123	($1.27)	($0.31)	($0.96)	$0.15	$0.10	($0.71)
2	Jun-03	$4.87	$5.58	$5.945	($1.08)	($0.37)	($0.71)	$0.18	$0.10	($0.43)
3	Jul-03	$4.61	$5.18	$5.291	($0.68)	($0.11)	($0.57)	$0.17	$0.10	($0.30)
4	Aug-03	$3.95	$4.55	$4.693	($0.74)	($0.14)	($0.60)	$0.15	$0.10	($0.35)
5	Sep-03	$4.31	$4.83	$4.927	($0.62)	($0.10)	($0.52)	$0.16	$0.10	($0.26)
6	Oct-03	$4.01	$4.34	$4.430	($0.42)	($0.09)	($0.33)	$0.15	$0.10	($0.08)
7	Nov-03	$3.87	$4.24	$4.459	($0.59)	($0.22)	($0.37)	$0.15	$0.10	($0.12)
8	Dec-03	$4.44	$4.42	$4.860	($0.42)	($0.44)	$0.02	$0.17	$0.10	**$0.29**
9	Jan-04	$5.09	$5.62	$6.150	($1.06)	($0.53)	($0.53)	$0.19	$0.10	($0.24)
10	Feb-04	$5.12	$5.27	$5.775	($0.66)	($0.51)	($0.15)	$0.19	$0.10	**$0.14**
11	Mar-04	$4.40	$4.69	$5.150	($0.75)	($0.46)	($0.29)	$0.17	$0.10	($0.02)
12	Apr-04	$4.17	$4.97	$5.365	($1.20)	($0.40)	($0.80)	$0.16	$0.10	($0.54)
13	May-04	$4.94	$5.43	$5.935	($0.99)	($0.51)	($0.49)	$0.18	$0.10	($0.21)
									13 month total	**($2.83)**
									13 Month Basis Average	**($0.22)**

Kinder Morgan Pony Express
vs.
Cheyenne Plains
Fuel Costs

	NYMEX Close Price As of May 11, 2004	Kinder Morgan Fuel Cost at 3.3%	Cheyenne Plains Fuel Cost at 1.1%	Loss In Capacity Release For Fuel
Jan-05	$ 6.901	$ 0.2277	$ 0.0759	$ 0.1518
Feb-05	$ 6.841	$ 0.2258	$ 0.0753	$ 0.1505
Mar-05	$ 6.621	$ 0.2185	$ 0.0728	$ 0.1457
Apr-05	$ 5.731	$ 0.1891	$ 0.0630	$ 0.1261
May-05	$ 5.546	$ 0.1830	$ 0.0610	$ 0.1220
Jun-05	$ 5.559	$ 0.1834	$ 0.0611	$ 0.1223
Jul-05	$ 5.584	$ 0.1843	$ 0.0614	$ 0.1228
Aug-05	$ 5.594	$ 0.1846	$ 0.0615	$ 0.1231
Sep-05	$ 5.554	$ 0.1833	$ 0.0611	$ 0.1222
Oct-05	$ 5.574	$ 0.1839	$ 0.0613	$ 0.1226
Nov-05	$ 5.749	$ 0.1897	$ 0.0632	$ 0.1265
Dec-05	$ 5.924	$ 0.1955	$ 0.0652	$ 0.1303