

MEMORANDUM

TO: Missouri Public Service Commission Official Case File Case Nos. GR-2000-520
and GR-2001-461, Missouri Public Service

FROM: Dave Sommerer, Manager- Procurement Analysis Department *ds*
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/s/ Dave Sommerer
[Signature] / 7-9-02
Dave Sommerer,
Project Coordinator/Date

/s/ Thomas R. Schwarz
[Signature] 7/6/02
Thomas R. Schwarz,
General Counsel's Office/Date

SUBJECT: Staff Recommendation in Missouri Public Service Company's 1999-2000 and
2000-2001 Actual Cost Adjustment Filings

DATE: July 9, 2002

The Procurement Analysis Department (Staff) has reviewed the 1999-2000 and 2000-2001 Actual Cost Adjustment (ACA) filings of Missouri Public Service (MPS or Company), a division of Aquila, Inc. The Company name was changed to Aquila, Inc. d/b/a Aquila Networks-MPS. in Case No. EO-2002-450. The 1999-2000 ACA filing was made on November 6, 2000, and was docketed as Case No. GR-2000-520. The review consisted of an analysis of the billed revenues and actual gas costs for the period of September 1999 to August 2000. The 2000-2001 ACA filing was made on November 5, 2001, and was docketed as Case No. GR-2001-461. The review consisted of an analysis of the billed revenues and actual gas costs for the period of September 2000 to August 2001. An examination of MPS's gas purchasing practices was performed to determine the prudence of the Company's purchasing decisions. The Company's balances include the ACA, Take-or-Pay (TOP), Transition Cost, Deferred Carrying Cost, and Refund recovery balances. Staff conducted a reliability analysis including a review of estimated peak day requirements and the capacity levels needed to meet those requirements.

MPS separates its gas operations into a Southern System, a Northern System, and an Eastern System. Williams Natural Gas Company (WNG) serves customers on the Southern System, while Panhandle Eastern Pipeline Company (PEPL) serves customers on the Northern System and Eastern System. In addition to PEPL, Missouri Pipeline Company (MPC) and Missouri Gas Company (MGC) deliver gas to the Eastern System. For the 1999-2000 ACA review period, the number of sales customers was approximately 31,500 on the Southern System, 11,100 on the Northern System, and 4,200 on the Eastern System. For the 2000-2001 ACA review period, the number of sales customers was approximately 32,000 on the Southern System, 11,200 on the Northern System, and 4,300 on the Eastern System.

1999-2000 ACA

PUT/CALL TRANSACTIONS

This issue is directly related to the put/call issue identified in the anonymous letter investigation in Case No. GO-2001-249. **

_____ **

Staff has proposed two adjustments for put and call activity during the 1999-2000 ACA review period. **

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_____ ** As a result,
the Staff proposes a cost reduction of \$128,729 on the Northern System. **

_____ ** As a result, the Staff proposes
a cost reduction of \$116,146 on the Southern System.

RELIABILITY ANALYSIS

To assure that sufficient capacity, but not excess capacity, is available to meet firm customer peak day capacity and natural gas supply requirements, Staff conducts a reliability analysis. The objective is to assure that a company has adequate capacity to provide natural gas to its firm customers on even the coldest days without maintaining excess capacity because when a company maintains excess capacity it costs consumers money without any related benefit. Staff conducted a reliability analysis for the Missouri Public Service's Southern System, Northern System, and Eastern System, and the comments for the 1999-2000 ACA period are summarized with the comments for the 2000-2001 ACA period, listed later in this memorandum.

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SUMMARY

The Staff has addressed the following concern regarding MPS Case No. GR-2000-520:
****** _____ ****** As a result, the Staff proposes to decrease the cost of gas on the Northern System by \$128,729 and decrease the cost of gas on the Southern System by \$116,146.

RECOMMENDATIONS

The Staff recommends that the Commission issue an order requiring Missouri Public Service to:

1. Adjust the ACA account balances in its 1999-2000 ACA filing to reflect the ending (over)/under recovery balances for the ACA, TOP, Transition Cost, DCCB, and Refund accounts, per the following table:

1999-2000 ACA Description	Beginning ACA Balance Per Filing	Staff Adjustments	Ending ACA Balance Per Filing
Southern System: Firm ACA	\$999,473	(\$116,146)	\$883,327
Interruptible ACA	(\$9,563)		(\$9,563)
Take-or-Pay	\$0		\$0
Transition Cost	\$0		\$0
DCCB	\$959		\$959
Refund	(\$228,693)		(\$228,693)
Northern System: Firm ACA	\$695,965	(\$128,729)	\$567,236
Interruptible ACA	\$104,100		\$104,100
Take-or-Pay	\$0		\$0
Transition Cost	\$0		\$0
DCCB	\$1,009		\$1,009
Refund	(\$42,426)		(\$42,426)
Eastern System: Firm ACA	\$872,699		\$872,699
DCCB	\$15,232		\$15,232

2. File a written response to the above recommendation pursuant to the procedural schedule.

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2000-2001 ACA

PUT/CALL TRANSACTIONS

This issue is directly related to the put/call issue identified in the anonymous letter investigation in Case No. GO-2001-249. ** _____

_____ **

Staff has proposed two adjustments for put and call activity during the 2000-2001 ACA review period. ** _____

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** _____

_____ ** As a result, the Staff proposes to reduce the cost of gas by \$45,007 on the Northern System. ** _____

_____ ** As a result, the Staff proposes to reduce the cost of gas by \$182,236 on the Southern System.

DEFERRED CARRYING COST BALANCE

Due to extreme price increases in the natural gas markets during the 2000-2001-winter period, the Company requested a one-time waiver during the 2000-2001 ACA case to forego the collection of carrying costs (interest) from its customers for the period of March 2001 to August 2001. The carrying costs resulted from large under-recovery balances that occurred during the ACA period. The Company calculated these carrying costs to be \$157,080. This waiver affects the Southern System customers only.

The Staff believes that carrying costs collected by the Company for the 12-month period ended August 2001 should include \$122,049 for the period of September 2000 to February 2001. The Company's filing includes \$109,760 of carrying costs for that same period (also see paragraph above). The Staff believes that an adjustment of \$12,289 (\$122,049-\$109,760) should be included in the Company's 2001-2002 ACA filing to reflect additional carrying costs to be

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collected by the Company for the period of September 2000 to February 2001. Staff's adjustment would increase gas costs to the Southern System by \$12,289. Per the Company's February 23, 2001 Motion for Waiver and/or Variance, the Company indicated that without the waiver, such carrying costs would have to be later added to rates. The Staff believes, therefore, that carrying costs incurred from March 2001 to August 2001 should be excluded from rates in any future PGA filing.

On the Northern System, Staff determined that carrying costs of \$18,420 should be collected by the Company. The Company filing included carrying costs of \$12,442 to be collected. An adjustment of \$5,978 (\$18,420-\$12,442) should be included in the Company's 2001-2002 ACA filing to reflect additional carrying costs to be collected by the Company. Staff's adjustment would increase gas costs to the Northern System by \$5,978.

NORTHERN SYSTEM STORAGE

Staff's review of the Panhandle Eastern Pipeline storage activity for the Company's Northern System indicated that the Company made storage withdrawals during the first nine days of March 2001. Because of the timing of these storage withdrawals, the Staff believes that these volumes should be priced at the February 2001 weighted average cost of gas (WACOG). The Company priced those volumes at the March WACOG. Staff therefore calculated the total withdrawal cost during the month of March by multiplying the current month withdrawal volumes times the February 2001 WACOG to determine the total cost of storage withdrawals. The Staff calculated (\$119,168) withdrawal cost for the month of March. The Company filed withdrawal costs of (\$144,013), a difference of (\$24,845) from Staff's calculation. This represents Staff's largest monthly adjustment of storage withdrawal costs. The Staff also made other minor adjustments related to the Company's storage withdrawals during the months of November 2000 to February 2001 totaling (\$3,984.81). The Company filed total storage withdrawal costs of \$2,986,086. The Staff believes the total storage withdrawal cost should be \$2,957,256. The Staff proposes that the cost of gas be reduced by \$28,830 (\$2,986,086 - \$2,957,256) on the Northern System to reflect the proper storage withdrawal rates.

PURCHASING PRACTICES – EASTERN SYSTEM

According to the Company's 2000-2001 gas purchasing plan, a portion of the requirements for all three Systems (Eastern, Northern, and Southern) was to be acquired through fixed-price purchases. The Company also indicated that, due to an oversight, all fixed priced packages purchased for the 2000-2001 winter season were only purchased on the Williams pipeline, which meant all fixed price packages planned for all three Systems were only purchased for the Southern System. The Southern System is the only Missouri system served by Williams pipeline.

As a result, the Eastern System did not receive any fixed price gas (or any hedged gas) during the 2000-2001 ACA winter period of November 2000 to March 2001. In addition, storage gas was not available to customers on the Eastern System. The Eastern System customers relied solely

on index-based purchases during this winter period. Because of its reliance on index-based purchases, the Company did not protect its Eastern System customers from exposure to price risk during this winter period.

Staff believes that it is reasonable to expect that Company would have engaged in a minimal level of hedging for the winter months of the 2000-2001 ACA review period. The Staff believes that 30% of normal requirements, as a minimum level of hedging for each month of November 2000 through March 2001, is reasonable. Normal requirements for the Eastern System are the amount of natural gas purchases MPS needs to make on a monthly basis in order to meet its demand based upon normal weather. The 30% of normal requirements minimum should not be viewed as an optimal level nor as precedent for future hedging levels, but only as a minimum level that was reasonable and attainable for the winter of 2000-2001. Staff compared the Company's actual monthly-hedged volumes to the monthly-hedged volumes calculated at 30% of normal requirements for each winter month of the 2000-2001 ACA review period. As a result, Staff proposes a hedging adjustment of (\$197,771) on the Eastern System to reflect the Company's hedging activity shortfall during the 2000-2001 ACA winter period.

PURCHASING PRACTICES - SOUTHERN SYSTEM

In its review of Company purchasing practices, the Staff reviewed the Company's decisions for flowing supplies and planned storage withdrawals for the ACA period.

The Staff believes that it was reasonable to expect MPS to hedge a minimum level of its natural gas purchases for the winter months of the ACA period. The Staff believes 30% of normal requirements as a minimum level of hedging for each month November 2000 through March 2001 is reasonable. Normal requirements are the amount of storage withdrawals and purchases MPS needs to make on a monthly basis in order to meet its demand based upon normal weather. The 30% of normal requirements minimum should not be viewed as an optimal level nor as precedent for future hedging levels, but only as a minimum level that was reasonable and attainable for the winter of 2000-2001. The Staff compared the Company's monthly-hedged volumes with the monthly 30% of normal requirements. The hedged volumes include storage and fixed price purchases. The Staff found that MPS met this minimum level of hedging for each of the winter months for the 2000-2001 ACA period.

Given the information known to the Company when decisions were made regarding planned flowing volumes and storage withdrawals for November 2000 through March 2001, Staff believes that MPS should have ordered a higher level of flowing supplies in November and December 2000 and a lower level of flowing supplies in January, February, and March 2001. This would have also changed the amount of natural gas pulled from storage for each of these months.

The Company's withdrawal season is from November 2000 to March 2001. During the month of November 2000, the Company's storage withdrawals were greater than planned because of colder weather and because of the Company's decision for the planned quantity of baseload and

term natural gas. The Company plans to pull storage down to 87.5% of the maximum capacity in November and actually pulled storage down to 66.8%. The Company planned to pull storage down to 62.5% of the maximum capacity by the end of December and actually pulled storage down to 45.7%. Staff believes that it was reasonable to expect the Company to plan for a greater quantity of natural gas in November and December 2000 - enough term and baseload natural gas to cover warm month requirements for November and December - and then storage inventory would not have been so low at the end of November and December 2000.

The Company planned to pull storage down to 37.5% of the maximum capacity by the end of January. The Company stated that it expected colder than normal temperatures for the first ten days of January 2001, but provided no support for this belief, and as a result, the Company indicated that it opted to forego any further use of storage gas during the month of January 2001. However, the Company could have withdrawn additional volumes from storage and still maintain the planned level of storage for February and March 2001. Instead, the Company made more flowing natural gas purchases - baseload, term, and swing purchases - for the month of January 2001. The Company made more baseload and term supply purchases than would be expected if January 2001 had been a warm month. This natural gas was purchased at \$10.54/mcf. Natural gas purchased for the January 2001 requirements was more than MPS's Southern System customers required and thus the oversupply of gas was injected into storage at a much higher price (\$10.54) than the current Weighted Average Cost of Gas (WACOG) of \$4.58 in storage. WACOG is a method used to price inventory. According to the Company's storage schedule, the storage WACOG increased from \$4.58 to \$6.93. When natural gas was withdrawn from storage in February and March 2001, it was withdrawn at this higher price.

Staff believes that MPS could have reasonably avoided much of its exposure to the higher storage costs beginning in January 2001 by following a reasonable approach for planned flowing gas and storage withdrawals for each of the winter months of November 2000 through March 2001. The Company's plans for flowing gas and storage withdrawals had an economic impact on purchased gas costs of \$1,010,503 and the Staff proposes to reduce gas costs by this amount.

RELIABILITY ANALYSIS

To assure that sufficient capacity, but not excess capacity, is available to meet firm customer peak day capacity and natural gas supply requirements, Staff conducts a reliability analysis. The objective is to assure that a company has adequate capacity to provide natural gas to its firm customers on even the coldest days without maintaining excess capacity because when a company maintains excess capacity it costs consumers money without any related benefit. Staff has the following concerns regarding the Company's reliability analysis and reserve margins for the three MPS service areas - Southern System, Northern System, and Eastern System for the 1999-2000 and 2000-2001 ACA periods.

1. The Company provided comparisons of actual usage on recent cold days to the estimated usage for these temperatures. In explaining the differences between estimated and actual usage, the Company stated that all transportation volumes might not be backed out to get the firm sales numbers. Staff is concerned that if transportation volumes are not always

backed out, then this may also be a problem when the Company develops its usage model, causing greater variation in expected usage and skewing the analysis.

2. To develop the peak day estimate the Company considered usage data from November 1999 to March 2000. The peak heating degree day (HDD) experienced during this period was 47 HDD and the coldest day from the 1998-1999 winter was 61 HDD and neither of these are close to the Company's planned peak cold day of 81 HDD. So that the reasonableness of the peak day estimate can be better evaluated, it is recommended that MPS continue to provide comparisons of actual usage to that estimated by the modeled usage for each service area, especially as occurrences with higher HDD are experienced
3. The Company shows a negative reserve margin for the 1999-2000 and 2000-2001 ACA periods for the Southern System. Thus if a peak cold day had occurred in these years, Staff is concerned that adequate capacity was not available to meet customer needs. The Company increased capacity in 2001-2002, but states that part of the rationale for the reserve margin on the Southern system for 2001-2002 is that the excess capacity is utilized to serve Aquila's regulated MPS natural gas generated electricity. Thus, Staff is concerned that natural gas customers may be subsidizing electric generation. This will be explored further in the 2001-2002 ACA review.
4. The volume of gas requirements that can be met by using storage for the Northern system seems high, especially beginning in 2000-2001.

Northern System – Storage	1999-2000	2000-2001
% of peak day that could be met with storage	37.3%	79.9%
% of normal winter usage that could be met with storage	63.6%	73.6%
% of warmest winter usage that could be met with storage	75.0%	86.3%
% of coldest winter usage that could be met with storage	54.0%	62.8%

5. For the 1999-2000 ACA review period, there was a negative 12.2% reserve margin for the Eastern System. Staff is concerned that if a peak cold day had occurred in this ACA period, either insufficient quantities of natural gas would have been available or customers would have been faced with high costs and penalties to acquire the gas. For the 2000-2001 ACA period additional capacity was obtained reducing the shortfall to negative 3.0%.

The Company refers to an Operational Balancing Agreement (OBA) and states that the negative reserve margin could be handled as an imbalance and worked off later. However, the Company explained that the agreement was between Missouri Pipeline Company and Panhandle Eastern Pipeline Company. The agreement was not made available to the Company or to Staff, so it is not clear whether this agreement would allow the Eastern System to be off by 2% or 5% or some other percentage and it is not clear what the penalties would be for exceeding the OBA constraints.

SUMMARY

The Staff has addressed the following concerns regarding Case No. GR-2001-461 for Missouri Public Service:

1. Put/call transactions ** _____ ** As a result, the Staff proposes to decrease the cost of gas on the Northern System by \$45,007 and decrease the cost of gas on the Southern System by \$182,236.
2. Staff believes that additional carrying costs (interest) of \$12,289 should be included in the Southern System DCCB balance for the 2001-2002 ACA filing. On the Northern System, additional carrying costs of \$5,978 should be included in the Company's DCCB balance for the 2001-2002 ACA filing.
3. On the Northern System, Staff believes that the March 2001 withdrawals should be priced at the prior months WACOG rate (February 2001). The Company priced March 2001 withdrawals at the March 2001 WACOG rate. Staff's proposes to reduce the cost of gas by \$28,830 to reflect the prior month withdrawal rate.
4. Staff believes that the Company purchasing practices did not adequately manage price protection for its Eastern System customers to reduce the volatility of gas prices during the 2000-2001 heating season. Staff, therefore, proposes a \$197,771 reduction in gas costs for the Company's Eastern System customers.
5. Staff believes the Company did not prudently manage its purchasing decisions for planned volumes of flowing natural gas and storage withdrawals for its Southern System customers for the 2000-2001 winter period. The Staff proposes to reduce the cost of gas by \$1,010,503.
6. The Staff believes it may be necessary for the Company to restate its inventory schedule(s) and weighted average cost of gas to the extent that storage gas costs for the winter of 2000-2001 is adjusted in this case. This inventory adjustment would apply to any gas cost adjustment that affected 2000-2001 inventory costs.
7. The Staff believes that a fully documented nomination process is critical for a reasonable gas procurement plan. The nomination process includes, but may not be limited to, the interaction between short-term weather forecasts, pricing information, nomination deadlines, demand forecasts, end-user analysis, required storage targets, actual storage balances, storage telemetry, existing gas supply contracts and constraints, and first-of-the-month flowing versus daily market levels. These variables should be considered, at least implicitly, in spreadsheet summaries containing the various inputs that eventually result in the determination of the amount of flowing supply to nominate. The Staff recommends that the nomination process be fully documented.

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8. To adequately review MPS' estimated peak day requirements and the rationale for the reserve margins, Staff recommends that additional information be submitted.

RECOMMENDATIONS

The Staff recommends that the Commission issue an order requiring Missouri Public Service to:

1. Adjust the ACA account balances in its 2000-2001 ACA filing to reflect the ending (over)/under recovery balances for the ACA, TOP, Transition Cost, DCCB, and Refund accounts per the following table:

2000-2001 ACA Description	Beginning Balances Per Filing	Staff Adjustments	Ending Balances Per Filing
Southern System: Firm ACA	\$6,117,964	(\$1,192,739)	\$4,925,225
Interruptible ACA	(\$9,563)		(\$9,563)
Take-or-Pay	\$0		\$0
Transition Cost	\$0		\$0
DCCB	\$109,760	\$12,289	\$122,049
Refund	\$233,613		\$233,613
Northern System: Firm ACA	\$774,705	(\$73,837)	\$700,868
Interruptible ACA	\$104,100		\$104,100
Take-or-Pay	\$0		\$0
Transition Cost	\$0		\$0
DCCB	\$12,442	\$5,978	\$18,420
Refund	(\$9,027)		(\$9,027)
Eastern System: Firm ACA	\$1,094,048	(\$197,771)	\$896,277
DCCB	\$33,607		\$33,607

2. By November 1, 2002 examine and restate the Company's inventory schedule and weighted average cost of gas to the extent the storage costs for the winter of 2000-2001 are adjusted as a result of this case.
3. By November 1, 2002 submit a copy of the Company's policies and procedures, as a guideline, for those responsible for nominating natural gas and include the information from the staff summary point number 7 above.
4. Take the following actions related to the Company's reliability analysis by November 1, 2002:
 - a. Examine the Company's forecasting models to assure that all transportation customer volumes are backed out of the firm sales numbers used by the Company to develop each system's forecasting models.

- b. Submit a summary of actual usage and actual heating degree days (HDD) for five or more recent cold days from the 2000-2001 or 2001-2002 winters for each Missouri service area. Compare the usage on these actual cold days to the usage estimated by the Company's forecasting model for those days. Include a calculation of the percent over (under) estimation by the forecasting model. For the actual data, show how all transportation volumes are identified and backed out to get the firm sales volumes. Provide an explanation when the modeled usage does not reasonably agree with the actual usage encountered. If the model is re-evaluated based on these findings, please explain.
 - c. For the 2001-2002 ACA provide further explanation for the reserve margin on the Southern System including the following:
 - i. Cost per customer for any excess reserve margin for 2001-2002, 2002-2003, and 2003-2004.
 - ii. Documentation of any efforts for release of excess capacity until needed, including an explanation of how these volumes would be credited to customers.
 - iii. For excess capacity utilized to serve Aquila's regulated Missouri Public Service natural gas generated electricity, explain how the Company assures that the regulated natural gas service customers are not subsidizing electric generation.
 - d. Submit the Company's gas procurement plan for each system showing how the Company establishes the percentages of baseload, term, and swing purchases and how these are used to meet usage needs for winter months for a warmer-than-normal winter, a colder-than-normal winter, and a peak day. The explanation should also include how storage volumes and market prices are considered in this determination.
 - e. For each system, submit any updated assumptions and analysis for the Company's peak day estimate. Show the estimated demand for the 2001-2002 ACA period and for three years beyond that.
 - f. For each system, submit an estimate of the reserve margin for the 2001-2002 ACA period and for three years beyond that. Explain the rationale for the reserve margin for each of these years. For any negative reserve margin shown, provide an explanation of the firm capacity that will be used to meet demand requirements beyond the firm contract maximum daily quantities. For any shortfall of capacity, provide details about the actions the Company will take for firm customers whose demand will not be met should a peak day recur.
5. File a written response to the above four recommendations pursuant to the procedural schedule.